

# 93<sup>rd</sup> Annual Meeting

of the American Association of Biological Anthropologists

March 20-23, 2024 · Los Angeles, CA

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#### PROGRAM OF THE

# 93<sup>RD</sup> ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF BIOLOGICAL ANTHROPOLOGISTS

MARCH 20-23, 2024

#### To be held at JW Marriott LA Live

900 W Olympic Blvd, Los Angeles, CA 90015

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#### **Program Assistant**

Amber Jaeger

#### Los Angeles Advance Team

C. Eduardo Amorim Steven R. Leigh Kristi L. Lewton Stephanie Meredith David Raichlen Amy Rector

#### **Local Arrangements Committee**

Kristi L. Lewton Stephanie Meredith David Raichlen

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#### **GOLD**



#### **SILVER**





#### **BRONZE**

**A**R The Anatomical Record

Welcome to the 93<sup>rd</sup> Annual Meeting of the American Association of Biological Anthropologists (AABA) in Los Angeles, California. Vice President and Program Committee Chair Kristi Lewton and the Program Committee have organized an impressive line-up of scientific sessions, symposia, workshops, and other events that address the most timely and critical topics in our discipline. We are pleased to offer both in-person and virtual, live-streamed components. This annual meeting promises to be one of our most accessible and engaging, both during and after the live events between March 20-23, 2024.

Be sure to take a few minutes to review the program schedule and Vice President Lewton's Welcome Message, as there are significant changes from previous years.

AABA holds a scientific conference every year in order to build and nurture the biological anthropology academic community. As you begin to prepare for the 2024 annual meeting, I invite you to give specific thought as to how you can contribute to our sense of community. As you look through the program, I want to highlight a number of events that provide opportunities of note for building community:

Make an extra effort to participate positively in student-oriented events. From the Committee on Diversity's Undergraduate Research Symposium and Reception on Wednesday (6-8pm, Diamond Ballroom) to the numerous students competing during regular scientific sessions for presentation awards, bring your enthusiasm and patience to support these young scholars as they develop into the next generation of Biological Anthropologists.

Participate in the **Business Meeting** on Friday evening at 6:30 pm (Room Platinum D). In order to be responsible members of AABA, we all need to be informed about how the Association functions. We need your input to make sure that all voices and opinions are heard and considered. In addition to the many other important tasks we cover during the Business Meeting, this year, we will vote to finalize a revision of our *Constitution and By-Laws*, updating the directives for annual conference Local Arrangement Committees.

Bring your perspective to the Presidential Panel Funding our Priorities: Past, Present, and Future of the AABA on Saturday from 12:30-2:15 pm (Room Platinum D). Thanks to wise financial decisions made by past AABA leadership, our Association has investments that provide significant annual income in addition to membership fees and conference registrations. The decision was made many years ago that these investment funds would subsidize the annual meeting, making registration fees much more affordable for our academic community. Looking forward, is this still the wisest use of these investment funds? The 2024 Presidential Panel brings this conversation to the broader community. Please come with your questions and opinions as to what AABA's future funding priorities should be.

Don't forget to attend the **Student Awards Closing Reception and Hooding Ceremony** on Saturday (7-9pm, Room Gold 1-2) to offer congratulations to the winners, cheer recent PhDs during the Hooding Ceremony, and celebrate the close of our annual meeting with colleagues old and new.

Keep an eye open for our award-winners and give them a hearty congratulations.

A key part of our conference is celebrating the truly stellar achievements of our colleagues in several areas. Our most prestigious research award, the *Charles R. Darwin Lifetime Achievement Award* for 2024 is awarded to **Dr. Laurie Godfrey**. The *Gabriel W. Lasker Service Award* for 2024 is given to **Dr. Steve Leigh**. The *AABA and Leakey Foundation Communication and Outreach Award in honor of Camilla M. Smith* is awarded to **Dr. Tina Lasisi**. The details of their accomplishments will be presented in detail during the Business Meeting on Friday at 6:30pm. Additionally, we will celebrate the winners of the *Cobb Professional Development Grants and the Politzer Student Travel Awards*.

On Saturday afternoon, come celebrate the lives of colleagues who passed away since our last annual meeting. This year, we have changed how we remember our colleagues who have passed recently. Instead of detailing our colleagues' lives in the annual business meetings, we will list these colleagues during the business meeting. And then on Saturday, we'll hold a session with poster presentations for each colleague. This will provide us with more time to learn about, reminisce, and celebrate our colleagues without the time constraints of our annual business meeting. The Saturday afternoon session is from 4:15-5:15 in Platinum J. All are welcome and encouraged to attend this celebration of life.

I also encourage you to **find a community group** that you identify with and meet up. There are a wide-range of groups that have formed within AABA who will be holding meet-ups of various types. Be sure to look through the program for the full offering of opportunities, but to highlight a few:

- Student Meet and Greet (Wednesday from 5-6pm in Georgia I),
- Committee on Diversity (COD) Women's Initiative Happy Hour (Wednesday from 5-6pm in Georgia II),
- Art, Culture and Science Engagement Exhibition (Thursday from 12:15-2:15 pm in the Diamond Ballroom),
- COD's **Disability Organizational Meeting** (Thursday from 11am-12pm in Atrium II) and discussion on mentoring on Friday from 2:15-4:15 pm in Gold 4,
- COD International and IDEAS mixer (Thursday from 5-6pm in Atrium II),

- Black in Biological Anthropology Group's networking social on Thursday from 5-7pm in Gold 3 (for more, see www.blackinbioanth.org)
- Biological Anthropology Women's Mentoring Network Happy Hour on Thursday from 6-8pm, off-site at Beelman's on 600 S Spring St. (~30 minute walk from the JW Marriott Los Angeles Hotel),
- The inaugural meeting of the nascent COD Native and Indigenous Biological Anthropologists Group on Friday from 10-11am, offsite at Bluestone Lane Coffee at 1260 S Figueroa St (~12 minute walk from JW Marriott),
- COD's LGBTQQIAA business meeting on Friday from 12:30-2pm in Platinum C.
- COD's newest subcommittee, South Asian Biological Anthropologists (SABA) is also being developed. Please reach out to Co-Chairs Sheela Athreya and Sabrina Agarwal for information.

Be sure to also check out events organized by AABA's cognate associations, the **Human Biology Association** (humbio.org), **American Association of Anthropological Genetics** (anthgen.org), **Dental Anthropology Association** (www.dentalanthropology.org), and the **Paleopathology Association** (paleopathology-association.wildapricot.org).

There are also two more general things you can do to improve the conference experience for all attendees. First, be **up-to-date on your COVID vaccinations and consider wearing a mask** to help protect the health of our community members. And second, **bring your best empathy skills to every event**; step in if you see an opportunity to ameliorate a tense situation.

I want to express deep appreciation for the tremendous efforts of our Vice President and Program Chair, Dr. Kristi Lewton and her graduate student assistant, Amber Jaeger. Planning for our conferences is a major undertaking, especially with the virtual resources that we now deploy. In addition, I would like to recognize the dedication of the 67 members of the Program Committee. Many thanks also to the Local Arrangements Committee, Drs. Kristi Lewton, Stephanie Meredith, and Dave Raichlen, along with our Los Angeles Advance Team (Eduardo Amorim, Steve Leigh, Stephanie Meredith, David Raichlen, Amy Rector, Kristi Lewton, and student volunteers Katie Beachem, Chloe Coulter, Cassie Croasmun, Alexandria Koedel, and Anamika Nanda) for their help.

We will be seeing significant changes on this year's AABA Executive Committee, with five new members recently elected. We will be welcoming a new President-Elect, Vice President and Program Chair, Secretary, Chair of the History and Honors Committee, and a new Chair of the Student Programs Committee. As we welcome these new Executive Committee Members, I also want to give a hearty thank-you-for-your-service to colleagues who will either be leaving the Committee or taking on new roles within it. I thank outgoing Past President, Dr. Steve Leigh for his service to the Association over the last four years (so happy you are receiving the Gabriel W. Lasker Service Award!). Vice President and Program Chair Kristi Lewton has done remarkable work with the Program Committee, moving us away from "pandemic times" and towards the new normal for our annual meeting. Secretary Amy Rector has kept the Association in good working order and been instrumental to the improvements to our website and social media presence. History and Honors Committee Chair Julienne Rutherford has helped us acknowledge our most accomplished colleagues with a keen eye towards equity and transparency. Student Programs Committee Chair, Chelsey Juarez, has tirelessly supported and advocated for our students.

