

Andrew B. Heckert

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A.B. Heckert's [Google Scholar Profile](#)
<https://www.ncbi.nlm.nih.gov/myncbi/a.b..heckert.1/bibliography/public/>

Position

Professor of Geology, Department of Geological & Environmental Sciences, Appalachian State University
Director, McKinney Geology Teaching Museum, Appalachian State University

Unpaid associations include, or have included:

Research Associate, Lauer Foundation for Paleontology, Wheaton, Illinois
Research Associate, New Mexico Museum of Natural History & Science, Albuquerque
Research Associate, North Carolina Museum of Science and Nature, Raleigh
Research Associate, Virginia Museum of Natural History, Martinsville
Adjunct Associate Professor, Department Biological Sciences, North Carolina State University

Citizenship: U.S. Citizen by birth (Hamilton, OH)

Education

Ph.D. Earth & Planetary Sciences University of New Mexico 2001 (3.99 GPA)

M.S. Earth & Planetary Sciences University of New Mexico 1997 (3.74 GPA)

B.S. Geology *summa cum laude* Denison University, Granville, Ohio 1993 (3.83 GPA)

Dissertation: The microvertebrate record of the Upper Triassic (Carnian) lower Chinle Group, southwestern U.S.A. and the early evolution of dinosaurs (465 pp; 38 citations). Published as a monograph in the New Mexico Museum Bulletin series in 2004 (183 citations according to Google Scholar).

Thesis: Litho- and biostratigraphy of the lower Chinle Group, east-central Arizona and west-central New Mexico, with a description of a new theropod (Dinosauria: Theropoda) from the Bluewater Creek Formation (278 pp.). Published as several articles in diverse formats.

Research Interests

I undertake **field-based** projects addressing Mesozoic, especially Triassic, paleobiodiversity through the **collection of new vertebrate assemblages**, particularly microvertebrates, and associated stratigraphic data. Many of my projects are **student-driven, specimen-based** studies of microvertebrate assemblages from understudied stratigraphic intervals or novel localities.

Employment (postgraduate only)

Professor of Geology, Dept. Geological & Environmental Sci, Appalachian State University 2014-current
Associate Professor of Geology, Department of Geology, Appalachian State University 2011-2014
Assistant Professor of Geology, Department of Geology, Appalachian State University 2005-2011
(also Director, McKinney Geology Teaching Museum, Appalachian State University)
Geoscience Collections Manager, New Mexico Museum of Natural History & Science 2002-2005

Awards

2021 Fulbright Global Scholar Award, research project in South Africa and Poland 2021-2022
2021 Chancellor's Award for Excellence in Research, Scholarship, and Creative Activity, Appalachian State
2018 Elected to Academy of Outstanding Teachers, College of Arts & Sciences, Appalachian State
2017 Undergraduate Research Mentorship Excellence Award, Appalachian State (inaugural award)
2015 Donald W. Sink Family Outstanding Scholar Award, ASU College of Arts & Sciences

Formal Teaching Experience (1990-present)

Appalachian State University, (2005-current)

Traditional classes (including conversions to online in 2020)

Features of all classes taught, regardless of level:

- Utilized course management software extensively for lectures, grades, etc.
 - WebCT (2005-2008) and Moodle-based ASULearn 1.0-2.0 (2008-current)
 - Incorporate multiple methodologies, including multimedia, in classroom and lab
 - Continually updating to include “current events,” updated text, & recent discoveries
 - Require extensive writing in lecture exams, labs, homework assignments, etc.
 - Encourage student attendance at departmental lectures and other campus STEM events
- Introduction to Physical Geology* (GLY 1101) lecture (5) and labs (2), Fall, 2005-2010
- Instructor of record, Fall, 2005, 2006, 2010, Spring 2007, 2008
 - Integrated classroom response systems (“clickers”) in Spring ’08 (first in department)
 - Integrated ASULearn (online) exams (Fall, 2010)
 - Contributed to lab manual revisions, including field trips
 - Produced camera-ready laboratory manual from diverse contributions for Spring, 2007
 - Require some essays/written responses on exams regardless of class sizes (up to 140)
- Introduction to Historical Geology* (GLY1102) lecture (5) and labs (~31), Spring, 2006-current
- Instructor of record, Fall 2007, 2012, 2013; Spring 2014, 2015.
 - First to integrate “clickers” (Fall, 2013)
 - First to integrate ASULearn exams in the lecture (Fall, 2012)
 - Extensively involved in production of laboratory manual, authoring many exercises and editing all others, updated almost every semester.
 - Developed new lab exercises on numerical dating methods, geological principles, and weighing dinosaurs, improved samples by securing new fossils, etc.
 - Heavily involved with redesign of laboratory to meet new general education program
 - Co-developed “prequiz” assignments on ASULearn (Spring, 2010)
 - Re-invented course day trip, run in Spring ’06 and Fall, ’08
 - Invented “Sentence check-outs,” to evaluate student understanding of lab topics
 - Lecture course included multiple new learning activities/assignments
- Dinosaurs: Then and Now* (GLY 1842; GES 1842) lecture course, Fall, 2015-current (except 2021)
- 2015-2025—10 Fall sections averaging ~90 students; 3 Summer sections (~25 students each)
 - Converted to online delivery for summer, 2020 (19 students) and fall (100 students)
 - Developed lecture course for university General Education program
 - In theme “How we know what we know about the past” (not strictly science)
 - Am only professor teaching course
 - Popular choice for minors in geology and animal studies
 - Using ASULearn “prequizzes,” iClickers/Poll Everywhere, and ASULearn exams
 - Developed innovative “Dinosaur Toy Evaluation” exercise
 - “Name your own dinosaur” workshop exercise associated with final exam
- Evolution of the Earth* (GLY/GES 2250; 4 credits) Lectures (16) and labs (~30+?) Fall, 2008-current
- Instructor of record Fall (’08, founding course; ’23) and Spring (2009-12, 16–2025)
 - Converted second half of course (lecture and lab) to online delivery in 2020 pandemic
 - First instructor to teach new course; have taught many overloaded sections
 - Built course from various sources, keeping what worked & adding extensively
 - Combines principles of historical geology with earth systems science
 - Developed new labs and field trips to support course
 - Includes two field trip handouts as transition to higher-level courses
 - Compiled exercises into first “lab manual,” to which I continue to contribute
 - Extensive writing requirements in weekly lab reports, including field trips
 - Integrated Fred Webb Jr. Outdoor Geology Laboratory (“rock garden”)
 - Later labs integrate skills from earlier exercises

- Requires attendance of departmental lecture series and related topics
- Actively collect specimens to update and improve multiple exercises
- Developed multiple worksheets to accompany lecture topics
- Added “Poll Everywhere” and ASULearn “prelabs” for Spring, 2024
- Paleontological Laboratory and Analytical Techniques* GES 3264, two credits)
 - Taught initial offering as topics course; have taught the course 5 times
 - Modeled on a “studio,” with 2-hour introduction to topics each week; students complete projects on their own time subsequently
 - Used to prepare students for graduate school, preparation and museum jobs
 - Provides skills in multiple aspects of preparation, including fossil extraction, conservation, duplication, and documentation.
 - Multiple students report that this course was critical to earning internships
 - Activities build up molds, casts, and 3D prints to support GES classes and outreach programs
 - Final projects are two “mini-exhibits,” only one of which can feature vertebrate body fossils
 - ”Mini-exhibits” then augment museum displays and outreach materials
- Dinosaurs* (GLY 3549, 3 credits), Spring, 2006 (see Honors course, below)
 - Developed new topics course, included field trip to NC Museum of Natural Sciences
 - Final project included both paper and oral presentations
- Invertebrate Paleontology and Historical Geology Laboratory* (GLY 4024), Fall, 2006
 - “Sabbatical replacement,” but still added and upgraded materials

Honors Courses

- Dinosaurs: Origins, Evolution, Extinction?* (GH1515, Freshman Honors), Fall, 2007, 2009
 - Included running 4-day field trip to US National Museum (Smithsonian) in 2007
 - Developed intensive writing & poster assignments and “laboratory” activities
 - Included field trip to NC Museum of Natural Sciences in 2009
 - Final projects included research papers and poster presentations
 - Fall, 2009 class overloaded (20 instead of 15)

Research and Topics Courses (* = published outcome)

- Senior Research and Senior Thesis* (GLY 4501, 4510), 2006-2007 w/Jessica Camp
 - *Enamel microstructure of phytosaurs (Reptilia:Archosauria)
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2009-2010 w/Jonathan Mitchell
 - *Upper Triassic microvertebrates of Moncure, NC—3 published papers resulted
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2011-2012 w/Eric Sload
 - *Triassic fossils solve stratigraphic problems in Picketwire Canyonlands
 - 3D microscopy project with results presented at SVP, 2011
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2013 w/Alex Harrison
 - Upper Triassic microvertebrates from the Blue Hills of Arizona—Presented, SVP 2013
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2015-2016 w/Jared Voris
 - *Hybodont shark from the Upper Triassic Redonda Fm, New Mexico
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2016-2017 w/Devin Hoffman
 - *CT-scan, digital reconstruction, and histology of *Coahomasuchus*—2 published papers
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2017-2018 w/Nick Brand
 - *Microvertebrate assemblage of the Upper Cretaceous Williams Fork Formation, CO
- Senior Research and Senior Thesis* (GLY 4501, 4510), 2019-2020 w/Mathias Eads
 - *Evaluating the Resource Efficiency of Physical and Digital Fossil Replication Methods
- Senior Research and Senior Thesis* (GES 4501, 4510), 2020-2021 w/Ciara Sailer
 - The *Triceratops* specimen at Appalachian State University – a study of the skeleton of a Cretaceous dinosaur, including histologic analysis
- Senior Research and Senior Thesis* (GES 4501, 4510), 2021-2022 w/Isaac Pugh
 - *Comprehensive description of the drepanosaur fossils from the Upper Triassic Homestead Site
- Senior Research and Senior Thesis* (GES 4501, 4510), 2022-2023 w/Alyssa Wurtz

- Preliminary description of the microvertebrates from “ReBecca’s Hollow,” a microvertebrate site in the Upper Cretaceous Williams Fork Formation of northwestern Colorado
Senior Research and Senior Thesis (GES 4501, 4510), 2024 w/Alec Quinn
- Evaluation of reconstructions and exhibits of *Otodus megalodon*, the giant extinct shark
Senior Research and Senior Thesis (GES 4501, 4510), 2023-2024 w/Luke Rose
- *Description and analysis of Upper Triassic lungfish tooth plates from the Homestead site in New Mexico and the Lower Triassic of Driefontein, South Africa
Triassic Fossil Identification and Description (GES 3539), 2021 w/six students
- This class took the best students from the previous fall’s “FFF” cohort and brought them up to speed with a world-class new paleontological site that will lead to multiple publications.

Field Courses

- Field and Museum Methods in Paleontology* (GES 2857), 2018-current (except 2020)
 - 17-day field & museum methods course built from “Triassic Trip” courses (see below)
 - Innovative blend of field- and museum time
 - Students collect primary data on the fossil record
 - Involves “behind the scenes” time at multiple museums
- Triassic trip: Field and Museum Methods* (GLY 3520, 1 credit), Intersession, 2007, 2009-2010
 - Two-week course introducing students to vertebrate paleontology techniques
 - Provide first extended field experience in geology & paleontology for many students
 - Introduce students to research projects in field
 - Course also introduces a dramatically different culture (southwestern USA)
- Triassic trip: Field and Museum Methods* (GLY 35xx, 2 credits), Spring intersession, 2008, 11-17
 - All of above but with more stratigraphic/mapping emphasis; up to 11 students
 - Integrated video technology/documentaries (2011-current)
 - Trips involve primary data collection that has been used in multiple research projects

“Outside the classroom”

- “Triassic trip” has traveled through 16 states with field work in NM, AZ, UT & CO
- Same trip/course has visited museums and fossil sites in seven states
- Honors field trip drove to District of Columbia (2007), Raleigh (2009)
- Utilized field trips to NC, VA, and TN in GLY 1102 and GLY 2250

Instructor, University of New Mexico

Taught 400-level graduate-level seminar on vertebrate paleontology (2003)

Instructor, Columbia University’s Biosphere 2 Center (2000-2001)

Integrated Earth Systems Science class (Fall, 2000)
 —Intensive ESS course requiring coordination with 3 other courses
 Helped lead 3 separate week-long multidisciplinary field trips (2000-2001)

Teaching Assistant, University of New Mexico (1993-2000)

Coordinator, Physical Geology Laboratory classes (1994-1995, 1997-2000)
 —Completely revised course materials and curriculum
 —Computerized all laboratory exercises and supplementary materials
 —Developed new exercises involving ground water, the rock cycle, and other topics
 Groundwater exercise published as part of Columbia University’s *Earthscape* series:
www.earthscape.org/t1/ES14455/heckert.html (no longer active)
 Same exercise was accepted for AGI/NAGT Environmental Geology lab manual (unpublished)
 21 sections of Physical or Historical Geology Laboratory (1993-2000)
 Served on selection committee for physical geology laboratory manual
 Reviewed AGI/NAGT Physical Geology Laboratory Manual (4th & 5th eds.) for Prentice Hall
 Nominated for campus-wide outstanding teaching assistant awards, 1997-8

Teaching assistant (undergraduate), Physical Geology Laboratory, Denison University (1990-1993)

Museum Experience (New Mexico Museum of Natural History & Science, 1993-2005)

As Geoscience Collections Manager, oversaw 8% annual growth in cataloged collections (2002-2005)
Engaged in all aspects of fossil collection including permitting, excavation, curation & publication
Partnered w/U.S. Bureau of Land Management to put entire paleontological collection online (2003)
Supervised 4 volunteers and 4 undergraduate student interns (2002-2005)
Spearheaded acquisition of 40 surplus specimen cabinets for field collections
Curatorial: M.S. and Ph.D. projects, 2000+ cataloged Triassic vertebrates (1993-2001)
—Led or co-led excavations collecting 150+ plaster jackets
—Collected over 10,000 pounds of screenwash matrix
Contract collections manager, 1994, 1997, assisted in moving NMMNH collections, 1996

Grants

External to Appalachian State

Fulbright Global Scholar Award, 2021, for research in South Africa (2021, 2022) and Poland (2021)
Co-PI w/ M. Toran and E. Cowan, JOIDES “Pop-up Science” encounter exhibit (2019)
Worked with M. Toran to secure >\$25,000 in commitments from Vulcan Materials Company for the “Geobago” mobile outreach lab, teacher workshops, and other initiatives.
Contributed to EPA “Water on the Move” grant (Marta Toran, PI) (~\$60,000+ awarded)
Departmental representative on NSF-funded S-STEM project (Rahman Tashakkori, PI) that provides stipends and research opportunities for underrepresented STEM students. 2018-current
Paleontological Society Outreach Grant (w/M. Toran), \$5,000 for teacher workshop, 2018
Paleontology and paleoenvironments of the Middle Triassic Moenkopi Formation in Dinosaur National Monument (\$20,000 award from National Park Service, 2012); \$11,000 extension authorized in September, 2013.

Internal to Appalachian State

Appalachian State University SSWAG (Summer Salary for Writing a Grant) for Summer, 2021
Appalachian State University Board of Trustees International Research Grants, 2013, 2020
Appalachian State University Foundation Fellows Grant, Spring, 2007
University Research Council (URC) Grants, Fall, 2005, 2006, 2008, 2010, 2013, 2014, 2015
Supervised student authors generating ~\$25,000 in internal support from the Office of Student Research, SAFE (Student and Faculty Excellence) and other funds.

Donations Secured to Appalachian State

Diverse parties associated with me have donated many thousands of dollars towards scholarships, student travel, and other opportunities (>\$30k by various donors)
Alumni of my courses have endowed a scholarship for students to attend my “Triassic trip” (2020) (>\$25k)
Friends impressed by the performance of my students endowed the McKinney Paleontology Scholarship (\$25k); this is in addition to the many donations listed previously.
Drove “Sponsor a Bone” for Archie the Aetosaur (2018-2019)—donations from the NC Fossil Club and others associated with me were instrumental in raising ~60-75% (>\$10k) of the cost of the “Archie the Aetosaur” bronze life reconstruction of *Gorgetosuchus* on campus.
Essentially the entirety of the Fred Webb Jr. Outdoor Geology Laboratory (~45 of ~50 specimens) were donated to Appalachian as a result of my efforts.
NC Fossil Club members and others have donated thousands of fossils and other specimens to the McKinney Geology Teaching Museum/Department of Geological & Environmental Sciences; these specimens have greatly improved the quality of specimens in multiple lab courses, museum exhibits, and outreach.
Acquired 40+ specimen cabinets from the NC Museum of Natural Sciences, these are in use across the department in research, instructional, and storage spaces.

Grants prior to 2005 (before starting at Appalachian State)

U.S. Bureau of Land Management “Fossils-at-risk” on-line database project (2002, 2003)
Co-principal investigator, Petrified Forest National Park “Sonsela project” (2003-2005)
Secured **\$150,000** endowment for fossil preparation at NMMNH (2002)
Paleobiological Fund Grant (1999)

Petrified Forest Museum Association Research Grants (1995, 1997, 1998, 2000; 6 total)
New Mexico Geological Society Student Grant (1999)
UNM Student Research Allocations Grants (5) and UNM Research and Project Travel Grants (3)
The Dinosaur Society Research Grant (1994)
See below for additional student funding

Student Research (see attached for a complete list of presentations and publications)

Supervised eleven senior theses at Appalachian
—Camp, Mitchell, Sload, Harrison, Voris, Hoffman, Brand, Eads, Sailer, Pugh, Rose, Quinn
Research students have presented at major regional, national, and international meetings (~50 abstracts)
All students apply for, and almost all earn, Office of Student Research (OSR) support
—OSR travel grants to almost all students presenting research
—OSR student research grants (Hoffman, Delgado, Eads, Sanchez, Sailer, Wurtz/Dunn, Plesh) for materials and/or analytical time
—SAFE grants to multiple students attending scientific meetings
Office of Student Research Undergraduate Research Assistantships (\$1,000-\$1200/semester)
Sload (2), Harrison (2), Voris (2), Avrahami (2), Delgado (2), Brand (1), Hendrix (1), Eads (1), Sailer (1), Pugh (1), Quinn (1), Carter (2)

Outreach & Engagement Activities

Multimedia (Internet, television, radio):

Talk to the Evolutionary Studies Institute, University of the Witwatersrand, South Africa, subsequently posted to YouTube (<https://www.youtube.com/watch?v=m5pRAKbOut4>), 240+ views
Talk to the Royal Tyrrell Museum of Paleontology in Drumheller, Alberta subsequently posted to YouTube (<https://www.youtube.com/watch?v=3d3cgO3EZYc>) *has generated over 44,000 views*
Help manage department Facebook page, posting on student success, outreach events, etc.
Prominently featured with students on in-house promotional videos on Appalachian Geology
“Talking Triassic” interview on “Sciworks” aired 14 September, 2015
<http://cpa.ds.npr.org/wfdd/audio/2015/09/070-SWRadio-NCTriassic-Heckert.mp3>
Segment on Fred Webb Jr. “rock garden” on UNC-TV’s *North Carolina Now*, Fall, 2008
Advisor (and “cameo”) in PBS documentary *Earthshaker*, on *Seismosaurus* (2005)
Interviewed by *NBC Nightly News* at excavation, May, 2000 (aired that night, but I was still in the field)
Lecture for Albuquerque Open-Spaces summer series (1996) aired on public-access cable for years.
Appeared in PBS documentary *Deep time* on the geology of New Mexico (1994)

Talks and tours:

Routinely have large booths at regional “Fossil Fairs” in 3 states with multiple undergraduate assistants
Often deliver talks to the NC Fossil Club, Forsyth Gem & Mineral Club, Lifelong Learners, others.
Lead tours and give lectures associated with McKinney Geology Teaching Museum (2005-current)
—Hundreds of school children from schools throughout the region annually
—Includes talks for other departments, boards, alumni organizations, etc.
—We run one of the largest booths at the STEaM festival each year.
Guest speaker for ASU Math Science Education Center science series (2011-2013, 2016-2017, 2019)
Guest speaker and liaison to Catawba Science Center in Hickory, NC (2011-current)
Guest speaker, North Carolina Fossil Club (2011, 2017, 2019, 2022)
Dozens of lectures for the NMMNH, NMFOP, Albuquerque Geological Society, public schools, etc.
City of Albuquerque Open-Spaces speaker 1996-1997 (1996 talk aired on public-access cable for years)
Paleontology department tours for NMMNH’s “Young Explorers” summer programs, 2002-2005

Other:

NMMNH liaison to NM Friends of Paleontology (volunteer organization, 2002-2005)
Editor, NM Friends of Paleontology newsletter (1998-1999; 2003-2005)

Field & Travel Experience (1993-current)

Geological fieldwork in eleven western states, North Carolina, Virginia, Ohio, Argentina, and South Africa.
Stratigraphic and paleontologic studies for M.S., Ph.D., and other projects

- Specialized in paleontological, stratigraphic, and sedimentologic work
 - Supervised numerous paleontological excavations (70+ volunteers, 3000+ hrs, 250+ jackets)
 - Collected Devonian-Pleistocene bones, footprints, skin impressions, shells, etc.
 - Measured several kilometers of stratigraphic sections ranging from Pennsylvanian to Recent
 - Led or co-led dozens of student and/or professional field trips in New Mexico, Texas, Arizona, Utah, Colorado, North Carolina, and Virginia.
- Independent consulting work assessing paleontological resources (1994-2002)
- Conducted several paleontological resource surveys in Arizona and New Mexico
- Studied in museums and visited the field in Argentina (1996, 2013, 2014), Germany (1998, 2018)

Fossil Collections

Fossils collected by me and/or under my supervision are repositied in at least eleven natural history museums on three continents, including: New Mexico Museum of Natural History & Science, Albuquerque; North Carolina Museum of Natural Sciences, Raleigh; Museum of Western Colorado, Grand Junction; Utah Field House of Natural History, Vernal; Badlands Dinosaur Museum, Dickinson, North Dakota; Virginia Museum of Natural History, Martinsville; Denver Museum of Nature & Science, Denver; Petrified Forest National Park, Arizona; Mesalands Dinosaur Museum, Tucumcari, NM; CRILAR, La Rioja, Argentina, and Evolutionary Studies Institute, University of the Witwatersrand, Johannesburg, South Africa.

Professional Society Memberships

Asociación Paleontológica Argentina (APA), Arizona Geological Society, Carolina Geological Society (CGS; lifetime member), Geological Society of America (GSA), National Association of Geoscience Teachers (NAGT), National Center for Science Education (NCSE), New Mexico Geological Society (NMGS; lifetime member), Palaeontological Association (PalAss), Paleontological Society (PS), Sigma Xi (Scientific Research Society), Society of Vertebrate Paleontology (SVP).

Selected Scholarships & Fellowships

The University of New Mexico 1993-2001:

Society of Vertebrate Paleontology Predoctoral Fellowship (Mary Dawson Award), 2000
 University of New Mexico Dean's Dissertation Fellowship, 2000
 Sigma Xi Excellence in Graduate Research Award (UNM Chapter), 2000
 Society of Vertebrate Paleontology Bryan Patterson Award, 1999
 New Mexico Geological Society Kottlowski Fellowship, 1998
 University of New Mexico Wengerd Traveling Fellowship, 1998
 University of New Mexico Geology Alumni Scholarship, 1995, 1996, 1998, 1999, 2000
 Richard Vann Paleontology Scholarship, 1995 & 1997

Denison University 1989-1993:

\$60,000+ in national, state, & local awards for scientific & academic excellence, including:
Barry M. Goldwater, National Merit, Ohio Academic, Denison University Wells Science, Denison University Anderson Science, Robert C. Byrd, NAGT Field Camp, Denison University LaMoreaux Field Camp, and Procter & Gamble scholarships, among others.

Peer Review and other Service to the Profession

Served as a reviewer for multiple international paleontological journals, including:

Acta Palaeontologica Polonica, *Ameghiniana*, *The Anatomical Record*, *Geobios*, *Geological Magazine*, *Historical Geology*, *Ichnos*, *Journal of African Earth Sciences*, *Journal of Iberian Geology*, *Journal of Paleontology*, *Journal of the Royal Society Interface*, *Journal of Vertebrate Paleontology* (including *Society of Vertebrate Paleontology Memoirs*), *Memoirs of the Geological Society of London*, *Naturwissenschaften*, *Neues Jahrbuch für Geologie und Paläontologie*, *New Mexico Bureau of Geology Memoirs*, *New Mexico Geological Society Guidebook*, *New Mexico Museum of Natural History & Science Bulletin*, *Palaeontographica Abteilung A*, *PPP (Palaeogeography, Palaeoclimatology, Palaeoecology)*, *Palaeontologica Polonica*, *Palaeontologica Electronica*, *Palaeontology*, *Palaeoworld*, *Palaios*, *Paleobiology*, *Paleobios*, *PeerJ*, *PLoS One*, *Proceedings of the Geologists' Association*, *Proceedings of the Royal Society B*, *Rivista Italiana di Paleontologia e Stratigrafia*, *Rocky Mountain*

Geology, Royal Society Open Science, Scientific Reports, Sedimentary Geology, Southeastern Geology, Zoological Journal of the Linnaean Society of London, Zootaxa and others.
Editorial board of the *New Mexico Museum of Natural History & Science Bulletin* (2005-2015?) and *Eastern Paleontologist* (2017-current), which involves frequent peer-review duties of both monographs and regular contributions.
Occasional proposal reviewer, principally for the National Science Foundation (NSF).

