

Curriculum Vitae

William A. Reyes

Jackson School of Geosciences
University of Texas at Austin

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Current Residence: Austin, Texas

EDUCATION (* = current)

Fall 2020 – Expected 2025	Ph.D.*	University of Texas at Austin, Geological Sciences Advisor: Dr. Christopher Bell
Fall 2013 – Summer 2018	B.S.	University of Houston – Downtown, Geosciences <i>Summa Cum Laude</i>

POSITIONS (* = current)

Spring 2022 – Present	*Ph.D. Candidate, The University of Texas at Austin
Fall 2020 – Spring 2022	Ph.D. Student, The University of Texas at Austin
Fall 2021 – Spring 2022	Graduate Teaching Assistant, The University of Texas at Austin
June 2022 – August 2022, May 2021 – August 2021, May 2019 – October 2019	Vertebrate Paleontology Intern, Petrified Forest National Park
Fall 2017 – Spring 2018	Scholars Academy Peer Mentor, The University of Houston– Downtown

ACTIVE RESEARCH INTERESTS

Current research interests include: **1)** The macroevolutionary processes that drive vertebrate evolution; **2)** The faunal dynamics (i.e., speciation, extinction, geographic range shifts, ecomorphological diversity) in the Late Triassic; **3)** The endocranial morphology and paleoneurology of Triassic pseudosuchians; **4)** Assessing intraspecific variation in the fossil record and how it influences our phylogenetic hypotheses of extinct taxa; **5)** Refining the temporal constraints of Late Triassic strata in the southwestern United States.

PEER-REVIEWED PUBLICATIONS

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1. **Reyes, W.A.**, Parker, W.G., and 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 paratypothoracin *Tecovasuchus* across the southwestern USA. *PaleoBios* 40(9):1-15. DOI: <https://doi.org/10.5070/P940961559>.
 2. **Reyes, W. A.**, Parker, W.G., and Marsh, A.D. 2020. Cranial Anatomy and Dentition of the Aetosaur *Typhothorax coccinarum* (Archosauria: Pseudosuchia) from the Upper Triassic (Revueltian—Mid Norian) Chinle Formation of Arizona. *Journal of Vertebrate Paleontology* 40:e1876080. DOI 10.1080/02724634.2020.1876080.

MANUSCRIPTS IN REVIEW

1. **Reyes, W.A.**, Small, B.J., Muller, B.D., and Martz, J.W. in review. *Garzapelta muelleri*, a new desmatosuchin aetosaur (Pseudosuchia) from the Late Triassic Cooper Canyon Formation, Dockum Group, of Garza County in northwestern Texas, USA.
2. Parker, W.G., **Reyes, W.A.**, and Marsh, A.D. in review. Inconsistent ontogenetic maturity indicators in a Late Triassic archosaur (Aetosauria: cf. *Typothorax coccinarum*).

MANUSCRIPTS IN PREPARATION

1. **Reyes, W.A.** in preparation. Insight into the neuroanatomical diversity of the Aetosauria (Archosauria: Pseudosuchia) based on digital endocasts of the desmatosuchines *Longosuchus meadei* and *Lucasuchus hunti*.
2. **Reyes, W.A.**, Martz, J.W., and Small, B.J. in preparation. *Acutiora douglassorum*, a new aetosaur (Pseudosuchia) from the Late Triassic Chinle Formation in the Eagle Basin, Colorado.
3. **Reyes, W.A.**, Parker, W.G., Marsh, A.D., and Kligman, B.T. in preparation. Cranial anatomy, intraspecific variation, and regional variation within *Calyptosuchus welllesi* (Pseudosuchia: Aetosauria) based on new specimens from the Late Triassic Chinle Formation of Petrified Forest National Park, Arizona, USA.
4. Kligman, B.T., and **Reyes, W.A.** in preparation. A revision of the holotype material of *Trilophosaurus buettneri* (Archosauromorpha: Allokotosauria) from the Late Triassic Dockum Group of northwestern Texas.
5. Kligman, B.T., Marsh, A.D., **Reyes, W.A.**, Mundil, R., Stockli, L.D., and Stockli, D.R. in preparation. New Late Triassic assemblage recalibrates the rise of the modern tetrapod evolutionary fauna, placing new constraints on early Mesozoic extinctions.
6. Martz, J.W., Parker, W.G., Small, B.J., and **Reyes, W.A.** in preparation. Cranial and mandibular morphology of aetosaurs (Archosauria, Pseudosuchia) from the Otis Chalk locality (Dockum Group, Upper Triassic) of Howard County, West Texas, including a redescription of the lectotype and paralectotype of *Longosuchus meadei*.
7. Parker, W.G., Stocker, M.R., **Reyes, W.A.**, and Werning, S. in preparation. Anatomy and histology of the “Carnivorous Aetosaur”: New information of *Coahomasuchus kahleorum* (Archosauria: Aetosauria) from the upper Triassic of Texas.
8. Parker, W.G., Desojo, J.B., Martz, J.W., Paes-Neto, V., Small, B.J., Hoffman, D., Marsh, A.D., Keeble, E., Sues, H.D., and **Reyes, W.A.** in preparation. Aetosauriforms. In (eds.) Non-marine tetrapods from the Late Triassic of North America. *PaleoBios*.