Other changes on our Executive Committee include outgoing Early Career Liaison to the Executive Committee Dr. Justin Lund, and Student Liaison Elise Adams. We thank them for their work over the last year. For next year, we'll be joined by Dr. Nicole Torres-Tamayo as the new Early Career Liaison and Luke Fannin as Student Liaison, and welcome them to these important positions.

Before ending this letter, it is essential to remind everyone that the AABA remains committed to recognizing and ending harassment in our discipline, an especially important safety issue for in-person meetings. In the last few years, the AABA has implemented numerous measures, including training session chairs, to ensure a safe and collegial set of meetings. We ask that all attendees review our Code of Conduct (bioanth.org/about/position-statements/aapa-code-conduct), including statements on ethics and sexual and other harassment.

I remind all attendees that an agreement to abide by the Code of Conduct was signed by everyone at the time of conference registration. Reports of harassment may be subjected to review by the AABA Harassment Committee for Awareness, Response, and Equity (HCARE). We maintain several resources to help address issues related to harassment during the conference:

- If you find yourself in a dangerous situation, call 911.
- You can a report an incident through the confidential NAVEX website, 24/7
- Our business support team also has a staffed e-mail address: codeofconduct@burkinc.com for confidential reporting.
- For support with other issues, call 703-592-9946, a number that reaches our business staff present at the conference.
- Furthermore, we will maintain a Safe Space near the registration desk.

As I personally look towards our conference in Los Angeles, I have many different emotions. This has been a particularly challenging year for me health-wise, one that forced me to disconnect from the professional community that grounded me for decades. While I am eager to step back into the role of President, I also feel trepidation. The day-to-day details of AABA have become unfamiliar. It is impossible not to feel guilt about this alienation. But simultaneously, I now have an even stronger sense of respect for what makes AABA a particularly valuable professional community. I will never be able to adequately express my gratitude to Past President Steve Leigh for so graciously stepping in as Acting President in my absence, and to Vice President Kristi Lewton and the entire Executive Committee who took on more than should have been their responsibility to cover in my absence. I have been in academia long enough to attest that the empathy and graciousness of AABA is uncommon, and something that we should never take for granted. I hope you will join me in celebrating our community in Los Angeles, and in making every effort to keep AABA a thriving academic association.

Sincerely,

#### Leslea J. Hlusko

President

American Association of Biological Anthropologists

(Written with significant assistance from Steve R. Leigh, Past President)



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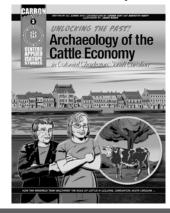
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# MESSAGE FROM THE VP & PROGRAM CHAIR

#### Welcome!

It is my great pleasure to welcome you to the 2024 meeting of the American Association of Biological Anthropologists. This year we are convening in Los Angeles, California for our 93<sup>rd</sup> annual meeting. Several of our events will be available to virtual meeting attendees. However you participate, we hope you find the conference vibrant and intellectually stimulating!

The full AABA 2024 program includes 764 peer-reviewed scientific presentations by authors from all over the world. Of these, 731 are scheduled to be presented in Los Angeles and the remaining 33 presentations will be presented online only. The abstracts illustrate the remarkable breadth of our discipline, covering a range of research topics and approaches, and with global reach and incredible time depth. A total of 13 invited symposia (146 abstracts) are included in this year's program: six podium symposia will take place in Los Angeles and be live-streamed via Zoom, six poster symposia in Los Angeles, and one symposium will be exclusive to the online program.

This Program provides an overview of the activities planned for the Los Angeles meeting. More details are available on AABA's annual meeting website. The conference hotel is the JW Marriott LA Live, which is centrally located in downtown LA. I'm excited to be hosting the conference in my home town and serving on the Local Arrangements Committee. Many thanks to the other LA Local Arrangements Committee members, Stephanie Meredith and David Raichlen, for helping AABA articulate with the local community. We have put together a wonderful list of Los Angeles attractions; check it out on our website!

#### Vaccination Requirement

Vaccination is required for attendance at AABA 2024, with very few allowable exceptions. We ask that all attendees be up-to-date on COVID boosters currently available to them. Exemption requests can be directed to AABA President, Leslea Hlusko, at bioanthpresident@gmail.com. Anyone granted an exception must submit a negative PCR test taken within 72 hours of the first day of the conference.

#### **Masking Policy**

Indoor masking is strongly recommended for all attendees (vaccinated or unvaccinated) at the AABA 2024 conference. KN95 masks will be available for all AABA attendees at the registration desk. A limited number of medical-grade N95 masks will also be available. Disinfectant wipes and hand sanitizer will be provided at each podium. We encourage attendees to eat and drink outdoors when possible. Fortunately, our venue has several large outdoor areas available.

#### MESSAGE FROM THE VP & PROGRAM CHAIR

#### The Scientific Program

We are pleased to be joined in Los Angeles by our partner organizations: the American Association for Anthropological Genetics (AAAG), the Dental Anthropology Association (DAA), the Human Biology Association (HBA), the Paleoanthropology Society (PAS), and the Paleopathology Association (PPA).

AABA 2024 programming in Los Angeles begins on Wednesday, March 20 with the Committee on Diversity Undergraduate Research Symposium (open to everyone from 6:00-8:00pm) and the Opening Reception (8:00-10:00pm). On Thursday, March 21, scientific sessions begin. This portion of the program includes six invited podium symposia, six invited poster symposia, one invited virtual symposium, and 46 contributed sessions (22 poster and 24 podium sessions). All six of the invited podium symposia, the Business Meeting, and the President's Panel will be live-streamed on Zoom and recorded so that attendees can participate in these events either in-person or online, synchronously or asynchronously.

#### Overview of Session Schedule and Presenter Information

Morning podium sessions begin at 8:00 am and end by 12:00pm. Afternoon podium sessions begin at 2:30 pm and end by 5:00 pm (with a few exceptions). We have a few quarter-day podium sessions (half-morning or half-afternoon); be sure to check the Program for start times. The 2.5 hour lunch break allows for dedicated time to view posters as well as attend a variety of mid-day events including workshops and committee meetings between 12:15 pm and 2:15pm. New this year, contributed poster sessions will only be on Thursday and Saturday from 5:00-7:00pm.

As in previous years, podium presentations need to be uploaded onto a central secure server in the Speaker Ready Room no later than a half day before the presentation. This server will then "push" presentations to the appropriate meeting room and will be available for the session. To ensure accessibility of presentations, we will be using voice-to-text subtitles in Powerpoint and ask all presenters to follow accessibility guidelines posted on the AABA website. Please note that all Invited Podium Symposia will be held in Platinum D and live-streamed via Zoom.

Contributed poster sessions and exhibitors booths will all be held in the Diamond Ballroom. Poster set-up will begin at 7:30 am and should be completed by 8:00am. Posters should be taken down by 7:30pm. Even-numbered poster presenters will stand by their posters from 5:00-6:00pm, with odd-numbered presenters attending from 6:00-7:00pm. Invited Poster Symposia are held in Platinum H-I and are assigned to a morning or afternoon time.

#### MESSAGE FROM THE VP & PROGRAM CHAIR

#### Joint session

The joint HBA/AABA invited podium symposium, *Terminology, Theory, and Method for the Study of Inequality of Health: Breakthroughs or Barriers?*, organized by Heather J.H. Edgar & Lexi O'Donnell, will be held on Saturday afternoon.

#### Workshops

This year we have planned 20 exciting and innovative workshops throughout the week that occur in conjunction with our annual meeting. Because of space limitations, some of the workshops and events may require pre-registration (information is available on our meeting website; pre-registration closes March 1). Our workshops provide professional development, science communication, and methodological training that should be of broad interest to our membership. Most workshops are held over the lunch hour from 12:15-2:15, but there are a few exceptions. Be sure to check the schedule.

