



12th NORTH AMERICAN PALEONTOLOGICAL CONVENTION University of Michigan 17-21 June 2024

Frontispiece: Designed by Carol Abraczinskas, Scientific/Biological Illustrator at the University of Michigan Museum of Paleontology (UMMP), the NAPC 2024 logo incorporates iconic fossils from Michigan and the Great Lakes region. From left to right, these are:

Skull of the American mastodon *Mammuth americanum*. The state fossil of Michigan, mastodons roamed the Great Lakes region until around 10,000 years ago. UMMP houses significant collections of Pleistocene proboscideans that provide clues about how individual animals lived and died, as well as why these species may have gone extinct.

The Devonian tabulate coral *Hexagonaria percarinatum*. It is shown here as a polished example, known colloquially as a “Petoskey stone”: Michigan’s state gemstone. It is frequently found on northern Michigan beaches, from the Leelanau Peninsula to Harbor Springs, where naturally worn examples show the six-sided, star-shaped pattern of adjacent corallites.

Leaves of the Carboniferous seed fern *Neuropteris schlehani*. A representative of tropical coal-forming peat swamps of North America, fossils of *Neuropteris* can be found near Grand Ledge, Michigan. You might even find an example on an optional NAPC 2024 field trip to this site, which is celebrated for its diversity of plant fossils.

Armor of the giant Devonian placoderm fish *Dunkleosteus terrelli*. The most famous examples of this marine apex predator from the “Age of Fishes” come from rocks in northeastern Ohio, not far from the shores of Lake Erie. Strata of similar age in northern Michigan also yield fossils of *Dunkleosteus*, complementing the diversity of placoderms known from older rocks in the state.

NORTH AMERICAN PALEONTOLOGICAL CONVENTIONS

- 1969: Field Museum, Chicago, Illinois
- 1977: University of Kansas, Lawrence, Kansas
- 1982: McGill University, Montréal, Québec
- 1988: University of Colorado, Boulder, Colorado
- 1992: Field Museum, Chicago, Illinois
- 1996: Smithsonian Institution, Washington, D.C.
- 2001: University of California, Berkeley, California
- 2005: Dalhousie University, Halifax, Nova Scotia
- 2009: University of Cincinnati, Cincinnati, Ohio
- 2014: The Florida Museum of Natural History, Gainesville, Florida
- 2019: University of California, Riverside, California
- 2024: University of Michigan, Ann Arbor, Michigan**

CONFERENCE ORGANIZATION

ORGANIZING COMMITTEE

Matt Friedman (lead organizer), Catherine Badgley (paleoart chair), Mónica Carvalho (early career chair), David Clark (avocational chair), Laura MacLatchy (workshop chair), Madeline Marshall (social media chair), Hadeel Saad (student chair), Selena Smith (DEI chair), Luke Weaver (field trip chair), Jeff Wilson Mantilla (program chair)

SYMPOSIA AND CONVENERS

A Gulf of Knowledge: Interconnecting Paleobiology Research Across the Caribbean — Lazaro W. Viñola López, Andrew K. Hensley, Brooke Crowley, Siobhán B. Cooke

A Model System for Evolution and Environmental Change: the Marine Communities of the Neogene Western Atlantic — Brendan Anderson, Jonathan Hendricks, Bruce Lieberman, Rowan Lockwood, Warren Allmon, Harry Dowsett, Erin Saupe, Luke Strotz

Answering Big Questions with Small Fossils: High-Resolution Biodiversity Dynamics in Deep Time — Anieke Brombacher, Huai-Hsuan Huang

Avocational Clubs as Paleontological Resources — David Clark, Jennifer Bauer

Broadening Accessibility in Paleontology through Innovative Community Engagement Practices — Jeanette Pirlo, Pedro Monarrez, Carmi Thompson

Conodonts in Time and Space – North American Pander Society Meeting — D. Jeffrey Over, Nicholas Hogencamp, Steven Rosscoe

Dawn of Animal Life: Exploring New Advances in Ediacaran Paleobiology — Philip C. Boan, Prescott Vayda, Princess Aira Buma-at

Deep Learning in Deep Time: Applications of AI and Automation in Paleontology — Allison Y. Hsiang, Daniela Schmidt, Anieke Brombacher, Congyu Yu

Evolutionary Paleobiology: in Honor of Jim Valentine — Charles Marshall, Seth Finnegan

Fifty Years in the Himalayan Foothills: Ecosystem Change in the Neogene Siwalik Record of Pakistan — Catherine Badgley, Michele E. Morgan, Kay Behrensmeyer

First Principles, Boundless Curiosity - Celebrating the Contributions of Daniel C. Fisher — Sandy Carlson, Paul Koch

Fossil Forces: Advances in Biomechanics and Imaging in Paleontology — Alec Wilken, Casey Holliday

From Caves to Cenotes: Pleistocene Vertebrate Paleontology of the Yucatán, México, and Belize — Blaine Schubert, Joaquin Arroyo-Cabrales

Hominoïd Evolution, Environments, and Communities in Eastern Africa — Susanne Cote, Laura MacLatchy

Integrated Approaches to Exploring Coupled Biotic, Landscape, and Climate Dynamics — Tara Smiley, Rebecca Terry, David Fox, Katharine Loughney

Interconnected Patterns of Natural History: a Tribute to the Career and Contributions of Lance Grande — Eric Hilton, Matt Friedman

Lessons Learned and Future Visions for Conservation Paleobiology — Jonathan Cybulski, Erin Dillon, Broc Kokesh, Lynn Wingard

Lessons Learned from Phanerozoic Marine Extinctions Applied to Modern Conservation — Sinjini Sinha, Travis Stone, Claire Williams, Rowan Martindale

Managing and Engaging with Federal Paleontological Resources in the 21st Century — Adam Rountrey, Brent Breithaupt, Vincent L. Santucci

Microbial Biosignatures: from Paleomicrobiology to Astrobiology — Sarah González Henao, Matthew Schrenk, Jena Johnson

North American Paleontological Resources 2024 — Danita Brandt

Paleobiology of Carnivorous Mammals — John D. Orcutt, Mairin Balisi

Paleoneurology — Rodrigo Figueroa, Matteo Fabbri

Plant-Insect Herbivore Relationships in Deep Time — L. Alejandro Giraldo

Progress in Proboscidean Paleontology — Advait Jukar, William Sanders

Proxies, Sedimentological Indicators, and Biotic Effects of Oceanic Anoxic Events in the Geological Record — Brian Huber, Joan M. Bernhard

Recent Advances in Computational Paleobiology — William Gearty, Bethany J. Allen, Lewis A. Jones, Erin M. Dillon

Recent Advances in Virtual Paleobiology — Russell D. C. Bicknell, Joseph Bevitt

Reef Paleoecology in Time and Space — Aaron O’Dea, Rowan Martindale, Katie Cramer

Stratigraphic Paleobiology: Working with the Nature of the Stratigraphic Record to Answer Paleobiological Questions — Pedro Monarrez, Annaka Clement, Katharine Loughney

Systematics and Phylogeny — Brooke Long-Fox

The Bighorn Basin: New Frontiers and Inter-Generational Knowledge of a Model System for Studying Terrestrial Ecosystem Evolution — Luke Weaver, Scott Wing, Vera Korasidis, Ellen Currano

Traits, Functions, and Systems: Quantifying Paleocommunity Variation, Persistence, and Resilience — Ashley Dineen, Peter Roopnarine

Wetland Ecology Through Time — Sam Neely, Michelle Chrpa

FIELD TRIPS AND LEADERS

Behind the Scenes at the University of Michigan's Research Museums Center — Jennifer Bauer, Adam Rountrey, William Sanders, Andrea Blaser, Aly Baumgartner, Cody Thompson, Randal Singer

Carboniferous (Mississippian) Fossils of Michigan: the Marshall Formation at the Blue Ridge Esker — Mike Palecuk, Rodrigo Figueroa

Carboniferous (Pennsylvanian) Marginal-Marine Fossils and Strata at Grand Ledge, Michigan: Stratigraphical, Educational, and Cultural Significance — Danita Brandt, Michael Velbel, Peter Voice

Climatic Change and Cyclic Extinction in Silurian Reefs of the Central United States — Don Mikulic

Diving into the Age of Fishes: the Cleveland Shale and the Cleveland Museum of Natural History — Caitlin Coleary, Robert Carr

Middle Devonian Marine Fossils of the Michigan Basin: the Silica Formation — Steve LoDuca, David Thompson

The Carboniferous Mazon Creek Fossil Site: Collecting at "Worm Hill" and Viewing Non-Worms at the Field Museum — Victoria McCoy

The Classic Cincinnati (Upper Ordovician, Katian) of the Cincinnati Vicinity: Paleoenvironments and Ecology of a Sea without Fish — Carl Brett, Ian Forsythe, Brenda Hunda

WORKSHOPS/EMBEDDED MEETINGS AND ORGANIZERS

An Introduction to Claddis: an R Package for Analyzing Morphological Diversity and Tempo Using (Primarily) Discrete Characters — Graeme Lloyd

Analytical Approaches to Networks, Trophic Structure, and Ancient Food Webs — Carrie Tyler, Peter Roopnarine, Ashley Dineen, Roxanne Banker, Madeline Ess

Building Custom Ecosystem Models with Biogeochemical Cycles in PALEOtoolkit — Stuart Daines, Sara Sjosten

Careers in Science Communications Panel with PBS Eons — Gabriel Santos

Creating LGBTQ-communities in Paleoscience — Oliver McLellan, Megan O'Quinn, Jill Leonard-Pingel

Innovative Tools for Research Management in Academia — Deborah Coyle, Amanda Godbold

Managing Morphological Character Matrices using MorphoBank — Brooke Long-Fox

National Science Foundation Town Hall — Margaret Frasier

Open-Source Software for 3D Data — Anne Kort

R for Paleobiologists: Getting Started with the Palaeoverse R Package — Lewis A. Jones, Bethany Allen, William Gearty, Erin Dillon, Christopher Dean

Save Time, Work Smarter with Zotero — Nicholas Gardner

Virtual Paleontology: Hands-On Training with Materialise Mimics — Bradley Tumas

Vision for a Midwestern Paleontology Center: Exploring Priorities in Research, Participation, and Partnerships — Tara Selly, James Schiffbauer, Sarah Jacquet, Lydia Tackett, Casey Holliday, Carol Ward

LOGISTICAL SUPPORT

Meeting Website and Volume Formatting — Lindsay Dorosh

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Conservation Paleobiology Network

University of Michigan Museum of Paleontology

University of Michigan Museum of Natural History

Department of Earth and Environmental Sciences, University of Michigan

Department of Anthropology, University of Michigan

Department of Ecology and Evolutionary Biology, University of Michigan

Botanical Society of America

Society for the Preservation of Natural History Collections

Triebold Paleontology

Taylor & Francis

Treatise on Invertebrate Paleontology

Materialise

PeerJ

CRC Press

Paleontological Research Institution

Black in Natural History Museums

Cincinnati Museum Center

Cleveland Museum of Natural History

Field Museum

WELCOME TO ANN ARBOR AND THE UNIVERSITY OF MICHIGAN

Welcome to the 12th North American Paleontological Convention (NAPC) at the University of Michigan. We're excited that you're able to join us! The first NAPC, held at the Field Museum 55 years ago, marked a break from specialist meetings by bringing together researchers from all areas of paleontology. This inclusive format makes NAPC a fertile setting for developing new research directions and collaborations. With well over 700 delegates and presentation abstracts, we look forward to the novel ideas that will emerge from your time in Ann Arbor!

Paleontology has a long and storied history at the University of Michigan. The first meeting of the Board of Regents in 1837—the year of Michigan statehood—established a Cabinet of Natural History at the young University. The following year, the state legislature enacted the Michigan Geological Survey with a mandate to send duplicate specimens to the cabinet. Douglass Houghton, the first state geologist of Michigan, collected the first fossils added to the cabinet from Isle Royale. Through a combination of field efforts and acquisition of existing collections, paleontological holdings of the University of Michigan continued to grow throughout the 19th and early 20th centuries. The Museum of Paleontology came into being with a separate budget in 1926, and from 1928 made its home in the Alexander G. Ruthven Museums Building. In 2018, the museum moved to two new, state-of-the-art facilities: the Biological Sciences Building and the Research Museums Center. Today, the Museum of Paleontology includes over 30 affiliated students, postdoctoral researchers, staff, and faculty.

The University of Michigan Museum of Paleontology contains an estimated 4 million fossil objects housed in three principal collections: vertebrate paleontology, invertebrate paleontology, and paleobotany. Although the holdings are global in scope, particular strengths include Paleozoic invertebrates of the midwestern United States, Permian and Triassic vertebrates of the southwestern United States, Paleogene mammals of Wyoming, and Pleistocene megafauna of the Great Lakes Region. The roughly 20 million objects now held between the Museum of Paleontology and its sibling units the Museum of Anthropological Archaeology, Museum of Zoology, and Herbarium represent a resource of international significance, and rank as one of the largest university natural history collections in the United States. These research museums collaborate closely with the public-facing Museum of Natural History to share their objects and findings with the University of Michigan community and the public at large.

The University of Michigan predates Michigan statehood, tracing its roots to a network of schools, libraries, and other institutions established in 1817. Ann Arbor has been home to the University of Michigan since 1841, with the school currently enrolling over 52,000 students of whom roughly 18,000 are postgraduates. The grassy, tree-lined “Diag”, across State Street from most NAPC events in the Michigan Union, represents the historic core of Main Campus. However, little remains from the earliest days of the university in Ann Arbor, with major growth taking place in the early 20th century and many remaining buildings dating to that time. Today, the university includes a North Campus and South Campus that are home to additional academic programs and athletic facilities, respectively.

Ann Arbor is a quintessential college town, with no shortage of options for delegates looking to spend some time away from NAPC. Several university museums and libraries—all free of charge—are located on Central Campus a short distance from NAPC events: the Kelsey Museum of Archaeology, the University of Michigan Museum of Art, the University of Michigan Museum of Natural History, and the William Clements Library will all be open during the meeting. You can take a quiet moment in the collegiate gothic quadrangles and library of the Law School or stroll in the wooded acres of Nichols Arboretum. Off campus, you can visit the Matthei Botanical Gardens, take a rented canoe or kayak on the Huron River, tube down Argo Rapids, or explore unique shops in Nickels Arcade, Kerytown, Main Street, and elsewhere. NAPC coincides with the Ann Arbor Summer Festival, which offers a variety of free outdoor entertainment from concerts to movies to contemporary circus, with many events on Ingalls Mall on Central Campus. You'll also find a wide variety of restaurants, cafes, and watering holes—from no-frills student haunts to fine dining—in Ann Arbor, with many located on State, Liberty, and Main streets west of Central Campus.

We hope you will enjoy your time in Ann Arbor and the University of Michigan!

Organizing Committee, 12th North American Paleontological Convention

PRESENTATION AND SOCIAL MEDIA POLICIES

We encourage the discussion of research presented at NAPC. While our default position permits sharing of work outside the meeting, we also recognize that delegates may wish to limit distribution of their results. NAPC adopts the following policies:

- Attendees should be aware of any embargo policies that may pertain to their own work.
- Recording or photographing talks or posters without permission of the presenter is prohibited.
- Sharing recordings or photographs of talks or posters requires permission of the presenter.
- Presenters who do not want their work to be shared beyond the meeting should clearly mark their poster or relevant slide(s). If this indication appears on the title slide, attendees should recognize that no portion of the presentation may be shared.

CODE OF CONDUCT AND REPORTING

NAPC adopts the Paleontological Society Code of Conduct. Delegates agreed to abide by the code upon abstract submission and meeting registration. The code applies to all attendees regardless of membership status in the Paleontological Society, and is in effect for all NAPC events on and off the University of Michigan campus. The Paleontological Society Code of Conduct emphasizes the need for dignity, respect, and civil communications. Its policy components include: expected behaviors; prohibited behaviors; reporting misconduct; investigations and enforcement. The Paleontological Society Code of Conduct is available at: <https://www.paleosoc.org/non-discrimination-and-code-of-conduct>

EXPECTED BEHAVIORS

- Treat others with dignity and respect
- Communicate with civility
- Give fair and equitable consideration to others without regard to status or identity
- Obey the rules and policies of the meeting venue

PROHIBITED BEHAVIORS

- Harassment in any form
- Abuse, intimidation, or threats in any form
- Violating previously communicated boundaries
- Recording others without their consent
- Displaying or distributing nude, sexual, bigoted, or other improper images or recordings

REPORTING MISCONDUCT: PS RISE AT NAPC

PS RISE (Respectful Inclusive Scientific Events) is a mechanism to help support compliance with the code of conduct. There are multiple channels for reporting issues at NAPC:

Speak to a PS RISE liaison – Several NAPC delegates serving as PS RISE liaisons will attend NAPC. You can recognize them by their PS RISE pin.

Visit the PS RISE room – The Michigan Room in the Michigan Union will act as the PS RISE room during NAPC. It will be open during each day of the meeting from 12:00–1:00 PM and 5:30–6:30 PM, and staffed by at least two representatives.

Report via NAVEX – Anonymous reports can be made through the third-party platform Navex, accessible at: <https://secure.ethicspoint.com/domain/media/en/gui/57816/index.html> You can also scan the QR code below. Instructions for reporting a violation are available at <https://www.paleosoc.org/ethics-reporting>



E-mail the PS Ethics Committee – You can report your concerns by e-mailing ethics@paleosoc.org.

Mail the PS Ethics Committee – Written allegations may be mailed to: Chair of Ethics Committee, The Paleontological Society, 12110 N Pecos St, Westminster, CO 80234.

In situations requiring immediate intervention: call an on-site PS representative – Call 970 834 3047 during session hours to contact a representative at the meeting. In the event of emergencies and/or crimes, contact campus security (734 763 1131) or the police (911).

Society members acting in leadership positions, whether for an established term (e.g., elected officials, committee members) or temporarily (e.g., field trip leaders, session organizers) are required to report to the Ethics Committee any incidents involving prohibited behavior that they directly witness or have reported to them to ensure that all parties involved receive appropriate consideration and follow-up.

Anyone subject to or witnessing behavior that constitutes an immediate or serious threat to public or individual safety or a criminal act should contact the U-M Division of Public Safety and Security (DPSS) or local law enforcement. Those witnessing a potential criminal act should also take actions necessary to maintain their own personal safety.

Contact the U-M DPSS at 734 763 1131

Contact local emergency services at 911

INVESTIGATIONS AND ENFORCEMENT

Investigations will follow standard procedures established by the Paleontological Society and will consider factors in determining an appropriate sanction for violations of the Code of Conduct. The Paleontological Society Sanctions Matrix for violations of the Code of Conduct is available at <https://www.paleosoc.org/assets/docs/Paleontological-Society-Conduct-Sanctions-Matrix.pdf>

SCHEDULE OF EVENTS

Friday, June 14 – Sunday, June 16

overnight field trip (advance sign-up required)

7:30 am (6/14) – 6:30 pm (6/16)*	Climatic Change and Cyclic Extinction in Silurian Reefs of the Central United States	depart from BSB loading dock*
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Sunday, June 16

4:00 pm – 7:00 pm	Registration and welcome refreshments (<i>talk upload for Monday sessions available</i>)	Union Pendleton
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Monday, June 17

7:15 am – 8:00 am	Continental breakfast	Union Rogel, IdeaHub, Opera Lounge
7:30 am – 5:00 pm	Speaker ready room	Union Crofoot
7:30 am – 5:00 pm	Registration	Union 2nd floor foyer
8:00 am – 12:00 pm	Plenary session: Paleontology for All	Rackham Auditorium
12:00 pm – 1:00 pm	Creating LGBTQ-mmunities in Paleoscience	LSA Multipurpose Room
12:00 pm – 1:00 pm, 5:30 pm – 6:30 pm	PS Rise Ethics Room	Union Michigan
1:15 pm – 5:30 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
5:30 pm – 6:15 pm	Monday poster presentations (<i>posters available from 9:45 am</i>)	Union IdeaHub
6:30 pm – 8:30 pm	NSF town hall	Union Rogel

Tuesday, June 18

7:15 am – 8:00 am	Continental breakfast	Union Rogel, IdeaHub, Opera Lounge
8:00 am – 5:00 pm	Speaker ready room	Union Crofoot
8:00 am – 5:00 pm	Registration	Union 2nd floor foyer
8:00 am – 12:00 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
12:00 pm – 1:00 pm	Creating LGBTQ-mmunities in Paleoscience	LSA Multipurpose Room
12:00 pm – 1:00 pm, 5:30 pm – 6:30 pm	PS Rise Ethics Room	Union Michigan
1:15 pm – 5:30 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
5:30 pm – 6:15 pm	Tuesday poster presentations (<i>posters available from 9:45 am</i>)	Union IdeaHub
6:15 pm – 8:30 pm	Career Fair sponsored by NSF and the Treatise on Invertebrate Paleontology (<i>advance sign-up required</i>)	Union Rogel (<i>start</i>)

Wednesday, June 19

7:15 am – 8:00 am	Continental breakfast	Union Rogel
8:00 am – 5:00 pm	Speaker ready room	Union Crofoot
8:00 am – 5:00 pm	Registration	Union 2nd floor foyer
12:00 pm – 1:00 pm, 5:30 pm – 6:30 pm	PS Rise Ethics Room	Union Michigan
2:00 pm – 3:30 pm	Careers in Science Communications Panel with PBS Eons	Union Rogel
6:00 pm – 7:00 pm	Conservation Paleobiology Network town hall	Union Rogel
7:00 pm	Conservation Paleobiology Network social networking event	The Brown Jug (1204 S University Ave.)
<i>field trips (advance sign-up required)</i>		
8:00 am – 12:15 pm	Middle Devonian Marine Fossils of the Michigan Basin: the Silica Formation	depart from Union
8:30 am – 12:00 pm	Behind the Scenes at the University of Michigan's Research Museums Center	depart from Union
9:00 am – 6:40 pm	Carboniferous (Pennsylvanian) Marginal-marine Fossils and Strata at Grand Ledge, Michigan: Stratigraphical, Educational, and Cultural Significance	depart from BSB loading dock*
1:15 pm – 6:15 pm	Carboniferous (Mississippian) Fossils of Michigan: the Marshall Formation at the Blue Ridge Esker	depart from Union
2:00 pm – 5:30 pm	Behind the Scenes at the University of Michigan's Research Museums Center	depart from Union
<i>workshops (advance sign-up required)</i>		
8:00 am – 5:15 pm	Analytical Approaches to Networks, Trophic Structure, and Ancient Food Webs	BSB 1100
8:00 am – 5:15 pm	Innovative Tools for Research Management in Academia	NUB 1528
8:00 am – 12:00 pm	An Introduction to Claddis: an R Package for Analyzing Morphological Diversity and Tempo Using (Primarily) Discrete Characters	BSB 1110
8:00 am – 12:00 pm	R for Paleobiologists: Getting Started with the Palaeoverse R Package	BSB 1010
8:00 am – 12:00 pm	Building Custom Ecosystem Models with Biogeochemical Cycles in PALEOtoolkit	NUB 2540
8:00 am – 12:00 pm	Vision for a Midwestern Paleontology Center: Exploring Priorities in Research, Participation, and Partnerships	LSA Multipurpose Room
9:00 am – 12:00 pm	Open-Source Software for 3D data	BSB 3150
1:15 pm – 5:15 pm	Managing Morphological Character Matrices using MorphoBank	BSB 1010
1:15 pm – 5:15 pm	Save Time, Work Smarter with Zotero: Note Taking, File Management, and Citations All in One Place	NUB 2540
1:15 pm – 5:15 pm	Virtual Paleontology: Hands-On Training with Materialise Mimics	NUB 2520

Thursday, June 20

7:15 am – 8:00 am	Continental breakfast	Union Rogel, IdeaHub, Opera Lounge
8:00 am – 5:00 pm	Speaker ready room	Union Crofoot
8:00 am – 5:00 pm	Registration	Union 2nd floor foyer

8:00 am – 12:00 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
12:00 pm – 1:00 pm	Creating LGBTQ-mmunities in Paleoscience	LSA Multipurpose Room
12:00 pm – 1:00 pm, 5:30 pm – 6:30 pm	PS Rise Ethics Room	Union Michigan
1:15 pm – 5:30 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
5:30 pm – 6:15 pm	Thursday poster presentations (<i>posters available from 9:45 am</i>)	Union IdeaHub
6:30 pm – 8:30 pm	Inclusive Paleontology Night sponsored by NSF and Taylor & Francis (<i>advance sign-up required</i>)	University of Michigan Museum of Natural History

Friday, June 20

7:15 am – 8:00 am	Continental breakfast	Union Rogel, IdeaHub, Opera Lounge
8:00 am – 12:00 pm	Speaker ready room	Union Crofoot
8:00 am – 12:00 pm	Registration	Union 2nd floor foyer
8:00 am – 12:00 pm	Parallel sessions	Union Rogel, Anderson, Pendleton, Kuenzel, Wolverine, 2210, Pond
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1:15 pm – 5:30 pm	Parallel sessions	Union Anderson, Kuenzel, Wolverine, 2210, Pond
1:30 pm – 2:00 pm, 2:30 pm – 3:00 pm, 3:30 pm – 4:00 pm, 4:30 pm – 5:00 pm	Tour of the UMMP fossil prep lab (<i>walk-up event</i>)	meet at Darwin’s Cafe, BSB 1st floor
1:30 pm – 5:00 pm	Matthaei Botanical Garden field trip (<i>walk-up event</i>)	depart from Union
3:30 pm – 4:15 pm	Planetarium show: “Sky Tonight” (<i>free tickets at registration</i>)	University of Michigan Museum of Natural History
5:30 pm – 6:15 pm	Friday poster presentations (<i>posters available from 9:45 am</i>)	Union IdeaHub
6:30 pm – 8:30 pm	Conference banquet (<i>ticketed event</i>)	Union Rogel, Union Pendleton

Saturday, June 22 – Sunday, June 23

overnight field trips (advance sign-up required)

8:00 am (6/22) – 7:00 pm (6/23)*	Diving into the Age of Fishes: the Cleveland Shale and the Cleveland Museum of Natural History	depart from BSB loading dock*
8:00 am (6/22) – 8:30 pm (6/23)*	The Classic Cincinnati (Upper Ordovician, Katian) of the Cincinnati Vicinity: Paleoenvironments and Ecology of a Sea without Fish	depart from BSB loading dock*
8:00 am (6/22) – 7:00 pm (6/23)*	The Carboniferous Mazon Creek Fossil Site: Collecting at “Worm Hill” and Viewing Non-worms at the Field Museum	depart from BSB loading dock*

Please note that departure time refers to when field trip vehicles will leave. Delegates should arrive in advance of the departure time.