PUBLISHED ABSTRACTS/ CONFERENCE PRESENTATIONS (* = Upcoming)

1. ***Reyes, W.A.**, and Brown, M.A. October 2023. (Poster) The Skeletal Morphology of a Hypothetically Juvenile Aetosaur Specimen from the Late Triassic Dockum Group (Otischalkian) of Texas. *Geological Society of America Connects 2023*. Pittsburgh, Pennsylvania, USA.
2. ***Reyes, W.A.**, and Brown, M.A. October 2023. (Poster) The Skeletal Morphology of a Hypothetically Juvenile Aetosaur Specimen from the Late Triassic Dockum Group (Otischalkian) of Texas. *Society of Vertebrate Paleontology 83rd Annual Meeting*. Cincinnati, Ohio, USA.

3. *Keeble, E.K., Fitch, A.J., Paes-Neto, V.D., Parker, W.G., **Reyes, W.A.**, and Nesbitt, S.J. October 2023. (Poster) Quantifying the shape of teeth of a rare herbivorous archosaurs in the Triassic using 3D geometric morphometrics and discrete analysis. *Society of Vertebrate Paleontology 83rd Annual Meeting*. Cincinnati, Ohio, USA.
4. **Reyes, W.A.** January 2023. (Poster) Endocranial variation of the Aetosauria (Archosauria: Pseudosuchia) from the Late Triassic Group. *Society of Integrative and Comparative Biology*.
5. Kligman, B.T., Marsh, A.D., Parker, W.G., Nesbitt, S.J., **Reyes, W.A.**, Gee, B.M., Smith, M.E., and Stocker, M.R. November 2022. (Talk) New Late Triassic paleocommunity recalibrates the rise of the modern tetrapod evolutionary fauna, placing new constraints on early Mesozoic extinctions. *Society of Vertebrate Paleontology 82nd Annual Meeting*. Toronto, Ontario, Canada.
6. **Reyes, W.A.**, Parker, W.G., Marsh, A.D., and Kligman, B.T. October 2022. (Poster) New specimens of *Calyptosuchus wellsi* (Pseudosuchia: Aetosauria) from the upper Triassic Chinle Formation of Petrified Forest National Park, Arizona, provide new details on the cranial anatomy and intraspecific variation of the taxon. *Geological Society of America Connects 2022*. Denver, Colorado, USA.
7. **Reyes, W.A.**, Kligman, B.T., Marsh, A.D., and Parker, W.G. March 2022. (Poster) New insight on the pelvic anatomy of the aetosaur *Calyptosuchus wellsi* (Archosauria: Pseudosuchia) based on a new specimen from the Chinle Formation within Petrified Forest National Park, Arizona. *11th Annual Jackson School Student Research Symposium*. Austin, Texas, USA.
8. **Reyes, W.A.** January 2022. (Poster) Forebrain variation within the Aetosauria (Pseudosuchia) based on the endocast of *Longosuchus meadei* from the upper Triassic (Early Norian?) of Texas. *Society of Integrative and Comparative Biology*. Online.
9. **Reyes, W.A.** November 2021. (Colbert Poster Session) Paleoneuroanatomy of the Otischalkian stagonolepidoid aetosaur *Longosuchus meadei* (Archosauria: Pseudosuchia) from the upper Triassic Dockum Group of West Texas. *Society of Vertebrate Paleontology 81st Annual Meeting*. Online.
10. **Reyes, W.A.** March 2021. (Poster) Paleoneuroanatomy of the aetosaur *Longosuchus meadei* (Archosauria: Pseudosuchia) from the upper Triassic (Otischalkian–Carnian) Dockum Group of Howard County, northwestern Texas. *10th Annual Jackson School Student Research Symposium*. Online.
11. **Reyes, W.A.**, W.G. Parker, and A.D. Marsh. October 2020. (Poster) Cranial Anatomy and Dentition of the Aetosaur *Typothorax coccinarum* (Archosauria: Pseudosuchia) from the Upper Triassic (Revueltian—Mid Norian) Chinle Formation of Arizona. *Society of Vertebrate Paleontology 80th Annual Meeting*. Online.
12. Beightol, C.V., W.G. Parker, J.W. Martz, A.D. Marsh, and **W.A. Reyes**. October 2018. (Poster) Estimating the statistical error of observed biostratigraphic ranges within Adamanian–Revueltian vertebrate assemblages of the Late Triassic Chinle Formation of Arizona to test for an abrupt turnover event. *Society of Vertebrate Paleontology 78th Annual Meeting*. Albuquerque, New Mexico, U.S.A.
13. **Reyes, W.A.**, S. Muttel, and J.W. Martz. April 2017. (Poster) Using confidence intervals to evaluate biostratigraphic ranges in the Chinle Formation. *Student Research Conference 16th Annual Meeting*. Houston, Texas, U.S.A.
14. Muttel, S., **W.A. Reyes**, H. Savage, J. Torres, and J.W. Martz. April 2017. (Poster)