#### Special Events

The American Anthropological Association Commission for the Ethical Treatment of Human Remains is approaching the completion of a two-year effort to canvass global representatives of descendant communities and professional organizations regarding the ethical treatment of human remains, samples, and images. Drs. Michael Blakey (College of William & Mary) and Sabrina Agarwal (University of California, Berkeley) will host a panel session on Thursday at 12:15 pm to debrief colleagues who may be affected by the Commission's recommendations and provide an opportunity for comment.

On Thursday afternoon we are excited to hold our annual **Auction**! Each year the auction raises thousands of dollars to support Pollitzer Student Travel Awards and Cobb Professional Development Grants. Please participate through donations (of items or cash!) and by bidding on our array of tempting auction items (please contact co-organizers Amy Rector and Anne Grauer if you are interested in donating or learning more).

On Friday, following the conclusion of the scientific sessions, we will hold the **Annual Business Meeting and Awards Presentation** (6:30-8:30pm). This meeting is where the association comes together to review business of the past year (including annual reports from AABA Officers and committee chairs) and make a plan for the future. If you want to have a say in the organization, come to the business meeting! We strongly encourage and welcome attendance by all members and those interested in applying for membership. Join us as we celebrate this year's Cobb Professional Development Grant, Pollitzer Student Travel award, and COD Undergraduate Research travel award winners. We will also recognize this year's recipients of the Charles R. Darwin Lifetime Achievement Award (awarded to Laurie Godfrey), the Gabriel W. Lasker Service Award (awarded to Steven Leigh), and the AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith (awarded to Tina Lasisi). Please join us in celebrating this year's outstanding winners!

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#### MESSAGE FROM THE VP & PROGRAM CHAIR

On Saturday at 12:30pm, we will hold the **Presidential Panel**, *Funding our Priorities: Past, Present, and Future of the AABA*. Please come with your questions and opinions as to what AABA's future funding priorities should be.

This year we will have a dedicated **In Memoriam** session on Saturday to remember colleagues who passed away over the last year. This stand-alone session will allow more time to learn about and remember our colleagues.

Saturday evening brings our annual meeting to a close, with the **Student Awards Closing Reception and Hooding Ceremony** from 7:00-9:00pm. Please join us for a last-chance to network in person, say goodbye to new and long-time colleagues, and to learn who won the 2024 Student Presentation Awards!

As we approach the conference, we will be publicizing additional information regarding special events. These will be listed in the final meetings program and on our website.

#### **Acknowledgements and Appreciation**

I sincerely thank everyone who helped organize the 2024 program. Tremendous thanks are due to our extraordinary business partners, Annual Meeting Executive Director Lori Strong and her team from Burk & Associates.

I am immensely grateful to the 67 dedicated members of our Program Committee who conducted and completed symposium and abstract reviews thoughtfully, thoroughly, and expeditiously. Additional thanks go to the 25 members of the Program Committee who took on the task of organizing the contributed sessions.

Many thanks to the Advance Team who met in Los Angeles to set the schedule for the scientific program. Thank you to Eduardo Amorim, Steve Leigh, Stephanie Meredith, David Raichlen, Amy Rector and to the extraordinary student volunteers Katie Beachem, Chloe Coulter, Cassie Croasmun, Alexandria Koedel, and Anamika Nanda! I also want to thank Michelle Bezanson for designing the beautiful AABA 2024 logo!

Of course, none of the program organization would be possible without the immense effort of Ed Hagen, our website and abstract database developer. The Program Assistant Amber Jaeger has been a tremendous help and I am very grateful for her outstanding organizational skills. I also want to thank the AABA Officers and members of the Executive Committee for their year-round hard work that makes our annual meeting possible.

The annual meeting would not be possible without the help of all these individuals, and I hope you will join me in thanking them when you see them in Los Angeles!

#### Kristi L. Lewton

AABA Vice President and Program Chair

## GENERAL INFORMATION

#### **Final Program**

AABA does not assume responsibility for any inconsistencies or errors in the abstracts for contributed paper and poster presentations. We regret any possible omissions, changes and/or additions not reflected in this final program.

#### **AABA App**

Be sure to download the AABA 2024 Meeting App! You can find it in the app store. If you need help, check with the AABA registration desk. All meeting updates and the most current information will be pushed through to the App.

#### Speaker Ready/Press Room

Due to the size and complexity of our meetings, we require that podium presentations be uploaded onto a central secure server no later than a half day before the presentation. This can be done from the Speaker Ready/Press Room (Studio III). The server will then "push" presentations to the appropriate meeting room and will be available for the session.

You may use your own computer, but you still must check in with the Speaker Ready/ Press Room a half day before your presentation. Note that your speaking time slot does not include time for set up and testing. There will be volunteers available to assist you in the Speaker Ready/Press Room (Studio III) at the following times:

- Wednesday, March 20, 2:00 PM 6:00 PM
- Thursday, March 21, 7:30 AM 5:00 PM
- Friday, March 22, 7:30 AM 5:00 PM
- Saturday, March 23, 7:30 AM 11:00 AM

#### **Poster Presentations**

- Poster set-up: 7:30 AM 8:00 AM
- Posters take-down: 7:00 PM 7:30 PM
- Even-numbered poster presenters: 5:00 PM 6:00 PM
- Odd-numbered poster presenters: 6:00 PM 7:00 PM

#### **Catering and Coffee Breaks**

Coffee and/or a cash bar will be available at the following times in the Diamond Ballroom (the poster room and exhibition hall).

- Thursday, Friday, Saturday: 9:30 AM 10:30 AM
- Thursday, Friday, Saturday: 5:00 PM 7:00 PM

#### GENERAL INFORMATION

#### Registration

The AABA Registration/Information area is located in the Diamond Foyer and will be open during the following hours:

- Wednesday, March 20, 2:00 PM 6:00 PM
- Thursday, March 21, 7:00 AM 4:00 PM
- Friday, March 22, 7:30 AM 4:00 PM
- Saturday, March 23, 7:30 AM 2:00 PM

#### Free Childcare

Camp AABA – An Adventure for Kids (our childcare during the meetings) is available for FREE this year, due to a substantial subsidy from the AABA, and will be located in Olympic III.

- Wednesday, March 20, 8:00 AM 9:00 PM
- Thursday, March 21, 8:00 AM -7:00 PM
- Friday, March 22, 8:00 AM 6:00 PM
- Saturday, March 23, 8:00 AM 7:00 PM

#### **Lactation and Family Respite Room**

The Lactation and Family Respite Room will be available in Olympic I.

- Wednesday, March 20, 5:00 PM 10:00 PM
- Thursday, March 21, 8:00 AM 10:00 PM
- Friday, March 22, 8:00 AM 10:00 PM
- Saturday, March 23, 8:00 AM 9:00 PM

#### **Quiet Room**

Feeling anxious and need a moment to decompress? A Quiet Room, Olympic II, with low lighting is available for attendees to rest quietly and recharge before diving back into the fray.

- Wednesday, March 20, 5:00 PM 10:00 PM
- Thursday, March 21, 8:00 AM 10:00 PM
- Friday, March 22, 8:00 AM 10:00 PM
- Saturday, March 23, 8:00 AM 9:00 PM

#### Safety

The American Association of Biological Anthropologists (AABA) is committed to providing a safe space, free of threats, harassment, or assault, to all of our members regardless of age, ethnicity, race, gender identity or expression, sexual orientation, disabilities, religion, marital status, or any other reason unrelated to professional performance. If you find yourself in a dangerous situation, do not hesitate to call 911. For support in other instances please call or text 703-592-9946 at any time during the meeting. This number reaches staff from Burk & Associates (our meeting management company), who are attending the conference.

# **KEY TO ACRONYMS**

**AAAG** – American Association of Anthropological Genetics

**AABA** – American Association of Biological Anthropologists

AJHB - American Journal of Human Biology

AJBA - American Journal of Biological Anthropology

**COD** – AABA's Committee on Diversity

**DAA** – Dental Anthropology Association

**HBA** - Human Biology Association

JHE - Journal of Human Evolution

**BAWMN** – Biological Anthropology Women's Mentoring Network

**PPA** – Paleopathology Association

# SOCIAL EVENTS/MEETING HIGHLIGHTS

All events take place at the JW Marriott LA Live unless otherwise noted.