**Accurate as of printing. Defer to correspondence from field trip leaders in the event of changes to schedule or site of departure.*

TALK SCHEDULE

MONDAY MORNING, JUNE 17, 2024

TIME	RACKHAM AUDITORIUM <i>Plenary Session: Paleontology for All</i>
8:00	<i>welcoming remarks</i>
8:30	KILBOURNE OPENING POEM: “BLINDFOLD WONDER”
8:45	BEHRENSMEYER & CSOTONYI VISUALIZING THE PAST: HOW ARTISTS AND PALEOBIOLOGISTS CREATE SCIENCE-INFORMED RECONSTRUCTIONS OF ANCIENT LIFE
9:15	CLARK & BAUER AN EVER-WIDENING CIRCLE OF FRIENDS
9:45-10:00	<i>coffee break</i>
10:15	MONARREZ LEARNING ABOUT THE FOUNDATIONAL ROLES OF COLONIALISM AND SYSTEMIC RACISM IN PALEONTOLOGY TO CREATE A MORE INCLUSIVE DISCIPLINE
10:45	ANTELL THE TRUTH ABOUT “GLOBAL” DATA, AND THE LIMITS OF THE KNOWABLE
11:15	CARVALHO FOSSILS: ANCIENT KEYS FOR UNDERSTANDING THE BIOLOGY OF A CHANGING PLANET
11:45	<i>group photo</i>

TALK SCHEDULE

MONDAY AFTERNOON, JUNE 17, 2024

TIME	UNION ROGEL <i>Big Horn Basin</i>	UNION ANDERSON <i>Neogene West. Atlantic</i>	UNION PENDLETON <i>Marine Extinctions</i>	UNION KUENZEL <i>Taphonomy & Ichnofossils</i>	UNION WOLVERINE <i>Oceanic Anoxic Events</i>	UNION 2210 <i>Paleoneurology</i>	UNION POND <i>Federal Paleo. Resources</i>
1:15	GINGERICH	O'DEA	BUSH	KIMMIG	BOWSER	<i>withdrawn</i>	TWEET
1:30	VITEK	<i>continued</i>	AL ASWAD	LUQUE	BERNHARD	ORTEGA-HERNÁNDEZ	BOBER
1:45	BLOCH	HENDY	MARTINDALE	BRANDT	GLOCK	FIGUEROA	VISAGGI
2:00	SCHWARTZ	HENDRICKS	STONE	CLEMENTS	ALCORN	GILES	LIGGETT
2:15	MORSE	CAMPBELL	REDDIN	MCCOY	BURKETT	BALANOFF	BREITHAUP
2:30	RIEGLER	CAMPBELL	SINHA	PLAZA-TORRES	WAN	YOHE	RAPP
2:45	WING	CAMPBELL	GAVIRNENI	HEKKALA	LI	FABBRI	SCANNELLA
3:00		ALLMON					NAKANO

TIME	UNION ROGEL <i>Big Horn Basin</i>	UNION ANDERSON <i>Neogene West. Atlantic</i>	UNION PENDLETON <i>Marine Extinctions</i>	UNION KUENZEL <i>Taphonomy & Ichnofossils</i>	UNION WOLVERINE <i>Oceanic Anoxic Events</i>	UNION 2210 <i>Paleoneurology</i>	UNION POND
3:30	CURRANO	ANDERSON	SULLIVAN	NEBELSICK	FEARON	ORTEGA-HERNÁNDEZ	UNION POND
3:45	KORASIDIS	THOMPSON	JACOBS	JACOBS	JACOBSON	BAZZANA-ADAMS	
4:00	MILLIGAN	ROJAS ARIZA	MIGUEZ SALAS	NICOL	WANG	LANG	
4:15	HAVRANEK	GOMES	SCHNEIDER	GAETANO	HUBER	BERTRAND	
4:30	SNELL	ORNDORFF	WILLIAMS	CHIAPPONE	CHEN	WATANABE	
4:45	SCHER	THOMAS	FIORILLO	COHEN	COHEN	SCOTT	
5:00	JUD	COLE	WHITE	MARROQUÍN	BURKE		
5:15	WEAVER	LOCKWOOD	ROSELLI				

Session titles shortened for clarity. Longer, keynote-style talks indicated in bold. Coffee and tea available between 3:00–3:30.

TALK SCHEDULE

TUESDAY MORNING, JUNE 18, 2024

TIME	UNION ROGEL <i>Valentine Symposium</i>	UNION ANDERSON <i>Cenozoic Tetrapods</i>	UNION PENDLETON <i>Caves to Cenotes</i>	UNION KUENZEL <i>Dawn of Animal Life</i>	UNION WOLVERINE <i>Mesozoic Reptiles</i>	UNION 2210 <i>Integrative Paleobio.</i>	UNION POND <i>Systematics & Phylogeny</i>
8:00	ERWIN	SILVIRIA	CHATTERS	TARHAN		MCMENAMIN	LLOYD
8:15	SIMPSON	WRIGHT	<i>continued</i>	<i>continued</i>		SUN	SHEFFIELD
8:30	WAGNER	SYVERSON	RISSOLO	KAUFMAN	KLIGMAN	BOYER	PÉREZ-PERIS
8:45	NG	WARD	REINHARDT	SURPRENANT	MELSTROM	FREEMAN PETERS	MONGIARDINO KOCH
9:00	SOSIAK	STRASSBERG	ARROYO-CABRALES	LIU	WILSON MANTILLA	MA	FAU
9:15	PATZKOWSKY	MEREGHETTI	SCHUBERT	BOBROVSKY	REGALADO FERNÁNDEZ NA		YONG
9:30	STANLEY	AMEEN	SAMUELS	BOAN	RADERMACHER	XU	VILELA-ANDRADE

TIME	UNION ROGEL <i>Valentine Symposium</i>	UNION ANDERSON <i>Swalik Record of Pakistan</i>	UNION PENDLETON <i>Caves to Cenotes</i>	UNION KUENZEL <i>Dawn of Animal Life</i>	UNION WOLVERINE <i>Mesozoic Reptiles</i>	UNION 2210 <i>Integrative Paleobio.</i>	UNION POND <i>Systematics & Phylogeny</i>
10:15	RICHARDS	RAZA	MCDONALD	SELLY	BOISVERT	WHITTLE	WANG
10:30	LOSSO	<i>continued</i>	CHATTERS	VIXSEBOXSE	BOISVERT	BROCCHINI	ZHANG
10:45	RIVERO-VEGA	RAYNOLDS	WIDGA	MITCHELL	WILSON MANTILLA	HOWARD	WALTY
11:00	JORDAN	WILLIS	CRUZ	OSÉS	MAKOVICKY	MACLEOD	DEHAAN
11:15	SHI	QUADE	OVANDO	MCCANDLESS	NORRIS	WOOLLEY	WATT
11:30	KLOMPMAKER	KARP	MCDONALD	PÉREZ PINEDO	DEAN	FELICE	SON
11:45	ZHOU	BEHRENSMEYER	<i>discussion</i>		HOLTZ	KNAPP	ABBOTT

Session titles shortened for clarity. Longer, keynote-style talks indicated in bold.
Coffee and tea available between 7:15–8:00, 9:45–10:15.

TALK SCHEDULE

TUESDAY AFTERNOON, JUNE 18, 2024

TIME	UNION ROGEL <i>Valentine Symposium</i>	UNION ANDERSON <i>Siwalik Record of Pakistan</i>	UNION PENDELETON <i>Caribbean Paleobio.</i>	UNION KUENZEL <i>Dawn of Animal Life</i>	UNION WOLVERINE <i>Virtual Paleobio.</i>	UNION 2210 <i>Fishes & Paleoz. Tetrapods</i>	UNION POND <i>Systematics & Phylogeny</i>
1:15	JABLONSKI	MORGAN	<i>introductory remarks</i>	EYANS	RAHMAN	SCHNETZ	PATELLOS
1:30	EDIE	HEAD	ITURRALDE-VINENT	<i>continued</i>	<i>continued</i>	HARIDY	SALEM
1:45	YASUHARA	SANDERS	VÉLEZ-JUARBE	XIAO	BEVITT	BRONSON	TORRES
2:00	HUANG	COTE	ALMONTE	SEGESSENMAN	HEBDON	FLANNERY SUTHER-	GOHAR
2:15	SINGH	KELLEY	VIÑOLA LOPEZ	BYKOVA	BICKNELL	STACK	DAVIES
2:30	DOYLE	GILBERT	PEROS		PATES	WHITNEY	
2:45	CRESTOHL	PATNAIK	KLUKKERT		NOLAN	ANGIELCZYK	
3:30	MARSHALL	FLYNN	HALENAR-PRICE	HAMILTON	HEGNA	MARTINEZ	WATTS
3:45	SAULSBURY	KIMURA	JACISIN III	SLATER	ZIETLOW	PARDO	SUMRALL
4:00	RICHARDSON	CASANOVAS-VILAR	MCAFFEE	DROSER	REYES		KEYES
4:15	SONG	UNO	COOKE	HOWARD	HUNT		DELINE
4:30	PETERSEN	JUKAR	HENSELEY	JORN	MAYLE		GAHN
4:45	ANTELL	BADGLEY	LEFEBVRE	ALIAN	LYNCH		
5:00	FINNEGAN	<i>continued</i>	MYCHAJLIW		JACQUET		
5:15					PETERMAN		

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TALK SCHEDULE

THURSDAY MORNING, JUNE 20, 2024

TIME	UNION ROGEL <i>Mollusks</i>	UNION ANDERSON <i>Computational Paleobio.</i>	UNION PENDLETON <i>Paleocommunities</i>	UNION KUENZEL <i>Hominoids</i>	UNION WOLVERINE <i>Stratigraphic Paleobio.</i>	UNION 2210 <i>N.A. Paleo. Resources</i>	UNION POND <i>Grande Symposium</i>
8:00	COLE	GILL	ROSSIE	HOLLAND	BRANDT	HILTON	
8:15	<i>continued</i>	FRANK	JANSMA	WOOD	KETCHUM	AASE	
8:30	VARGAS-PARRA	CULLEN	SHERWOOD	LOUGHNEY	CORTEZ	CAPOBIANCO	
8:45	CHATTOPADHYAY	ROOPNARINE	COSMAN	ORCHARD	DINEEN	IGIELMAN	
9:00	WEINSTEIN	MCGUIRE	MACLATCHY	CLEMENT	MAYER	MICKLE	
9:15	CLAPHAM	WRIGHT	SLENKER	ORLIKOFF	KOSNIK	CUNDIFF	GILES
9:30	WILSON	RHODA	KEMP	MICHEL	KIDWELL	ADRAIN	ATTERBY

TIME	UNION ROGEL <i>Conservation Paleobio.</i>	UNION ANDERSON <i>Computational Paleobio.</i>	UNION PENDLETON <i>Paleocommunities</i>	UNION KUENZEL <i>Hominoids</i>	UNION WOLVERINE <i>Stratigraphic Paleobio.</i>	UNION 2210 <i>N.A. Paleo. Resources</i>	UNION POND <i>Grande Symposium</i>
10:15	DAVIS	HOWARD	SCHAP	BAUMGARTNER	MONARREZ	HOOK	XU
10:30	<i>continued</i>	<i>continued</i>	TERRY	HALL	GALLAGHER	BAUER	DAVID
10:45	CRAMER	DUNNE	BROMBACHER	MUNYAKA	WESTROP	MILLHOUSE	BROWNSTEIN
11:00	BARCLAY	JONES	SJOSTEN	COTE	LITTLE	AMATI	FASEY
11:15	PHAM	WEN	ESS	WINKLER	FORSYTHE	UTRUP	ANDREWS
11:30	PIER	FLANNERY-SUTHER-	TYLER	MACLATCHY	HERNÁNDEZ GÓMEZ	RHUE	LIU
11:45	SHIRLEY	YOHLEH	BROPHY	HEAD	IRIZARRY	HUNDA	DE PINNA

Session titles shortened for clarity. Longer, keynote-style talks indicated in bold.
Coffee and tea available between 7:15–8:00, 9:45–10:15.

TALK SCHEDULE

THURSDAY AFTERNOON, JUNE 20, 2024

TIME	UNION ROGEL <i>Conservation Paleobio.</i>	UNION ANDERSON <i>Computational Paleobio.</i>	UNION PENDLETON <i>Paleocommunities</i>	UNION KUENZEL <i>Hominoids</i>	UNION WOLVERINE <i>Stratigraphic Paleobio.</i>	UNION 2210 <i>N.A. Paleo. Resources</i>	UNION POND <i>Grande Symposium</i>
1:15	WINGARD	FURNESS	BANKER	LUKENS	PIPPENGER	FARRAR	MONTALVO
1:30	SPANBAUER	<i>continued</i>	OPAZO MELLA	NORWOOD	HUGHES	GARCIA	YABUMOTO
1:45	DILLON	GEARTY	TACKETT	OPPENHEIM	SCLAFANI	MIKULJIC	CHIDA
2:00	AUSTIN	BAPST	NOVACK-GOTTSHALL	KINGSTON	MCLAUGHLIN	MCCALL	BEMIS
2:15	PRUDEN	JONES	STROTZ	UNO	HAYES	CLARY	HILTON
2:30	DIETL	WANG	THIBODEAUX	WERDELIN	FAN	HENDRICKS	
2:45	<i>discussion</i>	LOUGHNEY	DUTTA	ZHANG	LÓPEZ CARRANZA		

TIME	UNION ROGEL <i>Conservation Paleobio.</i>	UNION ANDERSON <i>Computational Paleobio.</i>	UNION PENDLETON <i>Arthropods</i>	UNION KUENZEL <i>Insect Herbivory</i>	UNION WOLVERINE <i>Conodonts</i>	UNION 2210 <i>N.A. Paleo. Resources</i>	UNION POND
3:30	KOWALEWSKI	WIEMANN	MIKULJIC	LABANDEIRA	MILLER	HENDY	
3:45	KOKESH	<i>continued</i>	ADRAIN	DEKOSTER	LUBLINER	KARIM	
4:00	LAKER	COLLINS	LAIRD	LAKERAM	ROSSCOE	JOHNSON	
4:15	LIYANAGEDARA	HOOKER	BEECH	XIAO	HENDERSON	LONG-FOX	
4:30	TORRES	ROBERTS	DRAGE	CARRILLO-ALBARRAN	HOGANCAMP	SIMPSON	
4:45	WRIGHT	PETSIOS	MOYSIUK	GIRALDO	OVER	QUIRK	
5:00	<i>discussion</i>	GOSWAMI	SWAIN			RAYMOND	
5:15						<i>continued</i>	

Session titles shortened for clarity. Longer, keynote-style talks indicated in bold.
Coffee and tea available between 3:00–3:30.

TALK SCHEDULE

FRIDAY MORNING, JUNE 21, 2024

TIME	UNION ROGEL <i>Conservation Paleobio.</i>	UNION ANDERSON <i>AI in Paleo.</i>	UNION PENDLETON <i>Fisher Symposium</i>	UNION KUENZEL <i>Paleobotany</i>	UNION WOLVERINE <i>Carnivorous Mammals</i>	UNION 2210 <i>Broadening Accessibility</i>	UNION POND <i>Avocational Clubs</i>
8:00	FLANTUA	LESHNO AFRIAT	<i>introductory remarks</i>	LODUCA	ORCUTT	PORCELLO	CLARK
8:15	<i>continued</i>	HU	LAMSDALL	HUEGELE	MORETTI	INMAN	MCCALL
8:30	KOORYMAN	HUANG	OCON	BUTRIM	POUST	BOLGER	BISSETT
8:45	MORLEY	MULQUEENEY	CARLSON	MORALES TOLEDO	RILEY	EL-SAYED	COOPER
9:00	GIBERT BRET	ANEMONE	PARINS-FUKUCHI	SPAGNUOLO	AMANE	HOPPS	SHOEMAKER
9:15	SHORT	JARIWALA	LEIGHTON	CORREA-NARVAEZ	LOWERY	THOMPSON	PANKOWSKI
9:30	<i>discussion</i>	<i>withdrawn</i>	FOX	TADOUAMANT	ROTHSCHILD	FRANCEK	KONIECKI
9:45			BADGLEY				

TIME	UNION ROGEL <i>Conservation Paleobio.</i>	UNION ANDERSON <i>AI in Paleo.</i>	UNION PENDLETON <i>Fisher Symposium</i>	UNION KUENZEL <i>Wetland Ecology</i>	UNION WOLVERINE <i>Carnivorous Mammals</i>	UNION 2210 <i>Broadening Accessibility</i>	UNION POND <i>Avocational Clubs</i>
10:15	KUSNERIK	FORCELLATI	PLOTNICK	CHRPA	KORT	XU	STOKES
10:30	CARDEN	RODRIGUEZ	CROWLEY	SCOTT	<i>continued</i>	SANTOS	WESTGAARD
10:45	EDELMAN-FURSTEN-	ADAIMÉ	ROUNTREY	JACKSON	LOPEZALLES	LEPORE	KAPLAN
11:00	SNYDERMAN	ROMERO	CERLING	RAYMOND	POLLY		SHOEMAKER
11:15	SMITH	PUNYASENA	CHERNEY	NEELY	EVERETT	WHITE	<i>discussion</i>
11:30	KELLEY	BERV	KOCH	MARTIN	DESANTIS		<i>discussion cont.</i>
11:45	<i>discussion</i>		SELGER		MUNSON		<i>discussion cont.</i>

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TALK SCHEDULE

FRIDAY AFTERNOON, JUNE 21, 2024

TIME	UNION ROGEL	UNION ANDERSON <i>Integrated Approaches</i>	UNION PENDLETON	UNION KUENZEL <i>Reef Paleocology</i>	UNION WOLVERINE <i>Carnivorous Mammals</i>	UNION 2210 <i>Biodiversity Dynamics</i>	UNION POND <i>Probscidians</i>
1:15	WEAVER		VAYDA	VALENZUELA-TORO	TOMASOVYCH	LISTER	
1:30	HARDY		LI	<i>continued</i>	ELKIN	<i>continued</i>	
1:45	MARDER		GODBOLD	CHURCHILL	MANOOGIAN	ANINY	
2:00	DOLBY		SCHNEIDER	BARRETT	LU	SANDERS	
2:15	TERRY		LORD	DOUGHTY	JONES	SAARINEN	
2:30	WYATT		KISSLING	CHRISTISON	JAMSON	WIDGA	
2:45	PENG		DIMITRIJEVIC	BALISI	HUNT	HULBERT	
3:00						JUKAR	

TIME	UNION ROGEL	UNION ANDERSON <i>Integrated Approaches</i>	UNION PENDLETON	UNION KUENZEL <i>Reef Paleocology</i>	UNION WOLVERINE <i>Fossil Forces</i>	UNION 2210 <i>Biodiversity Dynamics</i>	UNION POND <i>Probscidians</i>
3:30	WANG		DUSSEAULT	BYRNE	CERASONI	ARROYO-CABRALES	
3:45	REID		O'QUIN	WILKEN	KAHANAMOKU-MEYER	CRUZ	
4:00	WING		CHANDROTH	MAGALLANES	BENNETT	LINDSEY	
4:15	STILES		CYBULSKI	LI	HARRIS	MILLER	
4:30	HOPKINS		<i>continued</i>	DUDGEON	DENG	PARDI	
4:45	SAMUELS		<i>continued</i>	SELLERS	FALK	BUTLER	
5:00	KELLER		<i>discussion</i>	HOLLIDAY	WILSON	GARAPATI	
5:15	ZELDITCH				LEDESMA	SHIRLEY	

Session titles shortened for clarity. Longer, keynote-style talks indicated in bold. Coffee and tea available between 3:00–3:30.

**LIST OF PRESENTERS AND TITLES
IN CHRONOLOGICAL SESSION ORDER**

**MONDAY MORNING, JUNE 17, 2024
PLENARY SESSION: PALEONTOLOGY FOR ALL
RACKHAM AUDITORIUM
MODERATORS: Selena Smith and Matt Friedman**

- 8:00** *welcoming remarks*
- 8:30** **KILBOURNE** OPENING POEM: “BLINDFOLD WONDER”
- 8:45** **BEHRENSMEYER & CSOTONYI** VISUALIZING THE PAST: HOW ARTISTS AND PALEOBIOLOGISTS CREATE SCIENCE-INFORMED RECONSTRUCTIONS OF ANCIENT LIFE
- 9:15** **CLARK & BAUER** AN EVER-WIDENING CIRCLE OF FRIENDS
- 10:15** **MONARREZ** LEARNING ABOUT THE FOUNDATIONAL ROLES OF COLONIALISM AND SYSTEMIC RACISM IN PALEONTOLOGY TO CREATE A MORE INCLUSIVE DISCIPLINE
- 10:45** **ANTELL** THE TRUTH ABOUT “GLOBAL” DATA, AND THE LIMITS OF THE KNOWABLE
- 11:15** **CARVALHO** FOSSILS: ANCIENT KEYS FOR UNDERSTANDING THE BIOLOGY OF A CHANGING PLANET
- 11:45** *group photo*

MONDAY AFTERNOON, JUNE 17, 2024
THE BIGHORN BASIN: NEW FRONTIERS AND
INTER-GENERATIONAL KNOWLEDGE OF A MODEL SYSTEM
FOR STUDYING TERRESTRIAL ECOSYSTEM EVOLUTION
UNION ROGEL

MODERATORS: Lucas Weaver and Vera Korasidis

- 1:15 GINGERICH** HISTORY OF THE PALEOCENE–EOCENE TRANSITION IN THE BIGHORN BASIN OF WYOMING
- 1:30 VITEK** SUSTAINED WORK BREAKS NEW GROUND: EVOLUTIONARY RESEARCH FRONTIERS IN THE BIGHORN BASIN
- 1:45 BLOCH** THE BIGHORN BASIN PETM MICROVERTEBRATE PROJECT (PETM-MVP): NEW HIGH-RESOLUTION RECORDS OF VERTEBRATE RESPONSE TO CLIMATE CHANGE ACROSS THE PALEOCENE-EOCENE THERMAL MAXIMUM
- 2:00 SCHWARTZ** DIETARY CHANGE ACROSS THE PALEOCENE-EOCENE THERMAL MAXIMUM IN THE MESONYCHID *DISSACUS PRAENUNTIUS* THROUGH DENTAL MICROWEAR TEXTURE ANALYSIS
- 2:15 MORSE** A MULTIPROXY APPROACH TO CHARACTERIZING THE ECOLOGY OF THE EARLIEST KNOWN CROWN PRIMATE FROM THE BIGHORN BASIN, WY
- 2:30 RIEGLER** DOCUMENTING LIZARD FAUNAS ACROSS THE PALEOCENE-EOCENE THERMAL MAXIMUM IN THE BIGHORN BASIN, WYOMING
- 2:45 WING** MORE SITES, MORE FOSSILS – AN IMPROVED BASIS FOR UNDERSTANDING FLORAL CHANGE DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM IN THE BIGHORN BASIN
- 3:30 CURRANO** MORE SITES, MORE FOSSILS, PART 2 – AN IMPROVED BASIS FOR UNDERSTANDING INSECT HERBIVORY DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM IN THE BIGHORN BASIN
- 3:45 KORASIDIS** PALYNOFLORAL CHANGE THROUGH THE PALEOCENE-EOCENE THERMAL MAXIMUM IN THE BIGHORN BASIN, WYOMING
- 4:00 MILLIGAN** LEAF EPIDERMAL CELLS RECORD THE CANOPY RESPONSE TO CHANGING CLIMATE DURING THE LATE PALEOCENE TO EARLY EOCENE IN THE BIGHORN BASIN, WY
- 4:15 HAVRANEK** CLUMPED ISOTOPE THERMOMETRY RECORD OF THE PALEOCENE EOCENE THERMAL MAXIMUM FROM POLECAT BENCH
- 4:30 SNELL** CLUMPED ISOTOPE THERMOMETRY OF PALEOCENE TO EOCENE HYPERTHERMAL EVENTS IN THE BIGHORN BASIN, WY – EVOLUTION OF A TOOL AND A RECORD
- 4:45 SCHER** *CELTIS* ENDOCARP BOUND ORGANIC MATTER $\Delta^{15}\text{N}$: A POTENTIAL PALEOCLIMATE PROXY
- 5:00 JUD** ECOLOGICAL PATTERNS OF THE ANGIOSPERM DIVERSIFICATION IN THE EARLY CRETACEOUS DEPOSITS OF THE CLOVERLY FORMATION
- 5:15 WEAVER** AN EMERGING PERSPECTIVE ON MAMMALIAN EVOLUTION ACROSS THE CRETACEOUS-PALEOGENE BOUNDARY IN THE BIGHORN BASIN (WYOMING, U.S.A)

MONDAY AFTERNOON, JUNE 17, 2024
A MODEL SYSTEM FOR EVOLUTION AND ENVIRONMENTAL CHANGE:
THE MARINE COMMUNITIES OF THE NEOGENE WESTERN ATLANTIC
UNION ANDERSON

MODERATORS: Brendan Anderson and Jonathan Hendricks

- 1:15 O'DEA** EVOLUTION AND ENVIRONMENT OF CARIBBEAN COASTAL ECOSYSTEMS (30-minute keynote)
- 1:45 HENDY** KOUROU - A NEW AND HIGHLY DIVERSE PLEISTOCENE FOSSIL RECORD FROM THE EQUATORIAL WESTERN ATLANTIC
- 2:00 HENDRICKS** THE PLIO-PLEISTOCENE PINECREST BEDS: PROBLEMS, PROGRESS, AND POTENTIAL
- 2:15 CAMPBELL** PLIOCENE AND EARLY PLEISTOCENE MOLLUSCAN BIODIVERSITY: ZANCLEAN, PIACENZIAN, AND GELASIAN FAUNAS OF SOUTH CAROLINA AND SOUTHERN NORTH CAROLINA
- 2:30 CAMPBELL** EXTINCTION AND ORIGINATION DYNAMICS IN PLIOCENE AND EARLY PLEISTOCENE MOLLUSCA OF SOUTH CAROLINA AND SOUTHERN NORTH CAROLINA
- 2:45 CAMPBELL** DOUBLING THE DIVERSITY OF THE WACCAMAW FORMATION
- 3:00 ALLMON** THE RISES AND FALLS OF TURRITELLID GASTROPODS DURING THE CENOZOIC IN THE WESTERN ATLANTIC
- 3:30 ANDERSON** MACROEVOLUTIONARY AND MACROECOLOGICAL TRENDS IN TURRITELLIDAE IN THE WESTERN ATLANTIC, NEOGENE-RECENT: INSIGHTS FROM AN ABUNDANT, WELL-STUDIED TAXON
- 3:45 THOMPSON** TROPHIC STRUCTURE CHANGES IN NEOGENE GASTROPODS FROM THE SOUTHWESTERN CARIBBEAN
- 4:00 ROJAS ARIZA** TESTING THE FUNCTIONALITY OF TRAITS: INSIGHTS INTO EXTINCTION SELECTIVITY PATTERNS OF LATE CENOZOIC MOLLUSKS
- 4:15 GOMES** CARBONATE CLUMPED ISOTOPE (Δ_{47}) TEMPERATURE RECONSTRUCTIONS FROM THE PLIO-PLEISTOCENE FLORIDA PLATFORM: ASSESSING MARINE CLIMATE CHANGE AS A POTENTIAL EXTINCTION DRIVER
- 4:30 ORNDORFF** EFFECTS OF CLIMATIC WARMING ON MOLLUSCAN ABUNDANCE AND COMMUNITY STRUCTURE DURING THE MID-PLIOCENE WARM PERIOD
- 4:45 THOMAS** A SHORT-LIVED BURST OF ABERRANT POLYMORPHISM IN PLIOCENE POPULATIONS OF *GLYCYMERIS AMERICANA* (BIVALVIA: ARCOIDA), CONSISTENT WITH EXPRESSION OF A TRANSPOSABLE ELEMENT IN ITS GENOME, ASSOCIATED WITH RAPID ENVIRONMENTAL CHANGE IN THE WESTERN ATLANTIC
- 5:00 COLE** MOLLUSCAN SPECIES COMPOSITION AND EVENNESS ACROSS THE MID-PLIOCENE WARM PERIOD AS RECORDED IN THE YORKTOWN FORMATION (SOUTHEASTERN VIRGINIA)
- 5:15 LOCKWOOD** DECLINES IN BIVALVE BODY SIZE ACROSS THE MID-PLIOCENE WARM PERIOD IN SOUTHEASTERN VIRGINIA: IMPLICATIONS FOR ECONOMICALLY IMPORTANT TAXA?