Lithostratigraphy and Biostratigraphy of the Chinle Formation. *Student Research Conference 16th Annual Meeting*. Houston, Texas, U.S.A.

INVITED PRESENTATIONS AND LECTURES

Reyes, W.A. March 15, 2022. Evolution of Late Triassic Aetosaurs: To what extent did a changing climate drive their evolution? *Paleontological Society of Austin*. Online (Talk).

Reyes, W.A. October 1, 2020. *Typothorax coccinarum* and its significance in understanding the evolution of the Aetosauria. *Jackson School of Geosciences Paleontology Seminar*. Online (Talk).

OTHER PRESENTATIONS AND LECTURES

Reyes, W.A. May 28, 2021. Evolutionary Relationships of the Aetosauria – A Bayesian Tip-Dating Approach. *Triassic Vertebrate Paleontology Meetup*. Online (Talk).

FELLOWSHIPS, GRANTS, AND SCHOLARSHIPS (Total awarded: \$207,758)

Fall 2022	Endowed Presidential Scholarship (\$3,500) GSA Travel Grant (\$175)
Spring 2022	Summer Fellowship, UT-Austin Graduate School (\$7,500) Lundelius Endowment in Vertebrate Paleontology (\$1,500)
Spring 2021 (5-Year Fellow)	National Science Foundation Graduate Student Research Fellowship (\$108,000 over 3 years)
Fall 2020 – Summer 2021	Graduate School Mentoring Fellowship (\$30,000), UT-Austin Graduate School
Fall 2015	Be on Time Grant (\$4,000 over 2 years) Texas Public Education Grant (\$1,500)
Fall 2014	Nuclear Regulatory Commission Scholarship (\$13,400 over 4 years)
Fall 2013	Federal Pell Grant (\$20,150 over 4 years) Texas Grant (\$17,340 over 3 years) University of Houston Merit FTIC Scholarship (\$693)

HONORS AND AWARDS

Fall 2017, Fall/Spring 2016, Fall 2013	Dean's List: The University of Houston – Downtown, College of Science and Technology
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PROFESSIONAL ASSOCIATIONS

2022 – Present	The Paleontological Society American Association for Anatomy
2021 – Present	Society of Integrative and Comparative Biology
2018 – Present	Society of Vertebrate Paleontology

PEER-REVIEW JOURNAL INVITATIONS

Journal of Vertebrate Paleontology

MENTORING

Current Undergraduate Mentees, Jackson School of Geosciences, UT- Austin

Janet Cañamar, 2nd year undergraduate

Rocco Sennello, 2nd year undergraduate

Currently, Janet and Rocco are assisting me with cataloguing and re-organizing a portion of the museum collections with the goal of redescribing the post cranial anatomy of the aetosaur Longosuchus.