#### Wednesday, March 20

#### AABA COD Undergraduate Research Symposium and Reception

6:00 PM - 8:00 PM, Diamond Ballroom

AABA undergraduates have produced some excellent research. Come and meet them and learn about their research in a festive environment.

#### **Opening Reception**

8:00 PM - 10:00 PM, Platinum D-E

Meet your colleagues and enjoy good food and a cash bar.

#### Thursday, March 21

#### AAA Commission on the Ethical Treatment of Human Remains

12:15 PM - 2:15 PM. Platinum D

The Commission for the Ethical Treatment of Human Remains of the American Anthropological Association is approaching the completion of a two-year effort to canvass global representatives of descendant communities and professional organizations regarding the ethical treatment of human remains, samples, and images. This panel, hosted by Drs. Michael Blakey (College of William & Mary) and Sabrina Agarwal (University of California, Berkeley), is a debriefing to colleagues who may be affected by the Commission's recommendations and an opportunity for comment.

#### AABA Art, Culture and Science Engagement Exhibition

12:15 PM - 2:15 PM, Diamond Ballroom

Celebrate 'what it means to be human' in biological anthropology through an exhibition of art, culture, and crafting activities by and for AABA members.

#### AABA Silent Auction and Cash Bar

3:00 PM - 8:00 PM, Diamond Ballroom

Bid on unique items at the Silent Auction benefitting our student travel awards. Silent Auction from 3-7:30pm followed by a post-auction show from 7:30-8pm.



# 94th Annual Meeting

American Association of Biological Anthropologists Baltimore, MD • Baltimore Marriott Waterfront



Join us March 12-15, 2025, in Baltimore, Maryland for four days of education, networking, and professional development



#### SOCIAL EVENTS/MEETING HIGHLIGHTS

#### Friday, March 22

#### AABA Business Meeting and Awards Presentation

6:30 PM - 8:30 PM, Platinum D

Become involved in your association and celebrate the 2024 recipients of AABA's most prestigious awards: Laurie Godfrey (Charles R. Darwin Lifetime Achievement Award), Steven Leigh (Gabriel W. Lasker Service Award), and Tina Lasisi (AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith).

#### Saturday, March 23

## Presidential Panel: Funding our Priorities: Past, Present, and Future of the AABA 12:30 PM – 2:15 PM. Platinum D

Thanks to wise financial decisions made by AABA leadership in the past, our Association has investments that provide significant annual income in addition to membership fees and conference registrations. The decision was made many years ago that these investment funds would subsidize the annual meeting, making registration fees much more affordable for our academic community. Looking forward, is this still the wisest use of these investment funds? For the 2024 Presidential Panel, we bring this conversation to the broader AABA community. Please come with your questions and opinions as to what AABA's future funding priorities should be.

#### AABA Student Awards and Closing Reception

7:00 PM - 9:00 PM, Gold 1-2

Celebrate the recipients of our student presentation and other awards, applaud graduates at the hooding ceremony, enjoy good food and a cash bar, and close the AABA 93<sup>rd</sup> Annual Meeting in grand style.

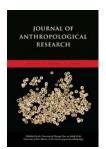
# Anthropology journals from Chicago



Current Anthropology



HAU: Journal of Ethnographic Theory



Journal of Anthropological Research



Transforming Anthropology New to Chicago in 2024

#### More journals from Chicago

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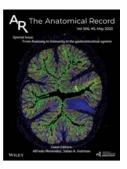
# A<sub>R</sub> The Anatomical Record

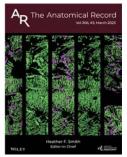
EDITOR-IN-CHIEF:
HEATHER F. SMITH, PH.D.
MIDWESTERN UNIVERSITY

**The Anatomical Record: Advances in Integrative Anatomy and Evolutionary Biology,** an official publication of the American Association for Anatomy, publishes new discoveries in morphological aspects of molecular, cellular, systems, and evolutionary biology.

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WILEY

Note: Some workshops require pre-registration. Space may prohibit attendance if you have not pre-registered. All events take place at the JW Marriott LA Live unless otherwise noted.

#### Wednesday, March 20

#### COD IDEAS Student Scholars Workshop (Invite only)

8:00 AM - 5:00 PM Location: Platinum A-B

NSF Mock Review 8:00 AM -12:00 PM Location: Platinum D

This workshop introduces postdoctoral researchers and junior faculty to the NSF merit review process through mock review exercises with experienced panelists and NSF program directors. *Registration required*.

Organized by Rebecca Ferrell (National Science Foundation), Marta Alfonso-Durruty (National Science Foundation), Lauren Schroeder (University of Toronto Mississauga and AABA Professional Development Committee)

# Trauma and thermal damage to skeletal elements: keys to identification and interpretation

9:00 AM -12:00 PM Location: Platinum F-G

This workshop reviews blunt force, sharp force, high velocity projection defects and thermal damage, focusing on how these occur and how fracture mechanism is determined. *Registration required*.

Organized by Alison Galloway (UC Santa Cruz), Chelsey Juarez (Fresno State University), Elayne Pope (Burned Bone)

#### How to use B3GET: simulating your favorite primate in a virtual 2D environment

1:00 PM -4:00 PM Location: Platinum F-G

Learn how to use the agent-based model B3GET and walk through the process creating virtual plant environments and simulating a primate species of your choosing.

Organized by Kristy Crouse (University of Minnesota)

CSViewer for Analysts – A big data approach to Cayo Santiago Rhesus macaque colony: A workshop on a software application to generate a user-friendly interface and to appropriate data analytical tools

1:00 PM -5:00 P Location: Studio IV

This workshop provides hands-on experience in using 'CSViewer for Analysts' to assess growth, health and pathology of the Cayo Santiago Rhesus colony through contextualized visualizations. *Registration required*.

Organized by Qian Wang (Texas A&M University School of Dentistry) and Martin Zhao (Mercer University)

# COD-WIN Workshop: Negoti=ating Change in Professional Settings: A Workshop and Mentoring Opportunity for all Women AABA Attendees

2:00 PM -5:00 PM Location: Atrium I

All life evolves and careers do too. This workshop is a mentoring-style opportunity for AABA women of all ranks to learn how to identify opportunities for change, negotiate position and pay, make major transitions, and build networks of support. *Registration required.* 

AABA COD-WIN workshop organized Michelle Bezanson (Santa Clara University) and Anne C. Stone (Arizona State University)

# Publishing in the American Journal of Biological Anthropology: Advice for Forensic Anthropologists and Bioarchaeologists

3:00 PM -4:30 PM Location: Platinum H-I

Participants will learn about the criteria used to assess forensic and bioarchaeological manuscripts submitted to the AJBA for publication, including a discussion of successful publications. *Registration required*.

AABA Publications Committee, Organized by Tracy Prowse (McMaster University), Daniel Temple (George Mason University), Trudy Turner (University of Wisconsin-Milwaukee)

#### Thursday, March 21

# Anthropology Unleashed: Navigating Public Outreach in the World of Insta(ntaneous) Gratification

12:15 PM -2:15 PM Location: Atrium L

In the age of instant gratification and misinformation, this workshop will facilitate conversations on how anthropologists can promote public outreach and engagement.

Organized by Sarah Reedy (University of Massachusetts, Amherst), Kelli Tamvada (Russell Sage College), Amanda Spriggs (State University of New York, Albany)

#### AABA Art, Culture and Science Engagement Exhibition

12:15 PM -2:15 PM

Location: Diamond Ballroom

Celebrate 'what it means to be human' in biological anthropology through an exhibition of art, culture, and crafting activities by and for AABA members.