MONDAY AFTERNOON, JUNE 17, 2024
LESSONS LEARNED FROM PHANEROZOIC MARINE
EXTINCTIONS APPLIED TO MODERN CONSERVATION
UNION PENDLETON
MODERATORS: Sinjini Sinha and Claire Williams

- 1:15 BUSH** LESSONS FROM THE LATE DEVONIAN MASS EXTINCTION IN NEW YORK AND PENNSYLVANIA
- 1:30 ALASWAD** WHAT CAUSES BIOTIC HOMOGENIZATION?
- 1:45 MARTINDALE** ANACHRONISTIC FACIES (WRINKLE STRUCTURES) IN THE AFTERMATH OF THE PLIENSBAKIAN-TOARCIC EXTINCTION, MOROCCO
- 2:00 STONE** EARLY JURASSIC REEF COLLAPSE AND RECOVERY: HOW KILL MECHANISMS SHIFTED REEF REGIMES
- 2:15 REDDIN** THERMAL PREFERENCES CORRESPOND TO ESCALATORY REGIONAL SPECIES RESPONSES DURING EARLY JURASSIC CLIMATE CHANGE
- 2:30 SINHA** IMPACT OF THE EARLY JURASSIC EXTINCTION (PLIENSBAKIAN-TOARCIC STAGES) ON THE FUNCTIONAL DIVERSITY OF MARINE MACROFAUNAL COMMUNITIES
- 2:45 GAVIRNENI** WHOLE-BODY AND MASS-SPECIFIC METABOLIC RATE IN BIVALVES AS PREDICTORS OF EXTINCTION SELECTIVITY DURING HYPERTHERMALS AND BEYOND
- 3:30 SULLIVAN** COMPARING THE TAXONOMIC AND FUNCTIONAL TURNS OF BENTHIC FORAMINIFERA ACROSS THE KPG AND THE EOCENE-OLIGOCENE
- 3:45 JACOBS** THE BENGUELA UPWELLING SYSTEM AS SEEN FROM ITS CRETACEOUS NORTHERN LIMIT
- 4:00 MIGUEZ SALAS** COMPARATIVE ICHNOLOGICAL ANALYSIS OF THE PALEOCENE-EOCENE THERMAL MAXIMUM: GOING FROM SHALLOW TO DEEP MARINE SETTINGS AT THE PYRENEAN BASIN, SPAIN
- 4:15 SCHNEIDER** THE ANATOMY OF A MASS EXTINCTION: COMPARING THE PRESENT WITH THE PAST
- 4:30 WILLIAMS** INTEGRATING FOSSIL DATA IMPROVES PREDICTIONS OF FUTURE HABITAT FOR KEY CARIBBEAN REEF CORALS

MONDAY AFTERNOON, JUNE 17, 2024
GENERAL SESSION: TAPHONOMY AND ICHNOFOSSILS
UNION KUENZEL
MODERATORS: Madison Gaetano and Javier Luque

- 1:15 KIMMIG** DEATH BECOMES THEM: UNDERSTANDING THE EXCEPTIONAL
- 1:30 LUQUE** THE CHIMAERA BEDS LAGERSTÄTTE: TAPHONOMIC WINDOW FOR BURGESS SHALE-TYPE PRESERVATION OF MARINE INVERTEBRATES STILL OPEN DURING THE CRETACEOUS
- 1:45 BRANDT** MUH-ZON/MAY-ZON: THE MAZON CREEK FAUNA AS A CASE FOR INCLUDING PRONUNCIATION GUIDES IN OUR WRITING
- 2:00 CLEMENTS** A NEW TAPHONOMIC MODEL FOR THE MAZON CREEK LAGERSTÄTTE: UNCOVERING THE IMPACT OF PALAEOGEOGRAPHY ON SOFT TISSUE PRESERVATION
- 2:15 MCCOY** TWO-PHOTON FLUORESCENCE MICROSCOPY PROVIDES EVIDENCE OF SUBERIN PRESERVATION IN FOSSIL BARK OF THE MONKEYHAIR TREE FROM THE EOCENE GEISELTAL FOSSIL LAGERSTÄTTE
- 2:30 PLAZA-TORRES** CRETACEOUS MICROBIAL ACTIVITY PRESERVED IN THE CARBON STABLE ISOTOPE COMPOSITIONS OF HERBIVOROUS DINOSAUR COPROLITES
- 2:45 HEKKALA** ANCIENT DNA FROM CROCODILIANS IN WET AND DRY CAVE SETTINGS: SUCCESS, FAILURE AND COLLABORATIVE INTERPRETATION.
- 3:30 NEBELSICK** PRESERVATION POTENTIALS, SKELETAL ARCHITECTURES AND THE SEDIMENTARY RECORD OF NEARSHORE REGULAR ECHINOIDS
- 3:45 JACOBS** LIVE-DEAD COMPARISONS IN TROPICAL REEF SETTINGS RECORD PREDATOR-PREY INTERACTIONS, AND HYDROLOGIC PROCESSES, BUT ARE BIASED BY “PAGURIZATION”
- 4:00 NICOL** ATTACK OF THE CRABS: PREDATION TRACES INDICATING A SUCCESSFUL ATTACK
- 4:15 GAETANO** RODENTS AS TAPHONOMIC AGENTS IN ARCTIC ECOSYSTEMS
- 4:30 CHIAPPONE** FLUVIAL MOBILITY OF HADROSAUROID DINOSAUR SKELETONS: EXPERIMENTALLY TESTING TRANSPORT POTENTIAL IN EXTINCT REPTILES
- 4:45 FIORILLO** A RICH NEW RECORD OF DINOSAUR TRACKS FROM AN UNNAMED CRETACEOUS ROCK UNIT ALONG THE YUKON RIVER IN WEST-CENTRAL ALASKA
- 5:00 WHITE** INTERPRETATION OF EOLIAN ICHNOFOSSILS USING NEOICHTHOLOGY OF DESERT ARTHROPODS

MONDAY AFTERNOON, JUNE 17, 2024
PROXIES, SEDIMENTOLOGICAL INDICATORS, AND
BIOTIC EFFECTS OF OCEANIC ANOXIC EVENTS IN THE
GEOLOGICAL RECORD
UNION WOLVERINE

MODERATORS: Brian Huber and Joan Bernhard

- 1:15 BOWSER** COPROLITES OF MONOTHALAMIC FORAMINIFERA AND GROMIIDS: STERCOMATA AS MICROFOSSILS IN MICROPALAEONTOLOGY
- 1:30 BERNHARD** THE EMERGING PALEO-OXYGEN PROXY MN/CA IN BENTHIC FORAMINIFERA: AN EXPLANATION FOR NON-CONFORMANCE BY KLEPTOPLASTIDIC FORAMINIFERS IN DYSOXIC TO EUXINIC ENVIRONMENTS
- 1:45 GLOCK** PORE CHARACTERISTICS OF CALCAREOUS BENTHIC FORAMINIFERA AS QUANTITATIVE PROXY FOR PAST NITRATE AND OXYGEN CONCENTRATIONS
- 2:00 ALCORN** VERTICAL REORGANIZATION OF THE NORTH PACIFIC OXYGEN MINIMUM ZONE DURING DEGLACIAL WARMING
- 2:15 BURKETT** AN ASSESSMENT OF THE PALEOCENE-EOCENE THERMAL MAXIMUM AND ITS IMPACT ON THE ECOLOGY, GEOCHEMISTRY, AND DENSITY OF BENTHIC FORAMINIFERAL COMMUNITIES ON THE AGULHAS PLATEAU
- 2:30 WAN** COMBINED STABLE O, CA, AND SR ISOTOPE RECORDS REVEAL COCCOLITHOPHORE FEEDBACKS ACROSS THE PALEOCENE-EOCENE THERMAL MAXIMUM
- 2:45 LI** THE LOCAL/REGIONAL HETEROGENEOUS BENTHIC REDOX RESPONSES TO THE OCEANIC ANOXIC EVENT-2 AS INDICATED BY SEDIMENTARY VANADIUM ISOTOPIC COMPOSITIONS
- 3:30 FEARON** SELECTIVE SURVIVAL OF INFAUNAL DECAPODS OVER THE CENOMANIAN-TURONIAN EXTINCTION (OAE 2)
- 3:45 JACOBSON** HIGH-PRECISION CA ISOTOPE MEASUREMENTS REVEAL POTENTIAL BIOMINERALIZATION CRISES DURING MAJOR CARBON CYCLE PERTURBATIONS
- 4:00 WANG** BIOCALCIFICATION CRISIS INDICATED BY STABLE CA AND SR ISOTOPES DURING OAE1A
- 4:15 HUBER** PURSUIT OF AN EXPLANATION FOR THE PLANKTONIC FORAMINIFERAL MASS EXTINCTION AND CARBON CYCLE PERTURBATION ACROSS OCEANIC ANOXIC EVENT 1B (113 MA)
- 4:30 CHEN** BIOCALCIFICATION STRESS AND FAUNAL TURNOVER AT THE APTIAN-ALBIAN BOUNDARY
- 4:45 COHEN** MICROFOSSIL DIVERSITY AND ABUNDANCE DURING THE LATE DEVONIAN LOWER KELLWASSER EVENT IN THE APPALACHIAN BASIN: IMPLICATIONS FOR EXTINCTION TRIGGERS AND ECOSYSTEM RESPONSE
- 5:00 MARROQUÍN** PROLONGED ANOXIA ACROSS THE TOARCIC OCEANIC ANOXIC EVENT (T-OAE) WITHIN THE EUROPEAN EPICONTINENTAL SEAWAY
- 5:15 ROSELLI** DISKS AND DYSOXIA: INVESTIGATING POTENTIAL RELATIONSHIPS BETWEEN REDOX CONDITIONS AND SOFT-BODIED PRESERVATION FROM THE MIDDLE DEVONIAN (GIVETIAN) APPALACHIAN BASIN

MONDAY AFTERNOON, JUNE 17, 2024
PALEONEUROLOGY
UNION 2210
MODERATORS: Rodrigo Tinoco Figueroa and Matteo Fabbri

- 1:15** *withdrawn*
- 1:30** **ORTEGA-HERNÁNDEZ** ANATOMY, PRESERVATION AND EVOLUTIONARY SIGNIFICANCE OF THE CENTRAL NERVOUS SYSTEM IN AN ORDOVICIAN TRILOBITE
- 1:45** **FIGUEROA** BRAIN OF ALL TRADES: THE NEUROANATOMICAL DIVERSITY OF RAY-FINNED FISHES
- 2:00** **GILES** RAY-FINNED FISH NEUROANATOMICAL EVOLUTION REVEALED THROUGH EXCEPTIONAL FOSSIL SOFT TISSUE PRESERVATION
- 2:15** **BALANOFF** INTEGRATIVE NEUROANATOMY AND THE ORIGIN OF BIRDS
- 2:30** **YOHE** PALEONEUROBIOLOGY OF THE TETRAPOD OLFACTORY BULB INFERRED FROM EXTANT OLFACTORY RECEPTOR REPERTOIRES
- 2:45** **FABBRI** THE NERVOUS SYSTEM SHAPES THE SKULL DURING DEVELOPMENT AND EVOLUTION
- 3:30** **ORTEGA-HERNÁNDEZ** THE EVOLUTIONARY SIGNIFICANCE AND PRESERVATION OF FOSSILIZED CENTRAL NERVOUS SYSTEMS IN CAMBRIAN METAZOANS
- 3:45** **BAZZANA-ADAMS** MORPHOLOGICAL COVARIATION BETWEEN THE INNER EAR, BRAIN, AND BRAINCASE OF THE LEOPARD GECKO (*EUBLEPHARIS*)
- 4:00** **LANG** ENDOCRANIAL SHAPE VARIATION IN MADAGASCAR'S SUBFOSSIL LEMURS
- 4:15** **BERTRAND** THE VIRTUAL BRAIN ENDOCAST OF *INCAMYS BOLIVIANUS*: INSIGHT FROM THE NEUROSENSORY SYSTEM INTO UNDERSTANDING THE ADAPTIVE RADIATION OF SOUTH AMERICAN RODENTS
- 4:30** **WATANABE** ENDOCRANIAL DEVELOPMENT IN NON-AVIAN DINOSAURS REVEALS AN ONTOGENETIC BRAIN TRAJECTORY DISTINCT FROM EXTANT ARCHOSAURS
- 4:45** **SCOTT** NEW INFORMATION ON THE BRAIN CAVITY AND INNER EAR OF *PACHYRHINOSAURUS LAKUSTAI* BASED ON CT SCANNING AND 3D VISUALIZATION
- 5:00** **BURKE** CAN ENDOCRANIAL FEATURES HELP ELUCIDATE THE EVOLUTIONARY HISTORY OF GAVIALOIDS?

MONDAY AFTERNOON, JUNE 17, 2024
MANAGING AND ENGAGING WITH FEDERAL PALEONTOLOGICAL
RESOURCES IN THE 21ST CENTURY
UNION POND

MODERATORS: Adam Rountrey and Brent Breithaupt

- 1:15** **TWEET** THE COLLECTED PALEONTOLOGICAL HERITAGE OF THE NATIONAL PARK SERVICE
- 1:30** **BOBER** AN OVERVIEW OF PALEOZOIC PALEOBOTANICAL RESOURCES DOCUMENTED IN NATIONAL PARK SERVICE AREAS
- 1:45** **VISAGGI** PALEONTOLOGY IN THE PARKS FELLOWSHIPS: A PROGRESS UPDATE ON THE NATIONAL PARK SERVICE AND PALEONTOLOGICAL SOCIETY COLLABORATIVE PROGRAM
- 2:00** **LIGGETT** A NEW TYPE OF RAPTOR: RECREATION AND PERMIT TRACKING ONLINE REPORTING
- 2:15** **BREITHAAPT** MANAGEMENT OF PALEONTOLOGICAL RESOURCES USING PHOTOGRAMMETRY IN THE 21ST CENTURY: AN ERA OF ADVANCEMENT
- 2:30** **RAPP** STORING RADIOACTIVE FOSSILS SAFELY, A CASE STUDY FROM HAGERMAN FOSSIL BEDS NATIONAL MONUMENT
- 2:45** **SCANNELLA** UNCOVERING, CONSERVING, AND INCREASING ACCESS TO FEDERAL PALEONTOLOGICAL RESOURCES AT MUSEUM OF THE ROCKIES
- 3:00** **NAKANO** REBUILDING PARTNERSHIPS FOR THE CARE OF FEDERAL PALEONTOLOGICAL RESOURCES AT THE SMITHSONIAN NATIONAL MUSEUM OF NATURAL HISTORY

**MONDAY POSTERS, JUNE 17, 2024
UNION IDEA HUB
PRESENTERS SHOULD ATTEND POSTERS FROM 5:30-6:15**

**THE BIGHORN BASIN: NEW FRONTIERS AND INTER-GENERATIONAL KNOWLEDGE
OF A MODEL SYSTEM FOR STUDYING TERRESTRIAL ECOSYSTEM EVOLUTION**

- 1 **BARCLAY** A REVISED *GINKGO* CO₂ BAROMETER USING A MODIFIED FRANKS MODEL TO ESTIMATE DEEP TIME CARBON DIOXIDE IN DEEP TIME
- 2 **FARKE** THE “MESAVERDE” FORMATION (CAMPANIAN) OF THE BIGHORN BASIN, WYOMING, U.S.A.: A KEY TO UNRAVELING LATE CRETACEOUS FAUNAL PROVINCIALITY IN LARAMIDIA?
- 3 **FLYNN** PRELIMINARY REPORT OF EARLY EOCENE FLORAS FROM THE LOWER SAN JOSE FORMATION, NEW MEXICO, USA
- 4 **KING** LITTLE BIGFOOT: A PATHOLOGIC ARTICULATED PES OF A SAUROPOD DINOSAUR FROM THE MORRISON FORMATION, BIGHORN BASIN, WY
- 5 **KRUMENACKER** A POTENTIALLY NEW DRYOMOPRH ORNITHOPOD FROM THE LATE JURASSIC MORRISON FORMATION SIMON QUARRY OF THE BIGHORN BASIN, WYOMING
- 6 **RAYNOLDS** TWO EPISODES OF DEFORMATION AND SEDIMENTATION IN THE LARAMIDE BIGHORN BASIN, WYOMING

**A MODEL SYSTEM FOR EVOLUTION AND ENVIRONMENTAL CHANGE:
THE MARINE COMMUNITIES OF THE NEOGENE WESTERN ATLANTIC**

- 7 **BIONDI** EXAMINING IMPACTS OF THE MID-PLIOCENE WARM PERIOD ON MOLLUSCAN DIVERSITY, RICHNESS, AND ABUNDANCE WITHIN THE YORKTOWN FORMATION (SOUTHEASTERN VIRGINIA)
- 8 **CAMPBELL** A STRATIGRAPHIC MODEL FOR THE MODEL SYSTEM: IDENTIFYING THE MID-PLIOCENE TRANSGRESSIVE INTERVALS IN THE SOUTHEASTERN US
- 9 **DAVIS** ISOTOPIC ECOLOGY OF LARGE BARNACLES FROM THE MIDDLE MIOCENE CLIMATIC TRANSITION, CALVERT CLIFFS, MARYLAND: DO BARNACLE PLATES RECORD SIMILAR PALEOCLIMATIC SIGNATURES AND DO BARNACLES HAVE SEASONAL LIGHT AND DARK GROWTH BANDS LIKE MOLLUSKS?
- 10 **DEL RÍO** EARLY MIOCENE PALEOTEMPERATURES FOR THE HIGH AUSTRAL SW ATLANTIC DERIVED FROM FOSSIL BIVALVES IN PATAGONIA, ARGENTINA
- 11 **DOWSETT** STRATIGRAPHIC FRAMEWORK FOR THE MID PIACENZIAN WARM PERIOD ON THE U.S. ATLANTIC COASTAL PLAIN
- 12 **GALE** A GLOBAL COMPARISON OF THE REGIONAL DYNAMICS IN MARINE BIVALVE FUNCTIONAL DIVERSITY UNDER CLIMATE CHANGE IN THE PAST 5 MILLION YEARS.
- 13 **MCKENZIE** THE SIGNIFICANCE OF ENCRUSTING TAXA AND BORING ICHNOTAXA ON MARINE BIVALVES IN THE MIOCENE, SHALLOW MARINE CALVERT AND CHOPTANK FORMATIONS, CALVERT CLIFFS, MARYLAND
- 14 **POLI** CHANGES IN ABYSSAL BENTHIC FORAMINIFERAL ASSEMBLAGES IN THE WESTERN NORTH ATLANTIC DURING THE LAST 3 MILLION YEARS (BERMUDA RISE, ODP SITE 1063)
- 15 **VISAGGI** MARINE MOLLUSCAN COMMUNITIES OF THE PLIO-PLEISTOCENE NASHUA FORMATION FROM MULTIPLE LOCALITIES IN NORTH-CENTRAL FLORIDA
- 16 **WATERS** DO CHANGES IN SPAWNING SEASON OF *CHIONE* SP. FACTOR INTO SURVIVORSHIP THROUGH THE PLIO-PLEISTOCENE MOLLUSCAN EXTINCTION?

LESSONS LEARNED FROM PHANEROZOIC MARINE EXTINCTIONS APPLIED TO MODERN CONSERVATION

- 17 **HASSELL** CORALLINE ALGAE RESPONSE TO THE PALEOCENE-EOCENE THERMAL MAXIMUM IN NORTH-EASTERN INDIA AND SOUTHERN TIBET
- 18 **SHUSTER** UPCYCLING PLASTIC WASTE TO MODEL DANGERS OF THE SIXTH EXTINCTION: VICTIMS OF THE “BIG 5” SEEN THROUGH THE TRASH OF TODAY

GENERAL SESSION: TAPHONOMY AND ICHNOFOSSILS

- 19 **BURNS** PRESERVATION VERSUS CHEMICAL AND BIOLOGICAL DISSOLUTION OF SHELLY CARBONATE AT THE EAST FLOWER GARDEN BRINE SEEP, GULF OF MEXICO
- 20 **GUNDERSON** TAPHONOMY OF NAUULOID CEPHALOPODS FROM THE MIDDLE SILURIAN MASSIE FORMATION OF SOUTHEASTERN INDIANA
- 21 **JUSTICE** UNRAVELING THE EFFECTS OF PRESERVATIONAL BIASES ON GASTROPOD DIVERSITY TRENDS FROM THE JURASSIC TO THE PALEOGENE
- 22 **KRAPOVICKAS** TRACKWAYS OF A SMALL, QUADRUPEDAL DINOSAUR FROM THE MIDDLE JURASSIC OF PATAGONIA AND ITS IMPLICATIONS FOR LOCOMOTOR EVOLUTION WITHIN ORNITHISCHIA
- 24 **MILLER-CAMP** A NEW REPORT ON FLORA AND FAUNA FROM THE MIDDLE PENNSYLVANIAN “STANLEY CEMETARY” LOCALITY IN SOUTHERN INDIANA, A LITTLE-KNOWN LAGERSTÄTTE FROM A MAZON CREEK-LIKE ENVIRONMENT
- 25 **MORRIS** A LIVE-DEAD STUDY OF TAXONOMIC AND FUNCTIONAL DIVERSITY IN GREAT BASIN SMALL MAMMALS
- 26 **MUSSO** HYDRODYNAMICS OF NON-UNIFORM, DISARTICULATED CRINOID GRAINS AND THEIR RELEVANCE TO THE MISSISSIPPIAN ROCK RECORD
- 27 **POTTER** SCANNING ELECTRON MICROSCOPE INVESTIGATION INTO THE PRESERVATION OF THE “TULLY MONSTER”
- 28 **PRZEDWIECKI** MORPHOMETRICS OF CONOSTICHOID BURROWS WITH BIOCLASTIC INFILL FROM THE SILURIAN OF SOUTHERN INDIANA
- 29 **SHELBURNE** CHARACTERIZING SOFT TISSUE PRESERVATION IN MAZON CREEK (PALEOZOIC; PENNSYLVANIAN) AMPHIBAMIFORMS (TEMNOSPONDYLI; AMPHIBAMIFORMES)
- 30 **TAMEZ** TRILOBITES BURROWING, WALKING, AND FEEDING IN TIDAL FLATS OF THE LATE ORDOVICIAN SEQUATCHIE FORMATION OF GEORGIA, USA
- 31 **WHITAKER** A TALE OF TWO LAGERSTÄTTEN: SIMILARITIES AND DIFFERENCES BETWEEN THE SILURIAN ERAMOSA FORMATION AND BRANDON BRIDGE FORMATION OF NORTH AMERICA
- 32 **ZHENG** A LATE TONIAN LAGERSTÄTTE: PICKLED VASE-SHAPED MICROFOSSILS FROM THE CHUAR GROUP, GRAND CANYON, USA

PROXIES, SEDIMENTOLOGICAL INDICATORS, AND BIOTIC EFFECTS OF OCEANIC ANOXIC EVENTS IN THE GEOLOGICAL RECORD

- 33 **ASHING-GIWA** THE GOOD, THE BAD, AND THE HYPOXIC: INVESTIGATING THE RESPONSE OF BRACHIOPODS AND BIVALVES TO LOW-OXYGEN CONDITIONS
- 34 **BATEMAN** INVESTIGATION OF A UNIQUE END-DEVONIAN EXTINCTION LOCALITY IN WESTERN NEW YORK
- 35 **BURKE** REDISTRIBUTION OF MARINE OXYGEN DEFICIENT ZONES DURING THE MID-MIOCENE

- 36 **MCCABE** THE END-TRIASSIC ENIGMA: LONG-TERM OXYGEN LOSS AND ENVIRONMENTAL DESTABILIZATION PRECEDED THE END-TRIASSIC MASS EXTINCTION

PALEONEUROLOGY

- 37 **FOSTER** CONTRIBUTIONS TO THE CRANIAL ANATOMY OF THE EARLY TRIASSIC RHYNCHOSAUR *MESOSUCHUS BROWNI* WITH A DISCUSSION OF VOMEROLFACTORY EVOLUTION ACCROSS CROWN ARCHELOSAURIA

MANAGING AND ENGAGING WITH FEDERAL PALEONTOLOGICAL RESOURCES IN THE 21ST CENTURY

- 38 **BONDE** COLLABORATIVE PARTNERSHIPS ENHANCE SCIENTIFIC RESEARCH AND RESOURCE MANAGEMENT IN A NEW NATIONAL PARK SERVICE UNIT: TULE SPRINGS FOSSIL BEDS NATIONAL MONUMENT (TUSK)
- 39 **MILLER** NEW TETRAPOD TRACKWAYS IN THE COCONINO SANDSTONE, GRAND CANYON NATIONAL PARK, ARIZONA
- 40 **PARRY** A COLLABORATIVE MODEL FOR RECOVERING LOST HISTORIC PALEONTOLOGICAL LOCALITIES AND FOSSIL PROVENIENCE ON FEDERAL LANDS
- 41 **PEECOOK** THE GIGANTIC EGG CAME FIRST: A STATE-FEDERAL PARTNERSHIP USING CUTTING-EDGE SCANNING AND 3D PRINTING TECHNOLOGY FOR A MAJOR EXHIBITION
- 42 **PULSIPHER** BRINGING THE HERMIT OUT OF HIDING: A REINVESTIGATION OF THE PERMIAN HERMIT FLORA IN GRAND CANYON NATIONAL PARK AFTER NEARLY A CENTURY IN OBSCURITY
- 43 **SHELL** VERTEBRATE PALEONTOLOGICAL RESOURCES FROM LOWER CARBONIFEROUS ROCKS OF THE HOOSIER AND SHAWNEE NATIONAL FORESTS (USA: ILLINOIS AND INDIANA)
- 44 **VAN VELDHUIZEN** DEVELOPING PROCEDURES FOR THE MIGRATION OF LEGACY PALEONTOLOGICAL LOCALITIES INTO THE BUREAU OF LAND MANAGEMENT'S RECREATION AND PERMIT TRACKING ONLINE REPORTING (RAPTOR) PALEONTOLOGICAL LOCALITIES DATABASE

TUESDAY MORNING, JUNE 18, 2024
UNION ROGEL
EVOLUTIONARY PALEOBIOLOGY IN THE 21ST CENTURY:
ADVANCING THE LEGACY OF JIM VALENTINE
MODERATORS: Charles Marshall and Seth Finnegan

- 8:00 ERWIN** JIM VALENTINE AND THE EVOLUTION OF BODYPLANS
- 8:15 SIMPSON** THE ORIGIN OF ANIMALS FROM A UNICELLULAR PERSPECTIVE
- 8:30 WAGNER** MACROEVOLUTIONARY MOUSE, PHYLOGENETIC MOUSETRAP: THE BROAD IMPLICATIONS OF EARLY BURSTS
- 8:45 NG** EVOLUTION OF DEVELOPMENT ON MICRO- AND MACROEVOLUTIONARY TIMESCALES IN MURINE RODENTS OF SOUTHWEST AUSTRALIA
- 9:00 SOSIAK** TRAIT-BASED PALEONTOLOGICAL NICHE PREDICTION RECOVERS EXTINCT ECOLOGICAL BREADTH OF THE EARLIEST SPECIALIZED ANT PREDATORS
- 9:15 PATZKOWSKY** VALENTINIAN ECOSPACE, ENVIRONMENTAL AFFINITIES, AND THE ORDOVICIAN RADIATION OF BRACHIOPODS
- 9:30 STANLEY** THE GREAT ORDOVICIAN BIODIVERSIFICATION EVENT HAD NO EXTERNAL CAUSE BUT WAS SIMPLY THE RESULT OF MANY NEW HIGHER TAXA RADIATING AT THEIR INTRINSIC RATES
- 10:15 RICHARDS** A NEW LUOLISHANIID FROM THE EARLY ORDOVICIAN AND THE AUTECOLOGY OF SUSPENSION-FEEDING LOBOPODIANS
- 10:30 LOSSO** TRILOBITES FROM THE WALCOTT-RUST QUARRY (MOHAWKIAN; ORDOVICIAN), NEW YORK: NEW INSIGHTS AFTER 150 YEARS
- 10:45 RIVERO-VEGA** DIVERSIFICATION OF JAW GEOMETRY DURING THE INITIAL RADIATION OF LOBE-FINNED FISHES (OSTEICHTHYES: SARCOPTERYGII)
- 11:00 JORDAN** TRILOBITE CO-OCCURRENCE PATTERNS ACROSS THE DEVONIAN-CARBONIFEROUS BOUNDARY
- 11:15 SHI** DIVERSITY-INDEPENDENT FUSULINID DIVERSIFICATION PATTERN DURING THE LATE PALEOZOIC ICE AGE EXPOSED BY A HIGH-TEMPORAL-RESOLUTION SPECIES RICHNESS ANALYSIS
- 11:30 KLOMPMAKER** WERE DECAPOD CRUSTACEANS IN ALABAMA ADVERSELY AFFECTED BY THE CRETACEOUS-PALEOGENE MASS EXTINCTION?
- 11:45 ZHOU** LOSS AND REBOUND OF MORPHOLOGICAL AND FUNCTIONAL DISPARITY AFTER A NON-SELECTIVE MASS EXTINCTION AT THE K/PG BOUNDARY (FAMILY VENERIDAE, BIVALVIA)

TUESDAY MORNING, JUNE 18, 2024
UNION ANDERSON
GENERAL SESSION: CENOZOIC TETRAPODS
MODERATORS: Val Syverson and Andrew Weber