External Reader

Atrayee Haldar, Indian Institute of Technology, Kharagpur (PhD, 2025)
Chandele Montgomery, Evolutionary Studies Institute, University of the Witwatersrand (MS, 2022)
Debarati Datta, Indian Institute of Technology, Kharagpur (PhD, 2021)
Mohd Shafi Bhat, Indian Institute of Technology, Kharagpur (PhD, 2018)

Graduate committee member

Haviv Avrahami (M.S., North Carolina State University, 2018)
Susan Drymala (M.S., North Carolina State University, 2015).

Host Committee:

2018 Carolina Geological Society (CGS) Fall Field Trip, Boone and vicinity
2012 Society of Vertebrate Paleontology Meeting (Raleigh).
2012 Southeastern Association of Vertebrate Paleontology (Boone).

Field Trip Leader

2018 Carolina Geological Society Fall Field Trip (Fred Webb Outdoor Geology Lab stop)
2014 Southeast section of the Geological Society of America (1-day trip was canceled but field guide published as Liutkus-Pierce et al., 2014; see references)
2012 Society of Vertebrate Paleontology (3-day trip in October, 2013); 21 participants from 4 countries
2012 Geological Society of America (3-day trip in November, 2013; literally ran with one arm due to surgery); 14 participants from across the U.S. and Canada.
2012 Southeastern Association of Vertebrate Paleontology (half-day field trip).
2003 New Mexico Geological Society Fall Field Conference co-chair, Zuni Plateau (3-day trip, 100+ participants).
2001 New Mexico Geological Society Fall Field Conference co-chair, Llano Estacado (3-day trip, 100+ participants).

Additional Service (exclusive of the McKinney Geology Teaching Museum)

Departmental

Academic advisor, 2006-current. Typically advise paleontology concentration majors, but have advised many others to completion.
Routinely serve on, and sometimes chair, departmental committees, including Departmental Personnel (DPC), Promotion and Tenure (PTC), Post-tenure Review (PTR), Curriculum, Search, Recruiting and others. I have frequently chaired the PTC. I attend almost every departmental event (seminar, recruiting/open house, banquet, geolympics, etc.).
Highlights include serving as Curriculum Committee chair as an Assistant Professor in 2006-2008 (2 years) encompassing an enormous overhaul of the entire departmental curriculum. This restructuring was a major factor in our subsequent growth that quadrupled the number of majors. Later curriculum committee work streamlined senior exams, reducing faculty workload and increasing student pass rate. Photographs of my students dot the department, college, and university web pages and other promotional materials and are prominently featured in many college and university websites.

College of Arts and Sciences (exclusive of the McKinney Geology Teaching Museum)

Served on various committees, principally the Donald Sink Research Award committee (2016-current)
Made presentations to the CAS Advisory Council on multiple occasions
Frequent guest lecturer in various courses.
S-STEM representative for the department, overseeing 2-3 students on scholarship yearly (~2015-2022)
Other duties as assigned, e.g., Caligari Scholarship Committee

University

Barry M. Goldwater Scholarship Committee (Prestigious Scholars Program/Honors College)
Frequent guest lecturer in First Year Seminar (FYS) courses
Frequent guest speaker for Math Science Education Center, Summer Ventures, etc.
Regular attendee of Convocation, Spring Commencement, etc.
Served in various roles for Office of Student Research, includes the advisory board and search committee
Founder of “Post-lab,” an informal STEM networking event that is ±monthly on campus

Publication Highlights (comprehensive bibliography either attached or available on request)

Books and Monographs

- Heckert, A.B., 2004, *Late Triassic microvertebrates from the Upper Triassic Chinle Group (Otischalkian-Adamanian: Carnian), southwestern U.S.A.*: New Mexico Museum of Natural History and Science Bulletin 27, 170 pages.
- Klein, H., Heckert, A.B., and Celeskey, M., 2023, *Chirotheres: Tracking the Ancestors of Dinosaurs and Crocodiles*. Indiana University Press (Life of the Past series). 360 pp.
<https://iupress.org/9780253066046/chirotheres/>
- Lucas, S. G., Rinehart, L. F., Heckert, A. B., Hunt, A. P., and Spielmann, J. A., 2016, *Rotten Hill: A Late Triassic bonebed in the Texas Panhandle, USA*: New Mexico Museum of Natural History and Science Bulletin 72, 97 pages.
- Rinehart, L. F., Lucas, S. G., Heckert, A. B., Spielmann, J. A., and Celeskey, M. D., 2009, *The paleobiology of Coelophysis bauri (Cope) from the Upper Triassic (Apachean) Whitaker quarry, New Mexico, with detailed analysis of a single quarry block*: New Mexico Museum of Natural History and Science Bulletin 45, 260 pages.
- Spielmann, J.A., Lucas, S.G., Rinehart, L.F. & Heckert, A.B., 2008, *The Late Triassic archosauromorph Trilophosaurus*. New Mexico Museum of Natural History and Science Bulletin 43: 177 pages.

Co-edited volumes

- Heckert, A.B., and Lucas, S.G., editors, 2002, *Upper Triassic Stratigraphy and Paleontology*, New Mexico Museum of Natural History and Science Bulletin 21, 301 pp.
- Heckert, A.B., and Lucas, S.G., editors, 2005, *Vertebrate paleontology in Arizona*, New Mexico Museum of Natural History and Science Bulletin 29, 210 pp.
- Lucas, S.G., and Heckert, A.B., editors, 1995, *Permian Footprints and Facies*, New Mexico Museum of Natural History and Science Bulletin 6, 300 pp.
- Lucas, S.G., and Heckert, A.B., editors, 2000, *Dinosaurs of New Mexico*, New Mexico Museum of Natural History and Science Bulletin 17, 240 pp.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., editors, 2003, *Paleontology and geology of the Upper Triassic Snyder quarry, north-central New Mexico*, New Mexico Museum of Natural History and Science Bulletin 24, 132 pp.

Selected Recent Major Publications (see following pages for complete list)

- 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, U.S.A, expands the morphological diversity of the Triassic archosauriform radiation. *The Science of Nature*. v. 198, article 32, 17 pp. <https://doi.org/10.1007/s00114-021-01733-1>
- 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-

Some statistics from Google Scholar® (through 2025—as of 31 December 2025)

See: <http://scholar.google.com/citations?user=qp4P57MAAAAJ&hl=en>
Citations: 6182 (1542 since 2020); h-index: 40 (20 since 2020); i10 index: 170 (42 since 2019)

Some statistics from ISI Web of Science® (through 01/01/2024) (includes abstracts)

ISI titles: 64 titles, including comments in *Geology*, *Palaeontologia Electronica*, and *Systematic Biology*
ISI articles cited 958 times by 617 articles (excluding self-citations, which increase totals to 958 and 617)

h-index: 19; 30% first-authorships; average total citations per year is 22.38

My own publications tally (through 12/27/2018, so sadly out-of-date)

Total titles (abstracts and papers): 465

Sole- or senior-authored papers: 63

Junior-authored papers: 125

Student authors on 21 papers (11 Appalachian student authorships)

Sole- or senior-authored abstracts: 99

Junior-authored abstracts: 178

Student authors on 101 abstracts; 72 of those authors were undergraduates (61 ASU student authorships)

Co-edited volumes: 5 (2 as senior editor, 3 as junior editor)

Monographs: 4 (1 as sole author, 3 as a junior author)

Miscellaneous credits

Photographs

Numerous photos of my students engaged in research, outreach, and field work dot the department, college, and university web pages.

Photos of and by my students have been published in the Society of Vertebrate Paleontology's Fossil Preparation Calendar, supporting the Hix Fund for Fossil Preparation in 2026, 2025, and several other years.

Cover photo, March, 2012 *Journal of Paleontology* (SEM image from Heckert et al. article)

Cover photo, 2003 New Mexico Geological Society Guidebook 55, *Geology of the Zuni Plateau*.

Cover photo, June, 2002, *Environmental Practice: Journal of the National Association of Environmental Professionals*, v. 4, no. 2.

Cover photo, 1998 Annual Report of the New Mexico and Arizona Land Company

Back cover photo, 2005 New Mexico Geological Society Guidebook 57, *Geology of the Chama Basin*

Back cover photo, 2004 Arizona Geological Society membership directory

Photographs on 3 pages, Arizona Geological Society membership directory, 2002/2001.

Poetry

"The favorite," *Exile* (Denison University Literary Art Magazine), Spring, 1993, p. 38

"Wonderings of an adopted son," *Exile* (Denison University Literary Art Magazine), Fall, 1992, p. 56

Letters to the editor

Watauga Democrat (several occasions)

Sports Illustrated, May, 2001

Proceedings of the New York Academy of Science, 2000, v. 40, no. 3, p. 5.

Oxford Press, 1995

Albuquerque Journal, 1994

University of New Mexico *Daily Lobo* (several occasions)

Complete scientific bibliography on the following pages

BIBLIOGRAPHY: Andrew B. Heckert

(Particularly significant titles in **boldface** type)

2026 Papers

Crothers, J., Eberle, J., Brinkman, D., Wurtz, A., Heckert, A. B., Hunt-Foster, R. K., Foster, J. R., Dirkes, I. C., & Dunn, R. 2026. An actinopterygian-dominated fish fauna from the Upper Cretaceous Williams Fork Formation, northwestern Colorado, and evidence for provinciality across Laramidia at the Campanian/Maastrichtian boundary. *Cretaceous Research*, v. 182, 106313.

<https://doi.org/https://doi.org/10.1016/j.cretres.2026.106313>

Crouch, J.N., Heckert, A.B., Lauer, B., and Lauer, R. 2026. Microcoprolite morphotypes from the Revueltian (Upper Triassic: Norian) age Homestead Site, Garita Creek Formation, east-central New Mexico, USA. *Ichnos* (in press).

<https://doi.org/10.1080/10420940.2026.2666124>.

2026 Abstracts

Bartlinski, J.J., Heckert, A.B., Lauer, B., Lauer, R., 2026, An investigation of enamel degradation in teeth of the Homestead site microvertebrate assemblage of the Garita Creek Formation (Late Triassic: Norian) New Mexico. Triple Joint 75th Southeastern/60th North-Central/60th South-Central Annual Section Meeting, *Geological Society of America Abstracts with Programs*.

Crouch, J.N., Turner, I., and Heckert, A.B., 2026, A marine vertebrate assemblage from the Upper Cretaceous (Latest Cretaceous: Maastrichtian) Peedee Formation of Greenville, North Carolina. TrTriple Joint 75th Southeastern / 60th North-Central / 60th South-Central Annual Section Meeting, Triple Joint 75th Southeastern/60th North-Central/60th South-Central Annual Section Meeting, *Geological Society of America Abstracts with Programs*.

Mirabile, D. N., and Heckert, A. B., 2026, An Upper Cretaceous vertebrate assemblage from the Tooth Draw quarry of the Hell Creek Formation (Upper Maastrichtian), South Dakota and its implications for coelurosaurian theropod phylogeny. Triple Joint 75th Southeastern/60th North-Central/60th South-Central Annual Section Meeting, *Geological Society of America Abstracts with Programs*. *Nick won an outstanding poster prize from the Paleontological Society for this poster.*

Santoro, L, Heckert, A.B, Ward, D, Dissolving diagenetic selenite from microvertebrate concentrate: Scaling up a successful chemical treatment. Triple Joint 75th Southeastern/60th North-Central/60th South-Central Annual Section Meeting, *Geological Society of America Abstracts with Programs*. *Leiana earned a runner-up outstanding poster prize from the Paleontological Society for this poster.*

Schwartz, M.R, Choiniere, S.G, Pugh,I, Heckert, A.B, Michael the *Microraptor* and Osborn the *Velociraptor*: *Dromaeosaur* Life Reconstruction for Educating the Public. Triple Joint 75th Southeastern/60th North-Central/60th South-Central Annual Section Meeting, *Geological Society of America Abstracts with Programs*.

2025 Papers

Heckert, A. B., Lucas, S. G., Lewis, C., Deans, A., Harrison, A., and Hendrix, A., 2025, [Stratigraphic distribution of vertebrate localities in the Upper Cretaceous \(?Santonian-Campanian\) Menefee Formation in the southeastern San Juan Basin](#): New Mexico Geological Society Guidebook, v. 75, p. 189-197.

Rose, L. J. P., Heckert, A. B., Hancox, P.J., and Hageman, S. J., 2025, Fossil lungfishes (Sarcopterygii, Dipnoi) of the Lower Triassic Driefontein locality in the Burgersdorp Formation, Beaufort Group, of South Africa, and their implications for ceratodontiform diversity after the end-Permian mass extinction: *Journal of Vertebrate Paleontology*, p. e2522785. <https://doi.org/10.1080/02724634.2025.2522785>

2025 Abstracts

Crothers, J., Wurtz, A., Hunt-Foster, R., Foster, J. R., Eberle, J. J., Heckert, A. B., Gardner, J. D., Brinkman, D. B., & Dunn, R., 2025, A new microvertebrate assemblage from the Williams Fork Formation (Campanian—Maastrichtian) of Colorado and evidence for discrete climate/faunal zones across Laramidia during the ‘Edmontonian.’ *Geological Society of America Abstracts with Programs*, 57(5).

- Geissler, A.E., Carter, C., Plesh K., Crouch, J. and Heckert, A.B., 2025, [Design and Application](#) of portable paleontological exhibits to enhance educational engagement in an undergraduate paleontology techniques course: *Association of Materials and Methods (AMMP) Meeting*, Johnson City, TN, pp. 62-63.
- Heckert, A.B., Celeskey, M.D., Donovan, T., Toran, M., and Waterworth, L., 2025, [From a Triassic bundle of bones to bronze](#): Fabrication of a life reconstruction of Archie the Aetosaur in a university setting: Association of Materials and Methods (AMMP) Meeting, Johnson City, TN, pp. 19-24.
- Hunt-Foster, R.K., Foster, J.R., Hotton, C., Baghai-Riding, N, Thomson, K, Gee, C.T, Eberley, J., Heckert, A., and Dirkes, I., 2025, The Upper Cretaceous Williams Fork Formation (Late Cretaceous: Campanian–Maastrichtian), northwestern Colorado, and its paleoecological implications for Laramidia. Rocky Mountain Section - 75th Annual Meeting, *Geological Society of America Abstracts with Programs*.
- Santoro, L. A., Heckert, A.B., and Ward, D., 2025, Dissolving diagenetic selenite from microvertebrate concentrate: An exploration of diverse techniques *Association of Materials and Methods (AMMP) Meeting*, Johnson City, TN, pp 91-92.
- Toran, M., *Choiniere, S., *Schwarte, M., and Heckert, A.B., 2025, Methods for making paleontological materials available for outreach to teachers, schools, and the greater public through undergraduate education and internships. *Association of Materials and Methods (AMMP) Meeting*, Johnson City, TN, pp 97-98.

2024 Monograph

- Rinehart, L.F., Lucas, S.G., & Heckert, A.B., 2024, [Lamy amphibian quarry, a Late Triassic metoposaur-dominated bonebed in New Mexico](#). *New Mexico Museum of Natural History and Science Bulletin* 97. 162 pp. For full size (100MB+) document, [click here](#).

2024 Papers

- Eberle J., Cohen J., Foster J., Hunt-Foster R., & Heckert A., 2024, A new Late Cretaceous metatherian from the Williams Fork Formation, Colorado. *PLOS ONE* 19(10): e0310948.
<https://doi.org/10.1371/journal.pone.0310948>
- Pugh, I., Nesbitt, S. J., Heckert, A. B., Lauer, R., & 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., & 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).

2024 Abstracts

- Carter, C., Heckert, A.B., Lauer, B., & Lauer, R., 2024, Preliminary statistical study of Late Triassic archosauriform teeth from the Homestead Site, a microvertebrate assemblage in east-central New Mexico: *12th North American Paleontological Convention, Program with Abstracts*, p. 143.
- Carter, C., Heckert, A.B., Lauer, B., & Lauer, R., 2024, Preliminary statistical study of Late Triassic archosauriform teeth from the Homestead Site, a microvertebrate assemblage in east-central New Mexico: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, p. 130.
- Crouch, J.N, Heckert, A.B., Lauer, B. & Lauer, R., 2024, Coprolite ichnotaxa from the Revueltian (Upper Triassic: Norian) age Homestead Site, Garita Creek Formation, east-central New Mexico, U.S.A.: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, pp. 157-158.
- Crothers, J., Wurtz, A., Hunt-Foster, R., Foster, J.R., & Heckert, A.B., 2024, A diverse microvertebrate site from the Late Cretaceous Williams Fork Formation (Campanian—Maastrichtian) of Colorado and its paleoecological implications for Laramidia. *Journal of Vertebrate Paleontology, Program and Abstracts*, p. 156.
- Dollman, K., Tolchard, R., Choiniere, J., Hancox, J., Montgomery, C., Heckert, A.B., and Botha-Brink, J., 2024, The explosive radiation of archosaurian growth strategies during the Early Triassic: *Palaeontological Society of South Africa abstracts*, p. 38
- Dunn, R.A., Wurtz, A.L., & Heckert, A.B., 2024, Hydrogen peroxide greatly increases breakdown of fossiliferous sediments from Upper Cretaceous microvertebrate sites in the Williams Fork Formation, northwestern

- Colorado: *GSA Abstracts with Programs*, v. 56, no. 2.
<https://gsa.confex.com/gsa/2024SE/meetingapp.cgi/Paper/398233>
- Dunn, R., Heckert, A.B., Foster, J.R., Hunt-Foster, R.K., 2024, Super Charger Heaven: A Freshwater Microvertebrate Assemblage from the Upper Cretaceous Williams Fork Formation of Northwestern Colorado. *Journal of Vertebrate Paleontology, Program and Abstracts*, pp. 60.
- Hancox, P.J., Montgomery, C., Heckert, A.B., Rose, L.J.P., Duffin, C.J., and Schneiderhan, E.A., 2024, The fossil fish fauna from the lower Burgersdorp Formation of the main Karoo Basin: *Palaeontological Society of South Africa abstracts*, p. 51.
- Heckert, A.B., 2024, Massive collections of microvertebrates—is there ever too much of a good thing?: *GSA Abstracts with Programs*, v. 56, no. 2. <https://gsa.confex.com/gsa/2024SE/meetingapp.cgi/Paper/398395>
- Heckert, A.B., Hancox, J.P., and Choiniere, J.N., 2024, Tanystropheid (Diapsida, Archosauromorpha) occurrences from the Lower Triassic Burgersdorp Formation (*Cynognathus* Assemblage Zone: Early Triassic) of South Africa: A rare early Gondwanan record of the clade: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, pp. 389-390.
- Montgomery, C., Choiniere, J.N., Heckert, A.B., Hancox, P.J., and Dollman, K.N., 2024, Comparative morphology and composition of Olenekian coprolites using 3D X-ray imaging: *Palaeontological Society of South Africa abstracts*, p. 77
- Montgomery, C., Dollman, K., Heckert, A.B., Hancox, J.P., and Choiniere, J., 2024, Comparative morphology and composition of Olenekian coprolites using 3D X-ray imaging: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, pp. 248-249.
- Nohomovich, M., Nesbitt, S.J., Haridy, Y., Shubin, N., Heckert, A.B., Barrett, P., Lauer, B.H., Lauer, R., Stocker, M.R., 2024, New anuran material from the Dockum Group in the American Southwest provides insight into frog novelty, evolution, and biogeography in the Late Triassic. *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, pp. 410-411.
- Quinn, A.E., & Heckert, A. B., 2024, Analyzing *Otodus megalodon* jaws and tooth whorl reconstructions in museums, hypothesizing improvements, and investigating ways of creating related exhibits and outreach: *GSA Abstracts with Programs*, v. 56, no. 2.
<https://gsa.confex.com/gsa/2024SE/meetingapp.cgi/Paper/397309>
- Quinn, A.E., & Heckert, A.B., 2024, Analyzing reconstructions of the giant fossil shark *Otodus megalodon*, and proposing a new process behind “megalodon” exhibit design: *Journal of Vertebrate paleontology, Program and Abstracts*, pp. 451-452.
- Rose, L.J.P., Heckert, A.B., Lauer, B., & Lauer, R., 2024, Reassessment of the taxonomic record of lungfish (Sarcopterygii:Dipnoi) in the Late Triassic of the United States: *12th North American Paleontological Convention, Program with Abstracts*, p. 369.
- Rose, L.J., Crothers, J.P., Pugh, I., Heckert, A.B., Nesbitt, S.J., Stocker, M.R., Lauer, B.H., & Lauer, R., 2024, Microvertebrate ichthyofauna of the Upper Triassic (Norian) Homestead Site at Garita Creek in east-central New Mexico, USA: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2024, p. 468-469.
- Tolchard, F.B., Hancox, P.J., Heckert, A.B., Dollman, K.N., and Choiniere, J.N., 2024, A South African Lagerstätte Site Reveals New insights into the Triassic archosauromorph radiation: *Palaeontological Society of South Africa abstracts*, p. 128.

2023 Book

- Klein, H., Heckert, A.B., and Celaskey, M., 2023, *Chirotheres: Tracking the Ancestors of Dinosaurs and Crocodiles*. Indiana University Press (Life of the Past series). 360 pp. ISBN: 9780253066046n
<https://iupress.org/9780253066046/chirotheres/>**

2023 Papers

- Duffin, C.J., Heckert, A.B., & Hancox, P.J., 2023, A new low diversity lacustrine elasmobranch assemblage from the Lower Triassic Burgersdorp Formation South Africa with descriptions of *Lissodus tumidoclavus* n. sp. (Chondrichthyes: Hybodontoidae): *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*: v. 308(2), pp. 151-179. DOI: 10.1127/njgpa/2023/1134
- Reyes, W.A., Parker, W.G., & Heckert, A.B., 2023, A new aetosaur (Archosauria: Pseudosuchia) from the upper Blue Mesa Member (Adamanian: Early–Mid Norian) of the Late Triassic Chinle Formation, northern Arizona, USA, and a

review of the paratyphosuchid *Tecovasuchus* across the southwestern USA: *PaleoBios*, v. 40(9), pp. 1-15.

<https://doi.org/10.5070/P940961559>

Rinehart, L. F., Lucas, S. G., Hunt, A. P., and Heckert, A. B., 2023, Skull and jaw shape as indicators of trophic guild association in temnospondyl amphibians and other aquatic predators: *New Mexico Museum of Natural History and Science Bulletin*, v. 90, p. 585-609.

2023 Mini-papers & extended abstracts

Celeskey, M.D., Heckert, A.B., and Klein, H., 2023, Chirotheres: Cinderella and the advent of archosaurian locomotor innovations: a pictorial guide: *The Anatomical Record: Special Issue: The 14th Symposium on Mesozoic Terrestrial Ecosystems and Biota*: v. 306(S1), pp. 67-69. DOI: 10.1002.ar/25/219

Hancox, P.J., Montgomery, C., Heckert, A.B., Duffin, C.J., Hoffman, D.K., and Schneiderhan, E., 2023, The fauna of the lower Burgersdorp Formation (*Cynognathus* Assemblage Zone, *Langbergia* Subzone) of South Africa: *The Anatomical Record: Special Issue: The 14th Symposium on Mesozoic Terrestrial Ecosystems and Biota*: v. 306(S1), pp. 121-124. DOI: 10.1002.ar/25/219

Heckert, A.B., Crothers, J.P., Rose, L.J., Nesbitt, S.J., Pugh, I., Stocker, M.R., Barrett, P.M., Wills, S., Ward, D., Lauer, B., Lauer, R., 2023, An exceptionally rich microvertebrate site from the ?early Revueltian (mid-Norian) Garita Creek Formation of east-central New Mexico, USA: *The Anatomical Record: Special Issue: The 14th Symposium on Mesozoic Terrestrial Ecosystems and Biota*: v. 306(S1), pp. 129-131. DOI: 10.1002.ar/25/219

Hunt-Foster, R.K., Foster, J.R., Eberle, J.J., Heckert, A.B., Hartman, J.H., Sroka, S.D., 2023, New paleobiotic elements of the Williams Fork Formation (Campanian-Maastrichtian) of northwestern Colorado and northeastern Utah: *The Anatomical Record: Special Issue: The 14th Symposium on Mesozoic Terrestrial Ecosystems and Biota*: v. 306(S1), pp. 145-149. DOI: 10.1002.ar/25/219

2023 Abstracts

Bonde, J., Milner, A.R.C., Heckert, A., Hall, R., 2023, New, westernmost occurrence of large-bodied temnospondyls from the Upper Triassic Chinle Formation of southern Nevada: *Geological Society of America Abstracts with Programs*, v. 55(4), p. 20. doi: 10.1130/abs/2023CD-387635.

Carter, C., Rose, L.J., Heckert, A.B., Lauer, B., and Lauer, R., 2023, Taphonomy and preservation bias of microvertebrate body fossils at the Revueltian Homestead Site (Upper Triassic: Norian), Garita Creek Formation of east-central New Mexico, USA: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, pp. 111-112.

Crouch, J.N., Carter, C., Heckert, A.B., Lauer, B., and Lauer, R., 2023, Preliminary taphonomy of a Revueltian (Upper Triassic: Norian) age coprolite assemblage from the Homestead Site in the Garita Creek Formation, east-central New Mexico, USA: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, p. 131.