Organized by AABA Education Committee, Michelle Bezanson (Santa Clara University) and Robert O'Malley (Harvard Medical School)

### Microchimerism and human health: Bridging the gaps between anthropology and medicine

12:15 PM -2:15 PM Location: Platinum E

This workshop will address ethical considerations when conducting microchimerism research and discuss strategies to implement these perspectives within the medical setting. *Registration required.* 

Organized by Amy Boddy (University of California Santa Barbara), Kristine Chua (University of California Santa Barbara)

#### Postdoc and Academic Job Hunting - Everything you need to know

12:15 PM -2:15 PM Location: Platinum F-G

Targeted toward senior graduate students and early postdocs, this workshop will review the expectations, materials, and strategies for succeeding in today's academic job market. Organized by Anna Ragni (University of Tampa)

# Departmental leadership and data: a discussion about trends in enrollment for current, past, and future departmental chairs

12:15 PM -2:15 PM Location: Studio IV

All current, former, and future leaders of anthropology and related departments are invited to join this discussion and collaboration for a data-driven investigation of trends in undergraduate enrollment. *Registration required*.

Organized by Amy Rector (Virginia Commonwealth University)

# Up Goer Five: Communicating Biological Anthropology Using English's Ten Hundred Most Common Words

4:30 PM -6:30 PM Location: Platinum E

Improve your science communication with broad audiences and increase the impact of your work by describing complex research in simple language.

Organized by C. Kinley Russell (The Johns Hopkins University School of Medicine) and Briana Pobiner (Smithsonian Museum of Natural History)

# Improv for Anthropologists: Building Teaching and Outreach Skills with Applied Improv

7:00 PM -9:00 PM **Location: Georgia** 

In this workshop, participants will use applied improv to develop skills that build confidence and engagement for teaching and public outreach. *Registration required*.

Organized by Amanda L. Ellwanger (Georgia State University- Perimeter College), Marc Kissel (Appalachian State University), Natalia Reagan, Kimberly Congdon (Evolent Health)

#### Friday, March 22

## Evolutionary Mechanisms Beyond the Basics: Envisioning Complex Processes in Hominin Evolution

12:15 PM -2:15 PM

Location: Online only (Zoom link to be distributed to registrants)

Workshop participants will collaborate to develop strategies for applying deeper understandings of evolutionary mechanisms – their complexities and synergies – toward teaching and research on hominin evolution. *Registration required*.

Organized by Andrea Alveshere (Western Illinois University)

# Considerations for Visualization and Documentation of Human Remains in Bioanthropology

12:15 PM -2:15 PM Location: Platinum A-B

Participants will engage in community discussions of ethical AR/VR and modeling applications in bioanthropology. Participant platforms will be showcased with opportunities for hands on engagement. *Registration required*.

Organized by Alexandria Orozco (University of Central Florida), Joe Kider and Lori Walters (University of Central Florida IST, School of Modeling, Simulation, and Training), Scott Branting (University of Central Florida Department of Anthropology)

#### Backlash!?! Tools for Managing Trolls in Biological Anthropology

12:15 PM -2:15 PM

Location: Platinum F-G

This workshop will enable AABA members to dialogue about unwanted communication about our work. Workshop panelists will include entertainment professionals well-accustomed to navigating internet trolls. *Registration required*.

Organized by Jonathan Bethard (University of South Florida), Michelle A. Rodrigues (Marquette University), Chris Stantis (University of Utah)

Sharing Your Science: Public Communication

12:15 PM -2:15 PM Location: Platinum H-I

Science writer and anthropologist Dr. Bridget Alex will provide a foundation for researchers who want to write or create content for diverse audiences.

Organized by Bridget Alex (SAPIENS Magazine)

# Deconstructing the 'Race as Biology' Paradigm: The Role of Citations in Shaping Scientific Narratives and Practices

12:15 PM -2:15 PM Location: Studio IV

This workshop delves into the debate on 'race as biology' challenging its validity, exploring the role of citations in perpetuating biases, and emphasizes the importance of citational practices.

Organized by Ulises Espinoza (Princeton University), Agustín Fuentes (Princeton University), Rebecca Sear (London School of Hygiene and Tropical Medicine)

#### Queer and Trans Field Safety

4:15 PM -6:15 PM Location: Platinum E

Panel Q&A session on the multiplicity of fieldwork experiences and concerns of queer and trans people, including advice on how to improve field safety. All are welcome to come ask questions and discuss.

Organized by Stephanie Meredith (College of the Canyons) and Ellis Locke (Idaho College of Osteopathic Medicine).

#### Wednesday, March 20

#### AABA

Workshop: NSF Mock Review

8:00 AM - 12:00 PM Platinum D

COD IDEAS Student Scholars Workshop (Invite only)

8:00 AM - 5:00 PM Platinum A-B

**AABA Executive Committee** 

8:00 AM - 5:00 PM Platinum J

Camp AABA – An Adventure for Kids

8:00 AM - 9:00 PM Olympic III

Workshop: Trauma and thermal damage to skeletal elements:

keys to identification and interpretation

9:00 AM - 12:00 PM Platinum F- G

Executive Committee and IDEAS Scholars Lunch

12:00 PM - 1:30 PM Gold 3

AJBA Editorial Board Meeting

12:00 PM - 1:30 PM Plaza III

Workshop: How to use B3GET:

simulating your favorite primate in a virtual 2D environment

1:00 PM - 4:00 PM Platinum F- G

Workshop: CSViewer for Analysts – A big data approach to Cayo Santiago Rhesus macague colony: A workshop on a software application to

generate a user-friendly interface and to appropriate data analytical tools

1:00 PM - 5:00 PM Studio IV

COD-WIN Workshop: Negotiating Change in Professional Settings:

A Workshop and Mentoring Opportunity for all Women AABA Attendees

2:00 PM - 5:00 PM Atrium I

AABA Registration

2:00 PM - 6:00 PM Diamond Foyer

Speaker Ready and Press Room

2:00 PM - 6:00 PM Studio III

Workshop: Publishing in the American Journal of Biological Anthropology:

Advice for Forensic Anthropologists and Bioarchaeologists

3:00 PM - 4:30 PM Platinum H-I

Student Committee Meeting 4:00 PM - 5:00 PM Georgia I Student Meet and Greet 5:00 PM - 6:00 PM Georgia I COD-WIN Happy Hour 5:00 PM - 6:00 PM Georgia II AABA Student Volunteer Training 5:00 PM - 5:30 PM Platinum H-I Lactation and Family Respite Room 5:00 PM - 10:00 PM Olympic I Quiet Room 5:00 PM - 10:00 PM Olympic II AABA COD Undergraduate Research Symposium and Reception Diamond Ballroom 6:00 PM - 8:00 PM Opening Reception 8:00 PM - 10:00 PM Platinum D-F DAA Dental Anthropology Association Workshop 1:00 PM - 5:00 PM Gold 2 **HBA HBA Student Mentoring Session** 7:00 AM - 9:00 AM Gold 3 Human Biology Association Poster Session 7:00 AM - 4:00 PM Diamond Ballroom Human Biology Association Plenary Session 7:00 AM - 7:00 PM Gold 4 Human Biology Association Registration 8:00 AM - 5:00 PM Gold Ballroom Fover AJHB Editorial Board 11:30 AM - 2:00 PM Georgia **Human Biology Association Reception** 6:00 PM - 8:00 PM Gold 3

PAS	
Paleoanthropology Society Registration 8:00 AM - 5:00 PM	Platinum Foyer
Paleoanthropology Society Podium Presentations 8:00 AM - 6:30 PM	Gold 1
PPA	
Paleopathology Association Registration 8:00 AM – 12:00 PM	Plaza Foyer
Paleopathology Association Podium Presentations 8:00 AM – 12:00 PM	Plaza I-II
Paleopathology Association Poster Session 9:00 AM - 4:00 PM	Diamond Ballroom
Paleopathology Association Virtual Poster Session 9:45 AM - 10:15 AM	Plaza I-II
Paleopathology Association Symposium 1:30 PM - 5:15 PM	Plaza I-II
Paleopathology Association In Person Poster Session 3:00 PM - 3:45 PM	Diamond Ballroom
Other	
Gombe Chimp Team Meeting (Invite only) 10:00 AM - 4:00 PM	Studio II

## Thursday, March 21

AABA		
Past President's Breakfast 7:00 AM – 9:00 AM	Atrium I	
AABA Registration 7:00 AM - 4:00 PM	Diamond Foyer	
Speaker Ready and Press Room 7:30 AM – 5:00 PM	Studio III	
COD IDEAS Faculty Scholars Mentoring Meeting (Invite only) 8:00 AM - 10:00 AM	Atrium II	