- 8:00 SILVIRIA** AN EXCEPTIONAL MAMMAL LOCALITY FROM THE FIRST ~28 KYRS AFTER THE CRETACEOUS-PALEOGENE MASS EXTINCTION IN NORTHEASTERN MONTANA WITH LANCIAN-ASPECT ‘DEAD CLADES WALKING’
- 8:15 WRIGHT** MINING FOR BLANCAN GOLD: THE RICHMOND HILL LOCAL FAUNA OF THE BLACK HILLS, SOUTH DAKOTA
- 8:30 SYVERSON** REVISING AND UPDATING QUATERNARY ¹⁴C CHRONOLOGIES IN THE NEOTOMA PALEOECOLOGY DATABASE FOR COMMUNITY PALEOECOLOGY
- 8:45 WARD** ISOTOPIC EVIDENCE REVEALS LIMITED MOBILITY IN THE SHORT-LEGGED RHINOCEROS *TELEOCERAS MAJOR* AT ASHFALL FOSSIL BEDS, USA
- 9:00 STRASSBERG** LOST DIGGING MODES OF Z: RECONSTRUCTING FOSSORIAL FUNCTION AND EXTINCT DIGGING STRATEGIES IN FOSSIL MAMMALS USING A COMPREHENSIVE MORPHOMETRIC FRAMEWORK
- 9:15 MEREGHETTI** A MAMMOTH DIET: UNDERSTANDING ECOLOGY AND BEHAVIOR OF *MAMMUTHUS PRIMIGENIUS* TO UNDERSTAND CAUSES AND CONSEQUENCES OF ITS EXTINCTION
- 9:30 AMEEN** SYSTEMATICS AND PALEOCLIMATE OF TERRESTRIAL MAMMALIAN FAUNA FROM THE LATE MIOCENE (11.2–3.58 MA) SIWALIK DEPOSITS OF PAKISTAN

TUESDAY MORNING, JUNE 18, 2024
UNION ANDERSON
FIFTY YEARS IN THE HIMALAYAN FOOTHILLS: ECOSYSTEM CHANGE IN
THE NEOGENE SIWALIK RECORD OF PAKISTAN
MODERATORS: Catherine Badgley, Michele E. Morgan, and Kay Behrensmeyer

- 10:15 RAZA** VERTEBRATE PALEONTOLOGY RESEARCH IN PAKISTAN: HISTORY, PRESENT, AND THE FUTURE (*30-minute keynote*)
- 10:45 RAYNOLDS** TIME ON THE GROUND IN THE HIMALAYAN MOLASSE SEDIMENTS; OBSERVATIONS FROM KHAUR TO KASHMIR
- 11:00 WILLIS** RECONSTRUCTING DEPOSITIONAL PATTERNS OF THE SIWALIK FLUVIAL SYSTEMS, CHINJI AND NAGRI FORMATIONS, POTWAR PLATEAU, PAKISTAN
- 11:15 QUADE** THE SIWALIK GROUP RECORD AND THE EXPANSION OF C4 VEGETATION IN THE MIOCENE
- 11:30 KARP** NEOGENE CLIMATE-FIRE-VEGETATION FEEDBACKS IN THE SIWALIKS AND BEYOND
- 11:45 BEHRENSMEYER** TAPHONOMIC CONTROLS ON THE SIWALIK VERTEBRATE FOSSIL RECORD

TUESDAY MORNING, JUNE 18, 2024
UNION PENDLETON
FROM CAVES TO CENOTES: PLEISTOCENE VERTEBRATE
PALEONTOLOGY OF THE YUCATAN, MEXICO AND BELIZE
MODERATORS: Blaine Schubert and Joaquin Arroyo-Cabrales

- 8:00** **CHATTERS** INTRODUCING THE HOYO NEGRO VERTEBRATE FAUNA, QUINTANA ROO, MÉXICO
(30-minute keynote)
- 8:30** **RISSOLO** RECENT ADVANCES IN VISUAL ANALYTICS AND VIRTUAL ACCESS TO SUBMERGED LATE PLEISTOCENE AND EARLY HOLOCENE FAUNAL DEPOSITS IN THE SUBMERGED CAVES OF THE YUCATAN PENINSULA
- 8:45** **REINHARDT** RECONSTRUCTING PAST GROUNDWATER LEVELS IN HOYO NEGRO, SAC ACTUN CAVE SYSTEM, QUINTANA ROO, MEXICO
- 9:00** **ARROYO-CABRALES** UNGULATES AND PROBOSCIDEANS FROM CENOTE HOYO NEGRO, QUINTANA ROO, MEXICO
- 9:15** **SCHUBERT** EXCEPTIONAL RECORDS OF EXTINCT CARNIVORANS (*ARCTOTHERIUM*, *PROTOCYON*, AND *SMILODON*) FROM SUBMERGED CAVES OF THE YUCATAN PENINSULA, MEXICO
- 9:30** **SAMUELS** NEW CARNIVORAN FOSSILS OF THE NATURAL TRAP HOYO NEGRO, FROM A SUBMERGED CAVE IN THE YUCATAN PENINSULA OF MEXICO
- 10:15** **MCDONALD** UPDATE ON THE EXTINCT SLOTH *NOHOCHICHAK* AND ITS RELATIONSHIP TO PLEISTOCENE SLOTH DIVERSITY OF THE YUCATAN REGION
- 10:30** **CHATTERS** A HIGHLY DIVERSE ASSEMBLAGE OF GIANT GROUND SLOTHS FROM HOYO NEGRO, QUINTANA ROO, MEXICO.
- 10:45** **WIDGA** COMBINED MICRO-COMPUTED TOMOGRAPHY AND SERIAL STABLE ISOTOPE ANALYSES OF GROUND SLOTHS FROM CENOTE HOYO NEGRO (QUINTANA ROO, MEXICO)
- 11:00** **CRUZ** SMALL VERTEBRATES FROM HOYO NEGRO AND THEIR PALAEOECOLOGICAL IMPORTANCE
- 11:15** **OVANDO** VERTEBRATE PALEONTOLOGY OF PLEISTOCENE SITES IN BELIZE
- 11:30** **MCDONALD** *EREMOTHERIUM* BONES AND THE CENOTE OF DOOM: ADVENTURES IN UNDERWATER PALEONTOLOGY
- 11:45** *discussion*

TUESDAY MORNING, JUNE 18, 2024
UNION KUENZEL
DAWN OF ANIMAL LIFE: EXPLORING NEW ADVANCES IN
EDIACARAN PALEOBIOLOGY
MODERATORS: Princess Aira Buma-at, Prescott Vayda, and Philip Boan

- 8:00** **TARHAN** THE ROLE OF MARINE SILICA CYCLING IN DRIVING THE EXCEPTIONAL FOSSILIZATION OF EARTH'S EARLIEST ANIMAL COMMUNITIES (*30-minute keynote*)
- 8:30** **KAUFMAN** THE NEOPROTEROZOIC EMERGENCE AND ENVIRONMENTAL CONSEQUENCES OF BIOMINERALIZED SPONGE GRADE ANIMALS
- 8:45** **SURPRENANT** A REVIEW OF THE GLOBAL RECORD OF THE EDIACARAN TUBULAR MORPHOTYPE
- 9:00** **LIU** ESTABLISHING THE ENVIRONMENTAL CONTEXT FOR EARTH'S FIRST 'MASS EXTINCTION'
- 9:15** **BOBROVSKY** HOW DID THE CREATURES OF THE EDIACARA BIOTA LOOK LIKE?
- 9:30** **BOAN** *DICKINSONIA* AND SPRIGGINAMORPH AT NILPENA EDIACARA NATIONAL PARK, SOUTH AUSTRALIA
- 10:15** **SELLY** TAXONOMIC REASSESSMENT OF *CLOUDINA?* FROM THE TAYLOR FORMATION, ANTARCTICA
- 10:30** **VIXSEBOXSE** AN EXOGENOUS ENZYMATIC CONTROL ON SOFT-TISSUE PRESERVATION IN THE EARLY ANIMAL FOSSIL RECORD
- 10:45** **MITCHELL** VARIATIONS IN DENSITY DEPENDENT PROCESSES IN EARLY EDIACARAN COMMUNITIES
- 11:00** **OSÉS** SKELETAL ORGANISATION, COMPOSITION AND CONTROLLED BIOMINERALIZATION OF EDIACARAN *CORUMBELLA WERNERI*
- 11:15** **MCCANDLESS** PUTTING ALGAE IN EDIACARAN ECOSYSTEMS
- 11:30** **PEREZ PINEDO** HYDRODYNAMIC INSIGHTS INTO THE PALAEOBIOLOGY OF THE EDIACARAN RANGEOMORPH *FRACTOFUSUS MISRAI*

TUESDAY MORNING, JUNE 18, 2024
UNION WOLVERINE
GENERAL SESSION: MESOZOIC REPTILES
MODERATORS: Peter Makovicky and Omar Rafael Regalado Fernández

- 8:30** **KLIGMAN** EXCEPTIONALLY DIVERSE LATE TRIASSIC LEPIDOSAUR ASSEMBLAGE ILLUMINATES SQUAMATE ORIGINS
- 8:45** **MELSTROM** DENTAL COMPLEXITY DISPARITY OF LATE TRIASSIC REPTILES APPROACHES THAT OF EXTANT LEPIDOSAURIA
- 9:00** **WILSON MANTILLA** A NEW KURMADEMYDINE TURTLE (PLEURODIRA: BOTHREMYDIDAE) FROM THE CRETACEOUS-PALEOGENE INTERTRAPPEANS OF UPPARHATTI (KARNATAKA STATE), INDIA
- 9:15** **REGALADO FERNÁNDEZ** FIELD TRIP IN THE MUSEUM: A NEW DINOSAUR BONEBED FROM NIOBRARA COUNTY, WYOMING
- 9:30** **RADERMACHER** QUANTIFYING WEAR IN ORNITHOPOD AND CERATOPSID DENTAL BATTERIES
- 10:15** **BOISVERT** ELEVEN SPECIMENS FROM TEN LOCALES IN EIGHT COLLECTIONS ACROSS THREE STATES, THE DIVERSITY OF KNOWN *HAPLOCANTHOSAURUS* SPECIMENS IN THE MORRISON FORMATION.
- 10:30** **BOISVERT** THE OSTEOLOGICAL NEUTRAL POSE OF THE NECK OF AN APATOSAURINE SAUROPOD FROM MILL CANYON (UPPER JURASSIC, MORRISON FORMATION) NEAR MOAB, UTAH.
- 10:45** **WILSON MANTILLA** AN EVOLUTIONARY DWARF TITANOSAUR (DINOSAURIA: SAUROPODA) FROM THE UPPER CRETACEOUS (MAASTRICHTIAN) OF AFRO-ARABIA
- 11:00** **MAKOVICKY** A NEW, NEARLY COMPLETE SPECIMEN OF *ALNASHETRI CERROPOLICIENSIS* SHEDS LIGHT ON THE COMPLEX EVOLUTIONARY HISTORY OF ALVAREZSAUROIDEA
- 11:15** **NORRIS** PROBLEMS AND SOLUTIONS FOR USING CALCIUM ISOTOPE RATIOS OF TEETH AS A PROXY FOR DINOSAUR PALEOECOLOGY
- 11:30** **DEAN** OCCUPANCY MODELLING REVEALS SAMPLING BIASES DRIVE THE OBSERVED END-CRETACEOUS DINOSAUR DECLINE
- 11:45** **HOLTZ** DINOSAURIAN VS. MAMMALIAN ONTOGENY AND ECOLOGY: THE EFFECT OF A MOTHER'S LOVE ON COMMUNITY STRUCTURE

TUESDAY MORNING, JUNE 18, 2024
UNION 2210
GENERAL SESSION: INTEGRATIVE PALEOBIOLOGY
MODERATORS: Norman MacLeod and Rowan Whittle

- 8:00** **MCMENAMIN** *PALEODICTYON*, MICROBURROWS, AND THE ORIGIN OF ANIMALS
- 8:15** **SUN** SPATIOTEMPORAL DISTRIBUTION AND MORPHOLOGICAL DIVERSITY OF CAMBRIAN ENIGMA *WIXAXIA*: NEW INSIGHTS FROM SOUTH CHINA
- 8:30** **BOYER** MORE THAN JUST STROMATOPOROID STORM DEPOSITS: INTERPRETING AN ECOLOGICAL SIGNAL OF *AMPHIPORA* FROM THE GREAT BASIN, U.S.A.
- 8:45** **FREEMAN PETERS** SEVEN HABITS OF HIGHLY EFFECTIVE WORMS: HOST TEXTURE PREFERENCE IN DEVONIAN MICROCONCHIDS
- 9:00** **MA** REVISITING ORDOVICIAN TEMPERATURE RECORDS
- 9:15** **NA** LATITUDINAL GRADIENT CONTROL ON EARLY PALEOZOIC BIODIVERSITY AND ECOSYSTEM FUNCTIONING
- 9:30** **XU** COUPLING AND DECOUPLING OF TAXONOMIC AND ECOLOGICAL DIVERSITIES DURING THE LATE PALEOZOIC
- 10:15** **WHITTLE** ANTARCTICA'S EARLIEST CENOZOIC GLACIAL COMMUNITIES
- 10:30** **BROCCHINI** WHAT WE TALK ABOUT WHEN WE TALK ABOUT COEVOLUTION: REEVALUATING A DOMINANT EXPLANATION FOR THE GEOGRAPHICALLY UNEVEN INTENSITY OF THE LATE QUATERNARY MEGAFUNAL EXTINCTIONS
- 10:45** **HOWARD** A SIMULATION FOR ESTIMATING EXPECTED DIVERSITY OF A CLADE
- 11:00** **MACLEOD** DOES DIMENSIONALITY-REDUCTION METHOD MATTER FOR MORPHOLOGICAL DISPARITY (AND OTHER) STUDIES?
- 11:15** **WOOLLEY** QUANTIFYING THE REPRESENTATION OF THE SKELETON IN THE FOSSIL RECORD OF BIRDS AND BEYOND: IMPLICATIONS FOR USING INCOMPLETE FOSSILS IN PHYLOGENETIC ANALYSES
- 11:30** **FELICE** THE INFLUENCE OF BODY SIZE AND BRAIN SIZE ON DIVERSIFICATION RATES IN BIRDS
- 11:45** **KNAPP** TRADE-OFFS AMONG CRANIAL SOFT TISSUES IN AVIAN CRANIAL EVOLUTION

TUESDAY MORNING, JUNE 18, 2024
UNION POND
SYSTEMATICS AND PHYLOGENY
MODERATORS: Tanya Berardini and Shreya Jariwala

- 8:00 LLOYD** IS “EQUAL WEIGHT” PARSIMONY A LIE? (AND WHAT HAPPENS IF WE ACTUALLY WEIGHT CHARACTERS EQUALLY IN MAXIMUM PARSIMONY PHYLOGENETIC INFERENCE?)
- 8:15 SHEFFIELD** EXPLORING RATES OF CHANGE AND MODES OF EVOLUTION IN BLASTOZOAN ECHINODERMS
- 8:30 PÉREZ-PERIS** THE ASAPHID TRILOBITE GENERA *TRIGONOCERCA* AND *TRIGONOCERCELLA* FROM THE EARLY ORDOVICIAN OF THE GREAT BASIN, WESTERN USA
- 8:45 MONGIARDINO KOCH** ITERATIVE ORIGINS OF EURYPTERID GIGANTISM WERE DECOUPLED FROM ECOLOGICAL AND ENVIRONMENTAL FACTORS
- 9:00 FAU** PHYLOGENETIC AND TAXONOMIC REVISION OF JURASSIC STARFISHES SUPPORTS A DELAYED ORIGIN OF THE ASTERIIDAE
- 9:15 YONG** NONMINERALIZED “TABULUS” OF THE BASAL CAMBRIAN MEDUSOZOANS *OLIVOOIDES*
- 9:30 VILELA-ANDRADE** POLYPHYLY AND EVOLUTION IN ANAZYGID BRACHIOPODS: A TALE OF MORPHOLOGICAL OVERLAP AND DISPERSAL EVENTS (ATRYPIDA: ANAZYGINAE AND CATAZYGINAE)
- 10:15 WANG** EXCEPTIONAL PRESERVATION OF REPRODUCTIVE ORGANS AND GIANT SPERM IN THE CRETACEOUS OSTRACODS
- 10:30 ZHANG** LATE ORDOVICIAN OSTRACODS OF VALCOUR ISLAND, NEW YORK STATE, U.S.A.
- 10:45 WALTY** DECIPHERING DESMOCERATOIDEA (AMMONOIDEA) TURNOVER RATES DURING CENOMANIAN-TURONIAN OCEAN ANOXIC EVENT 2 USING BAYESIAN AND PARSIMONY-BASED PHYLOGENETIC APPROACHES
- 11:00 DEHAAN** INTEGRATING MOLECULAR PHYLOGENIES AND FOSSILS WITHOUT A MORPHOLOGICAL MATRIX TO INVESTIGATE PATTERNS OF TRAIT EVOLUTION: A CASE STUDY USING CARANGARIA
- 11:15 WATT** EVOLUTIONARY PATTERNS IN THE COMPOSITION OF THE TETRAPOD LOWER JAW
- 11:30 SON** CRANIAL ONTOGENY IN THE EARLY CRETACEOUS CERATOPSIDIAN DINOSAUR *PSITTACOSAURUS LUJIATUNENSIS*: INTRASPECIFIC VARIATION BY AGE AND TAXONOMIC IMPLICATIONS
- 11:45 ABBOTT** A BOTTOM-UP REVISION OF *LYSTROSAURUS* (THERAPSIDA, DICYNODONTIA) SPECIES IN THE KAROO BASIN, SOUTH AFRICA

TUESDAY AFTERNOON, JUNE 18, 2024
UNION ROGEL
EVOLUTIONARY PALEOBIOLOGY IN THE 21ST CENTURY:
ADVANCING THE LEGACY OF JIM VALENTINE
MODERATORS: Sarah Losso and Carl Simpson

- 1:15 JABLONSKI** BIODIVERSITY HOTSPOTS AND LATITUDINAL GRADIENTS: DIFFERENT PATHS FOR LAND AND SEA?
- 1:30 EDIE** GLUTTONS OVER EPICURES? ANALYZING THE ECOLOGICAL STRUCTURE OF THE MARINE BIVALVE LATITUDINAL DIVERSITY GRADIENT
- 1:45 YASUHARA** ECOLOGICAL AND EVOLUTIONARY DEVELOPMENT OF CENOZOIC MARINE LATITUDINAL DIVERSITY GRADIENTS
- 2:00 HUANG** DOES RESOURCE STABILITY THROUGH SYMBIOSIS PROMOTE DIVERSITY?—A COMPARATIVE BIOGEOGRAPHIC PERSPECTIVE
- 2:15 SINGH** SEA SHELLS THROUGH TIME: ABUNDANCE AND DISTRIBUTION OF MARINE SKELETAL BIOMASS ACROSS THE PHANEROZOIC
- 2:30 DOYLE** DIFFERENTIAL EVOLUTIONARY TRENDS OF MARINE BIVALVE BODY SIZE BY HEMISPHERE AND BODY-SIZE CLASSES
- 2:45 CRESTOHL** QUANTIFYING THE IMPACTS OF PRESERVATION ON PALEOBIOLOGICAL PATTERNS: A LITERATURE-BASED SURVEY OF BODY SIZE IN CRETACEOUS AND PALEOGENE GASTROPODS
- 3:30 MARSHALL** FOLLOW THE ENERGY: VIEWING MACROEVOLUTIONARY CHANGE THROUGH THE LENS OF TROPHIC ENERGY FLUXES, THAT IS, THROUGH THE LENS TROPHIC POWER
- 3:45 SAULSBURY** BIOLOGICAL MEANING IN THE RISE AND FALL OF FOSSIL SPECIES
- 4:00 RICHARDSON** BENTHIC FORAMINIFERA CAN PROVIDE A SURROGATE FOR MARINE ECOSYSTEM BIOGEOGRAPHY
- 4:15 SONG** BIAS IN MORPHOLOGICAL DISPARITY STUDIES I: CHARACTERIZATION OF THE PHENOTYPE
- 4:30 PETERSEN** ISOTOPIC SIGNATURES OF PALEOPHYSIOLOGY – A TOOL FOR PALEONTOLOGISTS?
- 4:45 ANTELL** WAVELET ANALYSIS DETERMINES THE SYNCHRONICITY AND PERIODICITY OF ECOLOGICAL AND ENVIRONMENTAL CHANGE IN THE SANTA BARBARA BASIN, CALIFORNIA, THROUGHOUT THE COMMON ERA
- 5:00 FINNEGAN** APPLICATION OF CLUMPED ISOTOPE PALEOTHERMOMETRY TO LATE PLEISTOCENE MARINE TERRACE DEPOSITS SUPPORTS THERMAL NICHE CONSERVATISM IN NORTHEASTERN PACIFIC SHALLOW SUBTIDAL MOLLUSKS

TUESDAY AFTERNOON, JUNE 18, 2024
UNION ANDERSON
FIFTY YEARS IN THE HIMALAYAN FOOTHILLS: ECOSYSTEM
CHANGE IN THE NEOGENE SIWALIK RECORD OF PAKISTAN
MODERATORS: Catherine Badgley, Michele E. Morgan, and Kay Behrensmeyer

- 1:15 MORGAN** THE MIDDLE-LATE MIOCENE SIWALIK MAMMAL RECORD AND DYNAMIC PALEOCOMMUNITIES OF THE POTWAR PLATEAU, PAKISTAN
- 1:30 HEAD** REPTILES OF THE SIWALIK GROUP OF PAKISTAN: FAUNAL RESPONSES TO ENVIRONMENTAL CHANGE THROUGH DEEP TIME AND THE ORIGINS OF MODERN SOUTH ASIAN HERPETOFAUNAS
- 1:45 SANDERS** PROBOSCIDEANS OF THE SIWALIKS: A WORLD LIKE NO OTHER
- 2:00 COTE** CHALICOTHERES IN THE MIDDLE SIWALIKS AND BEYOND
- 2:15 KELLEY** PRIMATES IN THE MIOCENE SIWALIK RECORD OF PAKISTAN IN FAUNAL AND PALEOENVIRONMENTAL CONTEXT
- 2:30 GILBERT** NEW INSIGHTS INTO THE DIVERSITY OF THE PRIMATE FAUNA FROM CHINJI-AGED SIWALIK DEPOSITS AND THEIR IMPLICATIONS FOR PRIMATE EVOLUTIONARY HISTORY AND BIOGEOGRAPHY
- 2:45 PATNAIK** NICHE PARTITIONING AMONG MIDDLE MIOCENE SIWALIK PRIMATES FROM RAMNAGAR (J&K), INDIA
- 3:30 FLYNN** THE “SIWALIK” MICROFAUNA
- 3:45 KIMURA** FEEDING-CONTROLLED EXPERIMENTS IN MODERN RODENTS IMPROVE PALEOECOLOGICAL INTERPRETATIONS OF ISOTOPES FROM SIWALIK MOUSE TEETH
- 4:00 CASANOVAS-VILAR** THE EUROPEAN SIWALIKS: THE MIOCENE HIGH-RESOLUTION VERTEBRATE RECORD OF THE VALLÈS-PENEDÈS BASIN (CATALONIA, SPAIN)
- 4:15 UNO** THE SIGNIFICANCE OF THE SIWALIKS IN EVOLUTIONARY, ECOLOGICAL, AND EARTH HISTORY
- 4:30 JUKAR** FOSSILS ACROSS BORDERS IN TIME AND SPACE: THE IMPACT OF THE HARVARD-GSP PROJECT ON THE DEVELOPMENT OF EVOLUTIONARY PALEOECOLOGY IN THE INDIAN SUBCONTINENT
- 4:45 BADGLEY** THE SIWALIK RECORD OF NORTHERN PAKISTAN: HIGHLIGHTS AND SYNTHESIS

TUESDAY AFTERNOON, JUNE 18, 2024
UNION PENDLETON
A GULF OF KNOWLEDGE: INTERCONNECTING PALEOBIOLOGY
RESEARCH ACROSS THE CARIBBEAN
MODERATORS: Brooke Crowley and Lazaro W. Viñola Lopez

- 1:15** *introductory remarks*
- 1:30** **ITURRALDE-VINENT** NEW INSIGHTS INTO CARIBBEAN BIO- AND PALEOGEOGRAPHY DURING THE EOCENE-OLIGOCENE TRANSITION
- 1:45** **VÉLEZ-JUARBE** VERTEBRATE PALEONTOLOGY IN PUERTO RICO: PAST, PRESENT AND FUTURE DIRECTIONS
- 2:00** **ALMONTE** FOSSIL VERTEBRATES FROM THE LATE QUATERNARY OF HISPANIOLA, ONGOING RESEARCH AND FUTURE PERSPECTIVES
- 2:15** **VIÑOLA LOPEZ** A NEW GLIMPSE INTO THE ANCIENT DIVERSITY OF HISPANIOLA: FAUNAL CHANGE AND ASSEMBLY OF MODERN CARIBBEAN BIODIVERSITY
- 2:30** **PEROS** PALEOENVIRONMENTAL RECONSTRUCTION OF A SUBAQUATIC CAVE IN WESTERN CUBA CONTAINING EXTINCT SLOTH REMAINS
- 2:45** **KLUKKERT** HABITAT SUITABILITY MODEL SUGGESTS CLIMATIC CHANGE DID NOT DRIVE RECENT PRIMATE EXTINCTIONS IN THE CARIBBEAN
- 3:30** **HALENAR-PRICE** CRANIAL VARIATION AMONG CARIBBEAN PRIMATES
- 3:45** **JACISIN III** ANOLE NEW WORLD: HOW ANOLIS SKULL ELEMENTS HELP CHARACTERIZE THE TEMPO AND MODE OF AN ADAPTIVE RADIATION
- 4:00** **MCAFEE** NEW COLLECTIONS, INTRASPECIFIC VARIATION, AND PALEOGEOGRAPHY LEAD TO REVISED TAXONOMY AND SPECIATION OF LATE PLEISTOCENE GROUND SLOTHS (MAMMALIA: PILOSA) IN HISPANIOLA
- 4:15** **COOKE** EXPLORING LOCOMOTOR PATTERNS AMONG HISPANIOLA'S EXTINCT RODENTS
- 4:30** **HENSLEY** TIME ISN'T ALWAYS A FACTOR: ISOTOPIC EVALUATIONS OF RECENTLY EXTINCT AND THREATENED HISPANIOLAN RODENTS SUGGEST ECOLOGICAL NICHE PARTITIONING AND LITTLE TEMPORAL ISOTOPIC CHANGE PRIOR TO SPECIES LOSS
- 4:45** **LEFEBVRE** WE NEED EACH OTHER: BRIDGING PALEONTOLOGY AND ARCHAEOLOGY FOR THE FUTURE OF CARIBBEAN VERTEBRATE DIVERSITY
- 5:00** **MYCHAJLIW** CONSERVATION PALEOBIOLOGY IN THE CARIBBEAN: HOW FOSSILS CAN HELP US SAVE THE REGION'S LAST SURVIVING MAMMALS

TUESDAY AFTERNOON, JUNE 18, 2024
UNION KUENZEL
DAWN OF ANIMAL LIFE: EXPLORING NEW ADVANCES
IN EDIACARAN PALEOBIOLOGY
MODERATORS: Philip C. Boan, Prescott Vayda, and Princess Aira Buma-at

- 1:15** **EVANS** A LOCAL PERSPECTIVE ON GLOBAL TRENDS: EVALUATING RECORDS AT DISTINCT EDIACARAN FOSSIL SITES TO CONSTRAIN EVOLUTIONARY DYNAMICS DURING THE DAWN OF ANIMAL LIFE (*30-minute keynote*)
- 1:45** **XIAO** ON THE LATE EDIACARAN “KOTLINIAN CRISIS”
- 2:00** **SEGESSENMAN** THE TIDES THAT BIND: CORRELATIONS BETWEEN ROCKS, FOSSILS, AND TRANSGRESSION-REGRESSION CYCLES AT THE DAWN OF ANIMAL LIFE
- 2:15** **BYKOVA** SPECIES DIVERSITY OF *DICKINSONIA*

TUESDAY AFTERNOON, JUNE 18, 2024
UNION KUENZEL
MICROBIAL BIOSIGNATURES: FROM PALEOMICROBIOLOGY
TO ASTROBIOLOGY
MODERATORS: Sarah González Henao and Jena Johnson