Crothers, J.P., Heckert, A.B., Toran, M.L., and Rose, L.J., 2023, What no eye has seen: Digitization, 3D printing, and customization as an inexpensive means of reconstructing fossil specimens for exhibitions and outreach. *Association of Materials & Methods (AMMP) meeting*, Seattle.

Dunn, R., Wurtz, A.L., and Heckert, A.B., 2023: Hydrogen peroxide breakdown of fossiliferous sediments from Upper Cretaceous microvertebrate sites in the Williams Fork Formation, northwestern Colorado: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, p. 152.

Duffin, C.J., Heckert, A.B., and Hancox, P.J., 2023, A low diversity chondrichthyan fauna from the Early Triassic of South Africa and the recovery of non-marine ecosystems following the end-Permian mass extinction event. *8th International Meeting of Mesozoic Fishes and Aquatic Tetrapods: Bio-crises and recoveries*, Stuttgart, Germany.

Heidenfelder, J.C., Heckert, A.B., Pugh, I., Nesbitt, S.J., Lauer, R., and Lauer, B., 2023, The morphology of tanystropheids (Reptilia Archosauromorpha) of the Upper Triassic (Revueltian early-mid Norian) Homestead site in east central New Mexico. *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, pp. 209-210.

- Rose, L.J., Heckert, A.B., and Hancox, P.J., 2023, Taxonomic significance of lungfish (Sarcopterygii: Dipnoi) tooth plates in the Lower Triassic (Olenekian) Burgersdorp Formation of Driefontein, South Africa: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, p. 370.
- Stiegler, J., and Heckert, A.B., 2023, A new hypothesis for early dinosaur divergences informed by specimens from the Upper Triassic (Revueltian: Norian) Snyder quarry of northern New Mexico, USA: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, pp. 410-411.
- Wurtz, A.L., Crothers, J.P., Dunn, R., Carter, C., Heckert, A.B., Foster, J.R., Hunt-Foster, R.K., and Eberle, J.J., 2023, ReBecca's Hollow: A freshwater microvertebrate assemblage from the Upper Cretaceous (Edmontonian) Williams Fork Formation, northwestern Colorado, U.S.A.: *Journal of Vertebrate Paleontology, Program and Abstracts, 2023*, pp. 455-456.

2022 Papers

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://jpalaeontologicaltechniques.com/2022/10/06/jpt-no-23-reaking-the-mold-an-empirical-analysis-of-molding-and-casting-efficiency/>

Brand, N. A., Heckert, A. B., Sanchez, I., Foster, J. R., Hunt-Foster, R. K., and Eberle, J. J., 2022, Upper Cretaceous microvertebrate assemblage from the Williams Fork Formation (Campanian–Maastrichtian), northwestern Colorado, U.S.A., and its paleoenvironmental implications: *Acta Palaeontologica Polonica*, v. 67(3), p. 579-600.
<https://doi.org/10.4202/app.00934.2021>

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

Nesbitt, S. J., Stocker, M. R., Ezcurra, M. D., Fraser, N. C., Heckert, A. B., Parker, W. G., Mueller, B., Sengupta, S., Bandyopadhyay, S., Pritchard, A. C., and Marsh, A. D., 2022, Widespread azendohsaurids (Archosauromorpha, Allokotosauria) from the Late Triassic of western USA and India: *Papers in Palaeontology*, v. 8, no. 1, p. 1-29. <https://doi.org/10.1002/spp2.1413>

Rinehart, L. F., Heckert, A. B., and Lucas, S. G., 2022, The utility of probability plotting in palaeobiology: *Palaeontology*, v. 65, no. 6, p. e12633.

2022 Mini-papers & extended abstracts

Dollman, G., Kotzé, E., Heckert, A.B., and Choiniere, J., 2022, Deep Learning of Drone Images for Soil Erosion Detection Using Geological and Topographic Landcover Features: SACAIR Proceedings Volume II, p. 186-201.

2022 Abstracts

Crothers, J.P., Pugh, I., Rose, L.J., Heckert, A.B., and Toran, M.L., 2022, Printing, painting, and presenting lost worlds: Art and 3D printing as an inexpensive tool for increasing the accessibility of vertebrate fossils in exhibitions and classrooms: *Journal of Vertebrate Paleontology, Program and Abstracts*, p. 116.

Heckert, A.B., Carrano, M.C., Howell, L.S., Ore, Z., and Schneider, K.E., 2022, The paleopathological record of non-avian dinosaurs: implications of the distribution of disease and incidence of injury throughout the Mesozoic. *Geological Society of America Abstracts with Programs*, v. 54(4). doi: 10.1130/abs/2022NC-374616.

Heckert, A.B., Duffin, C.J., and Hancox, P.J., 2022, Diminutive hybodont chondrichthyans from the Lower Triassic of South Africa and implications for recovery of nonmarine ecosystems during the Early Triassic: *Journal of Vertebrate Paleontology, Program and Abstracts*, p 177.

Pugh, I., Heckert, A.B., Crothers, 2022, 3D Modeling and printing as a resource in paleontological outreach. *Geological Society of America Abstracts with Programs*, v. 54(4). doi: 10.1130/abs/2022NC-374914.

Pugh, I., Heckert, A.B., Nesbitt, S.J., Stocker, M., Lauer, B., Lauer, R., 2022, Three-dimensional preservation and variation of drepanosaurs (Reptilia:Archosauromorpha) from the Upper Triassic Homestead Site (Triassic:

- Revueltian:mid-Norian) of east-central New Mexico, U.S.A.: *Journal of Vertebrate Paleontology, Program and Abstracts*, p. 289.
- Rose, L.J., Crothers, J.P., Heckert, A.B., Nesbitt, S.J., Stocker, M., Lauer, B., and Lauer, R., 2022, Osteichthyans and chondrichthyans of the Upper Triassic Homestead site of east-central New Mexico, U.S.A., along with a comparison of lungfish (Sarcopterygii:Dipnoi) tooth plates from other Triassic localities across the American Southwest: *Journal of Vertebrate Paleontology, Program and Abstracts*, p. 302.
- Wurtz, A.L., Heckert, A.B., Foster, J., Hunt-Foster, R.K., and Eberle, J.J., 2022, A new microvertebrate assemblage from the Upper Cretaceous (Edmontonian) Williams Fork Formation, northwestern Colorado, U.S.A., and the taphonomy of Williams Fork Formation vertebrates: *Journal of Vertebrate Paleontology, Program and Abstracts*, p., 373.

2021 Papers

- Heckert, A.B., Viner, T.C., and Carrano, M.T., 2021, Detailed review of a large, pathological skeleton of *Smilosuchus gregorii* (Archosauriformes:Phytosauria) from the Upper Triassic of eastern Arizona, U.S.A., with discussion of the paleobiological implications in fossil archosaurs. *Palaeontologia Electronica* article 24.2.a2, 36 pp. <https://palaeo-electronica.org/content/2021/3385-pathological-phytosaur>; <https://doi.org/10.26879/1123>.
- 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, U.S.A, expands the morphological diversity of the Triassic archosauriform radiation. *The Science of Nature*. v. 198, article 32, 17 pp. <https://doi.org/10.1007/s00114-021-01733-1>
- Heckert, A. B., Martínez, R. N., and Celeskey, M. D., 2021, Anatomical details of Aetosauria (Archosauria:Pseudosuchia) as revealed by an articulated posterior skeleton from the Upper Triassic Ischigualasto Formation, San Juan Province, Argentina: *Ameghiniana*, v. 58(6), 464-484. doi: 10.5710/AMGH.05.09.2021.3426
- 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* article 24.3.a31, 26 pp. <https://palaeo-electronica.org/content/2021/3440-phytosaur-tooth-enamel> <https://doi.org/10.26879/1162>

2021 Abstracts

- Heckert, A.B., 2021, Geology 3264—an undergraduate course in paleontological laboratory techniques—what happens when those that do not prepare fossils teach preparation? *Association for Materials and Methods in Paleontology Meeting* (postponed due to Covid-19, presented virtually in 2021).
- Heckert, A.B., Pugh, I., Shamsuddin, A., Crothers, J. Meyer, J, Rose, L., Lauer, B., Lauer, R., Nesbitt, S., Stocker, M., Preliminary taphonomic assessment of the Homestead Site, a new Revueltian (Upper Triassic: mid-late Norian) microvertebrate assemblage from east-central New Mexico: Reconstructing an assemblage from incomplete data. *The Society of Vertebrate Paleontology Virtual Conference Meeting Program*, p.135.
- Pugh, I., and Heckert, A.B., 2021, Multiple supernumerary carinae in Revueltian (Triassic:mid-late Norian) phytosaur teeth from the Bull Canyon Formation of east-central New Mexico, U.S.A., *The Society of Vertebrate Paleontology Virtual Conference Meeting Program*, p. 213.

2020 Papers

- Wynd, B.M., Nesbitt, S.J., Stocker, M.R., and Heckert, A.B. 2020. A detailed description of *Rugarhynchos sixmilensis*, gen. et comb. nov. (Archosauriformes, Proterochampsia), and cranial convergence in snout elongation across stem and crown archosaurs. *Journal of Vertebrate Paleontology*: e1748042. <https://doi.org/10.1080/02724634.2019.1748042>

2020 Abstracts

- Heckert, A.B., Carrano, M.T., Ore, Z., Howell, L.S., Schneider, K.E. 2020, Implications of the distribution of disease and incidence of injury in non-avian Mesozoic dinosaurs. *Society of Vertebrate Paleontology Programs* p. 169 of pdf.

- Jasinski, S.E., Heckert, A.B., Lichtig, A.J., Sailer, C., Dodson, P. 2020, A rare plastomenid turtle (Testudines:Plastomenidae) from the end of the Cretaceous in North Dakota and survivorship of plastomenids across the Cretaceous-Paleogene boundary. *Society of Vertebrate Paleontology Programs* p. 190 of pdf.
- Sailer, C.A., and Heckert, A.B., 2020 Restoring Outreach, Display and Research Value to a specimen of *Triceratops* from the Uppermost Cretaceous Hell Creek Formation of North Dakota through instruction in preparation and conservation. *Society of Vertebrate Paleontology Programs* p. 288 of pdf.
- Sanchez, I., Heckert, A.B., Brand, N.A., Foster, J.R., Hunt-Foster, R.K., and Eberle, J.J., 2020, Taphonomy of Vertebrate Microsites in the Upper Cretaceous (late Campanian–early Maastrichtian) Williams Fork Formation of northwestern Colorado. *Society of Vertebrate Paleontology Programs*, pp. 290-291 of pdf.

The following were accepted for the 2020 meetings of the Geological Society of America (Joint southeastern-northeastern sections, SENEGSA) and Association of Materials and Methods in Paleontology (AMMP) meetings, but not presented due to cancellations associated with Covid-19.

- Heckert, A.B., Howell, L.S., Ore, Z.A., 2020, The paleopathological record of dinosaurs: The distribution of disease and incidence of injury throughout the Mesozoic. *Geological Society of America Abstracts with Programs*. Vol. 52, No. 2. postponed due to Covid-19, but online at: doi: 10.1130/abs/2020SE-344594
- Sanchez, I. Heckert, A.B., Foster, J.R., Brand, N., Hunt-Foster, R., 2020, Geology and microvertebrate paleontology of the J&M Site (Upper Cretaceous: ?Campanian), Williams Fork Formation, northwestern Colorado. *Geological Society of America Abstracts with Programs*. Vol. 52, No. 2, postponed due to Covid-19, but online at: doi: 10.1130/abs/2020SE-344181,
- Heckert, A.B., Geology 3264—an undergraduate course is paleontological laboratory techniques—what happens when those that do not prepare fossils teach preparation? *Association for Materials and Methods in Paleontology meeting* (postponed due to Covid-19, but will present in 2021).
- Eads, M.S., and Heckert, A.B., 2020, Breaking the Mold: Evaluating the Resource Efficiency of Physical and Digital Fossil Replication Methods. postponed due to Covid-19. *Association for Materials and Methods in Paleontology meeting* (canceled due to Covid-19),
- Sailer, CA., Perkinson, S.C., and Heckert, 2020, New Life in Old Bones: What Can Be Learned From a “Lost” Specimen? *Association for Materials and Methods in Paleontology meeting* (postponed due to Covid-19)

2020 Miscellaneous Contribution

- Heckert, A.B., 2020, The Fred Webb Jr. Outdoor Geology Laboratory. in Smith, April C., and Sarah J. Carrier, eds. *Thirty Great North Carolina Science Adventures: From Underground Wonderlands to Islands in the Sky and Everything in Between*. A Southern Gateways Guide. Chapel Hill, NC: University of North Carolina Press, 2020.

2019 Papers

- Hoffman, D.F.K., Heckert, A. B., and Zanno, L. E., 2019, Disparate growth strategies within Aetosauria: Novel histologic data from the aetosaur *Coahomasuchus chathamensis*: *The Anatomical Record*, v. 302, p. 1504-1515. <https://doi.org/10.1002/ar.24019> Online version of record published in 2018. *Figure 4b used for the cover of that issue of The Anatomical Record.*

2019 Abstracts

- Heckert, A.B., 2019, Finding Fossils on Friday: Using a “guild system” to develop a peer-trained undergraduate research group at Appalachian State University; *Geological Society of America Abstracts with Programs*, v. 51(5); <https://gsa.confex.com/gsa/2019AM/webprogram/Paper338726.html> doi: 10.1130/abs/2019AM-338726
- Heckert, A.B., Hoffman, D.F.K., Nesbitt, S.J., Stocker, M.R., Zimmer, B.W., and Schneider, V.P., 2019, A new short-faced archosauriform from the Upper Triassic (Adamanian:Norian) *Placerias*/Downs quarry complex, Apache County, Arizona, expands the morphospace occupation of Triassic archosauriforms: *Geological Society of America Abstracts with Programs*, v. 51(5),doi: 10.1130/abs/2019AM-339845; <https://gsa.confex.com/gsa/2019AM/webprogram/Paper339845.html>

- Hites, W.T., Heckert, A.B., King, L., and Weil, A., 2019, A preliminary analysis of the Mogan site, a new Late Jurassic vertebrate microfossil site in the Morrison Formation in northeastern Wyoming. *Geological Society of America Abstracts with Programs*. Vol. 51(3), doi: 10.1130/abs/2019SE-327144
- Klyce, A.M., Toran, M.L., and Heckert, A.B., 2019, Strengthening earth science education and outreach programs through teacher and student preparation with continuous support through Appalachian State University, *Geological Society of America Abstracts with Programs*, v. 51(3), doi: 10.1130/abs/2019SE-327222
- Sanchez, I., Heckert, A.B., Foster, J.R., and Brand, N., 2019, Shells, sharks and storms: Combining fossil and sedimentary records to describe an Upper Cretaceous near-marine fossil assemblage from northwest Colorado. *Geological Society of America Abstracts with Programs*, v. 51(3), doi: 10.1130/abs/2019SE-327222
- Toran, M.L., Klyce, A.M., Yokeley, B., Heckert, A.B., 2019, The Geobago: How we turned an old RV into a mobile classroom to maximize our outreach potential. *Geological Society of America Abstracts with Programs*, v. 51(3), doi: 10.1130/abs/2019SE-326679

2018 Papers

- Avrahami, H. M., Gates, T. A., Heckert, A. B., Makovicky, P. J., and Zanno, L. E., 2018, A new microvertebrate assemblage from the Mussentuchit Member, Cedar Mountain Formation: insights into the paleobiodiversity and paleobiogeography of early Late Cretaceous ecosystems in western North America: *PeerJ*, v. 6, p. e5883. <https://doi.org/10.7717/peerj.5883>
- Hoffman, D. K., Heckert, A.B., and Zanno, L.E., 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 and a phylogenetic analysis of Aetosauria. *Peer J*. 6:e4368 <https://doi.org/10.7717/peerj.4368>

2018 Field Guide Contribution

- Heckert, A.B., 2018, The Fred Webb Jr Outdoor Geology Laboratory at Appalachian State University, in *Old Wine in New Bottles: Carolina Geological Society Guidebook 79*, Stewart, K., and Wooten, R., eds., pp. 65-68.

2018 Abstracts

- Bramblett, J.L., Gaudin, T.J., Heckert, A. B., and Toran, M.L., 2018, Using polymer clays to make molds and casts of fossils for teaching and outreach, *Geological Society of America Abstracts with Programs*, v. 50(3). <https://gsa.confex.com/gsa/2018SE/meetingapp.cgi/Paper/312225>
- Brand, N. A., Heckert, A. B., Foster, J. R., and Hunt-Foster, R. K., 2018, On the banks of the Western Interior Seaway: Possible marine influence at the J&M site of the Williams Fork Formation (Upper Cretaceous, Campanian) in Colorado based on a newly described microvertebrate fossil assemblage: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 95.
- Deans, A. M., Lewis, C., Lucas, S. G., and Heckert, A. B., 2018, The paleoenvironment of the vertebrate fossil-bearing Allison Member of the Menefee Formation (Upper Cretaceous, early Campanian), eastern San Juan Basin, New Mexico: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 113.
- Deans, A. M., A. L. Hendrix, C. Lewis, S. G. Lucas, A. A. Harrison, and A. B. Heckert. 2018. New Late Cretaceous (early Campanian) microfossil assemblage from the Upper Cretaceous of New Mexico. *Geological Society of America Abstracts with Programs*, v. 50(3). <https://gsa.confex.com/gsa/2018SE/meetingapp.cgi/Paper/312971>
- Delgado, Y., Heckert, A. B., and Foster, J. R., 2018, Geochemical analyses and petrographic observations of Upper Triassic (Adamanian) coprolites from the Monitor Butte Formation, lower Chinle Group, near Wingate Mesa, southeastern Utah: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 114. DOI: 0.13140/RG.2.2.11789.87528
- Eads, M. S., and Heckert, A. B., 2018, Assessing the usable lifetime of tin and platinum-based silicone rubbers under high and low stress environments: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 120.
- Eads, M.S. and Heckert, A.B., 2018, Platinum and Tin-Based Silicone Rubber Mold Lifespan Under High and Low Stress Conditions. *Southeastern Association of Vertebrate Paleontology*. (Talk)
- Gonzalez, G., Heckert, A. B., and Zimmer, B. W., 2018, Fidelity of “traditional” vs “new tech” methods of fossil reproduction: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 135.

- Heckert, A. B., 2018, Finding Fossils on Fridays (FFF): Using an apprenticeship model to build a guild of undergraduate researchers and expand paleontological outreach at Appalachian State University: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 144.
- Hendrix, A. L., Deans, A. M., Harrison, A. A., Lewis, C., Lucas, S. G., and Heckert, A. B., 2018, Revisiting the Allison Member of the Menefee Formation (Upper Cretaceous: Early Campanian), San Juan Basin, New Mexico: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 145.
- King, L. R., and Heckert, A. B., 2018, A preliminary analysis of the Mogan site, a new Late Jurassic vertebrate microfossil site in the Morrison Formation in northeastern Wyoming: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 159.
- Lustri, L., and Heckert, A. B., 2018, Ecological and phylogenetic models to estimate resting and standard metabolic rates of extinct ectothermic Archosauria (Pseudosuchia: Aetosauria): 5th International Palaeontological Congress.
- Lustri, L., and Heckert, A. B., 2018, When ecology and phylogeny are at odds: Extrapolating resting and standard metabolic rates of aetosaurs (Archosauria: Aetosauria) from extant saurians: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 172.
- Wynd, B. M., Nesbitt, S. N., and Heckert, A. B., 2018, Skull elongation in stem archosaur cranial disparity: re-evaluating *Doswellia sixmilensis* (Archosauriformes: Proterochampsia) to examine phylogenetic distribution of morphological disparity: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2018, p. 245.

2017 Papers

- Fraser, N. C., Grimaldi, D. A., Axsmith, B. J., Heckert, A. B., Liutkus, C. M., Smith, D. & Dooley, Jr., A. C. (2017). The Solite quarry—A window into life by a Late Triassic lake margin In *Terrestrial Conservation Lagerstätten* (pp. 105-129). Edinburgh: Dunedin.
- Heckert, A. B., Fraser, N. C., and Schneider, V. P., 2017, A new species of *Coahomasuchus* (Archosauria:Aetosauria) from the Upper Triassic Pekin Formation, Deep River Basin, North Carolina: *Journal of Paleontology*, v. 91, p. 162-178. <http://dx.doi.org/10.1017/jpa.2016.130>**
- Voris, J. T., and Heckert, A. B., 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*, v. 37:e1351980.

2017 Abstracts

- Brand, N. A., Heckert, A. B., Foster, J. R., and Hunt-Foster, R. K., 2017, The Upper Cretaceous (Campanian-Maastrichtian) J&M site: The microvertebrate fossil assemblage of the Williams Fork Formation, N.W. Colorado, 10th Anniversary Meeting, *Southeastern Association of Vertebrate Paleontology*, Gray, TN, p. 12.
- Brand, N. A., A. B. Heckert, J. R. Foster, and R. K. Hunt-Foster. 2017. The microvertebrate fossil assemblage of the Upper Cretaceous (Campanian—Maastrichtian) Williams Fork Formation, Western Colorado. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:85.
- Celeskey, M. D., T. Donovan, A. B. Heckert, and L. H. Waterworth. 2017. From bare bones to Triassic Park: Creating a life reconstruction of the aetosaur *Gorgetosuchus* with a multidisciplinary team of scientists, artists, and students. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:95.
- Deans, A. M., A. L. Hendrix, C. Lewis, S. G. Lucas, A. A. Harrison, and A. B. Heckert. 2017. New Late Cretaceous (early Campanian) microfossil fish assemblage from the Upper Cretaceous Allison Member of the Menefee Formation of New Mexico. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:102.
- Delgado, Y., A. B. Heckert, and J. R. Foster. 2017. New occurrences of Upper Triassic (Adamanian—Revueltian?) fossils from the lower Chinle Group near Wingate Mesa, southeastern Utah: Expanding Utah's Late Triassic fossil record. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:103. DOI: 10.13140/RG.2.2.25211.64807
- Heckert, A. B., 2017, Finding fossils on Fridays—Developing a Paleontologist's Guild of Undergraduate Research in the Department of Geology at Appalachian State University, 10th Anniversary Meeting, *Southeastern Association of Vertebrate Paleontology*: Gray, TN, p. 20.
- Heckert, A. B., 2017, Synthesizing information through a dinosaur toy: An integrative assignment in a large non-majors' course: *Geological Society of America Abstracts with Programs*, v. 49(3): <https://gsa.confex.com/gsa/2017SE/webprogram/Paper290791.html>

- Heckert, A. B., Y. Delgado, D. K. Hoffman, and V. Schneider. 2017. Tiny skeleton of an archosaur from the Upper Triassic (Carnian) Pekin Formation of North Carolina, U.S.A.: A glimpse of a hatchling aetosaur? *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:127.
- Hendrix, A. L., Deans, A. M., Lewis, C., Lucas, S. G., Harrison, A. A., and Heckert, A. B., 2017, A microvertebrate assemblage from the Menefee Formation (Upper Cretaceous: early Campanian), San Juan Basin, New Mexico, 10th Anniversary Meeting, *Southeastern Association of Vertebrate Paleontology*, Gray, TN, p. 21.
- Hendrix, A. L., A. M. Deans, C. Lewis, S. G. Lucas, A. A. Harrison, and A. B. Heckert. 2017. A tetrapod microfossil assemblage from the Allison Member of the Menefee Formation (Upper Cretaceous: Early Campanian) of New Mexico. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:128.
- Hoffman, D. K., A. B. Heckert, Y. Delgado, and L. E. Zanno. 2017. Dermal armor and limb bone histology of the aetosaur *Coahomasuchus* (Archosauria: Stagonolepididae) from the Upper Triassic Pekin Formation, Deep River Basin, North Carolina. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:130.
- Nesbitt, S. N., M. R. Stocker, M. Ezcurra, N. C. Fraser, A. B. Heckert, A. Marsh, W. Parker, B. Mueller, and A. C. Pritchard. 2017. The 'strange reptiles' of the Triassic: the morphology, ecology, and taxonomic diversity of the clade Allokotosauria illuminated by the discovery of an early diverging member. *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book* 2017:168-169.

2016 Monograph

- Lucas, S. G., Rinehart, L. F., Heckert, A. B., Hunt, A. P., and Spielmann, J. A., 2016, Rotten Hill: A Late Triassic bonebed in the Texas Panhandle, USA: *New Mexico Museum of Natural History and Science Bulletin*, v. 72, p. 1-97.

2016 Abstracts

- Avrahami, H. M., Humphrey, J. S., Heckert, A. B., Gates, T., Makovicky, P. J., and Zanno, L. E., 2016, The early Late Cretaceous paleofaunal vertebrate assemblage of the Cliffs of Insanity microsite in the Mussentuchit Member of the Cedar Mountain Formation, Utah: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2016, p. 90.
- Heckert, A. B., Nesbitt, S. N., Schneider, V. P., Stocker, M. R., and Hoffman, D. K., 2016, A new, short-faced archosauriform (?Crocodylomorpha) from the Upper Triassic *Placerias/Downs'* quarry complex, east-central Arizona: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2016, p. 151.
- Hoffman, D. K., Heckert, A. B., Schneider, V. P., Fraser, N. C., and Zanno, L. E., 2016, X-ray computed tomographic reconstruction of the aetosaur *Coahomasuchus* (Archosauria, Stagonolepididae) and re-analysis of its phylogenetic relationships: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2016, p. 154-155.
- Voris, J. T., Heckert, A. B., and Martin, L., 2016, Ontogenetic heterodonty in *Reticulodus synergus* (Hybodontidae, Acrodontinae), a freshwater shark from the Upper Triassic of the American Southwest: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2016, p. 245.