COD IDEAS Scholars Lounge (Invite only)

8:00 AM - 5:00 PM Studio I

Camp AABA – An Adventure for Kids

8:00 AM - 7:00 PM Olympic III

**Posters** 

8:00 AM - 7:00 PM Diamond Ballroom

Lactation and Family Respite Room

8:00 AM – 10:00 PM Olympic I

Quiet Room

8:00 AM - 10:00 PM Olympic II

**Exhibits** 

9:30 AM - 8:00 PM Diamond Ballroom

**COD-Disability Organizational Meeting** 

11:00 AM - 12:00 PM Atrium II

Cognate Associations President's Meeting

12:00 PM - 2:00 PM Georgia I

Yearbook Editorial Board Meeting

12:00 PM - 2:00 PM Georgia II

Workshop: Anthropology Unleashed: Navigating Public Outreach

in the World of Insta(ntaneous) Gratification

12:15 PM - 2:15 PM Atrium I

AABA Art, Culture and Science Engagement Exhibition

12·15 PM – 2·15 PM Diamond Ballroom

AAA Commission on the Fthical Treatment of Human Remains.

12:15 PM - 2:15 PM Platinum D

Workshop: Microchimerism and human health:

Bridging the gaps between anthropology and medicine

12:15 PM - 2:15 PM Platinum E

Workshop: Postdoc and Academic Job Hunting -

Everything you need to know

12:15 PM - 2:15 PM Platinum F- G

Workshop: Departmental leadership and data: a discussion about trends in enrollment for current, past, and future departmental chairs

12:15 PM - 2:15 PM Studio IV

AABA Silent Auction and Cash Bar

3:00 PM - 7:30 PM Diamond Ballroom

#### **FVFNTS**

Workshop: Up Goer Five: Communicating Biological Anthropology Using English's Ten Hundred Most Common Words 4:30 PM - 6:30 PM Platinum F COD-International/IDEAS Mixer 5.00 PM - 6.00 PMAtrium II Workshop: Improv for Anthropologists: Building Teaching and Outreach Skills with Applied Improv 7:00 PM - 9:00 PM Georgia **HBA** Human Biology Association Podium Presentations 7:00 AM - 7:00 PM Gold 4 Human Biology Association Registration 8:00 AM - 5:00 PM Gold Ballroom Foyer Human Biology Association Business Meeting 5.00 PM - 6.00 PMGold 4 **Human Biology Association Student Reception** 7:00 PM - 9:00 PM Gold Ballroom Foyer **AAAG** American Association of Anthropological Genetics Speed Networking Event 4:30 PM - 6:00 PM Georgia I American Association of Anthropological Genetics Business Meeting 7:00 PM - 8:00 PM Platinum A-B American Association of Anthropological Genetics Cocktail Reception 8:00 PM - 10:00 PM Gold 1 Other Black in Biological Anthropology Networking Social 5:00 PM - 7:00 PM Gold 3 BA WMN Mentoring Happy Hour 6:00 PM - 8:00 PM Beelman's Journal of Human Evolution Editorial Board Meeting 6:00 PM - 8:00 PM Platinum J

#### Friday, March 22

#### ΔΔΒΔ

AABA Registration

7:30 AM - 4:00 PM Diamond Foyer

Speaker Ready and Press Room

7:30 AM - 5:00 PM Studio III

**Ouiet Room** 

8:00 AM - 10:00 PM Olympic II

Lactation and Family Respite Room

8:00 AM - 10:00 PM Olympic I

COD IDEAS Scholars Lounge (Invite only)

8:00 AM - 5:00 PM Studio I

Camp AABA - An Adventure for Kids

8:00 AM - 6:00 PM Olympic III

**Exhibits** 

9:30 AM - 6:00 PM Diamond Ballroom

Inaugural Meeting of the Nascent COD Native and Indigenous Biological Anthropologists Group

Bluestone Lane Coffee 10:00 AM - 11:00 AM

COD AACT Planning Meeting

12:15 PM - 2:15 PM Georgia

COD IDEAS Alumni+ Mixer/Speed Networking (Invite only)

12:15 PM - 2:15 PM Gold 2

Workshop: Evolutionary Mechanisms Beyond the Basics:

Envisioning Complex Processes in Hominin Evolution

12·15 PM - 2·15 PM Online only

Workshop: Considerations for Visualization and

Documentation of Human Remains in Bioanthropology

12:15 PM - 2:15 PM Platinum A-B

Workshop: Backlash!?!

Tools for Managing Trolls in Biological Anthropology

Platinum F- G 12:15 PM - 2:15 PM

Workshop: Sharing Your Science: Public Communication

12:15 PM - 2:15 PM Platinum H-I

Workshop: Deconstructing the 'Race as Biology' Paradigm: The Role of Citations in Shaping Scientific Narratives and Practices 12:15 PM – 2:15 PM	Studio IV	
COD-LGBTQQIAA Subcommittee Business Meeting 12:30 PM - 2:00 PM	Platinum C	
COD-Disability: Nothing About Us Without Us! A conversationon mentoring and being mentored for disabled scholars and allies 2:15 PM - 4:15 PM	Gold 4	
AJBA Special Issue Authors Meeting (Invite only) 2:30 PM - 3:30 PM	Atrium II	
COD South Asian Biological Anthropologists Chai Hour 4:00 PM - 5:00 PM	Atrium II	
Workshop: Queer and Trans Field Safety 4:15 PM - 6:15 PM	Platinum E	
AABA Business Meeting 6:30 PM - 8:30 PM	Platinum D	
НВА		
Human Biology Association Podium Presentations 8:00 AM - 12:00 PM	Gold 4	
DAA		
Dental Anthropology Association Speed Networking and Happy Hour 5:00 PM - 6:30 PM	Off site	
Dental Anthropology Association Business Meeting 8:30 PM - 9:30 PM	Platinum A- B	

### **EVENTS**

# Saturday, March 23

#### **AABA**

Speaker Ready and Press Room

7:30 AM - 11:00 AM Studio III

AABA Registration

7:30 AM – 2:00 PM Diamond Foyer

COD Steering Committee Meeting

8:00 AM - 9:00 AM Georgia II

AABA Education Committee: Biological Anthropology

Education and Engagement Mixer

8:00 AM - 10:00 AM Georgia I

Quiet Room

8:00 AM - 9:00 PM Olympic II

COD IDEAS Scholars Lounge (Invite only)

8:00 AM - 5:00 PM Studio I

Camp AABA – An Adventure for Kids

8:00 AM - 7:00 PM Olympic III

**Posters** 

8:00 AM - 7:00 PM Diamond Ballroom

Lactation and Family Respite Room

8:00 AM - 9:00 PM Olympic I

**COD-International Committee Meeting** 

9:15 AM - 10:15 AM Georgia II

**Exhibits** 

9:30 AM - 7:00 PM Diamond Ballroom

Presidential Panel: Funding our Priorities:

Past, Present, and Future of the AABA

12:30 PM - 2:15 PM Platinum D

Student Programs Committee Meeting

2:30 PM - 5:30 PM Georgia

AABA In Memoriam

4:15 PM - 5:15 PM Platinum J

Student Awards Closing Reception and Hooding Ceremony

7:00 PM - 9:00 PM Gold 1-2

# **EXHIBITOR FLOOR PLAN**



View the latest floorplan and company profiles on your phone or tablet. Scan the QR Code or visit aaba2024.expofp.com

#### **EXHIBIT HOURS: Diamond Ballroom**

Thursday, March 21..... 9:30 AM - 8:00 PM Saturday, March 23 . . . . . . . . . . 9:30 AM -7:00 PM

### **FUTURE MEETING DATES**

2025

March 12-15 Baltimore, MD Baltimore Marriott Waterfront Sheraton Downtown Denver

2026

March 18-21 Denver, CO

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Booth: 19

Booth: 18

Booth: 13

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The Center for Applied Isotope Studies is the largest Isotope Geochemistry Laboratory / Radiocarbon AMS Dating Facility in the United States that is accredited under ISO/IEC 17025:2017. CAIS provides experiential STEM education, interdisciplinary research, and superior service in Radiocarbon Dating, Stable and Radiogenic Isotope Analysis, Elemental analysis, and ICP-OES.