- 3:30** **HAMILTON** PHOTOSYNTHESIS IN A PROTEROZOIC OCEAN ANALOG
- 3:45** **SLATER** GEOCHEMICAL BIOSIGNATURES OF MICROBIALITES: ANALOGOUS FOR EARLY EARTH AND ASTROBIOLOGY
- 4:00** **DROSER** WHEN MATS MATTERED MOST (FOR US!): THE SIGNIFICANCE OF ORGANIC MATS ON THE DISTRIBUTION AND PRESERVATION OF THE EDIACARA BIOTA
- 4:15** **HOWARD** REFRAMING THE SEARCH FOR ARCHEAN LIFE
- 4:30** **JORN** CAN CRYSTAL ORIENTATION BE USED TO RECOGNIZE MICROBIAL INFLUENCE IN MINERALIZATION? ANALYZING CRETACEOUS CALCAREOUS COPROLITES USING ELECTRON BACKSCATTER DIFFRACTION (EBSD)
- 4:45** **ALIAN** MEMORIES IN THE MINERALS: DECIPHERING MICROBIAL BIOSIGNATURES THROUGH MICROSCOPIC CHEMICAL MAPPING

TUESDAY AFTERNOON, JUNE 18, 2024
UNION WOLVERINE
RECENT ADVANCES IN VIRTUAL PALEOBIOLOGY
MODERATORS: Russell Bicknell and Joseph Bevitt

- 1:15 RAHMAN** THE PAST, PRESENT AND FUTURE OF VIRTUAL PALAEONTOLOGY (30-minute keynote)
- 1:45 BEVITT** NEUTRON TOMOGRAPHY – SUBATOMIC PARTICLES MEET FOSSILS WITH GREAT OUTCOMES
- 2:00 HEBDON** USING THEORETICAL MORPHOLOGIES AS A FOUNDATION TO GETTING NOT SO THEORETICAL RESULTS IN FUNCTIONAL PERFORMANCE STUDIES.
- 2:15 BICKNELL** PUSHING THE LIMITS OF ARTHROPOD 3D BIOMECHANICS
- 2:30 PATES** DETERMINING THE LIFE AND FEEDING MODES OF EARLY ARTHROPODS USING COMPUTATIONAL FLUID DYNAMICS
- 2:45 NOLAN** VIRTUAL PALEOBIOLOGY: WALCOTT'S *BROOKSELLA ALTERNATA* AFFINITY RESOLVED THROUGH A COMBINATION OF CLASSIC AND MICRO-CT IMAGING TECHNIQUES
- 3:30 HEGNA** HOW TO EAT WITH A FORK: UNPRECEDENTED POST-ANTENNAL APPENDAGE DIFFERENTIATION IN THE TRILOBITE *ISOTELUS* (ASAPHIDA; ORDOVICIAN)
- 3:45 ZIETLOW** MODERN OSTEOLOGIES REQUIRE MODERN TECHNOLOGIES: MOSASAURS AS MODELS FOR THE CRITICAL IMPORTANCE OF SCAN DATA IN ANATOMICAL DESCRIPTIONS
- 4:00 REYES** AN AGGREGATE OF YOUNG, SKELETALLY IMMATURE AETOSAURS (ARCHOSAURIA: PSEUDOSUCHIA) FROM THE LATE TRIASSIC DOCKUM GROUP (OTISCHALKIAN) OF TEXAS
- 4:15 HUNT** USING DIGITAL FOSSIL RESTORATION AND HIGH-DENSITY 3D GEOMETRIC MORPHOMETRICS TO ELUCIDATE THE DRIVERS OF GALLOANSERAE EVOLUTION
- 4:30 MAYLE** THE EYES HAVE IT: OCULAR THERMOREGULATION IN BIRDS AND ITS INVERSE CORRELATION WITH OSTEOARTHRITIS
- 4:45 LYNCH** ENDOCAST MORPHOLOGY DIFFERS SIGNIFICANTLY WITHIN NORTH AMERICAN RIVER OTTERS
- 5:00 JACQUET** TENACIOUS TURDS FROM THE UPPER CRETACEOUS SMOKY HILL MEMBER, NIOBRARA CHALK, KANSAS
- 5:15 PETERMAN** EXPLORING THE STABILIZING POTENTIAL OF AMMONOID CONCH ORNAMENTATION WITH 3D PRINTING, 3D MOTION TRACKING, AND PARTICLE IMAGE VELOCIMETRY

TUESDAY AFTERNOON, JUNE 18, 2024
UNION 2210
GENERAL SESSION: FISHES AND PALEOZOIC TETRAPODS
MODERATORS: Allison Bronson and Yara Haridy

- 1:15 SCHNETZ** DIVERSITY OF FEEDING STRUCTURES IN HETEROSTRACAN FISH
- 1:30 HARIDY** VERTEBRATE TEETH AROSE AS SENSORY ORGANS
- 1:45 BRONSON** NO BONES ABOUT IT: THE DEPOSITIONAL ENVIRONMENT OF THE FAYETTEVILLE SHALE CREATES A TREASURE TROVE OF FOSSIL CARTILAGE
- 2:00 FLANNERY SUTHERLAND** BAYESIAN DIVERSIFICATION RATE ANALYSES IN A SPATIALLY CONTROLLED FRAMEWORK ILLUMINATE THE TIMING OF THE FIRST RADIATION OF RAY-FINNED FISH
- 2:15 STACK** A NEW SPECIES OF *SAURICHTHYS* (ACTINOPTERYGII) FROM THE DOCKUM GROUP OF TEXAS (LATE TRIASSIC, ?EARLY NORIAN) HIGHLIGHTS THE UNEVEN TEMPO OF THE EVOLUTION OF SPECIALIZED JAW MORPHOLOGIES
- 2:30 WHITNEY** THE PALEOHISTOLOGY OF VERTEBRATE WATER-TO-LAND TRANSITIONS: INSIGHTS FROM COMPARATIVE SALAMANDER BONE HISTOLOGY
- 2:45 ANGIELCZYK** NON-MAMMALIAN SYNAPSIDS FROM THE EARLY PERMIAN PEDRA DE FOGO FORMATION (PARNAÍBA BASIN, NORTHEAST BRAZIL) EXPAND OUR KNOWLEDGE OF THE GONDWANAN TROPICAL BIOME
- 3:30 MARTINEZ** QUANTITATIVE ANALYSIS OF IGUANID PALATAL TEETH WITH IMPLICATIONS FOR INFERRING DIETS OF EARLY AMNIOTES
- 3:45 PARDO** VOMERONASAL ADAPTATIONS RESPONSIBLE FOR UNIQUE PALATAL MORPHOLOGY IN ENDOTHIODONT DICYNODONTS (THERAPSIDA, ANOMODONTIA)

TUESDAY AFTERNOON, JUNE 18, 2024
UNION POND
SYSTEMATICS AND PHYLOGENY
MODERATORS: Caroline Abbott and Nicolás Mongiardino Koch

- 1:15 PATELLOS** THE POTENTIAL OF UNASSUMING FOSSILS: ASSESSING THE TAXONOMIC UTILITY OF OSTEODERM MORPHOLOGY IN ARCHOSAURIA
- 1:30 SALEM** A PEIROSAURID CROCODYLIFORM FROM THE UPPER CRETACEOUS (CENOMANIAN) BAHARIYA FORMATION OF THE BAHARIYA OASIS, WESTERN DESERT, EGYPT
- 1:45 TORRES** NEW INSIGHTS INTO THE ORIGIN OF THE GALAPAGOS TORTOISES WITH A TIP-DATED ANALYSIS OF TESTUDINIDAE
- 2:00 GOHAR** A NEW EOCENE PROTOCETID WHALE MATERIAL FROM EGYPT SHEDS NEW LIGHT ON THE EARLY DISPERSAL OF CETACEANS
- 11:00 DAVIES** PUTTING THEORY INTO PRACTICE; EXERCISES AND EXPERIENCES GAINED WHILE USING MODEL-BASED INQUIRY (MBI) AND AMBITIOUS SCIENCE TEACHING (AST) METHODS IN EARTH SCIENCE CLASSES AT A COMMUNITY COLLEGE.

TUESDAY AFTERNOON, JUNE 18, 2024
UNION POND
GENERAL SESSION: ECHINODERMS
MODERATORS: William Ausich and Bradley Deline

- 3:30 WATTS** “PSYCHO” ECHINOID SPINES – EVOLUTION THROUGH SPINE MORPHOSPACE IN CROWN GROUP CIDAROID ECHINOIDS
- 3:45 SUMRALL** A LATE MISSISSIPPIAN TURNOVER IN NORTH AMERICAN OPHIUROID FAUNAS
- 4:00 KEYES** THE PARAGARICOCRINIDAE (CRINOIDEA) – A LATE PALEOZOIC DEAD CLADE WALKING
- 4:15 DELINE** ECOLOGICAL STABILITY DURING DEVELOPMENTAL SHIFTS; A CASE STUDY OF PARACRINOIDEA
- 4:30 GAHN** SHIFTING RADIALS AND AN AZIMUTHAL DESCRIPTIVE SYSTEM PROVIDE NEW INSIGHTS INTO PATTERNS OF CRINOID CALYX SYMMETRY AND QUESTIONS OF PLATE HOMOLOGY

**TUESDAY POSTERS, JUNE 18, 2024
UNION IDEA HUB
PRESENTERS SHOULD ATTEND POSTERS FROM 5:30-6:15**

**EVOLUTIONARY PALEOBIOLOGY IN THE 21ST CENTURY:
ADVANCING THE LEGACY OF JIM VALENTINE**

no posters for this session

GENERALSESSION: CENOZOIC TETRAPODS

- 1 **BECKER** POST-CRANIAL REMAINS FROM A *SUBHYRACODON* BONEBED FROM THE BRULE FORMATION OF NIOBRARA COUNTY, WYOMING, U.S.A
- 2 **BUTRÓN-XANCOPINCA** TAPHONOMY OF THE POSTCRANIAL SKELETON OF *NANOTRAGULUS* (ARTIODACTYLA: HYPERTRAGULIDAE) FROM AN EARLY OLIGOCENE FAUNA IN SOUTHERN MEXICO
- 3 **COHEN** THE PETROSAL MORPHOLOGY OF PALEOGENE TYPOTHERIANS AND COMMENTS ON THE DISTRIBUTION OF PETROSAL CHARACTERS AMONG NOTOUNGULATES (MAMMALIA, PAN-PERISSODACTYLA)
- 4 **DEN OUDEN** THE UTILITY OF LINEAR MORPHOMETRICS AS A TOOL FOR DIETARY INFERENCE IN FOSSIL SHREWS
- 5 **EHLER** THE LIFE HISTORY OF THE EARLY CAMEL *POEBROTHERIUM* AS INFERRED FROM OSTEOHISTOLOGY
- 6 **FULGHUM** ASSOCIATED DENTITION AND PETROSAL OF A DRYOLESTOID MAMMAL FROM THE UPPER JURASSIC MORRISON FORMATION, UTAH, U.S.A.
- 7 **JORDAN** PLEISTOCENE MAMMALS FROM A KARSTIC FISSURE FILL IN PENDER COUNTY, NORTH CAROLINA
- 8 **MENÉNDEZ** INTEGRATING DATA FROM EXTANT AND EXTINCT SPECIES FOR THE UNDERSTANDING THE EVOLUTIONARY DYNAMICS OF SQUIRREL TOOTH MORPHOLOGY IN RELATION TO DIET
- 9 **OSWALD** POSSIBLE ADAPTIVE CHELONIVORY IN UINTAN CROCODYLOIDS FROM WESTERN NORTH AMERICA
- 10 **RUITER** SCREENWASHING FOR VERTEBRATE MICROFOSSILS IN LATE MIDDLE EOCENE STRATA OF THE DUCHESNE RIVER FORMATION, UINTA BASIN, UTAH
- 11 **STEWART** PALEOECOLOGY AND PALEOENVIRONMENTS OF OLIGO-MIOCENE DESMOSTYLIANS FROM THE STRAIT OF JUAN DE FUCA
- 12 **STRAUCH** TO FUSE OR NOT TO FUSE: DRIVERS OF SYMPHYSEAL FUSION IN WHALES
- 13 **WEBER** XENARTHRO MORPHOLOGICAL DISPARITY AND IMPLICATIONS FOR CINGULATE TAXONOMY

**FIFTY YEARS IN THE HIMALAYAN FOOTHILLS: ECOSYSTEM CHANGE IN THE
NEOGENE SIWALIK RECORD OF PAKISTAN**

no posters for this session

**FROM CAVES TO CENOTES: PLEISTOCENE VERTEBRATE PALEONTOLOGY
OF THE YUCATAN, MEXICO AND BELIZE**

no posters for this session

**A GULF OF KNOWLEDGE: INTERCONNECTING PALEOBIOLOGY
RESEARCH ACROSS THE CARIBBEAN**

- 14 **BOVILLE** THE STATE OF QUATERNARY VERTEBRATE PALEONTOLOGY RESEARCH IN THE CARIBBEAN: AREAS OF RIGOR AND OPPORTUNITIES FOR GROWTH
- 15 **ITURRALDE-VINENT** A NEW TITHONIAN ICHTHYOSAURIAN SKELETON FROM VIÑALES, WESTERN CUBA
- 16 **ORIHUELA** PLIOCENE-PLEISTOCENE CAPROMYINE RODENTS FROM CUBA: BRIDGING A GAP IN THE CARIBBEAN'S LAND VERTEBRATE PALEONTOLOGICAL RECORD
- 17 **RIEGLER** FOSSIL SQUAMATES OF PEDERNALES PROVINCE, DOMINICAN REPUBLIC: NOVEL RECORD OF HUMAN-INDUCED EXTINCTION AND EXTIRPATION

DAWN OF ANIMAL LIFE: EXPLORING NEW ADVANCES IN EDIACARAN PALEOBIOLOGY

- 18 **BUMA-AT** MORPHOMETRIC AND SPATIAL ANALYSES OF *CHARNIODISCUS* FROM THE EDIACARAN OF NEWFOUNDLAND, CANADA
- 19 **LIU** CROWN GROUP SPONGES FROM THE NAMA GROUP OF NAMIBIA, AND THE EVOLUTION OF SPICULOGENESIS ACROSS THE EDIACARAN-CAMBRIAN TRANSITION
- 20 **VIXSEBOXSE** SEAWATER SULFATE AND SEDIMENTARY IRON (OXYHYDR)OXIDE CONCENTRATIONS AS TAPHONOMIC CONSTRAINTS ON SOFT TISSUE PRESERVATION BY PYRITE

MICROBIAL BIOSIGNATURES: FROM PALEOMICROBIOLOGY TO ASTROBIOLOGY

no posters for this session

GENERAL SESSION: MESOZOIC REPTILES

- 21 **ABDUL KAREEM** SAUROPOD TAIL CLUBS FROM THE KOTA FORMATION (EARLY TO MIDDLE JURASSIC) OF INDIA AND THEIR IMPLICATIONS FOR EARLY SAUROPOD EVOLUTION
- 22 **CARTER** PRELIMINARY STATISTICAL STUDY OF LATE TRIASSIC ARCHOSAURIFORM TEETH FROM THE HOMESTEAD SITE, A MICROVERTEBRATE ASSEMBLAGE IN EAST-CENTRAL NEW MEXICO
- 23 **JACKSON** A NEW BASAL SAUROPODIFORM FROM THE EARLY JURASSIC OF ANTARCTICA
- 24 **SCOTT** RELATIVELY SIMPLE DENTAL COMPLEXITY SUGGESTS A GENERALIST DIET FOR THE LATE JURASSIC RHYNCHOCEPHALIAN *OPISTHIAS*

RECENT ADVANCES IN VIRTUAL PALEOBIOLOGY

no posters for this session

GENERAL SESSION: INTEGRATIVE PALEOBIOLOGY

- 25 **PARSONS** TESTING CHEMICAL-AIDED DISAGGREGATION OF THE SILICA FORMATION'S (MIDDLE DEVONIAN) FOSSILIFEROUS SHALE
- 26 **SAMUELS-FAIR** SPATIAL DIVISION OF REPRODUCTIVE LABOR IN THE BRYOZOAN *PARASMITTINA AREOLATA* AND IMPLICATIONS FOR INTERPRETING THE CHEILOSTOME FOSSIL RECORD

GENERAL SESSION: FISHES AND PALEOZOIC TETRAPODS

- 27 **GARDNER** PALEONTOLOGICAL DISCOVERY IN THE EMSIAN-EIFELIAN (DEVONIAN) NEEDMORE FORMATION IN WEST VIRGINIA: 150 YEARS OF EXPLORATION AND BEYOND

- 28 **HOSFIELD** NOVEL INSIGHTS INTO THE EVOLUTION OF ONTOGENY IN LYSTROSAURIDAE (THERAPSIDA, ANOMODONTIA)
- 29 **LYONS-WEILER** NEW RECORDS OF THE ACTINOPTERYGIAN *PROGYROLEPIS* FROM THE CARBONIFEROUS-PERMIAN LOWER CUTLER BEDS IN THE BEARS EARS NATIONAL MONUMENT, UTAH
- 30 **MERCADO** A FRESH LOOK AT A VERY OLD SPECIMEN: VISUALIZING THE ANATOMY OF *TETRACERATOPS INSIGNIS* (SYNAPSIDA, EUPELYCOSAURIA) WITH μ CT
- 31 **RAVELOSON** NEW INFORMATION ON THE XENACANTHIFORM SHARK IN THE MALERI FORMATION, UPPER TRIASSIC OF INDIA: PALEOHISTOLOGICAL APPROACH AND FAUNAL ASSOCIATION INDICATE SOME PALEOBIOLOGICAL AND PALEOECOLOGICAL INSIGHTS.
- 32 **ROSE** REASSESSMENT OF THE TAXONOMIC RECORD OF LUNGFISH (SARCOPTERYGII:DIPNOI) IN THE LATE TRIASSIC OF THE UNITED STATES
- 33 **SAAD** DESCRIPTION OF A SPADEFISH (ACANTHOMORPHA: EPHIPPIDAE) FROM PAKISTAN AND ITS IMPLICATIONS FOR MARINE FISH BIOGEOGRAPHY IN THE PALEOGENE
- 34 **THOMAS** THE IDENTITY OF A HISTORIC MOUNTED DICYNODONT SKELETON AT THE FIELD MUSEUM

SYSTEMATICS AND PHYLOGENY

- 35 **BLEY** ENCRINURID TRILOBITES FROM THE UPPER ORDOVICIAN (KATIAN) OF NORTHEASTERN IOWA
- 36 **EK** NOTES ON RARE TRILOBITE TAXA FROM THE SILURIAN ROCKS OF NORTHEASTERN ILLINOIS
- 37 **GOODSTADT** ECHO OF THE ANCIENTS: EVOLUTION OF SONG IN THE AVIAN FAMILY CETTIIDAE
- 38 **GUENSBURG** REMARKABLE NEW TAXON EXEMPLIFIES EARLY ARM MORPHOLOGY AND PROVIDES ADDITIONAL INSIGHT INTO THE ORIGIN OF CRINOIDS
- 39 **KOLATA** CYCLOCYSTOIDS (ECHINODERMATA) FROM THE UPPER ORDOVICIAN (EARLY KATIAN) BRECHIN LAGERSTÄTTE OF ONTARIO, CANADA: IMPLICATIONS FOR CYCLOCYSTOID SYSTEMATICS, ANATOMY, FUNCTIONAL MORPHOLOGY, AND LIFE MODE.
- 40 **KRISHER** THE CORALS OF THE DEVONIAN OF NEW YORK: FACILITATING THEIR IDENTIFICATION AND STUDY
- 41 **SHANKS** REEVALUATION OF AGNOSTOID ARTHROPOD MORPHOLOGY AND REASSESSMENT OF TRILOBITE AFFINITY USING SILICIFIED SPECIMENS FROM THE GREAT BASIN
- 42 **SOCKI** MORPHOLOGICAL, PHYLOGENETIC AND ECOLOGICAL ASSESSMENT OF A NEW SPECIES OF GEOMORPHA FROM THE PAWNEE CREEK FORMATION, CO.
- 43 **TYDINGS** A NEW HIGHLY DIVERSE ASSEMBLAGE OF ORGANICALLY PRESERVED VASE-SHAPED MICROFOSSILS
- 44 **VELEZ-ROSADO** A LATE CRETACEOUS CROCODYLIAN (*DOLICHOCHAMPSA MINIMA*) PROVIDES INSIGHTS INTO THE EARLY EVOLUTIONARY AND PALEOBIOGEOGRAPHIC HISTORY OF GAVIALINAE

GENERALSESSION: ECHINODERMS

- 45 FERRONE** ARCHAEOCIDARID ECHINOID (ECHINODERMATA) MATERIAL FROM THE UPPER PENNSYLVANIAN BARNSDALL FORMATION OF NORTHEASTERN OKLAHOMA: MICROSTRATIGRAPHIC DISTRIBUTION, ENCRUSTATION PATTERNS, AND GRAIN-SIZE EFFECTS
- 46 HAMIDA** THE FOSSILIZED ECHINODERMS IN NORTHERN ALGERIA
- 47 NEWMAN** GLASS HOUSES: POTENTIAL COMMENSALISM BETWEEN A CRINOID AND HEXACTINELLID SPONGE FROM THE UPPER DEVONIAN OF PENNSYLVANIA
- 48 REGISTER** EXPLORING THE MORPHOMETRIC IMPLICATIONS OF THE LOSS OF RESPIRATORY STRUCTURES IN PLEUROCYSTITID ECHINODERMS
- 49 ROBERTS** NEW INFORMATION ON THE UPPER ORDOVICIAN (KATIAN) CRINOID FAUNA FROM SAR-DINIA, ITALY

THURSDAY MORNING, JUNE 20, 2024
UNION ROGEL
GENERAL SESSION: MOLLUSKS
MODERATORS: Matthew Clapham

- 8:45** **CHATTOPADHYAY** PARASITIC INTERACTIONS AND THEIR RELATIONSHIP TO ENVIRONMENTAL CHANGE: INSIGHTS FROM THE OLIGO-MIOCENE MARINE MOLLUSCAN ASSEMBLAGES OF WESTERN INDIA
- 9:00** **WEINSTEIN** PALEOTEMPERATURE RECONSTRUCTION USING ISOTOPIC ANALYSIS ON LIVE, DEAD, AND FOSSIL GASTROPODS FROM THE WAKULLA RIVER IN FLORIDA
- 9:15** **CLAPHAM** ONTOGENY AND CONSTRAINTS IN THE EVOLUTION OF AMMONOID SHELL COILING
- 9:30** **WILSON** JAMES PARKINSON: NEGLECTED PALEONTOLOGY PIONEER

THURSDAY MORNING, JUNE 20, 2024
UNION ROGEL
LESSONS LEARNED AND FUTURE VISIONS FOR CONSERVATION PALEOBIOLOGY
MODERATORS: Jonathan Cybulski and Erin Dillon

- 10:15** **DAVIS** DATA HOMECOMING: THREE ELEMENTS FOR BUILDING TRANSPARENT, REALISTIC, AND MUTUALLY BENEFICIAL INTERDISCIPLINARY COMMUNITIES AND COLLABORATIONS IN CONSERVATION (*30-minute keynote*)
- 10:45** **CRAMER** FINDING PATHWAYS FOR INTEGRATING PALEO, ARCHEOLOGICAL, TRADITIONAL ECOLOGICAL KNOWLEDGE, AND HISTORICAL DATA INTO CARIBBEAN CORAL REEF MANAGEMENT
- 11:00** **BARCLAY** INDIGENOUS ARCHAEOLOGICAL SITES REVEAL INCREASE IN CLAM SIZES AND CONNECT GEOHISTORICAL DATA TO MARINE CONSERVATION ISSUES IN WESTERN CANADA
- 11:15** **PHAM** INCORPORATING LOCAL COMMUNITY PRIORITIES INTO CONSERVATION PALEOBIOLOGY RESEARCH: A CASE STUDY IN VELONDRIAKE, SOUTHWEST MADAGASCAR
- 11:30** **PIER** STORYTELLING WITH THE PAST AS A PERSUASIVE TOOL FOR CONSERVATION
- 11:45** **SHIRLEY** INVESTIGATING THE IMPACT OF PALEOBIOLOGY OUTREACH ON ATTITUDES ABOUT FOSSILS AND LIVING APE CONSERVATION IN UGANDA

THURSDAY MORNING, JUNE 20, 2024
UNION ANDERSON
RECENT ADVANCES IN COMPUTATIONAL PALEOBIOLOGY
MODERATORS: William Gearty, Bethany J. Allen, and Lewis A. Jones

- 8:00** **COLE** MACROEVOLUTIONARY CONSEQUENCES OF THE LATE ORDOVICIAN MASS EXTINCTION: A CROSS-CLADE INVESTIGATION OF THE LILLIPUT EFFECT (*30-minute keynote*)
- 8:30** **VARGAS-PARRA** PHYLOGENY AND EVOLUTIONARY MODULARITY OF A TRILOBITE FAMILY OVER THE ORDOVICIAN RADIATION
- 8:45** **HOPKINS** PERFORMANCE OF MODEL-BASED PREDICTIONS OF BODY SIZE AND BODY PROPORTIONS OF TRILOBITES AT A KEY TRANSITION POINT IN DEVELOPMENT
- 9:00** **NIKOLIC** WHAT'S IN THE TRUNK: BIASED TRUNK SHAPE EVOLUTION IN TRILOBITES
- 9:15** **WRIGHT** CHARACTER EVOLUTION MODELS MATTER IN PHYLOGENETIC PALEOBIOLOGY: IMPACTS ON TREE TOPOLOGIES, DIVERGENCE TIMES, AND MACROEVOLUTIONARY DYNAMICS
- 9:30** **RHODA** MULTIVARIATE FUNCTIONAL ADAPTIVE LANDSCAPES AND HOW WE MAKE THEM
- 10:15** **HOWARD** PALEOPHYLOGEOGRAPHIC MODELS: AN R PACKAGE FOR INTEGRATING PALEONTOLOGICAL, NEONTOLOGICAL, AND SPATIAL DATA IN A PHYLOGENETIC COMPARATIVE FRAMEWORK (*30-minute keynote*)
- 10:45** **DUNNE** ENVIRONMENTAL CONTROLS ON DINOSAUR DIVERSITY, BIOGEOGRAPHY, AND DIET
- 11:00** **JONES** TESTING THE EFFECTS OF COVERAGE-BASED SAMPLING STANDARDIZATION ON FOSSIL TIME SERIES OF MORPHOLOGICAL DISPARITY
- 11:15** **WEN** PALEOZOIC EVOLUTION OF THE MARINE LATITUDINAL DIVERSITY GRADIENT REGULATED BY PLATE TECTONICS, CLIMATE CHANGE AND GENUS-SPECIFIC TRAITS
- 11:30** **FLANNERY-SUTHERLAND** INTEGRATING BAYESIAN PHYLOGEOGRAPHY WITH LANDSCAPE CONNECTIVITY ANALYSIS REVEALS THE ECOGRAPHY OF THE EARLY ARCHOSAUFOMORPH RADIATION
- 11:45** **YOHLER** DEVELOPMENT OF AN INVERSE MODELING FRAMEWORK FOR DETERMINING THE DRIVERS OF MASS EXTINCTION EVENTS AND APPLICATION TO THE LATE ORDOVICIAN RECORD OF GRAPTOLITES

THURSDAY MORNING, JUNE 20, 2024
UNION PENDLETON
TRAITS, FUNCTIONS, AND SYSTEMS: QUANTIFYING
PALEOCOMMUNITY VARIATION, PERSISTENCE, AND RESILIENCE
MODERATORS: Peter Roopnarine and Sara Sjosten