2015 Papers

- Heckert, A.B., Schneider, V.P., Fraser, N.C., and Webb, R.A., 2015, A new aetosaur (Archosauria, Stagonolepididae) from the Upper Triassic Pekin Formation, Deep River Basin, North Carolina, U.S.A. and its implications for early aetosaur evolution: *Journal of Vertebrate Paleontology*, v. 35(1), e88131, 13 p.**
- Heckert, A.B., and Lucas, S.G., 2015, Triassic vertebrate paleontology in New Mexico: *New Mexico Museum of Natural History and Science Bulletin* v. 68, p. 77-96.
- Heckert, A. B., Chure, D. J., Voris, J. T., Harrison, A. A., and Thomson, T. J., 2015, Stratigraphy, correlation, and age of the Moenkopi Formation in the vicinity of Dinosaur National Monument, eastern Uinta Basin, Utah and Colorado, USA, in Vanden Berg, M. D., Resselar, R., and Birgenheier, L. P., eds., *The Uinta Basin: Salt Lake City, Utah Geological Association Guidebook* 45, p. 1-12.
- Lucas, S.G., and Heckert, A.B., 2015, Jurassic vertebrate paleontology in New Mexico: *New Mexico Museum of Natural History and Science Bulletin* v. 68, p. 97-104.
- Taborda, J.R.A., Heckert, A.B. and Desojo, J.B., 2015, Intraspecific variation in *Aetosauroides scagliai* Casamiquela (Archosauria: Aetosauria) from the Upper Triassic of Argentina and Brazil: Evidence of sexual dimorphism?: *Ameghiniana* 52(2), p. 173-187.

2015 Abstracts

- Avrahami, H. M., Heckert, A. B., and Martin, L., 2015, Comparison of nested sieves, traditional screen boxes, and paint

- sieves for the recovery of microvertebrate fossils: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 81-82.
- Avrahami, H. M., Heckert, A. B., and Martin, L., 2015, Comparison of nested sieves, traditional screen boxes, and paint sieves for the recovery of microvertebrate fossils: Association of Materials and Methods, Raleigh, NC. (April 17, 2015).
- Dooley, A.C., Jr, Heckert, A.B., Fraser, N.C., Byrd, C.J., Vodden, R., and Beard, J., 2015, Salvage paleontology at the Virginia Solite Quarry (Upper Triassic)—Rescuing a Lagerstätte. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 24.
<https://gsa.confex.com/gsa/2015SE/webprogram/Paper252397.html>
- Heckert, A. B., 2015, Variation in the ornamentation pattern of aetosaur (Archosauria:Suchia) osteoderms: taxonomic and paleobiological implications: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 141.
- Heckert, A.B., 2015, The geology of “my hometown,” an e-portfolio assignment focusing on the relevance of historical geology. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 11.
<https://gsa.confex.com/gsa/2015SE/webprogram/Paper252912.html>
- Heckert, A.B., 2015, Tiny Triassic fossils—where the weird things are, or what can we learn about the “Dawn of the Dinosaurs” from archosauromorph microvertebrates from the Upper Triassic of North America? *Paleofest*, Burpee Museum of Natural History, Rockford, Illinois (no real proceedings published yet).
- Hoffman, D. K., Heckert, A. B., Zanno, L. E., and Herzog, L., 2015, Techniques in fossil replication: A comparison of molding and casting versus 3D scanning and printing from the viewpoint of an undergraduate institution: Association of Materials and Methods, Raleigh, NC. (April 16, 2015).
- Hoffman, D.K., Miller-Camp, J. A., and Heckert, A. B., 2015, Differences in phytosaur (Diapsida:Archosauriformes) tooth enamel microstructure between basins and possible ecological implications: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 144.
- Hoffman, D.K., Miller-Camp, J.A., and Heckert, A.B., 2015, Variation in phytosaur (Diapsida:Archosauriformes) tooth enamel microstructure and possible implications for phytosaur ecology. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 76. *Won honorable mention for best student poster.*
<https://gsa.confex.com/gsa/2015SE/webprogram/Paper252928.html>
- King, L. R., Heckert, A. B., and Avrahami, H. M., 2015, A preliminary analysis of a potentially new Late Cretaceous vertebrate microfossil site in the Lance (Creek) Formation at the Bolan Ranch, Niobrara County, Wyoming: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 155.
- Martínez, R. N., and Heckert, A. B., 2015, Novel morphological insights from an incomplete, articulated skeleton of a primitive aetosaur (Archosauria, Pseudosuchia) from the Upper Triassic Ischigualasto Formation, San Juan province, Argentina: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 176.
- Straka, K.M., Harrison, A.A., Vaughn, C.M., Voris, J.T., Krzyzanowski, S.E., and Heckert, A.B., 2015, Late Triassic (Adamanian) vertebrate microfossil assemblage from the Blue Mesa Member of Arizona reveals coprolites with scale, bone, and tooth fragments. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 20. <https://gsa.confex.com/gsa/2015SE/webprogram/Paper252973.html>
- Vaughn, M. C., Foster, J. R., Nydam, R. L., Heckert, A. B., and Hunt-Foster, R. K., 2015, Newly reported lissamphibian and squamate taxa from the Williams Fork Formation (Upper Cretaceous; Campanian), Colorado: Closing the Gap: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 230.
- Vaughn, M.C., Straka, K.M., Hoffman, D.K, Voris, J.T., Avrahami H.M., Schneider, V., and Heckert, A.B., 2015, Microvertebrate assemblage of the Upper Triassic (Adamanian) Downs’ quarry, St. Johns, Arizona. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 76.
<https://gsa.confex.com/gsa/2015SE/webprogram/Paper253162.html>
- Voris, J. T., Heckert, A. B., Vaughn, M. C., Hoffman, D. K., Avrahami, H. M., Straka, K. M., and Schneider, V., 2015, The microvertebrate assemblage of the Downs' quarry, Upper Triassic (Adamanian), St. Johns, Arizona: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2015, p. 232-233.
- Voris, J.T., Heckert, A.B., and Schneider, V., 2015, Morphometric analysis of teeth of *Crosbysaurus harrisae* (Reptilia:Archosauriformes) from the Upper Triassic Chinle Group, southwestern U.S.A. *Geological Society of America Abstracts with Programs*, v. 47(2), p. 76.
<https://gsa.confex.com/gsa/2015SE/webprogram/Paper253048.html>

2014 Papers

- Liutkus-Pierce, C. M., Fraser, N. C., and Heckert, A. B., 2014, Stratigraphy, sedimentology, and paleontology of the Upper

Triassic Solite quarry, North Carolina and Virginia: *Geological Society of America Field Guide*, v. 35, p. 255-269.
Thomson, T. J., Heckert, A. B., and Chure, D. J., 2014, First report on reptile tracks from the Moenkopi Formation (Lower-?Middle Triassic) in Dinosaur National Monument: *New Mexico Museum of Natural History and Science Bulletin*, v. 62, p. 129-134.
http://libres.uncg.edu/ir/asu/f/Heckert_A_2014_First%20report%20on%20reptile%20tracks.pdf

2014 Abstracts

- Fraser, N. C., Heckert, A. B., Liutkus-Pierce, C. M., Grimaldi, D. A., Smith, D. M., and Axsmith, B. J., 2014, Triassic insect remains from the Virginia Solite quarry—How far did they sink?: *Geological Society of America Abstracts with Programs*, v. 46, p. 21. <https://gsa.confex.com/gsa/2014SE/webprogram/Paper236868.html>
- Heckert, A.B., 2014, What do micro- and small vertebrates from Laurasia tell us about Triassic nonmarine ecosystems? Insights from the Upper Triassic of North America. *4th International Palaeontological Congress* abstract book, p. 534.
- Heckert, A.B., 2014, Promoting paleontology on Precambrian basement: Finding Fossils on Fridays and other programs in the Department of Geology at Appalachian State University. *10th North American Paleontological Convention* abstract book, pp. 96-97.
- Heckert, A. B., Schneider, V. P., Sload, E. J., Olsen, P. E., and Huber, P., 2014, Tiny Triassic fish from the Newark Supergroup: What do small sharks and little lungfish say about paleoenvironments of North America's Triassic rift basins?: *Geological Society of America Abstracts with Programs*, v. 46, p. 21. <https://gsa.confex.com/gsa/2014SE/webprogram/Paper237073.html>
- Hoffman, D. K., Miller-Camp, J. A., and Heckert, A. B., 2014, Phylogenetic signals in phytosaur tooth enamel microstructure and implications for Newark Supergroup phytosaurs: *Geological Society of America Abstracts with Programs*, v. 46, p. 21. <https://gsa.confex.com/gsa/2014SE/webprogram/Paper237098.html>
- Taborda, J.R.A, Heckert, A.B., and Desojo, J.B., 2014, Intraspecific variation in *Aetosauroides scagliai* Casamiquela (Archosauria: aetosauria) from the Upper Triassic of Argentina and Brazil: Evidence of sexual dimorphism. *4th International Palaeontological Congress* abstract book, p. 812.

2013 Papers

- Desojo, J.B., Heckert, A.B., Martz, J.W., Parker, W.G., Schoch, R.R., Small, B.J., and Sulej, T., 2013, Aetosauria: a clade of armoured pseudosuchians from the Late Triassic continental beds: *Geological Society of London Special Publications*, v. 379, p. 203-239. <https://doi.org/10.1144/SP379.17>**
- 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>
- Heckert, A. B., H. S. Jenkins, A. P. Hunt, and S. G. Lucas. 2013. Mandibles of juvenile phytosaurs (Archosauria:Crurrotarsi) from the Upper Triassic Chinle Group of Texas and New Mexico, USA. *New Mexico Museum of Natural History and Science Bulletin* v. 61, p. 228-236. <http://libres.uncg.edu/ir/asu/listing.aspx?styp=ti&id=15608>
- Spielmann, J. A., S. G. Lucas, A. B. Heckert, and S. E. Krzyzanowski. 2013. *Trilophosaurus* (Archosauromorpha: Trilophosauridae) postcrania from the Upper Triassic Blue Mesa Member of the Petrified Forest Formation (Carnian: Adamanian), Arizona, USA. *New Mexico Museum of Natural History and Science Bulletin* v. 61, p. 567-572.
<http://libres.uncg.edu/ir/asu/listing.aspx?styp=ti&id=15609>

2013 Abstracts

- Bagley, C.T., Heckert, A.B., and Marshall, S.T., 2013, Using electrical resistivity surveys to determine the stratigraphic position of the Upper Triassic *Placerias* quarry, east-central Arizona, *Geological Society of America Abstracts with Programs*, v. 45(7), p. 610.
<https://gsa.confex.com/gsa/2013AM/webprogram/Paper226603.html>
- Harrison, A. A., Heckert, A. B., and Krzyzanowski, S. E., 2013, A microvertebrate assemblage from the Upper Triassic Blue Mesa Member, Petrified Forest Formation (Adamanian) of the Blue Hills in east-central Arizona: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2013, p. 139.
- Heckert, A. B., Schneider, V. P., Fraser, N. C., and Webb, R., 2013, The aetosaur (Archosauria:Suchia) fauna of the Upper Triassic Pekin Formation (Newark Supergroup), Deep River Basin, North Carolina, USA, and its implications for the phylogeny and biostratigraphy of aetosaurs: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2013, p. 141.

- Heckert, A. B., Thomson, T.J., and Chure, D.J., 2013, Traces and tracks from the Middle Triassic Moenkopi Formation of Dinosaur National Monument, Utah: *Geological Society of America Abstracts with Programs*, v. 45(7), p. 371. <https://gsa.confex.com/gsa/2013AM/webprogram/Paper229208.html>
- Howell, L. S., and Heckert, A. B., 2013, A new database of dinosaurian paleopathology: *Journal of Vertebrate Paleontology, Program and Abstracts*, 2013, p. 145.

2012 Papers

- Heckert, A.B., Lucas, S.G., and Spielmann, J.A., 2012, A new species of the enigmatic archosauromorph *Doswellia* from the Upper Triassic Bluewater Creek Formation, New Mexico, USA: *Palaeontology*, v. 55, p. 1333-1348. <http://dx.doi.org/10.1111/j.1475-4983.2012.01200.x>
- Heckert, A.B., Mitchell, J.S., Schneider, V.P., and Olsen, P.E., 2012, Diverse new microvertebrate assemblage from the Upper Triassic Cumnock Formation, Sanford subbasin, North Carolina, USA: *Journal of Paleontology*, v. 86(2), p. 368-390. SEM image featured on the cover of this issue. <http://dx.doi.org/10.1666/11-098.1>**
- Heckert, A.B., Sload, E.J., Lucas, S.G., and Schumacher, B.A., 2012, Triassic fossils found above "Jurassic" strata necessitate the revision of lower Mesozoic stratigraphy in Picket Wire Canyonlands, south-central Colorado: *Rocky Mountain Geology*, v. 47, p. 37-53.
- Lucas, S.G., Tanner, L.H., Kozur, H.W., Weems, R.E., and Heckert, A.B., 2012, The Late Triassic timescale: Age and correlation of the Carnian-Norian boundary: *Earth Science Reviews*, v. 114, p. 1-18.**

2012 Note

- Koenig, A. E., Lucas, S. G., Neymark, L. A., Heckert, A. B., Sullivan, R. M., Jasinski, S. E. & Fowler, D. W. 2012. Direct U-Pb dating of Cretaceous and Paleocene dinosaur bones, San Juan Basin, New Mexico. *Geology*, **40**, e262. 10.1130/G32154C.1. <http://geology.gsapubs.org/content/40/4/307.abstract>

2012 Abstracts

- Carmichael, S. K., Heckert, A. B., Cowan, E. A., Hageman, S. J., Liutkus-Pierce, C. M., Wilson, C. G., and Zimmer, B. W., 2012, Educational field trip stops in the Blue Ridge and surrounding areas utilized by the Department of Geology at Appalachian State University: *Geological Society of America Abstracts with Programs*, v. 44(7), p. 591. https://gsa.confex.com/gsa/2012AM/finalprogram/abstract_212767.htm
- Estridge, K., Howell, L.S., and Heckert, A.B., 2012, When were what dinosaurs sick? A review of the record of dinosaur paleopathology. *Geological Society of America Abstracts with Programs*, v. 44(4), p. 1. http://gsa.confex.com/gsa/2012SE/finalprogram/abstract_202335.htm
- Harrison, A. A., and Heckert, A. B., 2012, Quantitative description of Upper Cretaceous elasmobranchs using digital three-dimensional microscopy: *Geological Society of America Abstracts with Programs*, v. 44(7), p. 245. https://gsa.confex.com/gsa/2012AM/finalprogram/abstract_210911.htm
- Heckert, A. B., Schneider, V. P., Fraser, N. C., and Olsen, P. E., 2012, Recent advances in understanding the Late Triassic vertebrate fauna of the Deep River Basin (Newark Supergroup: Chatham Group) North Carolina: *Geological Society of America Abstracts with Programs*, v. 44(7), p. 362. https://gsa.confex.com/gsa/2012AM/finalprogram/abstract_210948.htm
- Heckert, A. B., Schneider, V. P., and Fraser, N. C., 2012, Two new aetosaurs (Reptilia:Archosauria) from the Upper Triassic Pekin Formation (Deep River Basin: Newark Supergroup) of North Carolina and the phylogeny and distribution of aetosaurs: *Geological Society of America Abstracts with Programs*, v. 44(7), p. 233. https://gsa.confex.com/gsa/2012AM/finalprogram/abstract_212817.htm
- Heckert, A. B., Schneider, V. P., Mitchell, J. S., Schneider, V., Sload, E. J., and Olsen, P. E., 2012, The current knowledge of Triassic vertebrate assemblages of the Deep River basin (Newark Supergroup: Chatham Group), North Carolina, based on recent discoveries: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book*, v. 2012, p. 109.
- Heckert, A. B., Schneider, V., Mitchell, J. S., Sload, E.J., and Olsen, P.E., 2012, Reconstructing the Triassic vertebrate fauna of the Deep River Basin (Newark Supergroup: Chatham Group) North Carolina, based on new discoveries: *Geological Society of America Abstracts with Programs*, v. 44(4), p. 67. http://gsa.confex.com/gsa/2012SE/finalprogram/abstract_202166.htm
- Heckert, A. B., Schneider, V. P., Mitchell, J. S., and Sload, E. J., 2012, Under the size limit—possible dwarf lungfish and hybodont chondrichthyans from the Newark Supergroup (Upper Triassic) of North Carolina, in *5th Annual Meeting of the Southeastern Association of Vertebrate Paleontology*, Boone, p. 10-11.
- Howell, L. S., Estridge, K., and Heckert, A. B., 2012, A preliminary study of dinosaur illness and injury through the

- Mesozoic: a possible case of North American bias?: *Geological Society of America Abstracts with Programs*, v. 44(7), p. 245. https://gsa.confex.com/gsa/2012AM/finalprogram/abstract_210543.htm
- Howell, L. S., Estridge, K., and Heckert, A. B., 2012, A preliminary study of dinosaur illness and injury, in *5th Annual Meeting of the Southeastern Association of Vertebrate Paleontology*, Boone, p. 11-12.
- Liutkus, C.M., Beard, J.S., Deocampo, D., Heckert, A.B., Fraser, N.C., and Ragland, P.C., 2012, Sedimentology and geochemistry as a key to the taphonomy of the Upper Triassic Virginia Solite Quarry Lagerstätte (Dan River Basin: Newark Supergroup). *Geological Society of America Abstracts with Programs*, v. 44(4), p. 62. http://gsa.confex.com/gsa/2012SE/finalprogram/abstract_202451.htm
- Liutkus, C.M., Beard, J.S., Deocampo, D., Heckert, A.B., Fraser, N.C., and Ragland, P.C., 2012, Sedimentology and geochemistry of the Virginia Solite Quarry Danville/Dan River Basin (Newark Supergroup): A new “shallow lake” interpretation for fossil-bearing, laminated, lacustrine sediments. *Geological Society of America Abstracts with Programs* v. 44(2), p. 41. http://gsa.confex.com/gsa/2012NE/finalprogram/abstract_200028.htm
- Lucas, S. G., Heckert, A. B., and Spielmann, J. A., 2012, New species of the enigmatic archosauromorph *Doswellia* from the Upper Triassic Bluewater Creek Formation, New Mexico, USA: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2012, p. 131.
- Schneider, V. P., Heckert, A. B., and Fraser, N. C., 2012, The aetosaur (Reptilia:Archosauria) record of the Deep River Basin (Newark Supergroup: Upper Triassic): A synopsis of history and current research, in *5th Annual Meeting of the Southeastern Association of Vertebrate Paleontology*, Boone, p. 17.
- Sload, E. J., Heckert, A. B., and Schneider, V. P., 2012, Measuring microvertebrates: A case study using a rare record of a hybodont shark from the Upper Triassic of North Carolina: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2012, p. 173.
- Spielmann, J. A., Lucas, S. G., and Heckert, A. B., 2012, A new armored archosauromorph from the Late Triassic (Otischalkian) Colorado City Formation of the Chinle Group, West Texas: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2012, p. 177.

2011 Papers

- Foster, J. R., and Heckert, A. B., 2011, Ichthyoliths and other microvertebrate remains from the Morrison Formation (Upper Jurassic) of northeastern Wyoming: A screen-washed sample indicates a significant aquatic component to the fauna: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 305, p. 264-279. <http://dx.doi.org/10.1016/j.palaeo.2011.03.007>,
- Lucas, S. G., and Heckert, A. B., 2011, Late Triassic aetosaurs as the trackmaker of the tetrapod footprint ichnotaxon *Brachychirotherium*: *Ichnos*, v. 18, p. 197-208. <http://dx.doi.org/10.1080/10420940.2011.632456>
- Lucas, S. G., Tanner, L. H., Donohoo-Hurley, L. L., Geissman, J. W., Kozur, H., Heckert, A. B., and Weems, R. E., 2011, Position of the Triassic-Jurassic boundary and timing of the end-Triassic extinctions on land: Data from the Moenave Formation on the southern Colorado Plateau, USA: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 302, p. 194-205. <http://dx.doi.org/10.1016/j.palaeo.2011.01.009>,

2011 Abstracts

- Bartholomew-Staples, A.D., Heckert, A.B., and Carmichael, S.K., 2011, A virtual boulder field inside the classroom—The interactive rock garden at Appalachian State University. *Geological Society of America Abstracts with Programs*. SE GSA. http://gsa.confex.com/gsa/2011SE/finalprogram/abstract_185248.htm
- Heckert, A.B., 2011, A boulder field adjacent to the classroom—the Fred Webb Jr. outdoor geology laboratory at Appalachian State University. *Geological Society of America Abstracts with Programs*. SE GSA. http://gsa.confex.com/gsa/2011SE/finalprogram/abstract_185248.htm
- Heckert, A. B., Mitchell, J. S., Schneider, V., Olsen, P. E., and Sload, E.J., 2011, Microvertebrates dramatically increase the diversity of the Cummock Formation (Newark Supergroup: Chatham Group) in the Sanford sub-basin, North Carolina: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2011, p. 124.
- Lucas, S. G., Heckert, A. B., and Lockley, M.G., 2011, The trackmaker of the Late Triassic tetrapod footprint taxon *Brachychirotherium* was an aetosaur: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2011, p. 147.
- Schneider, V., Heckert, A. B., and Fraser, N. C., 2011, Diversity of aetosaurs (Archosauria:Stagonolepididae) from the Upper Triassic Pekin Formation (Deep River Basin), North Carolina: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2011, p. 188.
- Sload, E.J., Heckert, A.B., Lucas, S.G., Schumacher, B.A., 2011, Triassic tetrapod fossils above “Jurassic” strata in

Picketwire Canyon, Southeastern Colorado, require major revision of lower Mesozoic stratigraphy across the southern High Plains. *Geological Society of America Abstracts with Programs*. SE GSA
http://gsa.confex.com/gsa/2011SE/finalprogram/abstract_185272.htm

Sload, E. J., Heckert, A. B., Schneider, V., and Lucas, S. G., 2011, Three dimensional digital microscopy of small- and microvertebrate fossils: *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book, v. 2011, p. 196.

2010 Papers

Heckert, A.B., Lucas, S.G., Rinehart, L.F., Celeskey, M.D., Spielmann, J.A., and Hunt, A.P., 2010, Articulated skeletons of the aetosaur *Typhothorax coccinarum* Cope (Archosauria:Stagonolepididae) from the Upper Triassic Bull Canyon Formation (Revueltian: early-mid Norian), eastern New Mexico, USA: *Journal of Vertebrate Paleontology*, v. 30, no. 3, 619-642. Featured article in May issue and freely available online: <http://dx.doi.org/10.1080/02724631003763524>

Lucas, S. G., Rinehart, L. F., Krainer, K., Spielmann, J. A., and Heckert, A. B., 2010, Taphonomy of the Lamy amphibian quarry: A Late Triassic bonebed in New Mexico, U.S.A.: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 298, p. 388-398. DOI: 10.1016/j.palaeo.2010.10.025

Mitchell, J. S., and 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>
or for .pdf: http://www.jpaleontologicaltechniques.org/pasta3/JPT%20N7/Pdf/JPT_n007_Jun.pdf

Mitchell, J. S., Heckert, A. B., and Sues, H.-D., 2010, Grooves to tubes: Evolution of the venom delivery system in a Late Triassic "reptile": *Naturwissenschaften*, v. 97, p. 1117-1121. DOI: 10.1007/s00114-010-0729-0

2010 Abstracts

Heckert, A.B., Biostratigraphic significance and redescription of the enigmatic vertebrate *Colognathus obscurus* from the Upper Triassic Chinle Group, Southwestern USA. *Journal of Vertebrate Paleontology*, SVP Program and Abstracts Book 2010, p. 103-104A.

Heckert, A. B., and Mitchell, J. S., Mesozoic microvertebrates as windows into tetrapod tooth development, in International Palaeontological Congress, London, p. 192
<http://www.ipc3.org/docs/ProgrammeAbstractsfull.pdf>

Heckert, A.B., Mitchell, J.S., and Schneider, V., East meets west and south comes north—How a single microvertebrate locality can revise Newark Supergroup diversity—the Moncure microvertebrate site, North Carolina. Southeastern Association of Vertebrate Paleontology, 3 June, 2010. (Unpublished proceedings)

2009 Monograph

Rinehart, L. F., Lucas, S. G., Heckert, A. B., Spielmann, J. A., and Celeskey, M. D., The paleobiology of *Coelophysys bauri* (Cope) from the Upper Triassic (Apachean) Whitaker quarry, New Mexico, with detailed analysis of a single quarry block: *New Mexico Museum of Natural History and Science Bulletin*, v. 45, 260 pages.