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Booth: 11

# **Leakey Foundation**

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The Leakey Foundation is a nonprofit that funds human origins research and shares discoveries through innovative educational programs. The organization was formed in 1968 with a mission to increase scientific research, education, and public understanding of human origins, evolution, behavior, and survival.

Booth: 22

Booth: 16

Booth: 25

#### **National Science Foundation**

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### Primate Conservation Inc.

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Primate Conservation Inc, is a 501(c)3 not for profit private foundation that gives grants to graduate students to study and protect theleast known and most endangered primates in their natural habitat. To date we have supported over 700 projects in 30 different habitat countries. In exchange for a donation the PCI table has plush toy monkeys, handmade, and hand embroidered items from Madagasca. Please stop by and pick up our news letter and information about our All the World's Primates book and website which is fully referenced with up to date taxonomy, 2000 photos, video and audio files.

### **FXHIBITOR LISTING**

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41 William Street Princeton, NJ 08540 609-258-4900 press.princeton.edu

Founded in 1905, Princeton University Press is a nonprofit publisher with close connections to Princeton University. The Press brings influential voices and ideas to the world stage through their academic scholarship, advancing the frontiers of scholarly knowledge and promoting the human conversation.

Booth: 15 Revware, Inc.

1645 Old Louisburg Rd Raleigh, NC 27604 919-790-0000

www.revware.net

Revware, manufacturer of the MicroScribe Portable CMM since 2009, will be at this year's ABAA Meeting to answer questions, provide technical information, and give an on-the-spot assessment of your device. We will demonstrate the newest MicroScribe technology and discuss best practices for data collection and equipment care in the field.

# **Springer Nature**

1 New York Plaza, Suite 4600 New York, NY 10004 718-839-0302 link.springer.com

Springer is an international publisher of scholarly research, and the world's largest publisher of monographs, reference works and graduate textbooks for academics and professionals.

# The Anatomical Record: Advances in Integrative Anatomy and Evolutionary Biology

**Bronze Sponsor** 

Booth: 3

Booth: 24

Glendale, AZ anatomicalrecord.com

An official publication of the American Association for Anatomy, the journal publishes new discoveries in morphological aspects of evolutionary, systems, and cell biology, and comparative anatomy. The journal recognizes the importance of descriptive anatomical studies in contemporary research, particularly when framed in the context of experimental models or questions.

### **EXHIBITOR LISTING**

# University of Bradford

Richmond Road Bradford West Yorkshire, BD7 1DP UK www.bradford.ac.uk

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The Wenner-Gren Foundation supports anthropology and anthropologists worldwide. We do our best to foster our field's wonderful diversity. We fund biological anthropologists seeking support for research and scholarly gatherings. Stop by to learn more about our programs!

Booth: 1

Booth: 17

Booth: 2

All events take place at the JW Marriott LA Live unless otherwise noted.

Session Title	Room	Time	#	Туре
Thursday, March 21, All Day				
American Association of Biological A	nthropologists			
Dental Anthropology: Dental Perspectives from the Past to the Present	Diamond Ballroom	8:00 AM - 7:00 PM	1	Poster
Primatology: Behavioral Adaptations Across Ecological and Social Landscapes	Diamond Ballroom	8:00 AM - 7:00 PM	2	Poster
Primatology: Assessing Primate Population Health and Conservation Strategies	Diamond Ballroom	8:00 AM - 7:00 PM	3	Poster
Primatology: Productive Lives: New Views on the Primate Life Course	Diamond Ballroom	8:00 AM - 7:00 PM	4	Poster
Primatology: From Tails to Teeth: Exploring Form-Function Relationships Across Primates	Diamond Ballroom	8:00 AM - 7:00 PM	5	Poster
Forensic Anthropology: Evaluating Casework Protocols and Methods	Diamond Ballroom	8:00 AM - 7:00 PM	6	Poster
Genetics and Genomics: Diverse analytical approaches	Diamond Ballroom	8:00 AM - 7:00 PM	7	Poster
Genetics and Genomics: New insights into human population history	Diamond Ballroom	8:00 AM - 7:00 PM	8	Poster
Education in Biological Anthropology: Education, Public Engagement, and Professional Development	Diamond Ballroom	8:00 AM - 7:00 PM	9	Poster
Human Behavior: Cultural Influences on Life History	Diamond Ballroom	8:00 AM - 7:00 PM	10	Poster
Human Biology: Energy, Mortality and Phenotypes	Diamond Ballroom	8:00 AM - 7:00 PM	11	Poster
Thursday, March 21, Morning				
American Association of Biological A	nthropologists			
Symposium: The growth and development of sub-adult hominins: multidisciplinary approaches	Platinum D	8:00 AM - 11:30 AM	12	Podium
Forensic Anthropology: Methods for Examining Human Variation and Taphonomy	Platinum A-B	8:00 AM - 11:15 AM	13	Podium
Primatology: Assessing Risk Factors and Consequences to Group and Population Health	Platinum C	8:00 AM - 12:00 PM	14	Podium

Bioarchaeology: Isotopes, Mobility, and Migration	Platinum E	8:00 AM - 12:00 PM	15	Podium
Genetics and Genomics: Human history, migration, and population dynamics	Platinum F-G	8:00 AM - 12:00 PM	16	Podium
Symposium: Bridging Disciplines with Bone Biology	Platinum H-I	8:00 AM - 12:00 PM	17	Poster
Thursday, March 21, Afternoon				
American Association of Biological A	nthropologists			
Symposium: Beyond Bones, Bodies, and Behavior: Shifting theDisciplinary Landscape towards Biocultural Bodies	Platinum D	2:30 PM - 5:30 PM	18	Podium
Human Biology: Modelling Disease	Platinum A-B	2:30 PM - 4:30 PM	19	Podium
Functional Anatomy: Hominoid bone biology	Platinum C	2:30 PM - 4:15 PM	20	Podium
Genetics and Genomics: Nonhuman primates	Platinum E	2:30 PM - 4:15 PM	21	Podium
Functional Anatomy: Nonhuman primate craniodental functional anatomy	Platinum F-G	2:30 PM - 4:15 PM	22	Podium
Symposium: William L. Jungers, a giant in the fields of paleoanthropology, size and scaling, and functional morphology: A commemorative tribute	Platinum H-I	2:30 PM - 5:00 PM	23	Poster
Friday, March 22, Morning				
American Association of Biological A	nthropologists			
Symposium: The Application of Artificial Intelligence (AI) in Biological Anthropology and Related Subfields	Online	8:00 AM - 10:00 AM		Online
Symposium: Undermining the production of race science	Platinum D	8:00 AM - 11:30 AM	24	Podium
Human Behavior: Alloparenting: Can you get enough sleep?	Platinum A-B	10:00 AM - 11:15 AM	25	Podium
Paleoanthropology: Morphological Signatures of Locomotion	Platinum C	8:00 AM - 12:00 PM	26	Podium
Bioarchaeology: Stress, Health, and Care	Platinum E	8:00 AM - 12:00 PM	27	Podium
Primatology: Socioecological Dynamics Across Temporal Scales	Platinum F-G	8:00 AM - 12:00 PM	28	Podium
Symposium: Kaye's Communities: Recognizing the Research, Teaching, and Mentorship of Kaye E. Reed	Platinum H-I	8:00 AM - 12:00 PM	29	Poster