Previous Undergraduate Mentees

Nisa Downey, University of Texas at Austin

Project focused on using digital models and CT data of skeletal elements to 3D print models that would be used for both research purposes and outreach service.

Jackson Battle, Texas A&M University

Mentored through The Jackson School of Geosciences Undergraduate Research Traineeship Experience (RTX).

Project focused on applying 2D geometric morphometrics on aetosaur dentition to assess the dietary ecology of the Aetosauria (Pseudosuchia: Archosauria).

PUBLIC OUTREACH AND SERVICE

Event Participation (UT- Austin Jackson School of Geoscience Service)

October 2021. Graduate Student Panelist for the GSEC Peer Mentorship Program

Served as panelist to discuss applying for the NSF Graduate Student Research Fellowship, Publishing, and Internships within the National Park Service.

September 2021. Graduate School Q & A with the Undergraduate Honors Program

Open discussion about pursuing a graduate degree.

November 2021, 2020. Enhancing Diversity in Geosciences Graduate Education (EDGE), Jackson School of Geosciences

Coordinated graduate student volunteers to engage with potential JSG graduate student applicants from underrepresented communities. As a former participant of this program, I shared with them my experiences prior to getting into graduate school, including the graduate application process, as well as my research focus here at UT–Austin.

Other Event Participation

April 2022. Waterloo Green Day, Austin, Texas, USA

Interacted and educated the public about Texas fossils.

July 2019. Field Dig Day, Petrified Forest National Park, Arizona, USA

Took a group of visitors out to the field with us for a day so they can experience an active excavation with paleontologists.

June 2019. Dinosaur Day, Petrified Forest National Park, Arizona, USA

Schools from the surrounding towns of the Navajo Nation and Hopi Reservation are invited to learn about the paleontology of the park.

Volunteering

January 2023. National Kidney Foundation, Austin Texas Mexican Consulate

Acted as a Spanish translator for members of the Latino Medical Student Association within the Dell Medical School to explain kidney healthcare to members of the Hispanic community.

March 2017. Harmony Public School Science Fair Volunteer Judge, Houston, Texas

February 2017. Harmony Public School STEM Festival Volunteer Judge, Houston, Texas

Fall 2016 – Spring 2020. Paleontology hall tour guide at the Houston Museum of Natural Science, Houston, Texas

Engaged with the visitors and school groups by providing scientific insight about the displays while teaching them about earth history, evolution, and geosciences.

Organization

Fall 2017 – Spring 2018. Scholars Academy community engagement, Houston, Texas

As Peer mentor I arranged several volunteer days for our group of geology majors to interact with visitors in the Paleontology Hall of the Houston Museum of Natural Science

FIELD WORK EXPERIENCE (* = internship)

Summer 2022. Glen Canyon National Recreational Area, Utah, U.S.A.

Assisted in a paleontological survey of an area that will be used to construct a new marina due to the receding water levels.

***Summer 2022.** Petrified Forest National Park, Arizona, U.S.A.

Collaborated on various research projects, including chapters of my dissertation. Additionally, assisted in fieldwork focused on understanding the microdiversity in the Blue Mesa Member of the Chinle Formation.

***Summer 2021.** Petrified Forest National Park, Arizona, U.S.A.

*Worked on various research projects: 1) continued excavating an associated skeleton of *Calyptosuchus*, as well as describing the already prepared material; 2) performing histological analysis to assess growth and maturity of a *Typhothorax* specimen which is currently the largest aetosaur reported; 3) studying the morphology of aetosaur osteoderms through ontogeny.*

Summer 2021. Purgatory Canyonlands, Southeastern Colorado, U.S.A.

Assessed the stratigraphy and vertebrate paleontology of the isolated exposures of the Late Triassic strata in the region.

Summer 2021. Ghost Ranch, Abiquiu, New Mexico, U.S.A.