2009 Papers

Beatty, B.L., and Heckert, A.B., 2009, A large archosauriform tooth with multiple supernumerary carinae from the Upper Triassic of New Mexico (USA), with comments on carina development and anomalies in the Archosauria: *Historical Biology*, v. 21, p. 57-65.
<http://www.informaworld.com/smpp/content~content=a915318366~db=all~jumptype=rss>

Joyce, W.G., Lucas, S.G., Scheyer, T.M., Heckert, A.B., and Hunt, A.P., 2009, A thin-shelled reptile from the Late Triassic of North America and the origin of the turtle shell: *Proceedings of the Royal Society B*, v. 296, p. 507-513 (available online 10 October 2008).
<http://rspb.royalsocietypublishing.org/content/276/1656/507.full.pdf+html?sid=504de079-34b5-4313-b1e0-e7f1860e42f3>

Lucas, S.G., Sullivan, R.M., Cather, S.M., Jasinski, S.E., Fowler, D.W., Heckert, A.B., Spielmann, J.A., and Hunt, A.P., 2009, No definitive evidence of Paleocene dinosaurs in the San Juan Basin: *Palaeontologia Electronica*, v. 12, p. 10. http://www.palaeo-electronica.org/2009_2/199/index.html

Spielmann, J.A., Lucas, S.G., Heckert, A.B., Rinehart, L.F., and Richards, H.R., III, 2009, Redescription of *Spinosuchus caseanus* (Archosauromorpha:Trilophosauridae) from the Upper Triassic of North America:

2009 Abstracts

- Heckert, A.B., Schneider, V., Olsen, P.E., Mitchell, J.S., Vertebrate diversity of the Upper Triassic Chatham Group, Deep River Basin, central North Carolina: Southeastern Association of Vertebrate Paleontology, Martinsburg, VA, May 27-30. Available online at:
http://web.me.com/dooleyclan/SEAVP/SEAVP_files/Abstract%20book.pdf
- Heckert, A.B., Mitchell, J.S., Schneider, V., Olsen, P.E., Microvertebrate sampling greatly increases the vertebrate diversity of Upper Triassic Newark Supergroup, North Carolina, USA: 9th North American Paleontological Convention, 21-26, 2009, published in *Cincinnati Museum Center Scientific Contributions*, no. 3, p. 88.
<http://npsc2009.org/wp-content/uploads/2009/06/npsc-2009-abstracts-cinc-mus-ctr-sci-cont-3.pdf>
- Heckert, A.B., Lucas, S.G., Rinehart, L.F., Spielmann, J.A., and Celeskey, M., An articulated skeleton of the aetosaur *Typothorax coccinarum* Cope (Archosauria: Stagonolepididae) from the Upper Triassic Bull Canyon Formation (Revueltian: early-mid Norian), eastern New Mexico, USA: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book 2009*, p. 112-113A.
- Heckert, A.B., Lucas, S.G., Dickinson, W.R., and Mortensen, J.K., 2009, New ID-TIMS U-Pb ages for Chinle Group strata (Upper Triassic) in New Mexico and Arizona, correlation to the Newark Supergroup, and implications for the "long Norian": Geological Society of America Abstracts with Programs, v. 41, p. 123.** http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_162342.htm
- Lucas, S.G., Heckert, A.B., Rinehart, L.F., Spielmann, J.A., and Jasinski, S., Vertebrate fauna, stratigraphy and age of the Whitaker quarry (Ghost Ranch, New Mexico), the richest Upper Triassic dinosaur quarry in the world: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book 2009*, p. 137-138A.
- Lucas, S., Tanner, L., Geissman, J., Hurley, L., Kozur, H., Heckert, A., Kuerschner, W., and Weems, R., 2010, Timing of the End-Triassic Extinctions on Land: the Moenave Formation on the Southern Colorado Plateau, USA: *AGU Fall Meeting Abstracts*, v. 1, p. 0409.
- Mitchell, J.S., Heckert, A.B., Schneider, V., and Olsen, P.E., Evolutionary insights from preliminary statistical analysis of teeth of the venomous microvertebrate *Uatchitodon* (Archosauriformes) from the Upper Triassic (Sanford sub-basin, Cummock Formation) of North Carolina, USA: *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book 2009*, p. 149A.
- Norman, J.R., Heckert, A.B., Krzyzanowski, S.E., Rinehart, L.F., and Lucas, S.G., New microvertebrate faunal assemblage from the Upper Triassic Blue Mesa Member of the Petrified Forest Formation in the Blue Hills, east-central Arizona: *Geological Society of America Abstracts with Programs*, v. 41, p. 103.
http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_160031.htm
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Lateral line groove development as an indicator of terrestriality in metoposaurid amphibians *Journal of Vertebrate Paleontology, SVP Program and Abstracts Book 2009*, p. 171-172A.
- Rinehart, L. F., Lucas, S. G., and Heckert, A. B., Lateral line groove development as a measure of terrestriality in Late Triassic metoposaurid amphibians: *New Mexico Geology*, v. 31, no. 2, p. 47.
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Limb allometry and lateral line groove development indicates terrestrial-to-aquatic lifestyle transition in Metoposauridae (Amphibia: Temnospondyli): *Geological Society of America Abstracts with Programs*, v. 41, p. 263.
http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_160014.htm
- Schumacher, B.A., Heckert, A.B., and Lucas, S.G., Vertebrate fossil discoveries prompt major shift in Mesozoic stratigraphy of Picketwire Canyonlands, Comanche National Grassland, southeastern Colorado: *Geological Society of America Abstracts with Programs*, v. 41, p. 546.
http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_162834.htm
- Spielmann, J.A., Lucas, S.G., Heckert, A.B., Sullivan, R.M., and Jasinski, S., Land-vertebrate faunachrons, GIS and cladotaxonomy—towards a global Triassic tetrapod biochronology: *Geological Society of America Abstracts with Programs*, v. 41, p. 107.
http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_159455.htm

2008 Paper

- Heckert, A.B., Lucas, S.G., Rinehart, L.F., and Hunt, A.P., A new genus and species of sphenodontian from the Ghost Ranch *Coelophysis* quarry (Upper Triassic: Apachean), Rock Point Formation, New**

2008 Monograph

Spielmann, J.A., Lucas, S.G., Rinehart, L.F. & Heckert, A.B. 2008. The Late Triassic archosauromorph *Trilophosaurus*. *New Mexico Museum of Natural History and Science Bulletin*, 43: 177 pp.

2008 Note

Heckert, A.B., Comments on the proposed conservation of *Buettneria* Case, 1922 (Amphibia): *Bulletin of Zoological Nomenclature*, v. 65(4), p. 310-313.

2008 Abstracts

- Heckert, A.B., Schneider, V., Olsen, P.E., Mitchell, J.S., The Moncure microvertebrate fauna (Upper Triassic: Norian), Colon cross-structure/Sanford Sub-basin, North Carolina: *Geological Society of America Abstracts with Programs*, v. 40(4), p. 55. http://gsa.confex.com/gsa/2008SE/finalprogram/abstract_136659.htm
- Heckert, A.B., Mitchell, J.S., Schneider, V. and Olsen, P.E. 2008. Exceptional taxonomic diversity from a single site: The Upper Triassic Moncure microvertebrate locality, Cumnock Formation, Sanford sub-basin, North Carolina, USA. *Journal of Vertebrate Paleontology*, v. 28(supplement to no. 3): 90A.
- Lewis, C.L., Heckert, A.B. and Lucas, S.G. A mixed marine/non-marine and terrestrial microvertebrate assemblage from the Late Cretaceous (late Santonian-early Campanian) Menefee Formation of New Mexico: Fauna, biostratigraphy, and paleoecology. *Journal of Vertebrate Paleontology*, v, 28(supplement to no. 3): 105A.
- Mitchell, J.S., Heckert, A.B., and Schneider, V., Heavy liquid separation techniques for microvertebrate fossils from a Newark Supergroup deposit and implications for other sites *Geological Society of America Abstracts with Programs* v. 40(4), p. 60. http://gsa.confex.com/gsa/2008SE/finalprogram/abstract_137217.htm
- Mitchell, J.S., Heckert, A.B. and Schneider, V. 2008. Quantifying the benefits of a heavy liquid (sodium polytungstate) separation technique on microvertebrate fossil recovery. *Journal of Vertebrate Paleontology*, v. 28(supplement to no. 3): 116-117A.
- Rinehart, L.F., Heckert, A.B., Lucas, S.G. and Celeskey, M. 2008. Growth, allometry, and age/size distribution of the Late Triassic theropod dinosaur *Coelophysis bauri*: Preliminary results. *Journal of Vertebrate Paleontology*, v. 28(supplement to no. 3): 132A.
- Viner, T., Heckert, A.B. and Carrano, M. 2008. Multiple pathological elements in a phytosaur (Diapsida: Archosauria) skeleton from the Upper Triassic of Arizona, USA: Evidence of extreme osteomyelitis. *Journal of Vertebrate Paleontology*, v. 28(supplement to no. 3): 156A.
- Watts, A. and Heckert, A.B. 2008. Reevaluation of small vertebrate fossils from the Upper Triassic Chinle Group, southeastern Utah. *Journal of Vertebrate Paleontology*, v. 28(supplement to no. 3): 158A.

2007 Papers

- Heckert, A. B., Ivanov, A., and Lucas, S. G., Dental morphology of the hybodontoid shark *Lonchidion humblei* Murry from the Upper Triassic Chinle Group: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 45-48.
- Heckert, A. B., Spielmann, J. A., Lucas, S. G., and Hunt, A. P., Biostratigraphic utility of the Upper Triassic aetosaur *Tecovasuchus* (Archosauria: Stagonolepididae), an index taxon of St. Johnsian (Adamanian: Late Carnian) time: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 51-57.
- Lucas, S. G., Heckert, A. B., and Rinehart, L. F., A giant skull, ontogenetic variation and taxonomic validity of the Late Triassic phytosaur *Parasuchus*: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 219-221.
- Lucas, S. G., Hunt, A. P., Heckert, A. B., and Spielmann, J. A., Global Triassic tetrapod biostratigraphy and biochronology: 2007 status: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 229-240.
- Lucas, S. G., Spielmann, J. A., Heckert, A. B., and Hunt, A. P., Topotypes of *Tyothorax coccinarum*, a Late Triassic aetosaur from the American Southwest: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 241-247.
- Spielmann, J. A., Lucas, S. G., and Heckert, A. B., Tetrapod fauna of the Upper Triassic (Revueltian) Owl Rock Formation, Chinle Group, Arizona: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 371-383.

- Spielmann, J. A., Lucas, S. G., Heckert, A. B., Rinehart, L. F., and Hunt, A. P., Taxonomy and biostratigraphy of the Late Triassic archosauromorph *Trilophosaurus*: *New Mexico Museum of Natural History and Science Bulletin*, v. 40, p. 231-240.
- Spielmann, J. A., Lucas, S. G., Rinehart, L. F., Hunt, A. P., Heckert, A. B., and Sullivan, R. M., Oldest records of the Late Triassic theropod dinosaur *Coelophysis bauri*: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 384-401

2007 Abstracts

- Camp, J.A., and Heckert, A.B., Tooth enamel microstructure in Phytosauria (Reptilia: Archosauria) and its implications for phylogeny, ecology, and biostratigraphy: *Geological Society of America Abstracts with Programs*, v. 39(2), p. 86. http://gsa.confex.com/gsa/2007SE/finalprogram/abstract_118849.htm
- Heckert, A.B., *Colognathus obscurus* Case, an unusual vertebrate index fossil of Adamanian (St. Johnsian: latest Carnian) time, from the Upper Triassic of the American Southwest: *Geological Society of America Abstracts with Programs*, v. 39(2), p. 30. http://gsa.confex.com/gsa/2007SE/finalprogram/abstract_119307.htm
- Heckert, A.B., and Camp, J.A., Tooth enamel microstructure of selected archosaurs (Reptilia: Archosauria) from the Upper Triassic Chinle Group: Taxonomic and evolutionary significance: *Geological Society of America Abstracts with Programs*, v. 39(6), p. 77. http://gsa.confex.com/gsa/2007AM/finalprogram/abstract_127709.htm
- Heckert, A.B., Lewis, C., Lucas, S.G., and Williamson, T.E., New mixed marine-nonmarine microvertebrate assemblage from the Upper Cretaceous (Late Santonian-Early Campanian) Menefee Formation, northwestern New Mexico: *Geological Society of America Abstracts with Programs*, v. 39(6), p. 73. http://gsa.confex.com/gsa/2007AM/finalprogram/abstract_128090.htm
- Heckert, A. B., Lucas, S. G., Hunt, A. P., and Spielmann, J. A., Late Triassic aetosaur biochronology revisited: *New Mexico Museum of Natural History and Science Bulletin*, v. 41, p. 49-50.
- Hunt, A.P., Lucas, S.G., Rinehart, L.F., Heckert, A.B., An articulated pes of the Late Triassic aetosaur *Typhothorax* from New Mexico and the trackmaker of *Brachychirotherium*: *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 92-93A.
- Joyce, W., Lucas, S.G., Scheyer, T., Hunt, A., and Heckert, A.B., A primitive turtle from the Late Triassic of New Mexico and the gradual origin of the turtle shell. *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 97A.
- King, L., Foster, J., and Heckert, A., New life for old fossils: Microvertebrate fossils from the Garden Park Fossil Area (Late Jurassic, Morrison Formation): *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 99A.
- Lewis, C., Heckert, A., Lucas, S., and Williamson, T., A diverse new microvertebrate fauna from the Upper Cretaceous (Late Santonian-early Campanian) Menefee Formation of New Mexico: *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 105A.
- Lucas, S., Hunt, A., Heckert, A., and Spielmann, J., The Triassic timescale based on tetrapod evolution: *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 107A.
- Rinehart, L., Lucas, S., Heckert, A., Skull allometry of the Late Triassic phytosaur genus *Parasuchus* and its ontogenetic and phylogenetic implications: *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 135A.
- Spielmann, J, Lucas, S., Hunt, A., and Heckert, A., A revision of the Trilophosauridae (Archosauromorpha) from the Late Triassic of western North America: *Journal of Vertebrate Paleontology*, v. 27, supplement to no. 3, p. 151A.

2007 Road logs

- Lucas, S. G., Heckert, A. B., Spielmann, J. A., Tanner, L. H., and Hunt, A. P., First day: Middle and Upper Triassic stratigraphy, sedimentology and paleontology of west-central New Mexico: *New Mexico Museum of Natural History and Science Bulletin*, v. 40, p. 169-180.
- Lucas, S. G., Heckert, A. B., Spielmann, J. A., Tanner, L. H., and Hunt, A. P., Second day: Early and Middle Triassic stratigraphy, paleontology, and correlation in northeastern Arizona: *New Mexico Museum of Natural History and Science Bulletin*, v. 40, p. 181-188.

Lucas, S. G., Heckert, A. B., Spielmann, J. A., Tanner, L. H., and Hunt, A. P., Third day: Triassic stratigraphy and paleontology in northeastern Arizona: *New Mexico Museum of Natural History and Science Bulletin*, v. 40, p. 189-198.

2006 Papers

Butler, R. J., Porro, L. B., and Heckert, A. B., A supposed heterodontosaurid tooth from the Rhaetian of Switzerland and a reassessment of the European Late Triassic record of Ornithischia (Dinosauria): *Neues Jahrbuch für Geologie und Paläontologie Monatshefte*, v. 2006(10), p. 613-633.

Heckert, A. B., Lucas, S.G., Micro- and small vertebrate biostratigraphy and biochronology of the Upper Triassic Chinle Group, southwestern USA: *New Mexico Museum of Natural History and Science Bulletin* 37: 94-104.

Heckert, A.B., Lucas, S.G., DeBlieux, D.D., and Kirkland, J.I., A revueltosaur-like tooth from the Petrified Forest Formation (Upper Triassic: Revueltian), Zion National Park, *New Mexico Museum of Natural History and Science Bulletin*, v. 37, p. 588-591.

Heckert, A. B., Lucas, S. G., Rinehart, L. F., Spielmann, J. A., Hunt, A. P., and Kahle, R., Revision of the archosauromorph reptile *Trilophosaurus*, with a description of the first skull of *Trilophosaurus jacobsi*, from the Upper Triassic Chinle Group, West Texas, USA; *Palaeontology*, v. 49, p. 621-640.
<http://www.blackwell-synergy.com/links/doi/10.1111/j.1475-4983.2006.00556.x>

Lucas, S.G., Heckert, A.B., and Rinehart, L.F., The Late Triassic aetosaur *Paratypothorax*: *New Mexico Museum of Natural History and Science Bulletin*, v. 37, p. 575-580.

Lucas, S.G., Rinehart, L.F., and Heckert, A.B., *Glyptops* (Testudines, Pleurosternidae) from the Upper Jurassic Morrison Formation, New Mexico: *New Mexico Museum of Natural History and Science Bulletin*, v. 36, p. 97-99.

Lucas, S.G., Spielmann, J.A., Rinehart, L.F., Heckert, A.B., Herne, M.C., Hunt, A.P., Foster, J.R., and Sullivan, R.M., Taxonomic status of *Seismosaurus hallorum*, a Late Jurassic sauropod dinosaur from New Mexico: *New Mexico Museum of Natural History and Science Bulletin*, v. 36, p. 149-161.

Mutter, R.J., and Heckert, A.B., Re-investigation of enigmatic fish bones known as colobodontid/perleiid toothplates from the Upper Triassic Chinle Group (southwestern U.S.A.): *New Mexico Museum of Natural History and Science Bulletin*, v. 37, p. 530-542.

Spielmann, J.A., Hunt, A.P., Lucas, S.G., and Heckert, A.B., Revision of *Redondasuchus* (Archosauria: Aetosauria) from the Upper Triassic Redonda Formation, New Mexico, with description of a new species: *New Mexico Museum of Natural History and Science Bulletin*, v. 37, p. 583-587.

Spielmann, J.A., Lucas, S.G., Hunt, A.P., and Heckert, A.B., Reinterpretation of the holotype of *Malerisaurus langstoni*, a diapsid reptile from the Upper Triassic Chinle Group of West Texas: *New Mexico Museum of Natural History and Science Bulletin*, v. 37, p. 543-547.

2006 Abstracts

Camp, J.A., and Heckert, A.B., Enamel microstructure in the Triassic archosaurs *Revueltosaurus callenderi* and *Krzyzanowskisaurus hunti* and its implications for phylogeny: *Geological Society of America Abstracts with Programs*, v. 38(7), p. 554. http://gsa.confex.com/gsa/2006AM/finalprogram/abstract_108818.htm

Fraser, N.C., Heckert, A.B., Lucas, S.G., and Schneider, V., The first record of *Coahomasuchus* (Archosauria: Stagonolepididae) from the Carnian of eastern North America: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 63A.

Heckert, A.B., Geographic and stratigraphic distribution of the enigmatic Upper Triassic (Adamanian: Carnian) vertebrate fossil *Cognathus obscurus* Case: *Museum of Northern Arizona Bulletin*, v. 62, p. 155-156.

Heckert, A.B., and Camp, J.A., Enamel microstructure in *Revueltosaurus callenderi* (Archosauria: Crurotarsi) an unusual reptile from the Triassic of the American Southwest: *Museum of Northern Arizona Bulletin*, v. 62, p. 153-154.

Heckert, A.B., Lucas, S.G., Rinehart, L.F., and Hunt, A.P., A sphenodontian (Reptilia:Lepidosauria) from the Upper Triassic Whitaker (*Coelophysis*) quarry, Rock Point Formation (Apachean: Norian) at Ghost Ranch, New Mexico, U.S.A.: *Geological Society of America Abstracts with Programs*, v. 38(7), p. 554.
http://gsa.confex.com/gsa/2006AM/finalprogram/abstract_113973.htm

Heckert, A.B., Camp, J.A., Schneider, V., Olsen, P.E., Nesbitt, S., and A diverse new microvertebrate fauna from the Upper Triassic (Revueltian: Norian) Cumnock Formation, Sanford subbasin, North Carolina: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 63A.
http://gsa.confex.com/gsa/2006SE/finalprogram/abstract_101756.htm

Heckert, A.B., Schneider, V., Olsen, P.E., and Nesbitt, S., A new microvertebrate fauna from the Upper Triassic (Norian) Cumnock Formation, Durham subbasin, North Carolina, USA: *Geological Society of America Abstracts with Programs*, v. 38(3), p. 23

Lewis, C., Heckert, A. B., and Forsys, M., Paleoecology of the aqueous paleoenvironments of the Late Cretaceous (early Campanian) Allison Member of the Menefee Formation in northwestern New Mexico: *New Mexico Geology*, v. 28, (2), p. 56.

Lewis, C.L., Heckert, A.B., and Lucas, S.G., A microvertebrate fauna of the Late Cretaceous (late Santonian-Early Campanian) Menefee Formation of northwestern New Mexico: *Geological Society of America Abstracts with Programs*, v. 38(7), p. 69. http://gsa.confex.com/gsa/2006AM/finalprogram/abstract_113044.htm

Lucas, S.G., Tanner, L.H., and Heckert, A.B., Vertebrate biostratigraphy and the Triassic-Jurassic boundary: *Geological Society of America Abstracts with Programs*, v. 38(7), p. 554. http://gsa.confex.com/gsa/2006AM/finalprogram/abstract_110714.htm

2005 Co-edited volume

Heckert, A.B., and Lucas, S.G., Vertebrate paleontology in Arizona: *New Mexico Museum of Natural History and Science Bulletin* 29, 210 pp.

2005 Papers

Appenzeller, O., Gunga, H.-C., Qualls, C., Furlan, R., Porta, A., Lucas, S.G., Heckert, A.B., Kirsch, K., Costa-Junqueira, M.A., Guillén, S.E., Sander, M., Schneider, T., and Blottner, B., A hypothesis: autonomic rhythms are reflected in growth lines of teeth in humans and extinct archosaurs: *Autonomic Neuroscience: Basic and Clinical*, v. 117, p. 115-119.

Heckert, A.B., *Krzyzanowskisaurus*, a new name for a probable ornithischian dinosaur from the Upper Triassic Chinle Group, Arizona and New Mexico, USA: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 77-83.

Heckert, A.B., and Jenkins, H.S., The microvertebrate fauna of the Upper Triassic (Revueltian) Snyder quarry, north-central New Mexico: *New Mexico Geological Society Guidebook* 56, p. 319-334.

Heckert, A.B., Lucas, S.G., and Hunt, A.P., Triassic vertebrate fossils in Arizona: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 16-44.

Heckert, A.B., Lucas, S.G., Sullivan, R.M., Hunt, A.P., and Spielmann, J.A., The vertebrate fauna of the Upper Triassic (Revueltian: early-mid Norian) Painted Desert Member (Petrified Forest Formation: Chinle Group) in the Chama Basin, northern New Mexico: *New Mexico Geological Society Guidebook* 56, p. 302-318.

Henrici, A.C., Berman, D.S., Lucas, S.G., Heckert, A.B., Rinehart, L.F., and Zeigler, K.E., The carpus and tarsus of the early Permian synapsid *Sphenacodon ferox* (Eupelycosauria: Sphenacodontidae): *New Mexico Museum of Natural History and Science Bulletin* 30, p. 106-110.

Hunt, A.P., Lucas, S.G., and Heckert, A.B., Definition and correlation of the Lamyan: A new biochronological unit for the nonmarine late Carnian (Late Triassic): *New Mexico Geological Society Guidebook* 56, p. 357-366.

Lewis, C.L., Heckert, A.B., and Lucas, S.G., Bibliography of Arizona vertebrate paleontology: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 168-210

Lucas, S.G., and Heckert, A.B., Mesozoic stratigraphy at Durango, Colorado: *New Mexico Geological Society Guidebook* 56, p. 160-169.

Lucas, S.G., and Heckert, A.B., Distribution, age and correlation of Cretaceous fossil vertebrates from Arizona: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 105-110.

Lucas, S.G., Lewis, C., Dickinson, W.R., and Heckert, A.B., The Late Cretaceous Tucson Mountains dinosaur: *New Mexico Museum of Natural History and Science Bulletin*, v. 29, p. 111-113.

Lucas, S.G., Harris, S.K., Spielmann, J.A., Berman, D.S., Berman, A.C., Heckert, A.B., Zeigler, K.E., and Rinehart, L.F., Early Permian vertebrate assemblage and its biostratigraphic significance, Arroyo del Agua, Rio Arriba County, New Mexico: *New Mexico Geological Society Fall Field Conference Guidebook* 56, p. 288-296.

Lucas, S.G., Heckert, A.B., and Tanner, L.H., Arizona's Jurassic vertebrates and the age of the Glen Canyon Group: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 95-104.

Lucas, S.G., Tanner, L.H., and Heckert, A.B., Tetrapod biostratigraphy and biochronology across the Triassic-Jurassic boundary in northeastern Arizona: *New Mexico Museum of Natural History and Science Bulletin* 29, p. 84-94.

- Lucas, S.G., Zeigler, K.E., Heckert, A.B., and Hunt, A.P., Review of Upper Triassic stratigraphy and biostratigraphy in the Chama basin, northern New Mexico: *New Mexico Geological Society Guidebook* 56, p. 170-181.
- Rinehart, L.F., Rasnitsyn, A.P., Lucas, S.G., and Heckert, A.B., Instar sizes and growth in the Middle Permian monuran *Dasyleptus brongniarti* (Insecta: Machilida: Dasyleptidae): *New Mexico Museum of Natural History and Science Bulletin* 30, p. 270-272.
- Spielmann, J.A., Heckert, A.B., and Lucas, S.G., The Late Triassic archosauromorph *Trilophosaurus* as an arboreal climber: *Rivista Italiana di Paleontologia e Stratigrafia*, v. 111, p. 95-112.
- Zeigler, K.E., Lucas, S.G., Heckert, A.B., Henrici, A.C., and Berman, D.S., Taphonomy of the Lower Permian Cardillo quarry, Chama Basin, north-central New Mexico: *New Mexico Geological Society Guidebook* 56, p. 297-301.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., Taphonomic analysis of a fire-related Upper Triassic vertebrate fossil assemblage from north-central New Mexico: *New Mexico Geological Society* 56, p. 341-354.
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., A new genus of Rhombodontidae (Chondrichthyes: Myliobatiformes) from the Eocene of Wyoming, U.S.A.: *Neues Jahrbuch für Geologie und Paläontologie Monatshefte*, v. 2005(6), p. 373-384.