- 8:00 GILL** ARE NOVEL COMMUNITIES ALSO NOVEL ECOSYSTEMS? POLLEN-DERIVED PLANT FUNCTIONAL TRAITS LINK PALEOECOLOGICAL PATTERNS WITH ECOSYSTEM PROCESSES
- 8:15 FRANK** AN ENERGY FLOW MODEL OF EARLY TERRESTRIAL TROPHIC DYNAMICS: EXPLORING THE ROLES OF AQUATIC SUBSIDIES AND DELAYED HERBIVORY EMERGENCE
- 8:30 CULLEN** FUNCTIONAL DIVERSITY AND STRUCTURE OF CRETACEOUS COASTAL PLAIN ECOSYSTEMS
- 8:45 ROOPNARINE** MODELING ECOLOGICAL DYNAMICS ON GEOLOGICAL TIMESCALES: CHANGING COMPOSITION, STRUCTURE AND COMPLEXITY OF LATE CRETACEOUS HELL CREEK COMMUNITIES
- 9:00 MCGUIRE** PLEISTOCENE DISRUPTION OF TRAIT-ENVIRONMENT RELATIONSHIPS INFORMS THE FUTURE CONSERVATION OF AFRICAN MEGAFUNA
- 9:15 SLENKER** THE EVAPORATION SENSITIVITY OF LARGE-BODIED NORTH AMERICAN MAMMALIAN HERBIVORES
- 9:30 KEMP** DEFAUNATION AND COLONIZATION SHIFT THE FUNCTIONAL DIVERSITY OF CARIBBEAN VERTEBRATE COMMUNITIES: IMPLICATIONS FOR ECOSYSTEM SERVICES AND CONSERVATION IN THE ANTHROPOCENE
- 10:15 SCHAP** USING THE FUNCTIONAL TRAITS OF SMALL MAMMALS TO ESTIMATE PAST ENVIRONMENTS AT NATURAL TRAP CAVE, WYOMING
- 10:30 TERRY** TRACKING TAXONOMIC AND FUNCTIONAL DIVERSITY OF SMALL MAMMALS ACROSS 17,000 YEARS OF CULTURAL AND ENVIRONMENTAL CHANGE AT THE PAISLEY CAVES, OREGON
- 10:45 BROMBACHER** TOWARDS A MULTIVARIATE FRAMEWORK FOR EXTINCTION RISK IN PLANKTONIC FORAMINIFERA
- 11:00 SJOSTEN** MODELLING THE LIFE-ENVIRONMENT INTERFACE IN ANCIENT SHELF SEAS
- 11:15 ESS** CHANGES IN ECOSPACE UTILIZATION ACROSS THE RICHMONDIAN INVASION IN THE CINCINNATIAN ARCH (LATE ORDOVICIAN)
- 11:30 TYLER** CHANGES IN MARINE FOOD WEB STRUCTURE AND THE CONSEQUENCES OF INVASIVE SPECIES DURING THE LATE ORDOVICIAN
- 11:45 BROPHY** PALEOECOLOGICAL DYNAMICS DURING OCEANIC ANOXIC EVENT 2 IN THE CRETACEOUS WESTERN INTERIOR SEAWAY: COMPARISONS BETWEEN HYDROCARBON COLD SEEP AND NON-SEEP COMMUNITIES

THURSDAY MORNING, JUNE 20, 2024
UNION KUENZEL
HOMINOID EVOLUTION, ENVIRONMENTS AND COMMUNITIES IN EASTERN AFRICA
MODERATORS: Susanne Cote and Laura MacLatchy

- 8:00 ROSSIE** MIOCENE APES FROM THE LOTHIDOK FORMATION, KENYA
- 8:15 JANSMA** THE PHYLOGENETIC AFFINITIES OF THE EARLY AND MIDDLE MIOCENE SMALL-BODIED CATARRHINES FROM EASTERN AFRICA
- 8:30 SHERWOOD** NEW POSTCRANIAL FOSSILS OF A *PROCONSUL MAJOR* RADIOHUMERAL JOINT FROM THE EARLY MIOCENE SITE COMPLEX NAPAK, UGANDA
- 8:45 COSMAN** POST-CRANIAL TRABECULAR MORPHOLOGY OF THE EARLY MIOCENE HOMINOID *PROCONSUL MAJOR*
- 9:00 MACLATCHY** FROM FOSSILS TO THE FOREST: FRUIT, LEAVES AND HOMINOID LOCOMOTOR EVOLUTION
- 9:15 ORLIKOFF** TERRESTRIAL POSITIONAL BEHAVIOR OF WILD *PONGO PYGMAEUS*: IMPLICATIONS FOR THE ORIGINS OF BIPEDALISM
- 9:30 MICHEL** EVERYTHING OLD IS NEW AGAIN: STRATIGRAPHIC REVISIONS AND SURVEY OF NEARLY 100 YEARS OF WORK ON THE EARLY MIOCENE RUSINGA AND MFANGANO ISLANDS, LAKE VICTORIA, KENYA
- 10:15 BAUMGARTNER** NOT JUST THE GREEN BACKGROUND: THE PAST, PRESENT, AND FUTURE OF PALEOBOTANY OF EAST AFRICAN FOSSIL SITES
- 10:30 HALL** REVISED BIOSTRATIGRAPHIC CONSIDERATIONS OF THE EARLY MIOCENE LOCALITY MFANGANO ISLAND, KENYA: IMPLICATIONS FOR MIOCENE CATARRHINE EVOLUTION AND FAUNAL TURNOVER
- 10:45 MUNYAKA** RECONSTRUCTING THE CLIMATE AND ECOLOGY OF AN EARLY MIOCENE TROPICAL FOREST ON THE FLANKS OF THE TINDERET VOLCANO, NYANZA PROVINCE, WESTERN KENYA
- 11:00 COTE** UPDATE ON A MULTI-PROXY STUDY OF RUMINANT DIETS FROM THE MIOCENE OF EASTERN AFRICA
- 11:15 WINKLER** THE MIDDLE MIOCENE EAST AFRICAN RODENT FAUNAL TRANSITION: EVIDENCE FROM MABOKO ISLAND, KENYA
- 11:30 MACLATCHY** A STRANGE OLD WORLD: PROBOSCIDEAN DIVERSITY AND COEXISTENCE IN THE EARLY MIOCENE OF EASTERN AFRICA
- 11:45 HEAD** SQUAMATE REPTILES FROM THE EARLY MIOCENE OF EQUATORIAL AFRICA INDICATE COMPLEX DISPERSAL BIOGEOGRAPHIC HISTORIES AND WET-FOREST PALEOENVIRONMENTS

THURSDAY MORNING, JUNE 20, 2024
UNION WOLVERINE
STRATIGRAPHIC PALEOBIOLOGY: WORKING WITH THE NATURE OF THE
STRATIGRAPHIC RECORD TO ANSWER PALEOBIOLOGICAL QUESTIONS
MODERATORS: Pedro Monarrez, Annaka Clement, and Katharine Loughney

- 8:00 HOLLAND** BRIDGING THE GAP: THE DISPARATE EXPRESSIONS OF BIOTIC EVENTS IN NONMARINE, SHALLOW SILICICLASTIC, AND SHALLOW CARBONATE SETTINGS
- 8:15 WOOD** ACCOUNTING FOR BURIAL POTENTIAL IN ESTIMATES OF FOSSIL MAMMAL DIVERSITY
- 8:30 LOUGHNEY** CLIMATE, LANDSCAPE, AND TAPHONOMIC SIGNALS OF FOSSIL ASSEMBLAGES FROM THE MIOCENE BASIN AND RANGE, WESTERN U.S.A.
- 8:45 ORCHARD** POTENTIAL SOURCES OF COMMUNITY COMPOSITION CHANGE IN THE CLOVERLY FORMATION AND SYKES MOUNTAIN FORMATION OF WYOMING, USA
- 9:00 CLEMENT** ORIGIN AND STRATIGRAPHIC CONTEXT OF LOW-DIVERSITY SHELL BEDS: A CASE STUDY FROM LATE TRIASSIC AOTEAROA NEW ZEALAND
- 9:15 KOSNIK** ACCOUNTING FOR DATING UNCERTAINTIES IN TIME-AVERAGING ESTIMATES
- 9:30 KIDWELL** NEW EVIDENCE FOR THE EVOLUTION OF TIME-AVERAGING: HOW TIME IS TANGLED, NOT LOST, IN MARINE RECORDS
- 10:15 MONARREZ** STRATIGRAPHIC CONTROLS ON THE LATE SERPUKHOVIAN (MISSISSIPPIAN, CARBONIFEROUS) MASS EXTINCTION EVENT
- 10:30 GALLAGHER** CHANGES IN BIODIVERSITY AND PALEOECOLOGY OF RHYNCHONELLIFORM BRACHIOPODS ACROSS THE LOWER AND UPPER KELLWASSER EXTINCTION EVENTS (LATE DEVONIAN) AT TIOGA, PENNSYLVANIA, U.S.A.
- 10:45 WESTROP** FORELAND BASIN FORMATION, ENVIRONMENTAL CHANGE AND TRILOBITE DISTRIBUTION, LATE ORDOVICIAN OF EASTERN LAURENTIA
- 11:00 LITTLE** THE RICHMONDIAN INVASION: ECOLOGICAL IMPLICATIONS OF INCUMBENT AND INVADER DISTRIBUTION PATTERNS
- 11:15 FORSYTHE** QUANTIFYING THE PALAEOECOLOGICAL IMPACTS OF THE CLARKSVILLE PHASE OF THE RICHMONDIAN INVASION IN THE NASHVILLE DOME, TN
- 11:30 HERNÁNDEZ GÓMEZ** ECOLOGICAL IMPACTS OF THE RICHMONDIAN INVASION: COMPARING NICHE STABILITY IN NASHVILLE DOME VERSUS THE CINCINNATI ARCH
- 11:45 IRIZARRY** FAUNAL PATTERNS ARE CONTROLLED BY FACIES CHANGES THROUGH THE DRUMIAN ISOTOPE CARBON EXCURSION (DICE) IN SW MONTANA, U.S.A.

THURSDAY MORNING, JUNE 20, 2024
UNION 2210
NORTH AMERICAN PALEONTOLOGICAL RESOURCES 2024
MODERATORS: Danita Brandt and Brenda Hunda

- 8:00 BRANDT** NORTH AMERICAN PALEONTOLOGICAL RESOURCES 2024
- 8:15 KETCHUM** NEARLY 150 YEARS OF FOSSIL INVERTEBRATES AT THE AMERICAN MUSEUM OF NATURAL HISTORY
- 8:30 CORTEZ** STATE OF GEOLOGICAL COLLECTIONS AT THE CALIFORNIA ACADEMY OF SCIENCES, SAN FRANCISCO, CALIFORNIA
- 8:45 DINEEN** COLLECTIONS AT THE UNIVERSITY OF CALIFORNIA MUSEUM OF PALEONTOLOGY (UCMP): GROWTH IN THE 21ST CENTURY AND BEYOND
- 9:00 MAYER** DIGITIZING THE FIELD MUSEUM'S FOSSIL INVERTEBRATE COLLECTION USING UNDERGRADUATE INTERNS AND IMLS FUNDED GRANTS
- 9:15 CUNDIFF** PALEONTOLOGY COLLECTIONS AT THE HARVARD MUSEUM OF COMPARATIVE ZOOLOGY
- 9:30 ADRAIN** NORTH AMERICAN PALEONTOLOGICAL RESOURCES: THE UNIVERSITY OF IOWA PALEONTOLOGY REPOSITORY – CHALLENGES OF A GROWING COLLECTION.
- 10:15 HOOK** OVER 100 YEARS OF PALEONTOLOGICAL COLLECTIONS AT THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY
- 10:30 BAUER** NAVIGATING CHANGE: DESCRIBING 50 YEARS OF ADAPTATIONS IN THE UMMP INVERTEBRATE DIVISION
- 10:45 MILLHOUSE** INCREASING THE ACCESSIBILITY AND DISCOVERABILITY OF THE NATIONAL FOSSIL COLLECTIONS AT THE SMITHSONIAN NATIONAL MUSEUM OF NATURAL HISTORY
- 11:00 AMATI** PERSISTENCE IN PALEONTOLOGY: 188 YEARS OF PALEONTOLOGY AT THE NEW YORK STATE MUSEUM
- 11:15 UTRUP** SPINELESS WONDERS: A HISTORY OF THE INVERTEBRATE PALEONTOLOGY COLLECTIONS AT YALE PEABODY MUSEUM
- 11:30 RHUE** BUILDING AND STEWARDING VERTEBRATE FOSSIL COLLECTIONS HELD IN PUBLIC TRUST: 150 YEARS OF SCIENTIFIC INQUIRY AT THE YALE PEABODY MUSEUM
- 11:45 HUNDA** CINCINNATI MUSEUM CENTER AS A REPOSITORY FOR ORPHANED PALEONTOLOGICAL COLLECTIONS

THURSDAY MORNING, JUNE 20, 2024
UNION POND
INTERCONNECTED PATTERNS OF NATURAL HISTORY: A TRIBUTE
TO THE CAREER AND CONTRIBUTIONS OF LANCE GRANDE
MODERATORS: Eric Hilton and Matt Friedman

- 8:00 HILTON** AN INTRODUCTION TO THE SYMPOSIUM “INTERCONNECTED PATTERNS OF NATURAL HISTORY: A TRIBUTE TO THE CAREER AND CONTRIBUTIONS OF LANCE GRANDE”
- 8:15 AASE** FOSSIL LAKE (GREEN RIVER FORMATION, EOCENE, YPRESIAN) AT A NEXUS OF COMMERCIAL FOSSIL EXTRACTION, PALEO TOURISM, ACADEMIC RESEARCH AND U.S. GOVERNMENT PRESERVATION
- 8:30 CAPOBIANCO** REVISITING THE USE OF PALEONTOLOGY IN BIOGEOGRAPHY IN THE 21ST CENTURY: THE GREEN RIVER ICHTHYOFAUNA AS A CASE STUDY
- 8:45 IGIELMAN** NEW DATA ON THE LOWER JAWS OF THE FIRST ACTINOPTERYGIANS; IMPLICATIONS FOR THE FIRST RADIATION OF THE EARLIEST RAY-FINNED FISH
- 9:00 MICKLE** LOWER ACTINOPTERYGIAN FISHES FROM THE UPPER PENNSYLVANIAN HAMILTON QUARRY, A KONSERVAT-LAGERSTÄTTE IN SOUTHEASTERN KANSAS, U.S.A.
- 9:15 GILES** ANATOMY AND RELATIONSHIPS OF PARASEMIONOTID ACTINOPTERYGIANS FROM THE EARLY TRIASSIC OF GREENLAND BASED ON CT- AND SYNCHROTRON TOMOGRAPHY
- 9:30 ATTERBY** THE APPLICATION OF CT AND SYNCHROTRON SCANNING TO RESOLVE THE INTERNAL ANATOMY, PHYLOGENY, AND ECOLOGY OF MESOZOIC FOSSIL FISHES
- 10:15 XU** THE ORIGIN AND EARLY EVOLUTION OF GINGLYMODIAN FISHES: FOSSIL EVIDENCE FROM THE MIDDLE TRIASSIC OF CHINA
- 10:30 DAVID** MODERN INSIGHTS REGARDING ANCIENT FISHES
- 10:45 BROWNSTEIN** THE GENOMIC SIGNATURES OF EVOLUTIONARY STASIS
- 11:00 FASEY** THE OLDEST THREE-Dimensionally PRESERVED ACTINOPTERYGIAN HEARTS? SOFT TISSUE PRESERVATION IN A STEM TELEOST
- 11:15 ANDREWS** MICRO-COMPUTED TOMOGRAPHY REVEALS THE INTERNAL ANATOMY OF PALEOCENE *MAGNIGENA ARABICA* (TELEOSTEI: OSTEGLOSSOMORPHA: OSTEGLOSSIDAE)
- 11:30 LIU** FOSSIL RECORDS OF PALEOGENE CATOSTOMIDS AND JIANGHANICHTHYIDS (OSTARIOPHYSI: CYPRINIFORMES) FROM ASIA: REVISION, REMARKS, AND NEW SPECIES
- 11:45 DE PINNA** PHYLOGENY AND EVOLUTION OF SILURIFORMES (TELEOSTEI), WITH A TENTATIVE BIOGEOGRAPHIC SCENARIO AND SPECIAL REFERENCE TO FOSSIL TAXA

THURSDAY AFTERNOON, JUNE 20, 2024
UNION ROGEL
LESSONS LEARNED AND FUTURE VISIONS FOR CONSERVATION PALEOBIOLOGY
MODERATORS: Jonathan Cybulski and Lynn Wingard

- 1:15 WINGARD** APPLICATION OF CONSERVATION PALEOBIOLOGY TO RESOURCE MANAGEMENT: EXAMPLES AND LESSONS LEARNED FROM THE GREATER EVERGLADES ECOSYSTEM RESTORATION
- 1:30 SPANBAUER** BASELINES, BIODIVERSITY, AND BASIN INFILL: USING PALEOLIMNOLOGY TO INFORM MANAGEMENT PRACTICES AND CONSERVATION EFFORTS
- 1:45 DILLON** ALIGNING PALEOBIOLOGICAL RESEARCH WITH CONSERVATION PRIORITIES USING ELASMOBRANCHS AS A MODEL
- 2:00 AUSTIN** A REVIEW OF LATE-QUATERNARY SOUTHERN CALIFORNIA PACKRAT MIDDENS: IMPLICATIONS FOR INTERPRETING THE IMPACT OF PALEOCLIMATE
- 2:15 PRUDEN** BALANCING TRADE-OFFS IN SALIENCY, CREDIBILITY, AND LEGITIMACY IN CONSERVATION PALEOBIOLOGY: A CASE STUDY FROM LONG ISLAND SOUND
- 2:30 DIETL** WHAT DOES “SUCCESS” MEAN IN CONSERVATION PALEOBIOLOGY?
- 2:45** *discussion*
- 3:30 KOWALEWSKI** ASSESSING LIVE-DEAD FIDELITY IN MARINE BENTHIC COMMUNITIES
- 3:45 KOKESH** RECENT DECALCIFICATION OF LIVING MOLLUSKS IS NEGATIVELY CORRELATED WITH DEAD SHELL DENSITIES IN PUGET SOUND: AN AGENCY-ACADEMIC COLLABORATION MOTIVATED BY CONCERNS FOR OCEAN ACIDIFICATION
- 4:00 LAKER** EVALUATING LONG-TERM CALVING GROUND VARIABILITY OF CARIBOU (*RANGIFER TARANDUS*) FROM IVVAVIK NATIONAL PARK, YUKON, CANADA
- 4:15 LIYANAGEDARA** LIVE-DEAD FIDELITY OF ECOLOGICAL HEALTH INDICES (AMBI AND M-AMBI) IN BENTHIC MARINE ASSOCIATIONS: A CASE STUDY FROM COASTAL NORTH CAROLINA, USA
- 4:30 TORRES** TAPHONOMY AND TIME-AVERAGING: A COMPARATIVE ANALYSIS OF ECHINOIDS AND MOLLUSKS
- 4:45 WRIGHT** THE TAPHONOMY OF PARASITISM: TWO CASE STUDIES AND A VISION FOR CONSERVATION PALEOBIOLOGY
- 5:00** *discussion*

THURSDAY AFTERNOON, JUNE 20, 2024
UNION ANDERSON
RECENT ADVANCES IN COMPUTATIONAL PALEOBIOLOGY
MODERATORS: William Gearty, Bethany J. Allen, and Lewis A. Jones

- 1:15 FURNESS** MODELLING THE MICROBIAL TO METAZOAN TRANSITION *(30-minute keynote)*
- 1:45 GEARTY** THE INTRODUCTION OF LARGE MAMMALS HAS NOT REMEDIED THE ECOLOGICAL IMPACT OF THE LATE PLEISTOCENE EXTINCTIONS
- 2:00 BAPST** PALEOAM – A PACKAGE FOR ABUNDANCE MODELS IN THE FOSSIL RECORD
- 2:15 JONES** MIND THE UNCERTAINTY: GLOBAL PLATE MODEL CHOICE IMPACTS DEEP-TIME PALAEOBIOLOGICAL STUDIES
- 2:30 WANG** QUANTITATIVE ICHNOLOGY: LINKING PALAEOBIOLOGY AND ENVIRONMENTAL CONDITIONS WITH TRACE FOSSIL MORPHOLOGY
- 2:45 LOUGHNEY** PALEOENVIRONMENTAL PROXIES, FACIES DATA, AND RESEARCHER INTERESTS
- 3:30 WIEMANN** COMPUTATIONAL APPROACHES TO CHEMICAL DATA REVEAL THE FIDELITY OF MOLECULAR BIOSIGNATURES THROUGH TIME AND SPACE *(30-minute keynote)*
- 4:00 COLLINS** MEASURING SPIRAL FORM ACROSS MOLLUSCAN CLASSES—AN EMPIRICAL PERSPECTIVE ON THE ‘MUSEUM OF ALL SHELLS’
- 4:15 HOOKER** RESHAPING THE PAST: INVESTIGATING GEOLOGICAL DEFORMATION IN †*DIICTODON* USING 3D GEOMETRIC MORPHOMETRICS
- 4:30 ROBERTS** DIVERGENT EVOLUTIONARY HISTORIES OF AXIAL SKELETAL COMPLEXITY BETWEEN REPTILES AND MAMMALS
- 4:45 PETSIOS** MORPHOSPACE OCCUPATION AND BIOMECHANICAL PERFORMANCE OF THE PERIGNATHIC GIRDLE IN JAWED ECHINOIDS
- 5:00 GOSWAMI** SEMILANDMARK AND LANDMARK FREE ANALYSIS OF SYNAPSID SKULL EVOLUTION

THURSDAY AFTERNOON, JUNE 20, 2024
UNION PENDLETON
TRAITS, FUNCTIONS, AND SYSTEMS: QUANTIFYING PALEOCOMMUNITY
VARIATION, PERSISTENCE, AND RESILIENCE
MODERATORS: Ashley Dineen and Thomas Cullen

- 1:15 BANKER** COMPARTMENTALIZATION OF PALEOCOMMUNITY TROPHIC NETWORKS DURING THE MESOZOIC MARINE REVOLUTION
- 1:30 OPAZO MELLA** ARE THE FOOD WEB PROPERTIES STABLE THROUGH A MASS EXTINCTION EVENT?
- 1:45 TACKETT** FINE-SCALE FOOD WEB MODELING FOR SHALLOW MARINE ECOSYSTEMS
- 2:00 NOVACK-GOTTSHALL** PERSISTENT ECOLOGICAL DIVERSITY OF MARINE TAXA THROUGH THE HISTORY OF ANIMAL LIFE
- 2:15 STROTZ** COMPETITION AND THE END OF THE LINE: WHAT STEAM LOCOMOTIVES CAN TELL US ABOUT CLADE REPLACEMENT IN THE FOSSIL RECORD
- 2:30 THIBODEAUX** MOLLUSK METABOLIC ENERGY EXPENDITURES FROM SHELL VOLUME AND FUNCTIONAL ECOLOGY INDICATE A PRODUCTIVE POST-IMPACT PALEOCENE SHALLOW MARINE ECOSYSTEM
- 2:45 DUTTA** QUANTITATIVE ECOLOGY OF AN EOCENE GREENHOUSE ANTARCTIC BENTHIC COMMUNITY – LA MESETA FORMATION, SEYMOUR ISLAND

THURSDAY AFTERNOON, JUNE 20, 2024
UNION PENDLETON
GENERAL SESSION ARTHROPODS
MODERATORS: Jonathan Adrain and Harriet Drage

- 3:30 MIKULIC** RESURRECTING THE SILURIAN TRILOBITES OF THE CENTRAL UNITED STATES; NEW LIFE FOR OLD COLLECTIONS
- 3:45 ADRAIN** COORDINATED TURNOVER OF SHALLOW WATER TRILOBITE ASSEMBLAGES ALONG THE EARLY ORDOVICIAN NORTHERN LAURENTIAN MARGIN
- 4:00 LAIRD** TRILOBITE DIVERSITY RESPONSE TO THE END-ORDOVICIAN MASS EXTINCTION: BETWEEN-HABITAT DISSIMILARITY (BETA DIVERSITY) AS A MECHANISM TO MAINTAIN WITHIN-HABITAT RICHNESS (ALPHA DIVERSITY)
- 4:15 BEECH** PARALLEL EVOLUTION AND POSSIBLE FUNCTIONS OF THE HARPIFORM BRIM IN TRILOBITES
- 4:30 DRAGE** DISTINCT CAUSES UNDERLIE DOUBLE-PEAKED TRILOBITE CEPHALON DISPARITY, BUT THIS DISPARITY IS UNRELATED TO EXOSKELETON MOULTING BEHAVIOUR
- 4:45 MOYSIUK** A NEW RADIODONT WITH A SPECIALIZED POSTERIOR TAGMA FROM THE BURGESS SHALE EXEMPLIFIES EARLY PLASTICITY IN ARTHROPOD SEGMENTATION

THURSDAY AFTERNOON, JUNE 20, 2024
UNION KUENZEL
HOMINOID EVOLUTION, ENVIRONMENTS AND COMMUNITIES IN EASTERN AFRICA
MODERATORS: Susanne Cote and Laura MacLatchy

- 1:15 LUKENS** QUANTITATIVE RECONSTRUCTION OF C4 PLANT FRACTIONS IN PALEOSOLS AND MAMMAL DIETS IN THE CENOZOIC RECORD OF EASTERN AFRICA
- 1:30 NORWOOD** REVISITING THE FOSSIL HERBIVORE ENAMEL ISOTOPES FROM LAETOLI, TANZANIA: INSIGHTS INTO THE PALEOECOLOGY OF *AUSTRALOPITHECUS AFARENSIS*
- 1:45 OPPENHEIM** ISOTOPIC NICHE SPACE: ASSESSING A NEW WAY TO LOOK AT HOMININ NICHE DYNAMICS AT HADAR AND WORANSO MILLE
- 2:00 KINGSTON** PALEOECOLOGY OF THE MIDDLE PLEISTOCENE KAPTHURIN FM. CHIMPANZEE (*PAN*) FOSSIL LOCALITY, BARINGO BASIN, KENYA
- 2:15 UNO** NEOGENE ECOSYSTEMS AND MAMMAL DIETS IN EAST AFRICA
- 2:30 WERDELIN** ARIDIFICATION AND FAUNAL ADAPTATIONS IN RESPONSE TO EAST AFRICAN MIOCENE UPLIFT

THURSDAY AFTERNOON, JUNE 20, 2024
UNION KUENZEL
PLANT-INSECT HERBIVORE RELATIONSHIPS IN DEEP TIME
MODERATORS: Alejo Giraldo and Anshuman Swain

- 3:30 LABANDEIRA** MAJOR QUESTIONS ADDRESSING ARTHROPOD AND PATHOGEN HERBIVORY IN DEEP TIME
- 3:45 DEKOSTER** DIVERSITY OF ARTHROPOD HERBIVORE DAMAGE ASSOCIATED WITH THE MIDDLE PENNSYLVANIAN MAZON CREEK FLORA, ILLINOIS, USA
- 4:00 LAKERAM** A TAXONOMIC CLASSIFICATION AND DIVERSITY ASSESSMENTS OF TERRESTRIAL ARTHROPOD COPROLITES IN THE CALHOUN COAL BED FROM PENNSYLVANIAN COAL BALLS
- 4:15 XIAO** HIGHLY DIVERSE INSECT MINES FOUND ON GYMNOSPERMS FROM MIDDLE JURASSIC YANLIAO BIOTA, CHINA
- 4:30 CARRILLO-ALBARRAN** BUGGING BACK IN TIME: THE BOTANICAL TANGO OF LA POPA'S EOCENE (CARROZA FORMATION; NUEVO LEÓN).
- 4:45 GIRALDO** INSECT-FEEDING TRACES FROM EOCENE PATAGONIA REVEAL UNRECOGNIZED EVOLUTIONARY HISTORY OF HERBIVOROUS INSECTS ON AUSTRALIA'S ICONIC *EUCALYPTUS*
- 5:00 SWAIN** EFFECTS OF TEMPERATURE, ARIDITY, AND PLANT STOICHIOMETRY ON INSECT HERBIVORY: LESSONS FROM THE PAST AND THE PRESENT

THURSDAY AFTERNOON, JUNE 20, 2024
UNION WOLVERINE
STRATIGRAPHIC PALEOBIOLOGY: WORKING WITH THE NATURE OF THE
STRATIGRAPHIC RECORD TO ANSWER PALEOBIOLOGICAL QUESTIONS
MODERATORS: Pedro Monarrez, Annaka Clement, and Katharine Loughney