1) Assisted in fieldwork focused on understanding early dinosaur evolution during the Late Triassic; 2) the diversification of aetosaur material being collected from the Hayden Quarry; 3) studied a nearly complete unidentified aetosaur skeleton from the upper red-siltstone.

***Summer 2019.** Petrified Forest National Park, Arizona, U.S.A.

Fieldwork focusing on understanding the diversity of microvertebrates during the Late Triassic in North America. Resulted in the discovery of a possible new species of aetosaur.

Summer 2019. Ghost Ranch, Abiquiu, New Mexico, U.S.A.

Fieldwork focused on understanding early archosaur evolution, particularly that of dinosaurs, from the Late Triassic Chinle Formation in North America.

Summer 2018. Central Colorado, U.S.A.

Mapping the geology of Kaufman Ridge.

Summer 2017. Northern Arizona, U.S.A.

Excavated two aetosaur skeletons from the Late Triassic Chinle Formation and studied the local stratigraphy.

Summer 2016. Glen Canyon and Grand Staircase–Escalante National Monument, Utah, U.S.A.

Focused on correlating the stratigraphy of the Late Triassic Chinle Formation in Utah to the sections in Arizona.

SHORT COURSES AND TRAININGS

November 10, 2021. Data Visualization using R-Studio short course.

Focused on the use of particular packages in R-studio to assist in the visualization of datasets associated to our personal research.

Spring 2021. URGE, Unlearning Racism in the Geosciences

Participant of a pod at the Jackson School of Geosciences. The goal is to discuss the issues within our institutions about racial inequality and how we, as members of the program, can promote change and become a welcoming environment for minorities (e.g., faculty, students).

October 19–23, 2020. University of Texas High-Resolution X-Ray CT Facility (UTCT) online short course.

Focused on the fundamentals of acquisition, visualization, analysis, and mobilization of High-Resolution X-Ray CT (HRXCT) data.

MEDIA

October 12th, 2022. Featured on docu-series “Outside Scientists, Inside Parks.” Focused on the interplay between student research, career development, and the National Park Service.

<https://www.nps.gov/media/video/view.htm%3Fid%3DC4A42A4B-C6C5-46DE-95CF-9DE6D5AA6CFA>

July 29th, 2022. Featured on Petrified Forest National Park Twitter Page (@PetrifiedNPS).

August 15th, 2019. Featured on The Tribune news article “Petrified Forest Paleontology program visits Petroglyph Park.” <https://tribunenewsnow.com/petrified-forest-paleontology-program-visits-petroglyph-park/>

GRADUATE COURSEWORK

First Year Ph.D. Student 2020-2021

Fall 2020: GEO 389E, Evolution of Reef Ecosystems; BIO 390C, Fundamentals of Evolution; BIO 384K, Phylogenetic Perspectives

Spring 2021: GEO 391, Earth in Deep Time; GEO 391, 3D Analysis of Volumetric Data; BIO 380L, Advanced Systematics; GEO 191, Proposal Writing

Second Year Ph.D. Student 2021-2022

Fall 2021: GEO 383U, Dynamic Field Stratigraphy; GEO 398W, 2-Paleoclimate

W. A. Reyes

Spring 2022: GEO 391, Geochronology; GEO 389R, Morphology of the Vertebrate Skeleton

Third Year Ph.D. Candidate 2022-2023

Fall 2022: KIN 395, Human Anatomy Dissection

TEACHING EXPERIENCE

Fall 2021: GEO 401, Physical Geology Lab, Instructor, Teaching Assistant

Spring 2022: EVS 311, Field Seminar in Environmental Science and Sustainability, Teaching Assistant

UNDERGRADUATE COURSEWORK (University of Houston–Downtown)

Geology Courses:

Historical Geology
Physical Geology
Structural Geology
Minerology
Petrology
Paleontology
Sedimentology & Stratigraphy
Plate Tectonics
Geological Field Methods
Inorganic Geochemistry
Atmospheres of Earth and Planets
Field Geology

Other Relevant Courses:

General Biology 1 & 2
General Ecology
Human Anatomy
General Chemistry 1 & 2
Organic Chemistry 1
Physics 1 & 2 (Calculus-based)
College Algebra
Precalculus with Trigonometry
Calculus 1 & 2
Statistical Analysis for Natural Sciences
Cultural Anthropology