2005 Abstracts

- Heckert, A.B., www.nmfossils.org—the newest paleontological resource and outreach initiative of the New Mexico Museum of Natural History and Science: *New Mexico Geology*, v. 27, p. 54.**
- Heckert, A.B., and Lucas, S.G., The Triassic-Jurassic non-event: Patterns and process of tetrapod extinctions across the Tr/J boundary: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 68A.**
- Heckert, A.B., Lucas, S.G., and Bednarski, S.P., The microvertebrate fauna of the Upper Triassic *Trilophosaurus* quarry, Colorado City Formation (Otischalkian: Carnian), West Texas: *New Mexico Geology*, v. 27, p. 45.
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., The microvertebrate fauna of Shark Tooth Hill, Redonda Formation (Late Triassic: Apachean), Quay County, New Mexico: *Geological Society of America Abstracts with Programs*, v. 37(6), p. 9. http://gsa.confex.com/gsa/2005RM/finalprogram/abstract_86716.htm
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., The microvertebrate fauna of Shark Tooth Hill, Redonda Formation (Late Triassic: Apachean), Quay County, New Mexico: *New Mexico Geology*, v. 27, p. 53.
- Heckert, A.B., McDonnell, J., and Traeger, R. “Rediscovery” of the Rousseau Flower Collection at the New Mexico Museum of Natural History & Science: *New Mexico Geology*, v. 27, p. 54.
- Krzyzanowski, S.E., Heckert, A.B., Lucas, S.G., and Boyer, K., The microvertebrate fauna of the Blue Hills (Blue Mesa Member, Petrified Forest Formation: Adamanian), Upper Triassic of east-central Arizona: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 80A.
- Lewis, C.L., Heckert, A.B., and Lucas, S.G., An updated electronic bibliography of New Mexico fossil vertebrates: *New Mexico Geology*, v. 27, p. 54.
- Lewis, C.L., Lucas, S.G., Dickinson, W.D., and Heckert, A.B., The Tucson Mountains dinosaur: A large hadrosaur from the Upper Cretaceous of Southern Arizona: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 83A.
- Lucas, S.G., Gierlinski, G., Haubold, H., Klein, H., Lockley, M.G., Tanner, L., Hunt, A.P., Heckert, A.B., and Thulborn, T., Triassic records of the theropod footprint ichnogenus *Eubrontes*: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 85A.**
http://gsa.confex.com/gsa/2005AM/finalprogram/abstract_91085.htm
- Lucas, S.G., Rinehart, L.F., Heckert, A.B., Peterson, R.E., and Peterson, R.E., Late Jurassic turtle from the Morrison Formation in central New Mexico: *New Mexico Geology*, v. 27, p. 54.
- Lucas, S.G., Tanner, L.H., and Heckert, A.B., Tetrapod biostratigraphy of the Triassic-Jurassic boundary, Four Corners Region, USA: *Geological Society of America Abstracts with Programs*, v. 37(6), p. 45.
http://gsa.confex.com/gsa/2005RM/finalprogram/abstract_86602.htm
- Lucas, S.G., Tanner, L.H., Heckert, A.B., and Hunt, A.P., Tetrapod biostratigraphy across the Triassic-Jurassic boundary on the southern Colorado Plateau, USA: *Tracking Dinosaur Origins, the Triassic/Jurassic Terrestrial Transition, Abstracts Volume*, St. George, Utah, p. 16
- Rinehart, L.F., Hunt, A.P., Lucas, S.G., Heckert, A.B., and Smith, J., New evidence of cannibalism in the Late Triassic (Apachean) dinosaur, *Coelophysis bauri* (Theropoda: Ceratosauria): *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 105A.

- Rinehart, L.F., Hunt, A.P., Lucas, S.G., and Heckert, A.B., Coprolites and cololites from the Late Triassic theropod dinosaur *Coelophysis bauri*, Whitaker quarry, Rio Arriba county, New Mexico: *New Mexico Geology*, v. 27, p. 53.
- Spielmann, J.A., Heckert, A.B., and Lucas, S.G., The Late Triassic archosauromorph *Trilophosaurus* as an arboreal climber: *New Mexico Geology*, v. 27, p. 45.
- Spielmann, J.A., Hunt, A.P., Lucas, S.G., and Heckert, A.B., The terrestrial vertebrate fauna of the Upper Triassic (Rhaetian) Redonda Formation: *Journal of Vertebrate Paleontology*, v. 25 (supplement to no. 3), p. 117A.

2005 Road logs, mini-papers, etc.

- Heckert, A.B., Lucas, S.G., Downs, A., and Hunt, A., Fossils at Ghost Ranch: The Ruth Hall Museum of Paleontology collection: *New Mexico Geological Society Guidebook 56*, p. 40.
- Heckert, A.B., Lucas, S.G., Sullivan, R.M., and Hunt, A.P., New Mexico's dinosaur district: *New Mexico Geological Society Guidebook 56*, p. 34-36.
- Lucas, S.G., Heckert, A.B., Zeigler, K.E., Owen, D.E., and Hunt, A.P., Mesozoic stratigraphy of the Chama Basin – Second-day road log from Ghost Ranch to Tierra Amarilla and Chama: *New Mexico Geological Society Guidebook 56*, p. 39-56.
- Lucas, S.G., Heckert, A.B., Zeigler, K.E., Owen, D.E., Hunt, A.P., Brister, B.S., Crumpler, L.S., and Spielmann, J.A., The San Juan volcanic field and Cretaceous depositional systems – Third-day road log from Chama to Cumbres Pass, Los Brazos, and Heron Lake: *New Mexico Geological Society Guidebook 56*, p. 57-68
- Lucas, S.G., Hunt, A.P., and Heckert, A.B., E.D. Cope and the first discovery of Triassic vertebrate fossils in the American West: *New Mexico Geological Society Guidebook 56*, p. 26.
- Lucas, S.G., Koning, D.J., Heckert, A.B., Zeigler, K.E., Hunt, A.P., Owen, D.E., Maldonado, F., and Berglof, W., Rio Grande rift to the Colorado Plateau – First-day road log from Espanola to Abiquiu, Youngsville, Coyote, Gallina, and Ghost Ranch: *New Mexico Geological Society Guidebook 56*, p. 1-38.
- Lucas, S.G., Morgan, G.S., and Heckert, A.B., The Youngsville mammoth: *New Mexico Geological Society Guidebook 56*, p. 19.
- Lucas, S.G., Owen, D.E., Zeigler, K.E., Hunt, A.P., and Heckert, A.B., Tierra Amarilla to El Vado Dam – Third-day supplemental road log; in Lucas, S. G., Zeigler, K. E., Lueth, V. W. and Owen, D. E., eds., Geology of the Chama Basin: *New Mexico Geological Society Guidebook 56*, p 69-70.
- Lucas, S.G., Sullivan, R.M., Hunt, A.P., and Heckert, A.B., The saga of *Coelophysis*: *New Mexico Geological Society Guidebook 56*, p. 37.
- Zeigler, K.E., Lucas, S.G., Henrici, A., Heckert, A.B., and Berman, D.S., Taphonomy of the Lower Permian Cardillo quarry, Chama basin, north-central New Mexico: *New Mexico Geological Society Guidebook 56*, p. 22-23.

2004 Monograph

Heckert, A.B., Late Triassic microvertebrates from the Upper Triassic Chinle Group (Otischalkian-Adamanian: Carnian), southwestern U.S.A.: *New Mexico Museum of Natural History and Science Bulletin 27*, 170 pp.

<http://econtent.unm.edu/cdm4/browse.php?CISOROOT=%2Fbulletins&CISOSORT=subject&CISOSTART=1,1>

2004 Papers

- Desojo, J. B., and Heckert, A. B., New information on the braincase and mandible of *Coahomasuchus* (Archosauria: Aetosauria) from the Otischalkian (Carnian) of Texas: *Neues Jahrbuch für Geologie und Paläontologie Monatsheft* v. 2004, p. 605-616.
- Heckert, A.B., and Lucas, S. G., Comment: Simplifying the stratigraphy of time: *Geology*, v. 52, p. e58 (published online only).
- Heckert, A. B., Berkhoudt, R., Hester, P., and Mathias, W. S., New Mexico Museum of Natural History and Science paleontological database available online: *New Mexico Geology*, v. 26, no. 2, p. 59-61.
- Lucas, S. G., and Heckert, A. B., Early Mississippian fossil plant from New Mexico: *New Mexico Geology*, v. 26, no. 2, p. 58.
- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Triassic strata at Carrizo Arroyo, Lucero uplift, Central New Mexico: *New Mexico Museum of Natural History and Science Bulletin 25*, p. 83-87.

2004 Abstracts

Heckert, A.B., Hester, P., Berkhoudt, R., and Mathias, W. S., 40,000 fossils online: The New Mexico Museum of Natural History and Science's digital database as a tool for geoscientists and educators: *New Mexico Geology*, v. 26, p. 75-76.

Heckert, A. B., Jenkins, H. S., Lucas, S. G., and Mutter, R. J., The microvertebrate fauna of the Upper Triassic Snyder quarry, from the Painted Desert Member of the Petrified Forest Formation (Revueltian), north-central New Mexico: *New Mexico Geology*, v. 26, p. 75.

Heckert, A. B., Lewis, C., Lucas, S. G., Hunt, A. P., Hutchison, J. H., and Cabot, J. C., The vertebrate fauna of the Upper Cretaceous (early Campanian) Menefee Formation, northwestern New Mexico: *New Mexico Geology*, v. 26, p. 75.

Heckert, A. B., Lucas, S. G., Rinehart, L. F., Spielmann, J. A., and Kahle, R., Biostratigraphy and evolution of *Trilophosaurus*, an unusual archosauromorph from the Upper Triassic Chinle Group, southwestern U.S.A., *Geological Society of America Abstracts with Programs*, v. 36, no. 4, p. 7.

http://gsa.confex.com/gsa/2004RM/finalprogram/abstract_71738.htm

Heckert, A. B., Lucas, S. G., Rinehart, L. F., and Spielmann, J.A., Microvertebrate biostratigraphy of the Upper Triassic Chinle Group, southwestern U.S.A.: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 92. http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77812.htm

Heckert, A. B., Lucas, S. G., Rinehart, L. F., and Hunt, A. P., Biostratigraphy, biochronology, and evolutionary trends of coelophysoids (Theropoda: Ceratosauria): *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 69A.

Heckert, A. B., Lucas, S. G., Rinehart, L. F., Spielmann, J. A., Hunt, A. P., and Kahle, R., Distribution of the enigmatic reptile *Trilophosaurus*, an unusual archosauromorph from the Upper Triassic Chinle Group, Southwestern USA: *New Mexico Geology*, v. 26, p. 75.

Heckert, A. B., Rinehart, L. F., Krzyzanowski, S. E., Lucas, S. G., and Harris, S. K., The Krzyzanowski bonebed: an Upper Triassic (Adamanian: latest Carnian) vertebrate fauna and its implications for microvertebrate studies: *New Mexico Geology*, v. 26, p. 64.

Hester, P., Heckert, A.B., Berkhoudt, R., and Mathias, S., 30,000 vertebrate fossils on line: New Mexico Museum of Natural History & Science's Digital Database, a research tool. *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 70A.

Jenkins, H., and Heckert, A.B., Revueltian (early-mid Norian) microvertebrates from the Upper Triassic Snyder quarry, Painted Desert Member, Petrified Forest Formation, north-central New Mexico: *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 75A.

Jenkins, H., and Heckert, A.B., Revueltian (early-mid Norian) microvertebrates from the Upper Triassic Snyder quarry, Painted Desert Member, Petrified Forest Formation, north-central New Mexico: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 423.

http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_80118.htm

Krzyzanowski, S.E., Heckert, A.B., Rinehart, L.F., and Lucas, S.G., An Upper Triassic (Adamanian: latest Carnian) vertebrate fauna from the Blue Mesa Member, eastern Arizona and its implications for microvertebrate studies: *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 80-81A.

Lewis, C., Heckert, A.B., Lucas, S.G., Hunt, A.P., Hutchison, J.H., The vertebrate fauna and paleoecology of the Upper Cretaceous Menefee Formation (late Santonian-early Campanian), northwestern New Mexico: *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 82A.

Lucas, S. G., Herne, M.C., Heckert, A. B., Hunt, A.P., and Sullivan, R.M., A re-appraisal of *Seismosaurus*, a Late Jurassic sauropod dinosaur from New Mexico: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 92. http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77727.htm

Pierce, M., Rinehart, L.F., Heckert, A.B., Lucas, S.G., and Hunt, A.P., Rotation of an Upper Triassic Ghost Ranch, New Mexico Whitaker (*Coelophysis*) quarry block: turning over a fragile 12,000 lb rock: *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 101A-102A.

Rinehart, L. F., Heckert, A. B., Lucas, S. G., and Hunt, A. P., Microstratigraphy and fauna of a single block from the Late Triassic Whitaker (*Coelophysis*) quarry (Rock Point Formation: Chinle Group), north-central New Mexico: *New Mexico Geology*, v. 26, p. 74.

Rinehart, L. F., Heckert, A. B., Lucas, S. G., and Hunt, A. P., The sclerotic ring of the Late Triassic theropod dinosaur *Coelophysis*: *New Mexico Geology*, v. 26, p. 64.

- Rinehart, L.F., Lucas, S.G., Heckert, A.B., and Hunt, A.P. Vision characteristics of *Coelophysis bauri* based on sclerotic ring, orbit, and skull morphology: *Journal of Vertebrate Paleontology*, v. 24 (supplement to no. 3), p. 104A.
- Rinehart, L.F., Heckert, A.B., Lucas, S.G., and Hunt, A.P., Taphonomic implications of the microstratigraphy of a single block from the Late Triassic Whitaker (Coelophysis) quarry (Rock Point Formation: Chinle Group), north-central New Mexico: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 64. http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77491.htm
- Rinehart, L.F., Lucas, S.G., Heckert, A.B., and Hunt, A.P., Ostracodes and conchostracans from the Upper Triassic Whitaker quarry, Rock Point Formation, Chinle Group, North-Central New Mexico: *Geological Society of America Abstracts with Programs*, Vol. 36, No. 4, p. 6. http://gsa.confex.com/gsa/2004RM/finalprogram/abstract_71718.htm
- Spielmann, J.A., Heckert, A.B., Lucas, S.G., Rinehart, L.F., and Hunt, A.P., The Late Triassic archosauromorph *Trilophosaurus* as an arboreal climber: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 61. http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77765.htm
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., A new genus of Rhombodontidae (Myliobatiformes) from the Eocene of Wyoming, U.S.A.: *Geological Society of America Abstracts with Programs*, v. 36 (5), p. 364. http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77232.htm

2003 Papers

- Heckert, A.B., and Lucas, S.G., Clarifying Aetosaur phylogeny requires more fossils, not more trees—Reply to intraorganismal homology, character construction, and the phylogeny of aetosaurian archosaurs, *Systematic Biology*, v. 52, p. 253-255.**
- Heckert, A.B., and Lucas, S.G., Triassic stratigraphy in the Zuni Mountains, west-central New Mexico: *New Mexico Geological Society Guidebook 54*, p. 245-262.
- Heckert, A.B., and Lucas, S.G., Stratigraphy and paleontology of the lower Chinle Group (Adamanian: latest Carnian) in the vicinity of St. Johns, Arizona *New Mexico Geological Society Guidebook 54*, 281-288.
- Heckert, A.B., and Zeigler, K.E., The Late Triassic Snyder quarry: A brief history of discovery and excavation: *New Mexico Museum of Natural History and Science Bulletin 24*, p. 5-12.
- Heckert, A.B., Lucas, S.G., and Krzyzanowski, S.E., The vertebrate fauna of the late Campanian (Judithian) Fort Crittenden Formation, and the age of Cretaceous vertebrate faunas of southeastern Arizona (U.S.A.), *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*, p. 343-364.**
- Heckert, A.B., Spielmann, J.A., Lucas, S.G., Altenberg, R., and Russell, D.M., An Upper Jurassic theropod dinosaur from the Section 19 mine, Grants Uranium district: *New Mexico Geological Society Guidebook 54*, 309-314.
- Heckert, A.B., Zeigler, K.E., Lucas, S.G., Spielmann, J.A., Hester, P.M., Peterson, R.E., Peterson, R.E., and D'Andrea, N.V., 2003, Geology and Paleontology of the Upper Jurassic (Morrison Formation: Brushy Basin Member) Peterson quarry, central New Mexico: *New Mexico Geological Society Guidebook 54*, p. 315-324.
- Heckert, A.B., Zeigler, K.E., and Lucas, S.G., Aetosaurs (Archosauria: Stagonolepididae) from the Upper Triassic (Revueletian) Snyder quarry, New Mexico: *New Mexico Museum of Natural History and Science Bulletin 24*, p. 115-126.
- Heckert, A.B., Zeigler, K.E., Lucas, S.G., and Rinehart, L.F., Coelophysids (Dinosauria: Theropoda) from the Upper Triassic (Revueletian) Snyder quarry: *New Mexico Museum of Natural History and Science Bulletin 24*, p. 127-132.
- Hurlburt, G.R., Heckert, A.B., and Farlow, J.O., Body mass estimates of phytosaurs (Archosauria: Parasuchidae) from the Petrified Forest Formation (Chinle Group: Revueletian) based on skull and limb bone measurements: *New Mexico Museum of Natural History and Science Bulletin 24*, p. 105-113.
- Kappus, E.J., Lucas, S.G., Hunt, A.P., Heckert, A.B., and Lockley, M.G., Dinosaur footprints from the Lower Cretaceous Sarten Member of the Mojado Formation at Cerro de Cristo Rey, Dona Aña County, New Mexico: *Ichnos*, v. 10, p. 263-267.
- Lucas, S.G., Heckert, A.B., and Anderson, O.J., Jurassic stratigraphy in west-central New Mexico: *New Mexico Geological Society Guidebook 54*, p. 289-301.

- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Tetrapod footprints from the Middle Triassic (Perovkan—early middle Anisian) Moenkopi Formation, west-central New Mexico, *New Mexico Geological Society Guidebook* 54, p. 241-244.
- Lucas, S.G., Zeigler, K.E., and Heckert, A.B., Upper Triassic stratigraphy and biostratigraphy, Chama basin, north-central New Mexico: *New Mexico Museum of Natural History and Science Bulletin* 24, p. 15-39.
- Lucas, S.G., Zeigler, K.E., and Heckert, A.B., Invertebrate paleontology of the Upper Triassic Snyder quarry, Chinle Group, Chama basin, New Mexico: *New Mexico Museum of Natural History and Science Bulletin* 24, p. 63-66.
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., An early eubrachyuran (Malacostraca: Decapoda) from the Upper Triassic Snyder quarry, Petrified Forest Formation, north-central New Mexico: *New Mexico Museum of Natural History and Science Bulletin* 24, p. 67-70.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., The Upper Triassic (Norian: Revueltian) Snyder quarry, Chama basin, north-central New Mexico: *New Mexico Museum of Natural History and Science Bulletin* 24, p. 1-3
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., The vertebrate fauna of the Upper Triassic (Norian: Revueltian) Snyder quarry: *New Mexico Museum of Natural History and Science Bulletin* 24, p. 71-79
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., Phytosaur (Archosauria: Parasuchidae) cranial and mandibular material from the Upper Triassic Snyder quarry (Petrified Forest Formation, Chinle Group): *New Mexico Museum of Natural History and Science Bulletin* 24, p. 81-88
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., An illustrated atlas of the phytosaur (Archosauria: Parasuchidae) postcrania from the Upper Triassic Snyder quarry (Petrified Forest Formation, Chinle Group): *New Mexico Museum of Natural History and Science Bulletin* 24, p. 89-103.
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., Variation in the Late Triassic Canjilon quarry (Upper Chinle Group, New Mexico) phytosaur skulls: a case for sexual dimorphism. *Paläontologische Zeitschrift*, v. 77, p. 341-352.**

2003 Abstracts

- Heckert, A.B., Hurlburt, G., and Farlow, J.O., How big was a phytosaur? Mass estimates of an extinct clade of Late Triassic archosaurs based on New Mexican fossils and modern crocodiles, *New Mexico Geology*, v. 25, p. 53.
- Heckert, A.B., Lucas, S.G., Rinehart, L.F., Spielmann, J.A., and Kahle, R., *Trilophosaurus jacobsi* is not a procolophonid: data from a new quarry from the Upper Triassic Chinle Group, West Texas. *Geological Society of America Abstracts with Programs*, v. 35, no. 7, p. 497.
http://gsa.confex.com/gsa/2003AM/finalprogram/abstract_63999.htm
- Heckert, A.B., Lucas, S.G., Zeigler, K.E., and Hunt, A.P., Stratigraphy, unconformities, and paleogeography of the Upper Triassic Chinle Group, southwestern U.S.A. *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 35. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_53151.htm
- Heckert, A.B., Zeigler, K.E., Lucas, S.G., Hunt, A.P., and Rinehart, L.F., Revised fauna list and significance of the Upper Triassic (Revueltian: early-mid Norian) Snyder quarry, north-central New Mexico, *New Mexico Geology*, v. 25, p. 52-53.
- Hunt, A.P., Heckert, A.B., Lucas, S.G., and Zeigler, K.E., Herbivorous dinosaur specimens from the Upper Triassic (Revueltian) Bull Canyon Formation of east-central New Mexico and Texas, *New Mexico Geology*, v. 25, p. 44.
- Hunt, A.P., Lucas, S.G., Heckert, A.B., and Zeigler, K.E., Dinosaur faunas of the western United States: sequence and paleobiogeographic significance: *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 34-35. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_53132.htm
- Hurlburt, G., Heckert, A., and Farlow, J., Estimating phytosaur body mass from skeletal dimensions using equations based on alligators and other crocodylians. *Journal of Vertebrate Paleontology*, v. 23 (supplement to no. 3), p. 64A.
- Kappus, E., Lucas, S.G., Heckert, A.B., and Hunt, A.P., Early Cretaceous dinosaur footprints from Cerro de Cristo Rey, Doña Ana County, New Mexico, *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 10. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_52695.htm
- Kappus, E., Lucas, S.G., Heckert, A.B., and Hunt, A.P., Dinosaur footprints from the Lower Cretaceous Anapra Sandstone at Cerro de Cristo Rey, Doña Ana County, New Mexico, *New Mexico Geology*, v. 25, p. 54.

- Lucas, S.G., Heckert, A.B., Zeigler, K.E., and Hunt, A.P., Evolution of Middle-Upper Jurassic depositional systems, southern western interior, *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 35. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_52965.htm
- Lucas, S.G., Tanner, L.H., and Heckert, A.B., Rethinking the mass extinction at the Triassic-Jurassic boundary. *Geological Society of America Abstracts with Programs*, v. 35, no. 7, p. 417. http://gsa.confex.com/gsa/2003AM/finalprogram/abstract_62414.htm
- Lucas, S.G., Zeigler, K.E., Heckert, A.B., and Rinehart, L.F., Nonmarine invertebrates from the Late Triassic Snyder quarry, Chinle Group, Chama basin, New Mexico, *New Mexico Geology*, v. 25, p. 54.
- Reser, P.K., Heckert, A.B., and Lucas, S.G., New Mexico's most complete skull of the Cretaceous dinosaur *Pentaceratops* (Ornithischia: Ceratopsidae)---insights into the cranial anatomy of the genus, *New Mexico Geology*, v. 25, p. 54.
- Rinehart, L.F., Lucas, S.G., Heckert, A.B., Zeigler, K.E., Henrici, A.C., and Berman, D.S., Nonmarine bivalves (Unionoida: Anthracosiidae) from the Lower Permian (Wolfcampian) Welles quarry, Arroyo del Agua, north-central New Mexico, *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 10. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_52760.htm
- Zeigler, K.E., Heckert, A.B., Lucas, S.G., and Hunt, A.P., A taphonomic survey of the bonebeds of the Upper Triassic Chinle Group, southwestern United States, *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 35. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_52787.htm
- Zeigler, K.E., Lucas, S.G., Heckert, A.B., Henrici, A.C., and Berman, D.S., Taphonomy of the Early Permian Cardillo quarry, a tetrapod bonebed in the Chama basin, north-central New Mexico, *Geological Society of America Abstracts with Programs*, v. 35, no. 5., p. 10. http://gsa.confex.com/gsa/2003RM/finalprogram/abstract_52736.htm
- Zeigler, K.E., Lucas, S.G., Heckert, A.B., Henrici, A.C., and Berman, D.S., A time-averaged tetrapod bonebed: taphonomy of the Early Permian Cardillo quarry, Chama Basin, north-central New Mexico, *New Mexico Geology*, v. 25, p. 52.