- 1:15 PIPPENGER** A COMBINED STRATIGRAPHIC AND ICHNOLOGICAL APPROACH TO RECONSTRUCTING THE EVOLUTION OF THE SEDIMENTARY MIXED LAYER IN THE DEVONIAN OF THE APPALACHIAN BASIN
- 1:30 HUGHES** EVOLUTIONARY TEMPO AND MODE IN STRATIGRAPHIC CONTEXT: DIKELOCEPHALID TRILOBITE EVOLUTION IN THE UPPER MISSISSIPPI VALLEY CAMBRIAN
- 1:45 SCLAFANI** STRATIGRAPHIC PALEOBIOLOGY IN THE LATE SILURIAN AND EARLY DEVONIAN OF CENTRAL NEVADA: PUTTING OLD DATA TO NEW USES
- 2:00 MCLAUGHLIN** FOSSIL POINT OREGON; NEW FOSSILS, OLD FOSSILS REVISITED, AND POSSIBLE CASCADIA TSUNAMI DEPOSITS
- 2:15 HAYES** RECONSTRUCTING HIGH-LATITUDE DEGLACIATION IN THE LATE PALEOZOIC VIA MACHINE LEARNING INFERENCE AND BIOSTRATIGRAPHIC OPTIMIZATION: CANNING BASIN, WESTERN AUSTRALIA
- 2:30 FAN** ONESTRATIGRAPHY: UNVEILING DEEP-TIME EARTH HISTORY THROUGH GLOBAL STRATIGRAPHIC DATA HARMONIZATION
- 2:45 ZHANG** CONSTRUCT A HIGH-RESOLUTION GEOLOGICAL TIMELINE THROUGH THE DEVONIAN TO TRIASSIC

THURSDAY AFTERNOON, JUNE 20, 2024
UNION WOLVERINE
CONODONTS IN TIME AND SPACE – NORTH AMERICAN PANDER SOCIETY MEETING
MODERATORS: D. Jeffrey Over and Nicholas Hogencamp

- 3:30 MILLER** PROBABLE IMPACT ORIGIN OF COINCIDENT EXTINCTIONS AMONG CONODONTS, TRILOBITES, AND BRACHIOPODS, TOP OF SYMPHYSURINID BIOMERE, EARLY ORDOVICIAN, HOUSE RANGE, IBEX AREA, WEST-CENTRAL UTAH
- 3:45 LUBLINER** MIND THE GAP: REVISING THE DESMOINESIAN (MIDDLE PENNSYLVANIAN) VERDIGRIS CONODONT ASSEMBLAGE
- 4:00 ROSSCOE** *GONDOLELLA* SPECIES OF THE UPPER SALESVILLE FORMATION, PALO PINTO COUNTY, TEXAS
- 4:15 HENDERSON** THE DELIVERY OF SHALLOW-WATER CONODONTS INTO DEEPER OFFSHORE SETTINGS: LOWER PERMIAN AND LOWER TRIASSIC CASE STUDIES
- 4:30 HOGANCAMP** AN INTRODUCTION TO THE CONODONT DATA ANALYSIS TOOL (CDAT) FOR VISUALLY ANALYZING RANGE, COUNT, AND DISTRIBUTION DATA
- 4:45 OVER** CONODONT COLOR ALTERATION INDEX REFERENCE SETS: HISTORIC ICONS AND ANITA (EPSTEIN) HARRIS LEGACY

THURSDAY AFTERNOON, JUNE 20, 2024
UNION 2210
NORTH AMERICAN PALEONTOLOGICAL RESOURCES 2024
MODERATORS: Lisa Amati and Vanessa Rhue

- 1:15 FARRAR** HISTORY, SIGNIFICANCE, AND FUTURE DIRECTIONS OF THE INVERTEBRATE PALEONTOLOGY COLLECTION AT THE SAM NOBLE OKLAHOMA MUSEUM OF NATURAL HISTORY
- 1:30 GARCIA** HISTORY AND CURRENT STATUS OF THE LELAND STANFORD JUNIOR UNIVERSITY PALEONTOLOGY COLLECTIONS
- 1:45 MIKULIC** THE FUTURE OF SMALL MUSEUM PALEONTOLOGICAL RESOURCES AND THE WEIS EARTH SCIENCE MUSEUM
- 2:00 MCCALL** THE ELEPHANT IN THE ROOM – THE NON-PROFESSIONAL SIDE OF PALEONTOLOGY
- 2:15 CLARY** U.S. FOSSIL PARKS AS PALEONTOLOGICAL RESOURCES: 21ST CENTURY CHALLENGES FOR PUBLIC FOSSIL COLLECTING AND EDUCATION
- 2:30 HENDRICKS** PRI'S ONLINE RESOURCES FOR LEARNING ABOUT FOSSILS, EVOLUTION, AND EARTH HISTORY
- 2:45 LÓPEZ CARRANZA** THE *TREATISE ON INVERTEBRATE PALEONTOLOGY*: NEW DIGITAL INITIATIVES AND FUTURE-FORWARD VISION
- 3:30 HENDY** DIGITIZATION OF INVERTEBRATE PALEONTOLOGY COLLECTIONS: LOTS OF PROGRESS BUT LOTS OF REMAINING CHALLENGES
- 3:45 KARIM** FOSSIL COLLECTIONS DATA: RESOURCES, STANDARDS, COMMUNITY
- 4:00 JOHNSON** BEST PRACTICES FOR DESIGNING EXPERIMENTS USING 3D DEFOSSILIZED MORPHOLOGIES
- 4:15 LONG-FOX** MORPHOBANK: A PALEONTOLOGICAL RESOURCE FOR COLLABORATIVE RESEARCH AND AN OPEN-ACCESS REPOSITORY FOR MORPHOLOGICAL DATA
- 4:30 SIMPSON** ANALYTICAL PALEOBIOLOGY RELIES ON ACCURATE TAXONOMIC DESCRIPTIONS: AN EMPHASIS ON PALEOBOTANY
- 4:45 QUIRK** A PALEONTOLOGICAL GOLDMINE: EDUCATION AND RESEARCH FUNDING OPPORTUNITIES THROUGH THE NATIONAL SCIENCE FOUNDATION
- 5:00 RAYMOND** WE SHOULD COLLABORATE (*30-minute keynote*)

THURSDAY AFTERNOON, JUNE 20, 2024
UNION POND
INTERCONNECTED PATTERNS OF NATURAL HISTORY:
A TRIBUTE TO THE CAREER AND CONTRIBUTIONS OF LANCE GRANDE
MODERATORS: Sam Giles and Miguel Montalvo

- 1:15 MONTALVO** REVIEW AND UPDATE OF THE FOSSIL HISTORY OF BILLFISHES
(ISTIOPHORIFORMES, XIPHIOIDEI)
- 1:30 YABUMOTO** MESOZOIC AND CENOZOIC ACTINOPTERYGIAN FISHES FROM JAPAN
- 1:45 CHIDA** PLEISTOCENE MARINE FISH FAUNA FROM THE MASUDA FORMATION OF TANEGASHIMA
ISLAND, SOUTHWEST JAPAN
- 2:00 BEMIS** ADVENTURES IN TEACHING VERTEBRATE EVOLUTION WITH SOME THOUGHTS ON
TRAINING THE NEXT GENERATION OF VERTEBRATE PALEONTOLOGISTS
- 2:15 HILTON** FURTHER NOTES ON MORPHOLOGICAL VARIATION: A HIERARCHICAL CONCEPTUAL
FRAMEWORK FOR INTERPRETING EMPIRICAL DATA

**THURSDAY POSTERS, JUNE 20, 2024
UNION IDEA HUB
PRESENTERS SHOULD ATTEND POSTERS FROM 5:30-6:15**

GENERAL SESSION: MOLLUSKS

- 1 **QUIZON** PRELIMINARY INSIGHTS INTO MARINE GASTROPOD PRECIPITATION KINETICS FROM DUAL CLUMPED ISOTOPES ($\Delta 47/\Delta 48$)
- 2 **SATOUR** BIVALVES FROM THE NEOGENE DEPOSITS OF ALGERIA (SYSTEMATIC & PALEOENVIRONMENTS)
- 3 **STOWE** BIOTIC RESPONSES TO ENVIRONMENTAL CHANGE IN A RESTRICTED BASIN: A MACROEVOLUTIONARY AND PALEOECOLOGICAL EXAMINATION OF THE LATE NEOGENE SAN JOAQUIN SEAWAY, CALIFORNIA

RECENT ADVANCES IN COMPUTATIONAL PALEOBIOLOGY

- 4 **ALI** IMPACT OF A CODING BUG ON PALEOBIOLOGY DATABASE GENUS RICHNESS
- 5 **ALLEN** RMACROSTRAT: AN R PACKAGE FOR RETRIEVING DATA FROM THE MACROSTRAT GEOLOGICAL DATABASE
- 6 **CURRANO** PBOT, THE INTEGRATIVE PALEOBOTANY PORTAL: A FREE WORKBENCH FOR PALEOBOTANICAL RESEARCH AND DATA MANAGEMENT
- 7 **DUMADAG** HIDDEN IN PLAIN SITE: COMPARING DIVERSITY USING SEPKOSKI'S *COMPENDIUM* AND THE PALEOBIOLOGY DATABASE
- 8 **GEARTY** DEEPTIME: AN R PACKAGE THAT FACILITATES HIGHLY CUSTOMIZABLE VISUALIZATIONS OF DATA OVER LONG TIME PERIODS (AND OTHER THINGS)
- 9 **JONES** PALAEOVERSE: A COMMUNITY-DRIVEN R PACKAGE TO SUPPORT PALAEOBIOLOGICAL ANALYSIS

**TRAITS, FUNCTIONS, AND SYSTEMS: QUANTIFYING PALEOCOMMUNITY
VARIATION, PERSISTENCE, AND RESILIENCE**

- 10 **JANUARIO** INVESTIGATING THE TIMESCALE OF TRAIT RE-STRUCTURATION IN A JURASSIC LAKE
- 11 **MADURO-SALVARREY** QUANTIFYING ECOSYSTEM STRUCTURE USING BIOVOLUME OF BENTHIC MARINE INVERTEBRATES DURING THE LATE PALEOZOIC ICE AGE
- 12 **RIZZA** NO TAXONOMIC OR ECOLOGICAL RESPONSE TO GLOBAL CLIMATE EVENTS IN THE LATE MAASTRICHTIAN OWL CREEK FORMATION

GENERAL SESSION: ARTHROPODS

- 13 **PANKOWSKI** THE DEVONIAN-CARBONIFEROUS DIVERSITY OF CLAM SHRIMP (CRUSTACEA: BRANCHIOPODA: LAEVICAUDATA, SPINICAUDATA, CYCLESTHERIDA): A PRELIMINARY REPORT
- 14 **SHILLING** A RE-EVALUATION OF THE SUPPOSED OCCURRENCE OF THE EXTANT NOTOSTRACAN SPECIES, *TRIOPS CANCRIFORMIS*, IN THE TRIASSIC OF VIRGINIA

**HOMINOID EVOLUTION, ENVIRONMENTS
AND COMMUNITIES IN EASTERN AFRICA**

- 15 **GOODCHILD** INVESTIGATING THE EFFECT OF HISTORICAL COLLECTION BIASES ON PALEOENVIRONMENTAL INTERPRETATIONS IN EAST TURKANA, KENYA
- 16 **TWEEDY** EARLY MIOCENE BIOMARKER RECORDS FROM TURKANA PALEONTOLOGICAL SITES

PLANT-INSECT HERBIVORE RELATIONSHIPS IN DEEP TIME

no posters for this session

**STRATIGRAPHIC PALEOBIOLOGY: WORKING WITH THE
NATURE OF THE STRATIGRAPHIC RECORD TO
ANSWER PALEOBIOLOGICAL QUESTIONS**

- 17 **CIAMPAGLIO** A PRELIMINARY REPORT OF A LOWER CARBONIFEROUS (MISSISSIPPIAN: TOURNAISIAN) CHONDRICHTHYAN FAUNA FROM THE “BLUE RIDGE ESKER” LOCALITY (MARSHALL FORMATION) OF MICHIGAN, USA
- 18 **CLINE** *HESLERODOIDES* (CHONDRICHTHYES: ELASMOBRANCHII: CTENACANTHIFORMES) FROM THE PERMIAN RED EAGLE LIMESTONE OF KANSAS
- 19 **OLSON** FOSSILS FROM THE MIDDLE CAMBRIAN OF SOUTHWESTERN MONTANA IN A STRATIGRAPHIC CONTEXT

**CONODONTS IN TIME AND SPACE –
NORTH AMERICAN PANDER SOCIETY MEETING**

no posters for this session

NORTH AMERICAN PALEONTOLOGICAL RESOURCES 2024

- 20 **COOROUGH BURKE** A DOZEN YEARS OF DIGITIZING BRINGS FOSSIL COLLECTIONS INTO THE SEARCHABLE WORLD
- 21 **ENGELKE** CURRENT STATUS OF THE PALEONTOLOGICAL COLLECTION AT BELOIT COLLEGE
- 22 **HUGHES** NHM UNLOCKED, PREPARING COLLECTIONS TO MOVE
- 23 **JOHNSON** THE INDIANA UNIVERSITY PALEONTOLOGY COLLECTION - CURRENT STATUS OF PALEONTOLOGICAL RESOURCES
- 24 **MORAN** PALEONTOLOGICAL COLLECTIONS AT THE NORTH CAROLINA MUSEUM OF NATURAL SCIENCES: IMPROVEMENT AND EXPANSION OVER THE LAST DECADE
- 25 **MORSE** BETTER NOW THAN NEVER: CATALOGUING A COLLECTION AFTER 188 YEARS
- 26 **NARDUCCI** VERTEBRATE PALEONTOLOGY COLLECTIONS AT THE FLORIDA MUSEUM OF NATURAL HISTORY, UNIVERSITY OF FLORIDA
- 27 **YACOBUCCI** PALEONTOLOGY AT BOWLING GREEN STATE UNIVERSITY: COLLECTING, RESEARCHING, AND TEACHING ABOUT THE ANCIENT LIFE OF THE GREAT LAKES REGION
- 28 **ZHANG** THE FIELD MUSEUM’S 2022 KONECNY FOSSIL INVERTEBRATE COLLECTION DIGITIZATION PROJECT

**INTERCONNECTED PATTERNS OF NATURAL HISTORY: A TRIBUTE TO
THE CAREER AND CONTRIBUTIONS OF LANCE GRANDE**

- 29 **BRITO** THE ‘MID’ CRETACEOUS FRESHWATER ICHTHYOFAUNA FROM THE NORTHERN GONDWANA: AN UPDATED LOOK
- 30 **FRIEDMAN** UNTANGLING THE FIRST ACTINOPTERYGIAN ADAPTIVE RADIATION
- 31 **GOTTFRIED** AN UPDATED LOOK AT ‘LOWER’ ACTINOPTERYGIAN AND COELACANTH RECORDS FROM THE LATE CRETACEOUS OF MADAGASCAR

FRIDAY MORNING, JUNE 21, 2024
UNION ROGEL
LESSONS LEARNED AND FUTURE VISIONS FOR CONSERVATION PALEOBIOLOGY
MODERATORS: Erin Dillon and Broc Kokesh

- 8:00** **FLANTUA** INTERDISCIPLINARY PERSPECTIVES IN AN ERA OF GLOBAL POLLEN SYNTHESIS
- 8:30** **KOOYMAN** USING PALEOBOTANY TO INFORM CONSERVATION OF THE AUSTRALIAN RAINFORESTS
- 8:45** **MORLEY** IDENTIFYING A SPRUCE REFUGIUM IN ALASKA, U.S.A. USING MONTE CARLO STATISTICAL METHODS
- 9:00** **GIBERT BRET** PLANTS ALWAYS HAVE HIGHER CLIMATE FIDELITY THAN MAMMALS, AND IT GETS WORSE AFTER INDUSTRIALIZATION
- 9:15** **SHORT** ADVANCING CONSERVATION PALEOBIOLOGY THROUGH ECOMETRICS: INTEGRATING FUNCTIONAL TRAITS AND ENVIRONMENTS OF PAST, PRESENT, AND FUTURE FAUNAS
- 9:30** *discussion*
- 10:15** **KUSNERIK** USING LIVE, DEAD, AND FOSSIL GASTROPODS TO ASSESS RESPONSE AND RECOVERY TO LONG- AND SHORT-TERM DISRUPTIONS IN FLORIDA FRESHWATER SPRINGS AND RIVERS
- 10:30** **CARDEN** CHANGES IN GROWTH RATES OF TWO SPECIES OF FRESHWATER MUSSELS IN AN OHIO STREAM OVER THE LAST 80 YEARS
- 10:45** **EDELMAN-FURSTENBERG** USING THE RECENT PAST TO RECOGNIZE ANTHROPOGENIC INFLUENCE ON THE ISRAELI MEDITERRANEAN SHELF: AGE-BASED STUDY
- 11:00** **SNYDERMAN** FROM EXTIRPATION TO EXTINCTION: HOLOCENE RANGE COLLAPSE OF THE GREAT AUK (*PINGUINUS IMPENNIS*)
- 11:15** **SMITH** THE THEORETICAL SIDE OF CONSERVATION PALEOBIOLOGY: A PERSPECTIVE FROM THE PALEOSYNTHESIS PROJECT
- 11:30** **KELLEY** DEVELOPING PEDAGOGIES TO FOSTER CORE COMPETENCIES FOR THE NEXT GENERATION OF CONSERVATION PALEOBIOLOGISTS: A WORKING GROUP PROGRESS REPORT
- 11:45** *discussion*

FRIDAY MORNING, JUNE 21, 2024
UNION ANDERSON
DEEP LEARNING IN DEEP TIME: APPLICATIONS OF AI
AND AUTOMATION IN PALEONTOLOGY
MODERATORS: Allison Hsiang and Meghan Forcellati

- 8:00 LESHNO AFRIAT** TESTING THE BOREAL-TETHYAN SHIFT OF NERINEOIDEAN GASTROPODS: TAXONOMIC CLASSIFICATION USING CONVOLUTIONAL NEURAL NETWORKS
- 8:15 HU** AUTOMATICALLY IDENTIFYING, DETECTING AND MEASURING OSTRACODS WITH DEEP LEARNING
- 8:30 HUANG** MICROFOSSIL AUTOMATIC IDENTIFICATION USING INTEGRATED DEEP-LEARNING MODELS
- 8:45 MULQUEENEY** ADVANCING HIGH-RESOLUTION TRAIT EXTRACTION IN THREE-DIMENSIONAL BIOLOGICAL IMAGES THROUGH DEEP LEARNING
- 9:00 ANEMONE** GEOSPATIAL PALEONTOLOGY: MODELING THE LOCATION OF FOSSIL LOCALITIES USING SATELLITE IMAGERY AND ARTIFICIAL INTELLIGENCE
- 9:15 JARIWALA** UTILIZING ARTIFICIAL INTELLIGENCE FOR EFFICIENT MORPHOLOGICAL DATA INTEGRATION
- 10:15 FORCELLATI** USING MACHINE LEARNING AND PHYLOGENETIC COMPARATIVE METHODS FOR PREDICTING ECOLOGY IN FOSSILS FROM INNER EAR BONY LABYRINTHS OF TOXICOFERANS (SQUAMATA, REPTILIA)
- 10:30 RODRIGUEZ** IDENTIFYING FLORISSANT LEAF FOSSILS TO FAMILY USING DEEP NEURAL NETWORKS
- 10:45 ADAIMÉ** RECONSTRUCTING THE DIVERSITY DYNAMICS OF LATE QUATERNARY EAST AFRICAN GRASSLANDS USING SUPERRESOLUTION IMAGING OF FOSSIL POACEAE POLLEN AND DEEP LEARNING
- 11:00 ROMERO** USING MACHINE LEARNING TO STUDY CHANGES IN THE LATITUDINAL DISTRIBUTION OF TERRESTRIAL PLANTS BETWEEN THE LATE PALEOCENE AND EARLY EOCENE IN NORTH AMERICA
- 11:15 PUNYASENA** DEVELOPMENT OF A HIGH-THROUGHPUT FOSSIL POLLEN ANALYSIS PIPELINE
- 11:30 BERV** 15,000 PASSERINE SKELETONS ILLUMINATE TIME-HETEROGENEOUS PATTERNS OF PHENOTYPIC INTEGRATION

FRIDAY MORNING, JUNE 21, 2024
UNION PENDLETON
FIRST PRINCIPLES, BOUNDLESS CURIOSITY –
CELEBRATING THE CONTRIBUTIONS OF DANIEL C. FISHER
MODERATORS: Sandra Carlson and Paul Koch

- 8:00** *introductory remarks*
- 8:15** **LAMSDALL** FOSSIL CHELICERATES AS AN EVOLUTIONARY CASE STUDY INTO MECHANISMS AND DRIVERS OF MORPHOLOGICAL CHANGE
- 8:30** **OCON** GROWING UP IN THE GRÈS À VOLTZIA: ONTOGENY IN *LIMULITELLA BRONNI*
- 8:45** **CARLSON** TESTING EVOLUTIONARY HYPOTHESES OF THECIDIDE BRACHIOPOD ORIGINS: HOMOLGY, HOMOPLASY, AND HETEROCHRONY
- 9:00** **PARINS-FUKUCHI** MACROEVOLUTIONARY AND PHYLOGENETIC CONSEQUENCES OF STABLE MORPHOLOGICAL POLYMORPHISM IN THE FOSSIL RECORD
- 9:15** **LEIGHTON** HUMAN IMPACTS, RATHER THAN THE LATITUDINAL PREDATION GRADIENT, DRIVE CRAB PREDATION ALONG THE WEST COAST OF NORTH AMERICA
- 9:30** **FOX** DENTAL ECOMORPHOLOGY OF MODERN NORTH AMERICAN RODENTS
- 9:45** **BADGLEY** THE PUZZLE OF MIOCENE MEGAHERBIVORE RICHNESS
- 10:15** **PLOTNICK** NO MORE MONKEYS JUMPING INTO THE BED: FIRST ORDER CONTROLS ON THE FOSSIL RECORD OF PRIMATES
- 10:30** **CROWLEY** DIGESTION BY BIRDS OF PREY IMPACTS THE ISOTOPIC COMPOSITION OF CONSUMED PREY: IMPLICATIONS FOR PALEOECOLOGICAL STUDIES
- 10:45** **ROUNTREY** “A STRIKING PATTERN OF INCREMENTAL LAMINATION”: GROWTH INCREMENTS IN VERTEBRATE TISSUES
- 11:00** **CERLING** UNSCRAMBLING THE OMELETTE – ISOTOPE INCORPORATION IN ANIMAL TISSUES AND METHODS FOR INTERPRETING ISOTOPE PROFILES IN TISSUES
- 11:15** **CHERNEY** HORMONES PRESERVED IN TUSKS ENHANCE LIFE-HISTORY ANALYSES OF PROBOSCIDEANS PAST AND PRESENT
- 11:30** **KOCH** PROTEIN METABOLISM IN EXTANT AND EXTINCT LARGE MAMMALS: DIFFERENCES IN *DE NOVO* AND GUT MICROBE AMINO ACID SYNTHESIS
- 11:45** **SELGER** LIFE HISTORIES IN THE HISTORY OF LIFE: A BIOGRAPHICAL APPROACH TO PALEONTOLOGY

FRIDAY MORNING, JUNE 21, 2024
UNION KUENZEL
GENERAL SESSION: PALEOBOTANY
MODERATORS: Indah Huegele and Edward Spagnuolo

- 8:00 LODUCA** MORE MICHIGAN MARINE MACROALGAE (SILURIAN, LLANDOVERIAN)
- 8:15 HUEGELE** EVOLUTIONARY MYSTERIES IN THE PLANE TREE (PLATANACEAE) FOSSIL RECORD
- 8:30 BUTRIM** TWO PATHWAYS OF PLANT RECOVERY AFTER THE END-CRETACEOUS MASS EXTINCTION IN THE DENVER BASIN, COLORADO
- 8:45 MORALES TOLEDO** BISEXUAL CLIMBERS OF ARACEAE IN DEEP TIME: A REEXAMINATION OF *ARTHMIOCARPUS HESPERUS* FROM THE LATE CRETACEOUS OF SOUTH DAKOTA
- 9:00 SPAGNUOLO** INTO- OR OUT-OF-INDIA? EARLY EOCENE POLLEN AND MACROFOSSILS FROM THE GHAZIJ FORMATION IN BALOCHISTAN, PAKISTAN TEST LONG-STANDING BIOGEOGRAPHIC HYPOTHESES
- 9:15 CORREA-NARVAEZ** A UNIQUE CARYOPHYLLALEAN FOSSIL AND THE TEMPTATIONS OF THE MODERN FAMILY
- 9:30 TADOUMANT** CLIMATE CHANGE IMPACTS ON ENDEMIC SPECIES IN THE CENTRAL PART OF MOROCCO: *ARGANIA SPINOSA* AS A CASE STUDY

FRIDAY MORNING, JUNE 21, 2024
UNION KUENZEL
WETLAND ECOLOGY THROUGH TIME
MODERATORS: Michelle Chrpá and Samuel Neely

- 10:15 CHRPA** MG/CA OF CRINOIDS AND PLANTS IN COAL BALLS FROM THE MID-MOSCOVIAN THROUGH KASIMOVIAN OF THE LATE PALEOZOIC MIDCONTINENT SEAWAY
- 10:30 SCOTT** THE RISE OF ARBORESCENT LYCOPHYTES AS KEYSTONE SPECIES
- 10:45 JACKSON** ALETHOPTERID OR NEUROPTERID? DISTINGUISHING *MYELOXYLON* IN COAL BALLS
- 11:00 RAYMOND** LARGE DEBRIS IN PALEOZOIC AND MODERN PEAT
- 11:15 NEELY** ECOSYSTEM ENGINEERING THROUGH TIME: THE ROLE OF POST-PALEOZOIC DETRITIVORES IN PEATLANDS
- 11:30 MARTIN** TRACES OF ECOLOGICAL RECOVERY IN PALEOCENE FRESHWATER ECOSYSTEMS AT CORRAL BLUFFS (DENVER BASIN), COLORADO

FRIDAY MORNING, JUNE 21, 2024
UNION WOLVERINE
PALEOBIOLOGY OF CARNIVOROUS MAMMALS
MODERATORS: John D. Orcutt and Mairin Balisi

- 8:00** **ORCUTT** BODY SIZE & *BASSARISCUS*
- 8:15** **MORETTI** WILDCAT SKELETONS FROM NATURAL BRIDGE CAVERNS OFFER INSIGHTS INTO THE DIVERSITY OF SMALL FELINES IN THE LATE QUATERNARY OF TEXAS
- 8:30** **POUST** A NEW CARNIVORAMORPHAN FROM THE EOCENE FRIARS FORMATION OF SOUTHERN CALIFORNIA
- 8:45** **RILEY** FIRST CRANIUM OF THE ENIGMATIC ARCHAIC UNGULATE MAMMAL “*CARCINODON*” IN THE DENVER BASIN, COLORADO, PROMPTS REEVALUATION OF THAT GENUS
- 9:00** **AMANE** BASILOSOURIDAE (MAMMALIA, CETACEA) FROM THE SAHARA DESERT OF SOUTHWESTERN MOROCCO
- 9:15** **LOWERY** CARNIVORAN BIRTH CERTIFICATES: UTILIZING MULTIPLE VISUALIZATION METHODS TO PINPOINT DENTAL NEONATAL LINES IN NEW TAXA
- 9:30** **ROTHSCHILD** CRANIAL CHANNELS AND SUPRA-PARIETAL VASCULAR PLEXUSES: IMPLICATIONS FOR BRAIN THERMOREGULATION IN MAMMALIAN CARNIVORES
- 10:15** **KORT** SPEED OR ENDURANCE: WHAT IS THE ECOLOGICAL ADVANTAGE OF CURSORIALITY IN CARNIVORANS? (30-minute keynote)
- 10:45** **LOPEZALLES** THE SHAPE OF SPEED: THE RELATIONSHIP BETWEEN 3D HUMERUS SHAPE AND MAXIMUM RUNNING SPEED
- 11:00** **POLLY** THE ASSEMBLY OF NEW WORLD CAT COMMUNITIES: ECOMETRICS AND NEOGENE LOCOMOTOR TRAIT TURNOVER
- 11:15** **EVERETT** MORPHOMETRIC ANALYSIS OF ARCTOID UPPER CARNASSIAL TEETH CORRELATES SHAPE WITH DIET AND PHYLOGENY
- 11:30** **DESANTIS** ECOLOGICAL RESONANCE: UNRAVELING THE HUNTING BEHAVIOR AND DIETARY ECOLOGY OF THE AMERICAN LION (*PANTHERA ATROX*), AN INFERRED DEPARTURE FROM AFRICAN LIONS
- 11:45** **MUNSON** PREDATOR-PREY DYNAMICS OF DIRE WOLVES AND THEIR PREY IN THE CONTEXT OF CHANGING CLIMATE, LATE PLEISTOCENE-EARLY HOLOCENE, CUTLER HAMMOCK SITE, FLORIDA, U.S.A.