2003 Road logs, mini-papers, etc.

- Crumpler, L.S., Aubele, J.C., Lucas, S.G., and Heckert, A.B., Supplemental road log 1, from Grants to eastern margin of El Malpais, Sandstone Bluffs Overlook, and McCarty's lava flow. *New Mexico Geological Society Guidebook 54*, p. 44-45.
- Heckert, A.B., and Lucas, S.G., The Upper Triassic Sonsela Member of the Petrified Forest Formation in the Zuni Mountains. *New Mexico Geological Society Guidebook 54*, p. 44-45.
- Heckert, A.B., and Lucas, S.G., The Upper Triassic Perea Sandstone Bed (Petrified Forest Formation, Painted Desert Member) in the Zuni Mountains. *New Mexico Geological Society Guidebook 54*, p. 50-52.
- Heckert, A.B., Kues, B.S., and Semken, S.C., From Bear Spring to Fort Wingate: *New Mexico Geological Society Guidebook 54*, p. 37-40.
- Lucas, S.G. and Heckert, A.B., Deposition of the Upper Triassic Owl Rock Formation, west-central New Mexico. *New Mexico Geological Society Guidebook 54*, p. 52-53.
- Lucas, S.G., Heckert, A.B., and Berglof, W.R., Lectostratotype section of the Jurassic Todilto Formation, western New Mexico. *New Mexico Geological Society Guidebook 54*, p. 15-16.
- Lucas, S.G., Semken, S.C., Heckert, A.B., Berglof, W.R., Hoffman, G., Kues, B.S., Crumpler, L.S., and Aubele, J.C., First-day road log, from Gallup to Gamerco, Yah-Ta-Hey, Window Rock, Fort Defiance, Navajo, Todilto park, Crystal, Narbona Pass, Sheep Springs, Tohatchi, and Gallup, New Mexico. *New Mexico Geological Society Guidebook 54*, p. 1-34.
- Lucas, S.G., Heckert, A.B., Berglof, W.R., Kues, B.S., Crumpler, L.S., Aubele, J.C., McLemore, V.T., Owen, D.E., and Semken, S.C., Second-day road log, from Gallup to Fort Wingate, Sixmile Canyon, Ciniza, Red Rock Park, Church Rock, White Mesa, Thoreau and Grants. *New Mexico Geological Society Guidebook 54*, p. 35-68.
- Lucas, S.G., Heckert, A.B., Berglof, W.R., Crumpler, L.S., Aubele, J.C., Kues, B.S., and McLemore, V.T., Third-day roadlog, from Grants to Milan, Homestake Mining Company, Dos Lomas, Haystack Mountain and El Tintero. *New Mexico Geological Society Guidebook 54*, p. 69-83.

2002 Co-edited volume

Heckert, A.B., and Lucas, S.G., *Upper Triassic stratigraphy and paleontology*, New Mexico Museum of Natural History and Science, *Bulletin* 21, 301 p.

2002 Papers

- Harris, S.K., Heckert, A.B., Lucas, S.G., and Hunt, A.P., The oldest North American prosauropod, from the Upper Triassic Tecovas Formation of the Chinle Group (Adamanian: latest Carnian), West Texas, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 249-252.
- Heckert, A.B., A revision of the Upper Triassic ornithischian dinosaur *Revueltosaurus*, with a description of a new species, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 253-268.**
- Heckert, A.B., and Lucas, S.G., South American Occurrences of the Adamanian (Late Triassic:Latest Carnian) index taxon *Stagonolepis* (Archosauria:Aetosauria) and their biochronological significance. *Journal of Paleontology*, v. 76, p. 754-765.**
- Heckert, A.B., and Lucas, S.G. Revised Upper Triassic stratigraphy of the Petrified Forest National Park, Arizona, U.S.A., *New Mexico Museum of Natural History and Science Bulletin* 21, p. 1-36.**
- Heckert, A.B., and Lucas, S.G. Lower Chinle Group (Upper Triassic:Carnian) stratigraphy in the Zuni Mountains, west-central New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 51-72.
- Heckert, A.B., and Lucas, S.G. The microfauna of the Upper Triassic Ojo Huelos Member, San Pedro Arroyo Formation, central New Mexico, U.S.A., *New Mexico Museum of Natural History and Science Bulletin* 21, p. 77-85.
- Heckert, A.B., and Lucas, S.G. Historical taxonomy of the Late Triassic aetosaurs *Typhothorax* and *Desmotosuchus* (Archosauria: Crurotarsi), including a lectotype designation for *Desmotosuchus haplocerus*, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 77-85.
- Heckert, A.B., and Lucas, S.G. *Acaenasuchus geoffreyi* (Archosauria:Aetosauria) from the Upper Triassic Chinle Group: Juvenile of *Desmotosuchus haplocerus*, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 205-214.
- Heckert, A.B., and Lucas, S.G., Osteoderms of juveniles of *Stagonolepis* (Archosauria: Aetosauria) from the lower Chinle Group, east-central Arizona, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 235-239.
- Heckert, A.B., Lucas, S.G., and Estep, J.W., Lower Chinle Group (Upper Triassic:upper Carnian) tetrapods from the vicinity of Cameron, Arizona, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 73-76.
- Heckert, A.B., Lucas, S.G., and Krzyzanowski, S.E., The rauisuchian archosaur *Saurosuchus* from the Upper Triassic Chinle Group, southwestern U.S.A. and its biochronological significance, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 241-244.
- Hunt, A.P., Lucas, S.G., and Heckert, A.B., A Revueltian (Norian) phytosaur from the Sonsela Member of the Petrified Forest Formation (Chinle Group: Upper Triassic), Petrified Forest National Park, Arizona *New Mexico Museum of Natural History and Science Bulletin* 21, 165-169.
- Hunt, A.P., Heckert, A.B., Lucas, S.G. and Downs, A., The distribution of the enigmatic reptile *Vancleavea* in the Upper Triassic Chinle Group of the western United States, *New Mexico Museum of Natural History and Science Bulletin* 21, 269-273.
- Lucas, S.G., and Heckert, A.B., The *Hyperodapedon* biochron, Late Triassic of Pangea. *Albertiana*, v. 27, p. 26-34.
- Lucas, S.G., and Heckert, A.B., Skull of the dicynodont *Placerias* from the Upper Triassic of Arizona, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 77-85.
- Lucas, S.G., and Heckert, A.B., Upper Triassic dinosaur track from Fort Wingate, New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 245-248.
- Lucas, S.G., Heckert, A.B., and Hotton, N., III, The rhynchosaur *Hyperodapedon* from the Upper Triassic of Wyoming and its global biochronological significance, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 149-156.
- Lucas, S.G., Heckert, A.B., and Kahle, R., Postcranial anatomy of *Angistorhinus*, a Late Triassic phytosaur from West Texas, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 157-164.
- Lucas, S.G., Heckert, A.B., Zeigler, K.E., and Hunt, A.P., The type locality of *Belodon buceros* Cope, 1881, a phytosaur (Archosauria: Parasuchidae) from the Upper Triassic of north-central New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 189-192.**

- Lucas, S.G., Heckert, A.B., and Hunt, A.P., A new species of the aetosaur *Typhothorax* (Archosauria: Stagonolepididae) from the Upper Triassic of east-central New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 221-234.
- Zanno, L.E., Heckert, A.B., Krzyzanowski, S.E., and Lucas, S.G., Diminutive metoposaurid skulls from the Upper Triassic Blue Hills (Adamanian:latest Carnian) of Arizona *New Mexico Museum of Natural History and Science Bulletin* 21, p. 121-125.
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., A phytosaur skull from the Upper Triassic Snyder quarry (Petrified Forest Formation, Chinle Group) of north-central New Mexico *New Mexico Museum of Natural History and Science Bulletin* 21, p. 171-176.
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., The Late Triassic Canjilon quarry (upper Chinle Group, New Mexico) phytosaur skulls: Evidence of sexual dimorphism in phytosaurs, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 279-284.
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., Taphonomy of the Late Triassic Lamy amphibian quarry (Garita Creek Formation: Chinle Group), central New Mexico *New Mexico Museum of Natural History and Science Bulletin* 21, p. 179-187.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., A new species of *Desmotosuchus* (Archosauria: Aetosauria) from the Upper Triassic of the Chama basin, north-central New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 215-219.**
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., A tale of two sites: A taphonomic comparison of two Late Triassic (Chinle Group) vertebrate fossil localities from New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 21, p. 285-290.

2002 Abstracts

- Heckert, A.B., The rise of the ruling reptiles was no accident: The microvertebrate record of the Upper Triassic Chinle Group, southwestern U.S.A. *Journal of Vertebrate Paleontology*, v. 22 (supplement to no. 3), p. 63A.**
- Heckert, A.B., The microvertebrate record of the Upper Triassic (Carnian) lower Chinle Group, southwestern U.S.A. and the early evolution of dinosaurs, *New Mexico Geology*, v. 24, p. 103.**
- Heckert, A.B., Taxonomy and biostratigraphic significance of the ornithischian dinosaur *Revueltosaurus* from the Chinle Group (Upper Triassic), Arizona and New Mexico. *New Mexico Geology*, v. 24, p. 65.
- Heckert, A.B., and Lucas, S.G., New Mexico's oldest dinosaur track: a theropod footprint from the Upper Triassic (Adamanian: latest Carnian) of west-central New Mexico. *New Mexico Geology*, v. 24, p. 66.
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., Origin and early evolution of dinosaurs: New ecosystems, not the same old "extinctions.": *Geological Society of America, Abstracts with Programs*, v. 34(6), p. 360.**
http://gsa.confex.com/gsa/2002AM/finalprogram/abstract_43180.htm
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., Diapsids open the door to new Upper Triassic ecosystems. *Geological Society of America Abstracts with Programs*, v. 34(6), p. 360.**
- Heckert, A.B., Lucas, S.G., and Kietzke, K.K., Micropaleontology of the Upper Triassic (Apachean) Sloan Canyon Formation, northeastern New Mexico. *New Mexico Geology* v. 24, p. 61.
- Hunt, A.P., Lucas, S.G., and Heckert, A.B., No significant nonmarine Carnian-Norian (Late Triassic) extinction event: evidence from Petrified Forest National Park. *Geological Society of America Abstracts with Programs*, v. 34(6), p. 536. http://gsa.confex.com/gsa/2002AM/finalprogram/abstract_42936.htm
- Lucas, S.G., Heckert, A.B., and Zeigler, K.E., Provenance of the holotype of *Belodon buceros* Cope, 1881, a phytosaur from the Upper Triassic of north-central New Mexico. *New Mexico Geology*, v. 24, p. 66.
- Rinehart, L.F., Heckert, A.B., and Lucas, S.G., Probability plots, populations and paleobiology: What to do with Lagerstätten. *Journal of Vertebrate Paleontology*, v. 22 (supplement to no. 3), p. 100A.
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Probability plots distinguish morphological groupings in biometric data: Analysis of *Coelophys* and comparison to other Diapsida. *New Mexico Geology*, v. 24, p. 62.
- Rinehart, L.F., Lucas, S.G., Heckert, A.B., and Estep, J.W., Stasis in bivalve growth and population ecology: age distribution, growth curves, and biomass of a population of Revueltian (Upper Triassic: early-mid Norian) unionids from West Texas. *Geological Society of America Abstracts with Programs*, v. 34(6), p. 354.
http://gsa.confex.com/gsa/2002AM/finalprogram/abstract_43578.htm

- Zanno, L.E., Heckert, A.B., Lucas, S.G., and Krzyzanowski, S.E., Diminutive metoposaurid skulls from the Upper Triassic Blue Hills (Adamanian: latest Carnian) of Arizona: Ontogenetic and phylogenetic implications. *Journal of Vertebrate Paleontology*, v. 22 (supplement to no. 3), p. 121A.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., A taphonomic analysis of a fire-related Late Triassic vertebrate fossil assemblage. *Journal of Vertebrate Paleontology*, v. 22 (supplement to no. 3), p. 121-122A.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., A fire-related Late Triassic vertebrate fossil assemblage from north-central New Mexico. *Geological Society of America Abstracts with Programs*, v. 34(6), p. 535. http://gsa.confex.com/gsa/2002AM/finalprogram/abstract_43765.htm

2001 Papers

- Heckert, A.B., and Lucas, S.G., Stratigraphy, biostratigraphy, and biochronology of lower Chinle Group (Adamanian: latest Carnian) vertebrate assemblages in the vicinity of St. Johns, Arizona. Western Association of Vertebrate Paleontologists and Southwest Paleontological Symposium—Proceedings 2001, p. 9-15.
- Heckert, A.B., Lucas, S.G., Hunt, A.P., and Harris, J.D., A giant phytosaur (Reptilia: Archosauria) skull from the Redonda Formation (Upper Triassic: Apachean) of east-central New Mexico. *New Mexico Geological Society Guidebook 52*, p. 171-178.
- Heckert, A.B., Lucas, S.G., Kahle, R., and Zeigler, K.E., New occurrence of *Trilophosaurus* (Reptilia: Archosauromorpha) from the Upper Triassic of West Texas and its biochronological significance. *New Mexico Geological Society Guidebook 52*, p. 115-122.
- Lucas, S.G. and Heckert, A.B., Theropod dinosaurs and the Early Jurassic age of the Moenave Formation, Arizona-Utah, USA. *Neues Jahrbuch für Geologie und Paläontologie Monatshefte* 2001(7): 435-448.
- Lucas, S.G. and Heckert, A.B., The aetosaur *Stagonolepis* from the Upper Triassic of Brazil and its biochronological significance. *Neues Jahrbuch für Geologie und Paläontologie Monatshefte* 2001(12): 719-732.**
- Lucas, S.G., and Heckert, A.B., Stratigraphy and biostratigraphy of an Upper Cretaceous outlier near Roy, Harding County, New Mexico. *New Mexico Geological Society Guidebook 52*, p. 251-255.
- Lucas, S.G., Heckert, A.B., and Anderson, O.J. The Middle Jurassic Entrada Sandstone near Gallup, New Mexico: Discussion. *The Mountain Geologist*, v. 38, p. 225-227.
- Lucas, S.G., Heckert, A.B., Harris, J.D., Seegis, D., and Wild, R. Mammal-like tooth from the Upper Triassic of Germany. *Journal of Vertebrate Paleontology* 21, p. 397-399.**
- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Triassic stratigraphy, biostratigraphy and correlation in east-central New Mexico. *New Mexico Geological Society Guidebook 52*, p. 85-102.**
- Peterson, R.E., D'Andrea, N.V., and Heckert, A.B., The RONDAN jacket support clamp and jacket transport sled: Society of Vertebrate Paleontology *Materials and Methods Technical Paper*, No. 2: http://www.vertpaleo.org/methods/tech_papers/Rodan/index.html
- Rinehart, L.F., Heckert, A.B., Bryant, G., Lucas, S.G., and Cushman, R., Protosuchid crocodylomorphs from the Lower Jurassic Navajo Sandstone of north-central Utah. Western Association of Vertebrate Paleontologists and Southwest Paleontological Symposium—Proceedings 2001, p. 25-31.

2001 Abstracts

- Heckert, A.B., and Lucas, S.G., A dinosaur-bearing microvertebrate fauna from the Upper Triassic Los Esteros Member, Santa Rosa Formation (Adamanian: latest Carnian), central New Mexico. *New Mexico Geology* v. 23, p. 64-65.
- Heckert, A.B., and Lucas, S.G., What are the oldest dinosaurs? *Journal of Vertebrate Paleontology*, v. 21 (supplement to no. 3), p. 60A. Session moderator.**
- Heckert, A.B., and Lucas, S.G., North America's oldest herbivorous dinosaurs. *Geological Society of America Abstracts with Programs*, v. 33(5) p. A21. Session moderator.** http://gsa.confex.com/gsa/2001RM/finalprogram/abstract_5375.htm
- Heckert, A.B., Lucas, S.G., and Kietzke, K.K., An Upper Triassic microfauna from the Ojo Huelos Member, San Pedro Arroyo Formation, Valencia County, New Mexico. *New Mexico Geology*, v. 23, p. 64.
- Heckert, A.B., Lucas, S.G., Zeigler, K.E., and Kahle, R., New occurrence of *Trilophosaurus* (Reptilia: Archosauromorpha) from the Upper Triassic of West Texas and its biochronological significance. *New Mexico Geology*, v. 23, p. 65.

- Hunt, A.P., Heckert, A.B., and Lucas, S.G. Phytosaurs (Reptilia: Archosauria) from the Upper Triassic Petrified Forest Formation, Petrified Forest National Park, Arizona. *New Mexico Geology* v. 23, p. 63.
- Hunt, A.P., Lucas, S.G., and Heckert, A.B., A Germanic-aspect phytosaur from the Upper Triassic Sonsela Sandstone (Chinle Group: Petrified Forest Formation), Petrified Forest, Arizona. Western Association of Vertebrate Paleontologists and Southwest Paleontological Symposium—Proceedings 2001, p. 16.
- Hunt, A.P., Lucas, S.G., and Heckert, A.B., Does the enigmatic tetrapod ichnotaxon *Barrancapus cresapi* from the Upper Triassic Bull Canyon Formation of east-central New Mexico represent the oldest prosauropod trackway? *New Mexico Geology*, v. 23, p. 63.
- Hunt, A.P., Lucas, S.G., Lockley, M.G., Heckert, A.B., Comparison of tetrapod faunas inferred from osteological and ichnological data derived from lakeshore facies of the Upper Triassic Redonda Formation, east-central New Mexico. *New Mexico Geology* v. 23, p. 63.
- Krzyzanowski, S.E., Lucas, S.G., and Heckert, A.B., Late Campanian (Judithian) vertebrate fauna of the Fort Crittenden Formation, southeastern Arizona. *Journal of Vertebrate Paleontology*, v. 21 (supplement to no. 3), p. 69-70A.
- Lucas, S.G., and Heckert, A.B., Stratigraphy and biostratigraphy of an Upper Cretaceous outlier near Roy, Harding County, New Mexico, *New Mexico Geology*, v. 23, p. 65.
- Lucas, S.G., and Heckert, A.B., Olson's gap: a global hiatus in the record of Middle Permian tetrapods. *Journal of Vertebrate Paleontology*, v. 21 (supplement to no. 3), p. 75A.
- Lucas, S.G., and Heckert, A.B., J-5 unconformity: a tectonosequence boundary in the Jurassic western interior basin. *Geological Society of America Abstracts with Programs*, v. 33(5), p. A22.**
http://gsa.confex.com/gsa/2001RM/finalprogram/abstract_5754.htm
- Lucas, S.G., and Heckert, A.B., Age and correlation of Cretaceous fossil vertebrates from southeastern Arizona. Western Association of Vertebrate Paleontologists and Southwest Paleontological Symposium—Proceedings 2001, p. 62.
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Microvertebrate fossils from the late Carnian Lamy amphibian quarry, east-central New Mexico. *New Mexico Geology*, v. 23, p. 64.
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Preliminary quantification of the robust and gracile forms of the Triassic dinosaur *Coelophysis* using probability plots. *Geological Society of America Abstracts with Programs*, v. 33(5), p. A55.** http://gsa.confex.com/gsa/2001RM/finalprogram/abstract_5476.htm
- Rinehart, L.F., Lucas, S.G., and Heckert, A.B., Preliminary statistical analysis defining the juvenile, robust and gracile forms of the Triassic dinosaur *Coelophysis*. *Journal of Vertebrate Paleontology*, v. 21 (supplement to no. 3), p. 93A.**
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., A taphonomic comparison of two Late Triassic (Chinle Group) fossil localities from New Mexico. *New Mexico Geology*, v. 23, p. 56.
- Zeigler, K.E., Lucas, S.G., Heckert, A.B., and Hunt, A.P., The phytosaur *Nicrosaurus buceros* in the Upper Triassic of the Chama basin, north-central New Mexico. *Geological Society of America Abstracts with Programs*, v. 33(5), p. A22. http://gsa.confex.com/gsa/2001RM/finalprogram/abstract_5249.htm
- Zeigler, K.E., Lucas, S.G., and Heckert, A.B., Variation in the Late Triassic Canjilon quarry (Upper Chinle Group, New Mexico) phytosaur skulls: sexual dimorphism in phytosaurs. *Journal of Vertebrate Paleontology*, v. 21 (supplement to no. 3), p. 117A.**

2001 Road logs, mini-papers, etc.

- Hunt, A.P., Lucas, S.G., and Heckert, A.B., Paleocurrents in the Trujillo Formation (Chinle Group; Upper Triassic), east-central New Mexico, and the myth of the Dockum lake. *New Mexico Geological Society Guidebook 52*, p. 22-23.
- Lucas, S.G., Hunt, A.P., Kues, B.S., Heckert, A.B., and McLemore, V.T., First-day road log, from Tucumcari to the edge of the Llano Estacado at Gruhlkey, Texas, Palo Duro Canyon, Texas, and San Jon Hill, New Mexico. *New Mexico Geological Society Guidebook 52*, p. 1-23.
- Lucas, S.G., Hunt, A.P., Heckert, A.B., Kues, B.S., and McLemore, V.T., Second-day road log, from Tucumcari to Mesa Redonda, Pyramid Mountain, Ragland, and Blackwater Draw, New Mexico. *New Mexico Geological Society Guidebook 52*, p. 25-39.
- Lucas, S.G., Hunt, A.P., Heckert, A.B., Kues, B.S., and McLemore, V.T., Third-day roadlog, from Tucumcari to Conchas Dam, New Mexico. *New Mexico Geological Society Guidebook 52*, p. 41-53.

2000 Co-edited volume

Lucas, S.G., and Heckert, A.B., editors, *Dinosaurs of New Mexico*, New Mexico Museum of Natural History and Science Bulletin 17, 240 p.

2000 Papers

Heckert, A.B., and Lucas, S.G., Taxonomy, phylogeny, biostratigraphy, biochronology, paleobiogeography, and evolution of the Late Triassic Aetosauria (Archosauria: Crurotarsi). *Zentralblatt für Geologie und Paläontologie Teil I, Heft 11-12*, p. 1539-1587.

Heckert, A.B., and Lucas, S.G., Global correlation of the Triassic theropod record. *Gaia*, v. 15, p. 63-74.

Heckert, A.B., Lucas, S.G., and Morgan, G.S., Specimens of *Gomphotherium* in the New Mexico Museum of Natural History and Science and the species-level taxonomy of *Gomphotherium*. *New Mexico Museum of Natural History and Science Bulletin* 16, p. 187-194.

Heckert, A.B., Lucas, S.G., and Sullivan, R.M., Triassic dinosaurs in New Mexico: *New Mexico Museum of Natural History and Science Bulletin* 17, p. 17-26.

Heckert, A.B., Lucas, S.G., Zeigler, K.E., Peterson, R.E., Peterson, R.E., and D'Andrea, N.V., stratigraphy, taphonomy, and new discoveries from the Upper Jurassic (Morrison Formation: Brushy Basin Member) Peterson quarry, central New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 51-60.

Heckert, A.B., Zeigler, K.E., Lucas, S.G., Rinehart, L.F., and Harris, J.D., Preliminary description of coelophysoids (Dinosauria: Theropoda) from the Upper Triassic (Revueltian: early-mid Norian) Snyder quarry, north-central New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 27-32.

Hunt, A.P., Lucas, S.G., Lockley, M.G., and Heckert, A.B., Occurrence of the dinosaurian ichnogenus *Grallator* in the Redonda Formation (Upper Triassic: Norian) of eastern New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 39-41.

Lucas, S.G., and Heckert, A.B., Dinosaurs of New Mexico: An overview. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 1-4.

Lucas, S.G., and Heckert, A.B., Dinosaurs of New Mexico: A popular guide. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 5-6.

Lucas, S.G., and Heckert, A.B., Jurassic dinosaurs in New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 43-45.

Lucas, S.G., Heckert, A.B., and Sullivan, R.M., Cretaceous dinosaurs in New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 17, p. 83-91.

Lucas, S.G., and Heckert, A.B., Biochronological significance of Triassic nonmarine tetrapod records from marine strata. *Albertiana*, v. 24, p. 29-36.

Lucas, S.G., Heckert, A.B., and Hunt, A.P., Probable turtle from the Upper Triassic of east-central New Mexico: *Neues Jahrbuch für Geologie und Paläontologie Monatsheft*, 2000(5), p. 287-300.

Peterson, R.E., D'Andrea, N.V., and Heckert, A.B., The Rondan jacket support clamp and jacket transport sled. *New Mexico Museum of Natural History and Science Bulletin* 16, p. 281-288.

2000 Abstracts

Heckert, A.B., Tempo and trends in Triassic dinosaur evolution. *GSA Abstracts with Programs*, v. 32, no. 7, p. 497.

Heckert, A.B., and Lucas, S.G., Phytosaurs (Archosauria: Crocodylotarsi) from the Upper Triassic Owl Rock Formation, Arizona, and their biochronological significance. *Mesa Southwest Museum Bulletin*, v. 7, p. 37.

Heckert, A.B., Harris, J.D., and Lucas, S.G., A giant, incomplete *Redondasaurus* skull from the Redonda Formation (Upper Triassic: Apachean) of east-central New Mexico. *Mesa Southwest Museum Bulletin*, v. 7, p. 59.

Heckert, A.B., Harris, J.D., Lucas, S.G., and Zeigler, K.E., Additions to the fauna of the Upper Triassic Snyder Quarry, Petrified Forest Formation (Revueltian: early-mid Norian), north-central New Mexico. *New Mexico Geology* v. 22, p. 46.