FRIDAY MORNING, JUNE 21, 2024
UNION 2210
BROADENING ACCESSIBILITY IN PALEONTOLOGY THROUGH
INNOVATIVE COMMUNITY ENGAGEMENT PRACTICES
MODERATORS: Jeanette Pirlo and Carmi Thompson

- 8:00** **PORCELLO** HOOKING ELEMENTARY STUDENTS INTO A LOVE OF SCIENCE WITH FOSSILS
- 8:15** **INMAN** EVALUATING THE EFFICACY OF INFORMAL EDUCATION THROUGH MUSEUM POP-UP DISPLAYS AT CALIFORNIA STATE UNIVERSITY, STANISLAUS'S VASCHÉ LIBRARY
- 8:30** **BOLGER** PALEO PODCASTS: USING PARTICIPATORY NARRATIVE INQUIRY TO EVALUATE STUDENT LEARNING IN A 4-H PALEONTOLOGY SUMMER CAMP
- 8:45** **EL-SAYED** ADVANCEMENTS IN EGYPTIAN VERTEBRATE PALEONTOLOGY: MUVP'S CONTRIBUTIONS AND FUTURE PERSPECTIVES
- 9:00** **HOPPS** PLACE-BASED FOSSIL KITS FOR ACCESSIBLE PALEONTOLOGICAL EDUCATION
- 9:15** **THOMPSON** OTHER STRATIGRAPHIES, OTHER NARRATIVES: EXPLORING POST HUMAN METHODOLOGIES IN PALEOBIOLOGY EDUCATION
- 9:30** **FRANCEK** FROM DISCOVERY TO INTERNATIONAL NEWS: A UTILITY AGENCY'S STEWARDSHIP AND PUBLIC OUTREACH OF A CALIFORNIA FOSSIL SITE
- 10:15** **XU** EXPLORING STRATEGIES FOR FACILITATING INTERNATIONAL COLLABORATIONS TO ENHANCE PALEONTOLOGICAL RESEARCH
- 10:30** **SANTOS** COSPLAY FOR SCIENCE: AN AMBITIOUS CROSSOVER OF POP CULTURE AND SCIENCE EDUCATION
- 10:45** **LEPORE** INTERROGATING ABLEISM AND THE PRIVILEGE OF SCIENCE: STUDENT PERCEPTIONS OF ACCESSIBILITY AND DISABILITY IN PALEONTOLOGY COLLEGE CLASSROOMS
- 11:15** **WHITE** ADVANCING COMMUNITY COLLEGE EDUCATION AND STUDENT SUCCESS (ACCESS) AT THE UNIVERSITY OF CALIFORNIA MUSEUM OF PALEONTOLOGY: SEVEN YEARS OF EXPANDING ACCESS AND BUILDING NEW PARTNERSHIPS OPPORTUNITIES

FRIDAY MORNING, JUNE 21, 2024
UNION POND
AVOCATIONAL CLUBS AS PALEONTOLOGICAL RESOURCES
MODERATORS: David Clark and Jennifer Bauer

- 8:00 CLARK** YOU'VE GOT A FRIEND IN ME – 20 YEARS IN THE FRIENDS OF THE UNIVERSITY OF MICHIGAN MUSEUM OF PALEONTOLOGY
- 8:15 MCCALL** FOSSIL CLUBS – PAST, PRESENT AND FUTURE? THE 10,000 FT VIEW
- 8:30 BISSETT** DISCOVERIES IN THE SILURIAN OF INDIANA: FOUR DECADES OF COLLABORATION BETWEEN AVOCATIONAL AND PROFESSIONAL PALEONTOLOGISTS
- 8:45 COOPER** CONTRIBUTIONS OF AN AVOCATIONAL INVERTEBRATE PALEONTOLOGIST TO RESEARCH COLLECTIONS AND PROFESSIONAL PAPERS
- 9:00 SHOEMAKER** AMATEUR CONTRIBUTIONS TO PALEONTOLOGY: A MIDWESTERNER'S EXPERIENCE
- 9:15 PANKOWSKI** DIGGING ONLINE AND PARTNERING WITH PALEONTOLOGISTS TO DISCOVER NEW SPECIES AND PREHISTORIC BEHAVIOR
- 9:30 KONIECKI** AN AMATEUR'S CONTRIBUTIONS TO PALEONTOLOGY
- 10:15 STOKES** DIGGING FOR TRILOBITES, SCIENCE EDUCATION, AND LONG-TERM SUSTAINABILITY AT PENN DIXIE FOSSIL PARK IN BUFFALO, NY
- 10:30 WESTGAARD** AN INTRODUCTION TO THE HILL ANNEX PALEONTOLOGY PROJECT: A NEW RESEARCH PROGRAM EXAMINING THE CRETACEOUS SYSTEMS OF THE MINNESOTA REGION
- 10:45 KAPLAN** EMPOWERING CLUBS TO ADVISE ON ACADEMIC GRANT PROPOSALS' BROADER IMPACTS SECTIONS: FULFILLING AVOCATIONAL NEEDS WHILE BOOSTING GRANT FUNDING RATES
- 11:00 SHOEMAKER** INSPIRING PUBLIC ENTRY INTO AVOCATIONAL PALEONTOLOGY: IMPEDIMENTS AND INITIATIVES
- 11:15** *discussion (45 minutes)*

FRIDAY AFTERNOON, JUNE 21, 2024
UNION ANDERSON
INTEGRATED APPROACHES TO EXPLORING COUPLED BIOTIC,
LANDSCAPE AND CLIMATE DYNAMICS
MODERATORS: David Fox and Rebecca Terry

- 1:15** **WEAVER** ON THE ROLE OF TECTONICS IN STIMULATING THE CRETACEOUS DIVERSIFICATION OF MAMMALS
- 1:30** **HARDY** QUANTIFYING PRESERVATION OF MODERN RODENT SPECIES IN THE FOSSIL RECORDS OF COLORADO AND ECUADOR
- 1:45** **MARDER** THE IMPACT OF MOUNTAIN BUILDING ON BIODIVERSITY OF SMALL TO MEDIUM SIZED TERRESTRIAL MAMMALS IN DEEP TIME
- 2:00** **DOLBY** CAPTURING THE NUANCE OF PHYSIOGRAPHIC BARRIERS: AN EXAMPLE FROM RIVERS
- 2:15** **TERRY** DIVERSITY UP MOUNTAINS: QUANTIFYING THE ROLE OF CANYON GEOMORPHOLOGY ON ELEVATIONAL DIVERSITY GRADIENTS
- 2:30** **WYATT** SPATIAL DIVERSITY AND TRAIT DISPARITY OF MODERN HETEROMYIDAE (RODENTIA) WITH IMPLICATIONS FOR THE RELATIONSHIP BETWEEN DYNAMIC LANDSCAPES AND EVOLUTIONARY HISTORY OVER DEEP TIME
- 2:45** **PENG** MODERN BIOLOGICAL DIVERSITY GRADIENTS AND THEIR IMPLICATIONS FOR THE FOSSIL RECORD: A CASE STUDY IN NORTH AMERICAN RODENTS
- 3:30** **WANG** BIOGEOGRAPHY AND ISOTOPE ECOLOGY OF EXTANT HERBIVOROUS ARTIODACTYLS, WITH IMPLICATIONS FOR PALEOECOLOGY
- 3:45** **REID** BAT GUANO RECORDS OF PAST CLIMATE AND ENVIRONMENT FROM SOUTHWEST VIRGINIA: EXCAVATING THE FORGOTTEN GRASSLANDS OF THE SOUTH
- 4:00** **WING** A NEW APPROACH FOR COMPARING PALEOCLIMATE MODEL RESULTS AND FOSSIL PLANT DISTRIBUTIONS
- 4:15** **STILES** MID-HIGH LATITUDE FOREST EXPANSIONS ACROSS THE EARLY EOCENE CLIMATIC OPTIMUM IN SOUTH AMERICA: PHYTOLITH RECORDS FROM THE SAN JORGE BASIN OF ARGENTINE PATAGONIA
- 4:30** **HOPKINS** HOLARCTIC SMALL MAMMALS SHOW HETEROGENEOUS RESPONSES TO THE SPREAD OF OPEN HABITATS DURING THE MIDDLE AND LATE CENOZOIC
- 4:45** **SAMUELS** MAMMAL COMMUNITY EVOLUTION THROUGH THE CENOZOIC OF OREGON WAS DRIVEN BY CLIMATE CHANGES AND GEOLOGIC INFLUENCES
- 5:00** **KELLER** CLIMATE CHANGE AND BIODIVERSITY LOSS SHAPE MICROMAMMAL COMMUNITY ECOLOGY OVER THE LAST 22,000 YEARS AT HALL'S CAVE, TEXAS
- 5:15** **ZELDITCH** LANDSCAPE, CLIMATE AND ECOLOGY INTERACT TO SHAPE REGIONAL SPECIES ASSEMBLAGES

FRIDAY AFTERNOON, JUNE 21, 2024
UNION KUENZEL
REEF PALEOECOLOGY IN TIME AND SPACE
MODERATORS: Aaron O’Dea and Katie Cramer

- 1:15 VAYDA** CAMBRIAN REEFS PROVIDED A FOUNDATION FOR THE CAMBRIAN EXPLOSION: EVIDENCE FROM SMALL SHELLY FOSSIL ASSEMBLAGES FROM YUKON, CANADA
- 1:30 LI** MESOPHOTIC REEFS IN THE SILURIAN: INSIGHTS FROM SOUTH CHINA
- 1:45 GODBOLD** TEMPORAL DYNAMICS OF DEVONIAN REEF COMMUNITIES: INSIGHTS FROM A 3.9 MILLION-YEAR STUDY IN WESTERN AUSTRALIA
- 2:00 SCHNEIDER** TRENDS IN BIOTRAME-OFF BIOTRAME PALEONTOLOGY, SEDIMENTOLOGY, AND DIAGENESIS IN THE WATERWAYS FORMATION (LATE DEVONIAN) FROM ALBERTA, CANADA
- 2:15 LORD** MISSISSIPPIAN (EARLY SERPUKHOVIAN ~331–327 MA) FRAMEWORK REEFS HIDDEN IN THE CAVES OF PIGEON MOUNTAIN IN NORTHWESTERN GEORGIA, U.S.A.
- 2:30 KIESSLING** PHANEROZOIC REEF BUILDING IN RELATION TO CLIMATE CHANGE
- 2:45 DIMITRIJEVIC** CASCADING EFFECTS OF REEF CRISES
- 3:30 DUSSEAUT** NOT ALL TURBIDITY IS EQUAL: THE OCCURRENCE OF DIVERSE PLEISTOCENE REEFS IN A DELTA FRONT SETTING AT THE PALAEO-KAMBANIRU RIVER MOUTH
- 3:45 O’QUIN** UNCOVERING THE PAST: UTILIZING INVERTEBRATE SUB-FOSSIL ASSEMBLAGES FROM BELIZEAN LAGOONAL REEFS TO DETERMINE DRIVERS AND TIMING FOR CARIBBEAN REEF ECOSYSTEM DECLINE
- 4:00 CHANDROTH** ROLE OF REDUNDANCY AND ECOPHENOTYPIC VARIATIONS OF CORALS ON REEF STABILITY
- 4:15 CYBULSKI** NITROGEN STABLE ISOTOPES FROM CORAL FOSSILS CONTEXTUALIZE CLIMATE-ECOLOGY-HUMAN INTERACTIONS THROUGH MILLENNIA (*45-minute keynote*)
- 5:00** *discussion*

FRIDAY AFTERNOON, JUNE 21, 2024
UNION WOLVERINE
PALEOBIOLOGY OF CARNIVOROUS MAMMALS
MODERATORS: John D. Orcutt and Mairin Balisi

- 1:15 VALENZUELA-TORO** DIVING THROUGH SHALLOW AND DEEP TIME: UNRAVELING THE (PALEO) ECOLOGY AND ECOMORPHOLOGY OF MARINE CARNIVOROUS MAMMALS *(30-minute keynote)*
- 1:45 CHURCHILL** DISPARITY IN CRANIAL TELESCOPING IN WHALES (ARTIODACTYLA: CETACEA) THROUGH TIME
- 2:00 BARRETT** MOSAIC EVOLUTION UNDERLIES FELIFORM MORPHOLOGICAL DISPARITY
- 2:15 DOUGHTY** FUNCTIONAL GROUP RICHNESS OF NORTH AMERICAN LARGE MAMMALIAN PREDATORS AND HERBIVORES WERE POSITIVELY CORRELATED OVER THE CENOZOIC
- 2:30 CHRISTISON** EARLY (WASATCHIAN) AND LATE EOCENE (CHADRONIAN) CREODONT AND CARNIVORAMORPHAN NICHE OCCUPATION IN NORTH AMERICA
- 2:45 BALISI** A WORLD OF SMALLER ANIMALS: ECOMORPHOLOGICAL AND BIOGEOCHEMICAL SHIFTS IN MESOCARNIVORES FOLLOWING THE PLEISTOCENE MEGAFaUNAL EXTINCTIONS

FRIDAY AFTERNOON, JUNE 21, 2024
UNION WOLVERINE
FOSSIL FORCES: ADVANCES IN BIOMECHANICS AND
IMAGING IN PALEONTOLOGY
MODERATORS: Alec Wilken and Casey Holliday

- 3:30 BYRNE** INTEGRATING VERTEBRAL MORPHOLOGY AND HISTOLOGIC CORRELATES TO ELUCIDATE DIVERGING PATTERNS OF CARDIOPULMONARY SYSTEM EVOLUTION IN TERRESTRIAL VS SECONDARILY AQUATIC ARCHOSAURS
- 3:45 WILKEN** BONE DISTRIBUTION, LOAD PATHS, AND A NEW FRAMEWORK OF MANDIBLE FUNCTION FOR RECONSTRUCTING OF MAMMALIAN JAW EVOLUTION
- 4:00 MAGALLANES** FUNCTIONAL MORPHOLOGY OF ASYMMETRICAL ROOTS IN THE LOWER MOLARS OF JURASSIC DRYOLESTOIDEAN MAMMALS AND THEIR BIOMECHANICAL IMPLICATIONS
- 4:15 LI** KINEMATIC MOBILITY AND MODULARITY OF ANCESTRAL MAMMALIAN HYOID
- 4:30 DUDGEON** DISPARATE FEEDING MECHANICS BETWEEN A CONTEMPORANEOUS LAMBEOSAURINE AND HADROSAURINE (ORNITHOPODA: HADROSAURIDAE) SUPPORT THE POTENTIAL FOR NICHE PARTITIONING
- 4:45 SELLERS** THE ORIENTATION OF THE QUADRATE BONE COEVOLVED WITH JOINT REACTION FORCE DURING CROCODILE EVOLUTION
- 5:00 HOLLIDAY** AVIAN CRANIAL KINESIS IS THE RESULT OF INCREASED ENCEPHALIZATION DURING THE ORIGIN OF BIRDS

FRIDAY AFTERNOON, JUNE 21, 2024
UNION 2210
ANSWERING BIG QUESTIONS WITH SMALL FOSSILS:
HIGH-RESOLUTION BIODIVERSITY DYNAMICS IN DEEP TIME
MODERATORS: Anieke Brombacher and Huai-Hsuan M. Huang

- 1:15 TOMASOVYCH** FUNCTIONAL FORM OF SPECIES-TIME RELATIONSHIP IS NOT POWER-LAW IN MOST LONG TIMESERIES
- 1:30 ELKIN** AN ONTOGENETIC MORPHOMETRIC APPROACH TO RECONSTRUCTING THE LATE CRETACEOUS PHYLOGENY OF BISERIAL PLANKTONIC FORAMINIFERA
- 1:45 MANOOGIAN** DID THE DECCAN VOLCANIC EVENT CAUSE BIOTIC STRESS AND EXTINCTIONS OF LATEST CRETACEOUS PLANKTONIC FORAMINIFERA?
- 2:00 LU** SEPARATING THE PLANKTONIC AND BENTHIC FORAMINIFERAL RESPONSE TO ENVIRONMENTAL CHANGES ACROSS THE EOCENE-OLIGOCENE TRANSITION
- 2:15 JONES** ARE COMMUNITY TRAIT CHANGES A RESULT FROM ENVIRONMENTAL DRIVERS OR SHIFTS IN SPECIES COMPOSITION?
- 2:30 JAMSON** INVESTIGATING THE RESPONSES OF DEEP SEA SEDIMENTS TO CENOZOIC PALEOCLIMATE AND PALEOCEANOGRAPHIC EVENTS USING DATA SYNTHESIS AND THE EODP PROJECT
- 2:45 HUNT** USING STATE SPACE MODELS TO UNDERSTAND THE EVOLUTION OF MORPHOLOGY IN THE LAKE DIATOM *STEPHANODISCUS YELLOWSTONENSIS* OVER THE PAST 14,000 YEARS
- 3:30 CERASONI** PALAEOECOLOGY AND *G. DORYSSUS* EVOLUTION IN A MIOCENE DIATOMITE PALEOLAKE WITHIN THE TRUCKEE FORMATION, HAZEN, NEVADA
- 3:45 KAHANAMOKU-MEYER** HIGH-THROUGHPUT PHENOTYPING REVEALS A 19TH-CENTURY DECLINE IN CLONAL REPRODUCTION OF BENTHIC FORAMINIFERA IN THE SANTA BARBARA BASIN, CALIFORNIA
- 4:00 BENNETT** REEF-LECTING ON THE CAMBRIAN: TAXONOMIC REVISION AND LATERAL DISTRIBUTIONS OF SMALL SHELLY FAUNAS FROM REEF-ADJACENT FACIES OF THE UPPER HARKLESS FORMATION, NEVADA
- 4:15 HARRIS** REDEFINING AND CONTEXTUALIZING PALEOZOIC ECHINODERM DIVERSITY DYNAMICS
- 4:30 DENG** DO NOVEL FUNCTIONS DRIVE DIVERSIFICATION IN CENOZOIC ANOMALODESMATA (BIVALVIA)?
- 4:45 FALK** MICRO- AND MACROFOSSIL REMAINS OF VERTEBRATES FROM THE GIVETIAN BOYLE FORMATION (MIDDLE DEVONIAN) OF EASTERN KENTUCKY, USA
- 5:00 WILSON** INTEGRATING MICROVERTEBRATE FOSSILS AND MOLECULAR PHYLOGENIES TO BETTER UNDERSTAND THE DIVERSITY DYNAMICS OF FRESHWATER FISH ACROSS THE K/PG MASS EXTINCTION EVENT
- 5:15 LEDESMA** CHANGES IN A CENTRAL TEXAS LIZARD COMMUNITY IN RESPONSE TO SHIFTING VEGETATION AND CLIMATE OVER THE LAST 16,000 YEARS

FRIDAY AFTERNOON, JUNE 21, 2024
UNION POND
PROGRESS IN PROBOSCIDEAN PALEONTOLOGY
MODERATORS: Advait Jukar and William Sanders

- 1:15 LISTER** THE EVOLUTION OF MAMMOTHS: MORPHOLOGY MEETS DNA (*30-minute keynote*)
- 1:45 ANINY** DISCOVERY OF BARYTHERIUM REMAINS (MAMMALIA: PROBOSCIDEA) FROM THE MIDDLE EOCENE OF MOROCCO: IMPLICATIONS FOR MORPHOLOGY, PHYLOGENY AND PALEOGEOGRAPHY
- 2:00 SANDERS** WINNERS AND LOSERS IN AFRO-ARABIAN PROBOSCIDEAN EVOLUTION
- 2:15 SAARINEN** EVOLUTION OF PROBOSCIDEAN DENTAL FUNCTIONAL TRAITS – HOW ARE THEY RELATED TO VEGETATION AND CLIMATE?
- 2:30 WIDGA** WE THOUGHT WE KNEW YOU: EVOLVING PERSPECTIVES ON THE ORIGINS, BIOGEOGRAPHY, AND MORPHOLOGY OF THE AMERICAN MASTODON, *MAMMUT AMERICANUM*
- 2:45 HULBERT** PROBOSCIDEA (MAMMUTIDAE AND GOMPHOTHERIIDAE) FROM THE LATE MIOCENE MONTBROOK LOCALITY, FLORIDA, USA: TAPHONOMY, PALEOBIOLOGY, AND PHYLOGENETIC IMPLICATIONS
- 3:00 JUKAR** THE IDENTITY OF AMEBELODONTIDS FROM MIXSON’S BONE BED AND ITS BIOGEOGRAPHIC IMPLICATIONS
- 3:30 ARROYO-CABRALES** MEXICAN CONTRIBUTIONS ON KNOWLEDGE ON THE BIOLOGY OF PLEISTOCENE COLUMBIAN MAMMOTH (*MAMMUTHUS COLUMBI*)
- 3:45 CRUZ** THE MAMMOTHS AT THE AIRPORT IN MEXICO CITY AFTER EXCAVATIONS
- 4:00 LINDSEY** WHAT’S THE DEAL WITH PROBOSCIDEANS AT RANCHO LA BREA?
- 4:15 MILLER** GAPS IN THE FOSSIL RECORD PROVIDE NEW INSIGHT INTO MAMMOTH EXTINCTION DYNAMICS
- 4:30 PARDI** WHAT IS THE FUNCTIONAL EQUIVALENT OF A MAMMOTH?
- 4:45 BUTLER** PATHOLOGY PREVALENCE IN PROBOSCIDEAN POPULATIONS AS A PALEOENVIRONMENTAL PROXY
- 5:00 GARAPATI** EARLY-LIFE ENDOCRINOLOGY IN MODERN AND PREHISTORIC PROBOSCIDEANS REVEALED THROUGH STEROID ANALYSES OF HAIR AND DENTIN
- 5:15 SHIRLEY** MAMMOTH TUSK CT-DERIVED REPRODUCTIVE LIFE HISTORIES FROM EASTERN SIBERIA AND THE CONSERVATION BIOLOGY OF ELEPHANTS

FRIDAY POSTERS, JUNE 21, 2024
UNION IDEA HUB
PRESENTERS SHOULD ATTEND POSTERS FROM 5:30-6:15

LESSONS LEARNED AND FUTURE VISIONS FOR CONSERVATION PALEOBIOLOGY

- 1 **BRUCE** ECOMETRIC MODEL FOR BODY MASS AND TEMPERATURE WITHIN GLOBAL TERRESTRIAL CARNIVORAN COMMUNITIES
- 2 **DEPAOLIS** MICROPLASTICS IN VIRGINIA'S EASTERN SHORE: ESTABLISHING A BASELINE FOR FUTURE CONSERVATION PRACTICES
- 3 **GÓMEZ** RECONSTRUCTING SPATIAL VARIATION IN SHARK COMMUNITIES ACROSS THE ISTHMUS OF PANAMÁ USING FOSSIL DERMAL DENTICLES
- 5 **LONG-FOX** GEOMETRIC MORPHOMETRICS AS A TOOL FOR CONSERVATION PALEOBIOLOGY: DETECTING ENVIRONMENTAL CHANGE USING LIVE-DEAD COMPARISONS OF LUCINID BIVALVE SHELL SHAPES AND SIZE
- 6 **MASCHLER** DIETARY GENERALISM OF PLEISTOCENE COYOTES FROM THE MCKITTRICK AND RANCHO LA BREA ASPHALT SEEPS, SOUTHERN CALIFORNIA, USA
- 7 **SANDERS** LIVE-DEAD DATA FROM BENTHIC MARINE SURVEYS OF THE EASTERN GULF OF MEXICO REVEAL POSSIBLE RANGE CONTRACTION IN AN IUCN RED LIST CONE SNAIL
- 8 **SONI** LESSONS FROM THE PAST: INSIGHTS FROM LATE PLEISTOCENE MARINE INVASIONS INTO SOUTHERN CALIFORNIA
- 9 **SPANO** WHERE THE WILD THINGS WERE: AN ONLINE, INTERACTIVE, AND ACCESSIBLE ATLAS OF ANIMAL LOSSES FROM THE PLEISTOCENE TO TODAY
- 10 **SUH** FOSSIL BOBCATS: A LENS TOWARD UNDERSTANDING RESILIENCE TO ANTHROPOGENIC CHANGE
- 11 **WANG** FOSSILS OF AN ENDANGERED, ENDEMIC, GIANT DIPTEROCARP TREE UNLOCK A HISTORICAL PORTAL INTO BORNEO'S VANISHING RAINFORESTS
- 12 **WITTMER** HISTORY OF INTERLOCKING THREATS USING JOINT BIOSTRATIGRAPHY OF MOLLUSKS AND OSTRACODES: SPECIES INVASION AND CULTURAL EUTROPHICATION IN THE WESTERN FINGER LAKES OF NEW YORK
- 13 **YU** DETANGLING EQUATORIAL INDIAN OCEAN OXYGENATION, VENTILATION, AND DIAGENESIS WITH BULK AND FORAMINIFERA SHELL-BOUND $\delta^{15}N$ ACROSS THE LAST TWO GLACIAL TERMINATIONS

GENERAL SESSION: PALEOBOTANY

- 14 **BAGHAI-RIDING** PALYNOLOGY OF A LATE CRETACEOUS VERTEBRATE SITE IN NORTHEASTERN MISSISSIPPI, U.S.A. – IMPLICATIONS FOR FLORISTICS, BIOSTRATIGRAPHY AND CLIMATE
- 15 **CONTRERAS** RECONSTRUCTING THE COASTAL VEGETATION OF CENOMANIAN SOUTHWESTERN APPALACHIA: AN INTEGRATED STUDY OF PLANT FOSSILS AND SEDIMENTS OF THE LEWISVILLE FORMATION (WOODBINE GROUP), DALLAS-FORT WORTH TEXAS, U.S.A.
- 16 **HOLIAN** DINOSAURS PERISHED BUT FERNS FLOURISHED: RESILIENT FLORA DURING THE CRETACEOUS-PALEOGENE MASS EXTINCTION
- 17 **WHITE** DOCUMENTING THE EARLY CONIACIAN *PEDIASTRUM* ACME BIO-EVENT IN A THIRD SECTION FROM THE NUMANHA FORMATION, YOLA BASIN, NIGERIA

WETLAND ECOLOGY THROUGH TIME

- 18 **BEDDOW** ASSESSING GEOCHEMISTRY OF CARBONIFEROUS COAL BALLS ALONG THE EQUATOR

INTEGRATED APPROACHES TO EXPLORING COUPLED BIOTIC, LANDSCAPE AND CLIMATE DYNAMICS

- 19 **LAVIN** REVEALING PATTERN AND PROCESS OF EAST AFRICAN RODENT DIVERSITY

FIRST PRINCIPLES, BOUNDLESS CURIOSITY – CELEBRATING THE CONTRIBUTIONS OF DANIEL C. FISHER

no posters for this session

DEEP LEARNING IN DEEP TIME: APPLICATIONS OF AI AND AUTOMATION IN PALEONTOLOGY

- 20 **AL-ZAYADI** APPLICATION OF MACHINE LEARNING AND ECOLOGICAL NICHE MODELING IN THE PREDICTION OF NEANDERTHAL SETTLEMENTS IN PREHISTORIC AUSTRIA
- 21 **MATE** THROUGH THE SIEVE AND THE ACID BATH: SAMPLE PREPARATION AND TAPHONOMIC BIASES OF SMALL SHELLY FAUNAS FROM THE CAMBRIAN (SERIES 2: STAGE 3) OF SOUTH AUSTRALIA

REEF PALEOECOLOGY IN TIME AND SPACE

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