- Heckert, A.B., Lucas, S.G., Peterson, Ronald E., Peterson Rodney E., and D'Andrea, N.V., Diplodocid (Dinosauria:Sauropoda) skull and jaw material from the Upper Jurassic Morrison Formation, central New Mexico. *New Mexico Geology*, v. 22, p. 51.
- Lucas, S.G., and Heckert, A.B., Late Triassic phytosaur skulls from Arizona in the USNM collection and their biostratigraphic significance. *Mesa Southwest Museum Bulletin*, v. 7, p. 57.
- Rinehart, L.F., Heckert, A.B., Bryant, G., Cushman, R., and Lucas, S.G., Probable protosuchid crocodylomorph from the Early Jurassic Navajo Sandstone of north-central Arizona: *GSA Abstracts with Programs*, v. 32, no. 7, p.14.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., The aetosaur *Desmatosuchus* from the Upper Triassic Snyder quarry, northern New Mexico, and its biochronological significance. *New Mexico Geology*, v. 22, p.46.
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., Preliminary taphonomy of the Upper Triassic Snyder quarry and significant concentrations of titanium in the specimens. *New Mexico Geology* v. 22, p. 51-52
- Zeigler, K.E., Heckert, A.B., and Lucas, S.G., Preliminary taphonomy of a unique Upper Chinle bonebed from north-central New Mexico. *GSA Abstracts with Programs*, v. 32, no. 7, p. 220.

1999 Papers

- Heckert, A.B., Upper Triassic tetrapods from the Lucero uplift, central New Mexico. *New Mexico Geological Society Guidebook* 50, p. 311-315.
- Heckert, A.B., and Lucas, S.G., A new aetosaur (Archosauria:Crurotarsi) from the Upper Triassic of Texas and the phylogeny of aetosaurs. *Journal of Vertebrate Paleontology*, v. 19, p. 50-68.**
<http://www.jstor.org/stable/4523969>
- Heckert, A.B., and Lucas, S.G., Global chronology and correlation of Triassic theropods (Archosauria:Dinosauria). *Albertiana* 23, p. 22-35.
- Heckert, A.B., Lucas, S.G., and Harris, J.D., An aetosaur (Reptilia:Archosauria) from the Upper Triassic Chinle Group, Canyonlands National Park, Utah. in Santucci, V., (ed.) National Park Service Geologic Resources Division Technical Report, p. 23-26.
- Lucas, S.G., Estep, J.W., Heckert, A.B., and Hunt, A.P. Cynodont teeth from the Upper Triassic of New Mexico, U.S.A. *Neues Jahrbuch für Geologie und Paläontologie Monatsheft*, 1999(6), p. 331-344.
- Lucas, S.G., Heckert, A.B., and Estep, J.W., Correlation of Triassic strata across the Rio Grande rift, North-Central New Mexico, *New Mexico Geological Society Guidebook* 50, p. 305-310.
- Lucas, S.G., Heckert, A.B., Fraser, N.C., and Huber, P., Aetosaur from the Upper Triassic of Great Britain and its biochronological significance. *Neues Jahrbuch für Geologie und Paläontologie Monatsheft*, 1999(9), p. 568-576**

1999 Abstracts

- Harris, J.D., Heckert, A.B., and Lucas, S.G., Preliminary analysis of sphenodontian (Lepidosauria) diversity in the Upper Triassic Chinle Group, southwestern USA. *Journal of Vertebrate Paleontology*, v. 19(3) p. 49A (incorrectly printed as Harris, Lucas, and Heckert).
- Heckert, A.B., and Lucas, S.G., Late Triassic ornithischian dinosaur evolution. *Journal of Vertebrate Paleontology*, v. 19(3), p. 50A.**
- Heckert, A.B., Harris, J.D., Lucas, S.G., and Rinehart, L.F., The oldest coelophysoid (Dinosauria:Theropoda) skull, from the Upper Triassic Chinle Group, north-central New Mexico, U.S.A. *GSA Abstracts with Programs*, v. 31(7), p. A365. Session moderator.**
- Heckert, A.B., Lucas, S.G., and Estep, J.W. Lower Chinle Group (Upper Triassic:Upper Carnian) tetrapods from the vicinity of Cameron, Arizona. *Southwest Paleontological Symposium Proceedings 1999*, p. 17-18.
- Heckert, A.B., Lucas, S.G., and Rinehart, L.F., From decapods to dinosaurs: a diverse new fauna from a bonebed in the Upper Triassic (Norian) Petrified Forest Formation. *Journal of Vertebrate Paleontology*, v. 19(3), p. 50A.**
- Heckert, A.B., Lucas, S.G., Krzyzanowski, S.E., and Estep, J.W., Additions to the vertebrate fauna of the Upper Triassic Blue Mesa Member (Adamanian-latest Carnian) of the Petrified Forest Formation in the Blue Hills, Apache County, Arizona. *Southwest Paleontological Symposium Proceedings 1999*, p. 19. (**Best Student Paper Award**).

- Heckert, A.B., Rinehart, L.F., Lucas, S.G., Downs, A., Estep, J.W., Harris, J.D., Reser, P.K., and Snyder, M., A diverse new Triassic fossil assemblage from the Petrified Forest Formation (Revueletian:early-mid Norian) near Abiquiu, New Mexico. *New Mexico Geology* v. 21, p. 42.
- Lucas, S.G., Heckert, A.B., and Estep, J.W. Topotype skull of *Placerias* (Synapsida:Dicynodontia) from the Upper Triassic Chinle Group of northern Arizona. *Southwest Paleontological Symposium Proceedings 1999*, p. 21.
- Lucas, S.G., Heckert, A.B., and Estep, J.W. Continuity of Triassic strata and unconformities across the Rio Grande Rift, north-central New Mexico. *New Mexico Geology* v. 21, p. 44.
- Lucas, S.G., Heckert, A.B., and Harris, J.D., Biostratigraphic correlation based on cladistic phylogeny: an unparsimonious exercise. *GSA Abstracts with Programs*, v. 31(7), p. A42.
- Lucas, S.G., Heckert, A.B., and Morgan, G.S., Newly discovered skull of the Proboscidean *Gomphotherium* from the Miocene of the Española Basin, New Mexico. *New Mexico Geology* v. 21, p. 44.
- Peterson, R., Peterson, R., D'Andrea, N.V., Lucas, S.G., and Heckert, A.B. Geology and taphonomy of the Peterson site, New Mexico's most extensive Late Jurassic dinosaur quarry. *New Mexico Geology* v. 21, p. 43-44.
- Peterson, R., Peterson, R., D'Andrea, N.V., Lucas, S.G., and Heckert, A.B., Geological context and preliminary taphonomic analysis of the Peterson site, a Late Jurassic dinosaur quarry in New Mexico. *Journal of Vertebrate Paleontology*, v. 19(3), 68A.
- Rinehart, L.F., Heckert, A.B., and Lucas, S.G., A probable decapod crustacean from the Upper Triassic Petrified Forest Formation of the Chinle Group, north-central New Mexico. *New Mexico Geology* v. 21, p. 43.
- Rinehart, L.F., Heckert, A.B., and Lucas, S.G., Late Triassic decapod from the Upper Triassic Petrified Forest Formation, north-central NM, U.S.A. *GSA Abstracts with Programs*, v. 31(7), p. 464.

1998 Papers

- Anderson, B.G., Barrick, R.E., Lucas, S.G., and Heckert, A.B., Dinosaur skin impressions from the Upper Cretaceous Ringbone Formation, southwestern New Mexico. *Journal of Vertebrate Paleontology* 18(4):739-745. <http://www.jstor.org/stable/4523951>
- Heckert, A.B., and Lucas, S.G. A new dinosaur footprint locality from the Dakota Sandstone (Upper Cretaceous: Cenomanian) in west-central New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 14, p. 169-171.
- Heckert, A.B., and Lucas, S.G., First occurrence of *Aetosaurus* (Reptilia:Archosauria) in the Upper Triassic Chinle Group (USA) and its biochronological significance. *Neues Jahrbuch für Geologie und Paläontologie Monatsheft*, 1998(10), p. 604-612.**
- Heckert, A.B., and Lucas, S.G., Stratigraphic distribution of petrified wood in the Petrified Forest National Park and vicinity, Arizona. in Santucci, V., and McClelland, L. (eds.), National Park Service Paleontological Research Volume 3, *National Park Service Geologic Resources Division Technical Report*, p. 125-129.
- Heckert, A.B., and Lucas, S.G., The oldest Triassic strata in the Petrified Forest National Park, Arizona. in Santucci, V., and McClelland, L. (eds.), *National Park Service Geologic Resources Division Technical Report*, p. 129-134.
- Hunt, A.P., Lucas, S.G., Heckert, A.B., Sullivan, R.M., and Lockley, M.G. Late Triassic dinosaurs from the western United States. *Geobios* 31(4):511-531.
- Lucas, S.G., Heckert, A.B., and Huber, P., *Aetosaurus* (Archosauromorpha) from the Upper Triassic of the Newark Supergroup and its biochronological significance. *Palaeontology*, v. 41, p. 1215-1230.**
- Lucas, S.G., Heckert, A.B., Estep, J.W., and Cook, C.W., Stratigraphy of the lower Permian Hueco Group in the Robledo Mountains, Doña Ana County, New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 12, p.43-54.
- Lucas, S.G., Heckert, A.B., Estep, J.W., Hunt, A.P, and Anderson, O.J., Stratigraphy, paleontology, and depositional environments of the lower Permian Robledo Mountains Formation of the Hueco Group, Robledo Mountains, New Mexico. *New Mexico Museum of Natural History and Science Bulletin* 12, p. 29-41.

1998 Abstracts

- Estep, J.W., Heckert, A.B., and Lucas, S.G., *Acaenasuchus geoffreyi* (Archosauria:Aetosauria) from the Upper Triassic Chinle Group: Juvenile of *Desmotosuchus haplocerus*. *Journal of Vertebrate Paleontology*, v. 18(3), p. 40A.

- Heckert, A.B., and Lucas, S.G., The "Type" Wingate Sandstone (Upper Triassic-Lower Jurassic) and the homotaxial Entrada Sandstone (Middle Jurassic): Resolving stratigraphic problems on the southern Colorado Plateau. *New Mexico Geology* 20(2), p. 54.
- Heckert, A.B., and Lucas, S.G., Taxonomy, phylogeny, biostratigraphy, biochronology, and paleogeography of the Aetosauria (Archosauria:Crurotarsi). *Epicontinental Triassic International Symposium—Abstracts*, Institut für Geologische Wissenschaften und Geiseltalmuseum, Martin-Luther Universität Halle-Wittenberg, Halle (Saale), Germany, p. 71-72.**
- Heckert, A.B., Lucas, S.G., and Estep, J.W., Additions to the vertebrate fossil record of the Moenkopi Formation (Middle Triassic:Anisian), northern New Mexico. *New Mexico Geology* 20(2), p. 57.
- Heckert, A.B., Lucas, S.G., and Estep, J.W., The tetrapod fauna of the Upper Triassic Chinle Group in the Lucero uplift, central New Mexico, U.S.A. *Journal of Vertebrate Paleontology*, v. 18(3), p. 50A.
- Lucas, S.G., and Heckert, A.B., Stratigraphy of the Jurassic Entrada Sandstone in New Mexico. *New Mexico Geology* 20(2), p. 54-55.
- Lucas, S.G., and Heckert, A.B., Biochronological significance of the aetosaur *Longosuchus* from the Upper Triassic of Morocco. *Journal of Vertebrate Paleontology*, v. 18(3), p. 59-60A.

1997 M.S. Thesis

- Heckert, A.B., Litho- and biostratigraphy of the lower Chinle Group, east-central Arizona and west-central New Mexico, with a description of a new theropod (Dinosauria:Theropoda) from the Bluewater Creek Formation. M.S. Thesis, University of New Mexico, 278 p.

1997 Papers

- Heckert, A.B., The tetrapod fauna of the Upper Triassic lower Chinle Group (Adamanian:latest Carnian), of the Zuni Mountains, west-central New Mexico. *New Mexico Museum of Natural History and Science, Bulletin 11*, p. 29-39.
- Heckert, A.B., and Lucas, S.G., Lower Chinle Group (Adamanian:latest Carnian) tetrapod biostratigraphy and biochronology, eastern Arizona and west-central New Mexico. *Southwest Paleontological Symposium Proceedings* p. 11-23.
- Heckert, A.B., and Lucas, S.G., First use of ornithischian dinosaurs for biostratigraphic zonation of the Upper Triassic. *Albertiana* v. 20, p. 58-63.
- Lucas, S.G., Heckert, A.B., and Anderson, O.J., The Triassic System on the Fort Wingate quadrangle, west-central New Mexico. *New Mexico Geology*, v. 19(2), p. 33-42.
- Lucas, S.G., Heckert, A.B., and Huber, P., The *Aetosaurus* biochron, middle Norian of Pangea. *Albertiana* v. 19, p. 41-47.
- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Stratigraphy and biochronological significance of the *Placerias* quarry, eastern Arizona. *Neues Jahrbuch für Geologie und Paläontologie Monatsheft*, v. 203(1), p. 23-46.
- Lucas, S.G., Heckert, A.B., Anderson, O.J., and Estep, J.W., Phytosaur from the Wingate Sandstone in southeastern Utah and the Triassic-Jurassic boundary on the Colorado Plateau. *Southwest Paleontological Symposium Proceedings* p. 49-59.
- Lucas, S.G., Heckert, A.B., Estep, J.W., and Anderson, O.J., Stratigraphy of the Upper Triassic Chinle Group, Four Corners region. *New Mexico Geological Society Guidebook* 48 p. 81-108.
- Morgan, G.S., Sealey, P.L., Lucas, S.G., and Heckert, A.B., Pliocene (latest Hemphillian and Blancan) vertebrate fossils from the Mangas Basin, southwestern New Mexico. *New Mexico Bulletin of Natural History and Science, Bulletin 11*, p. 97-128.

1997 Abstracts

- Heckert, A.B., and Lucas, S.G., Triassic stratigraphy and tetrapod biochronology of the Petrified Forest National Park and vicinity, eastern Arizona, USA. *GSA Abstracts with Programs*, v. 29(2), p. 13.
- Heckert, A.B., and Lucas, S.G., No Moenkopi Formation sediments in the Petrified Forest National Park, Arizona. *GSA Abstracts with Programs*, v. 29(2), p. 14.
- Heckert, A.B., and Lucas, S.G., The Tr-3 unconformity on the Colorado Plateau. *New Mexico Geology*, v. 19(2), p. 57.

- Heckert, A.B., and Lucas, S.G., Lakes, caves, and lithofacies: using detailed lithostratigraphy to understand problematic Chinle outcrops in west-central New Mexico, *New Mexico Geology*, v. 19(2), p. 60-61.
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., Biostratigraphic importance of ornithischian dinosaur teeth in the Upper Triassic Chinle Group, southwestern U.S.A. *Journal of Vertebrate Paleontology* v. 17(supplement to no. 3), p. 52A.
- Hunt, A.P., Lucas, S.G., and Heckert, A.B., Heterochrony in the evolution of phytosaurs (Archosauria: Crurotarsi). *Journal of Vertebrate Paleontology* v. 17(supplement to no. 3), p. 54A.
- Lucas, S.G., and Heckert, A.B., Evolution of the Late Triassic Chinle Basin, western United States. *GSA Abstracts with Programs*, v. 29(2), p. 37.
- Lucas, S.G., and Heckert, A.B., *Aetosaurus* from the Upper Triassic Chinle Group, eastern New Mexico, and its biochronological significance. *Journal of Vertebrate Paleontology* v. 17(supplement to no. 3), p. 61A.
- Lucas, S.G., Anderson, B.G., Barrick, R.E., Basabilvazo, G.T., and Heckert, A.B., Dinosaur skin impressions from the Upper Cretaceous of south-western New Mexico. *New Mexico Geology*, v. 19(2), p. 62.

1996 Papers

- Heckert, A.B., and Lucas, S.G., Stratigraphic description of the Tr-4 unconformity, west-central New Mexico and eastern Arizona. *New Mexico Geology*, v. 18(3), p. 61-70.
- Heckert, A.B., Hunt, A.P., and Lucas, S.G., Redescription of *Redondasuchus reseri*, a Late Triassic aetosaur (Reptilia: Archosauria) from New Mexico (U.S.A) and the biochronology and phylogeny of aetosaurs. *Geobios* v. 29(5), p. 619-632.**
- Lucas, S.G., and Heckert, A.B., Late Triassic aetosaur biochronology. *Albertiana*, v. 17, p. 57-64.**
- Lucas, S.G., and Heckert, A.B., Stratigraphy and correlation of Triassic strata around the Nacimiento and Jemez uplifts, northern New Mexico. *New Mexico Geological Society Guidebook 47*, p. 199-204.
- Lucas, S.G., and Heckert, A.B., Vertebrate biochronology of the Late Triassic of Arizona. *Proceedings of the Symposium on Fossils of Arizona*, v. 4, p. 63-81.
- Sullivan, R.M., Lucas, S.G., Heckert, A.B., and Hunt, A.P., The type locality of *Coelophysis*, a Late Triassic dinosaur from north-central New Mexico (USA). *Paläontologische Zeitschrift* v. 70, p. 245-255.**

1996 Abstracts

- Heckert, A.B., Regional litho- and sequence stratigraphy of the lower Chinle Group, west-central New Mexico and eastern Arizona. *New Mexico Geology*, v. 18(2), p. 48.
- Heckert, A.B., Vertebrate paleontology, biostratigraphy, and biochronology of the lower Chinle Group, Zuni Mountains, New Mexico, and St. Johns and Petrified Forest National Park, Arizona. *New Mexico Geology*, v. 18(2), p. 54.
- Heckert, A.B., and Lucas, S.G., Triassic stratigraphy around the Nacimiento and Jemez uplifts, northern New Mexico. *New Mexico Geology*, v. 18(2), p. 57.
- Heckert, A.B., and Lucas, S.G., Revision of the South American Aetosaur (Archosauria: Pseudosuchia) record with implications for the absolute age of the Late Triassic Chinle Group, USA. *GSA Abstracts with Programs*, v. 28(7), p. 365.**
- Lucas, S.G., Heckert, A.B., Huber, P., and Hunt, A.P., The Triassic aetosaur "*Stegomus*" from the Newark Supergroup and its biochronological significance. *Journal of Vertebrate Paleontology* v. 16 (supplement to no. 3), p. 49A.
- Watts, B.R., Hunt, A.P., Lucas, S.G., Heckert, A.B., and Lockley, M.G., The vertebrate fauna of the Redonda Formation (Upper Triassic: Rhaetian), east-central New Mexico. *Journal of Vertebrate Paleontology* v. 16(supplement to no. 3), p. 71A.

1995 Co-edited volume

- Lucas, S.G., and Heckert, A.B., editors, *Permian Footprints and Facies*, New Mexico Museum of Natural History and Science, Bulletin 6, 300 p.**

1995 Papers

- Lucas, S.G., and Heckert, A.B., Triassic stratigraphy around the Sandia uplift, New Mexico: *New Mexico Geological Society Guidebook 46*, p. 233-242.

- Lucas, S.G., Anderson, O.J., Heckert, A.B., and Hunt, A.P., Geology of early Permian tracksites, Robledo Mountains, south-central New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 6, p. 13-32.
- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Unusual aetosaur armor from the Upper Triassic of West Texas, U.S.A. *Paläontologische Zeitschrift* v. 69, p. 467-473.
- Lucas, S.G., Heckert, A.B., and Kues, B.S., A late Cretaceous mosasaur from north-central New Mexico. *New Mexico Geological Society Guidebook* 46 p. 257-60.
- Lucas, S.G., Heckert, A.B., and Sealey, P.L., Pliocene fossil snake from southern New Mexico. *Texas Journal of Science* v. 47(1), p. 9-12.
- Lucas, S.G., Hunt, A.P., and Heckert, A.B., Preliminary report on paleontology of the Abo Formation, McLeod Hills, Sierra County, New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 6, p. 269-275.
- Lucas, S.G., Hunt, A.P., Heckert, A.B., and Haubold, H., Vertebrate paleontology of the Robledo Mountains Member of the Hueco Formation, Doña Ana Mountains, New Mexico, *New Mexico Museum of Natural History and Science Bulletin* 6, p. 277-285.

1995 Abstracts

- Heckert, A.B., and Lucas, S.G., Outcrop expression and significance of the Tr-4 unconformity in west-central New Mexico. *New Mexico Geology*, v. 17(2), p. 24.
- Heckert, A.B., and Lucas, S.G., The Upper Triassic Tr-4 unconformity on the southern Colorado Plateau, Arizona and New Mexico. *GSA Abstracts with Programs*, v. 27(4), p. 13.
- Heckert, A.B., and Lucas, S.G., Synchronous Pangea-wide diversification of Late Triassic dinosaurs and the importance of western North America in early dinosaur evolution. *GSA Abstracts with Programs*, v. 27 (6), p. 319.**
- Heckert, A.B., Lucas, S.G., and Davis, C.L., Lower Chinle Group stratigraphy and biochronology of the Petrified Forest National Park, Arizona: *Second Biennial Conference of Research on the Colorado Plateau*.
- Heckert, A.B., Lucas, S.G., and Hunt, A.P., A nearly complete skeleton of a new genus and species of aetosaur (Archosauria) and the evolutionary history of aetosaurs: *Journal of Vertebrate Paleontology* v. 15 (supplement to no. 3), p. 34A.**
- Heckert, A.B., Lucas, S.G., Sullivan, R.M., and Hunt, A.P., "Coelophysid" *Rioarribasaurus*, and the stratigraphy and biochronology of the upper Chinle Group in north-central New Mexico. *New Mexico Geology*, v. 17(2), p. 29.
- Hunt, A.P., Heckert, A.B., and Lucas, S.G., Vertebrate paleontology and biochronology of the Santa Rosa Formation, Santa Fe County, north-central New Mexico. *New Mexico Geology*, v. 17(2), p. 32.
- Hunt, A.P., Heckert, A.B., Lucas, S.G., Sealey, P.L., and Lockley, M.G., Vertebrate taphofacies of the Upper Triassic (Rhaetian) Redonda Formation, east-central New Mexico. *New Mexico Geology*, v. 17(2), p. 32.
- Hunt, A.P., Sullivan, R.M., Lucas, S.G., and Heckert, A.B., Herrerasaur and theropod diversity in the Late Triassic of western United States. *Journal of Vertebrate Paleontology*, v.15, supplement to no. 3, p. 36A.
- Lucas, S.G., and Heckert, A.B., Aetosaur biochronology and correlation of the Pangean nonmarine Upper Triassic. *GSA Abstracts with Programs*, v. 27(6), p. 320.
- Lucas, S.G., Heckert, A.B., and Davis, C.L., Lithostratigraphy and biochronology of the Sonsela and Painted Desert Members, Petrified Forest Formation, Chinle Group, in the Petrified Forest National Park, Arizona: *Second Biennial Conference of Research on the Colorado Plateau*
- Lucas, S.G., Heckert, A.B., and Hunt, A.P., Stratigraphy and biochronology of the *Placerias* quarry, Apache County, Arizona. *GSA Abstracts with Programs*, v. 27(4), p. 44-45.
- Lucas, S.G., Heckert, A.B., Anderson, O.J., and Hunt, A.P., Early Permian tracksite, base-level changes, and depositional cyclicity of intertongued Abo-Hueco strata, Robledo Mountains, New Mexico. *New Mexico Geology*, v. 17(2), p. 24.
- Sealey, P.L., Hunt, A.P., Lucas, S.G., and Heckert, A.B., Reconstruction of *Typhothorax coccinarum* (Archosauria:Aetosauria) from the Late Triassic (Norian) of the western United States. *Journal of Vertebrate Paleontology*, v.15, supplement to no. 3, p. 52A.

1994 Paper

Lucas, S.G., and Heckert, A.B., Triassic stratigraphy in the Lucero uplift, Cibola, Valencia and Socorro counties, New Mexico: *New Mexico Geological Society Guidebook 45*, p. 241-254.

1994 Abstracts

Heckert, A.B., Lucas, S.G., and Hunt, A.P., North America's most complete late Carnian dinosaur: a derived theropod from the Chinle Group in west-central New Mexico: *GSA Abstracts with Programs*, v. 26(7), p. A60.

Heckert, A.B., Lucas, S.G., and Hunt, A.P., A late Carnian theropod from New Mexico: Implications for the early evolution of Theropoda. *Journal of Vertebrate Paleontology* Supplement to v. 13 (3), p. 28-29.

Heckert, A.B., Lucas, S.G., and Hunt, A.P., New Mexico's oldest dinosaur. New Mexico Geological Society Spring Meeting 1994, published in *New Mexico Geology*, v. 17(1), p. 16, 1995.

Lucas, S.G., and Heckert, A.B., Triassic stratigraphy in the Lucero uplift, central New Mexico. New Mexico Geological Society Spring Meeting 1994, published in *New Mexico Geology*, v. 17(1), p. 16, 1995.

Lucas, S.G., Heckert, A.B., and Sealey, P.L., Pliocene fossil snake from the Camp Rice Formation, Palomas basin, southern New Mexico: New Mexico Geological Society Spring Meeting 1994, published in *New Mexico Geology*, v. 16(4), p. 85.