Friday, March 22, Afternoon				
American Association of Biological A	nthropologists			
Symposium: Women have always been here: Working towards a biological anthropology of women	Platinum D	2:30 PM - 5:15 PM	30	Podium
Genetics and Genomics: Evolution, adaptation, and health	Platinum A-B	2:30 PM - 4:30 PM	31	Podium
Paleoanthropology: The Hominin Niche: Diet, ecology and environments	Platinum C	2:45 PM - 5:45 PM	32	Podium
Functional Anatomy: Hominoid morphology and biomechanics	Platinum E	2:30 PM - 4:00 PM	33	Podium
Human Biology: Epigenetics and COVID	Platinum F-G	2:30 PM - 4:30 PM	34	Podium
Symposium: Rethinking primate and human origins: A symposium honoring Matt Cartmill	Platinum H-I	2:30 PM - 6:00 PM	35	Poster
Saturday, March 23, All day				
American Association of Biological A	nthropologists			
Paleoanthropology: Comparative and Phylogenetic Analysis of Craniodental Morphology	Diamond Ballroom	8:00 AM - 7:00 PM	36	Poster
Paleoanthropology: Postcranial Variation and Covariation	Diamond Ballroom	8:00 AM - 7:00 PM	37	Poster
Paleoanthropology: Paleoprimatology	Diamond Ballroom	8:00 AM - 7:00 PM	38	Poster
Paleoanthropology: Faunal Analysis and Taphonomy	Diamond Ballroom	8:00 AM - 7:00 PM	39	Poster
Functional Anatomy: Appendicular primate functional anatomy/tissue biology	Diamond Ballroom	8:00 AM - 7:00 PM	40	Poster
Functional Anatomy: Axial primate functional anatomy/tissue biology	Diamond Ballroom	8:00 AM - 7:00 PM	41	Poster
Bioarchaeology: Advances in Theory, Method, and Ethics	Diamond Ballroom	8:00 AM - 7:00 PM	42	Poster
Bioarchaeology: Biology, Behavior, and Embodiment	Diamond Ballroom	8:00 AM - 7:00 PM	43	Poster
Bioarchaeology: Human and Animal Biomolecular Investigations	Diamond Ballroom	8:00 AM - 7:00 PM	44	Poster
Bioarchaeology: Populations in Transition – Intersections of Health, Paleodemography and Paleoepidemiology	Diamond Ballroom	8:00 AM - 7:00 PM	45	Poster

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Bioarchaeology: Womb to Tomb – Skeletal Evidence of Stress, Disease, and Violence Across the Life Course	Diamond Ballroom	8:00 AM - 7:00 PM	46	Poster
Saturday, March 23, Morning				
American Association of Biological A	nthropologists			
Symposium: Central Asia: at the cross- roads of Eurasia	Platinum D	8:00 AM - 12:00 PM	47	Podium
Bioarchaeology: Development, Biomechanics, and Behavior	Platinum A-B	8:00 AM - 11:45 AM	48	Podium
Primatology: Social Dynamics of Fertility, Bonding, and Fitness part A	Platinum C	10:00 AM - 12:00 PM	49	Podium
Paleoanthropology: New Approaches to Old Questions	Platinum E	8:00 AM - 12:00 PM	50	Podium
Human Biology: Faces, Foraging and Fetal Positioning	Platinum F-G	8:00 AM - 11:45 AM	51	Podium
Symposium: Endurance locomotion in humans: Diverse perspectives on long distance advantages	Platinum H-I	8:00 AM - 12:00 PM	52	Poster
Saturday, March 23, Afternoon				
AABA and HBA				
HBA/AABA Joint Symposium: Terminology, Theory, and Method for the Study of Inequality of Health: Breakthroughs or Barriers?	Platinum D	2:30 PM - 5:15 PM	53	Podium
American Association of Biological A	nthropologists			'
Functional Anatomy: Nonhuman primate postcranial functional anatomy	Platinum A-B	2:30 PM - 4:15 PM	54	Podium
Primatology: Social Dynamics of Fertility, Bonding, and Fitness part B	Platinum C	2:30 PM - 4:15 PM	55	Podium
Bioarchaeology: Ethical Community Engagement andMarginalization	Platinum E	2:30 PM - 4:00 PM	56	Podium
Dental Anthropology: Insights from Dentition	Platinum F-G	2:30 PM - 4:45 PM	57	Podium
Symposium: 60 years of studying human evolution: Theongoing contribution of Yoel Rak to Paleoanthropology	Platinum H-I	2:30 PM - 5:00 PM	58	Poster

# ASYNCHRONOUS PRESENTATIONS AVAILABLE ON DEMAND ONLINE

### **Contributed Presentations**

- · Archaeogenomic insights into Anatolia-Caucasus interactions since Neolithic. F. ÖZER.
- Differential Identification of Juvenile Grey Seal and Subadult Human Remains at Sable Island NPR, Mi'kma'ki (Nova Scotia, Canada). J.M. PARISH, R. DUNHAM.
- Dental arch shape and dimensions influence maxillary and mandibular third molar impaction. L. ARSENAULT, J. MCCLUSKEY, A. HARDIN.
- Beer, Bones, and Biomechanics: Investigating the Impacts of Alcohol Use Patterns on Femoral Cross-Sectional Geometry in Young Adult Males. K.E. BRENT, K. KOMZA, M.E. CAMERON.
- Bone modeling and remodeling: similar response to mechanical loading? S.M. BORGEL, M.S. DRAPEAU.
- Nutrition transition and food insecurity: Stable isotopes (carbon and nitrogen), anthropometry, and diet in the Brazilian Amazon. M. CORREIA, M. INGLEZ, L.A. MARTINELLI, G.B. NARDOTO, B.A. PIPERATA, R.S. MURRIETA.
- Human Mobility in the first millennium AD of Asia Minor: An Archaeogenomic Approach. N. ALTINISIK.
- Age-related feeding behaviors in wild Cebus imitator. B.S. LIU, S.L. CANINGTON, J.G. CASORSO, R. LOPEZ NAVARRO, S. CHEVES HERNANDEZ, M.A. MAH, M. DUTRA FOGAÇA, M.A. HOLMES, C.E. TERHUNE, A.D. MELIN, M.F. LAIRD, J. CHALK-WILAYTO.
- Recovering Coahuiltecan Ancestors: A Collaborative Exploration of Texas' Prehistoric Populations using Ancient DNA. L.B. JONES.
- Gouging and non-gouging callitrichid primate canine morphospace. E.L. FULWOOD, T. HARPER.
- A trepanation case caused by surgery during the late Neolithic Age in the North of China. K. HOU.
- A geometric morphometric study on sexual dimorphism in human juvenile facial morphology. C.M. SHIPMAN, S.E. FREIDLINE.
- Discriminating between taxa of Cercopithecid primates using morphometric analysis of landmark data. L.E. DAVIS, S.R. FROST.
- The use of multiple foot bones to estimate sex in human archaeological and fossil populations. C. ALONSO-LLAMAZARES, A. PABLOS.
- Photos from the past illuminate the complexities of flanging in historic captive orangutans (Pongo spp.). S. FACHNIE, A.E. KRALICK, L.F. ROGERS, E.S. ROGERS, S.L. CANINGTON.
- Stature Comparison Between 18th Century Blacks in the Western Hemisphere. E. TURNER- BYFIELD.
- Protocol for application of traditional points and measures to digital crania. M. CERVANTES, H. CARDOSO, J. ALBANESE.

# ASYNCHRONOUS PRESENTATIONS AVAILABLE ON DEMAND ONLINE

- A shared pattern of facial growth in present-day humans . S.E. FREIDLINE, M. HUBBART, C. VILLA, A. SCHUH.
- Archaic Adaptive Introgression in Peruvian Populations. E. MEYER, X. ZHANG.
- Assessing research practices and perspectives in anthropological genomics. S.Z. VILCHIS.
- Exploring the Interplay of Diet and Shoulder Morphology in Primate Adaptations. E. SHARMA,
   C. PATEL, C. MCGRATH, L. DAY, A.L. RECTOR, M. VERGAMINI.
- New paleoecological data from the middle Miocene of Maboko Island, Kenya reveals a humid subtropical local climate. I.D. ARNEY, E. HYLAND, R.J. JANSMA, R.N. KINYANJUI, E. LOCKE, S.N. MUTETI, L.A. GONZALES.
- Virtual reconstruction of the StW 573 Australopithecus skull. A. BEAUDET, R.J. CLARKE, R.C. ATWOOD, V. FERNANDEZ, N.T. VO, J. DUMONCEL, K.J. CARLSON, T. JASHASHVILI, J.L. HEATON, T.R. PICKERING, R. CROMPTON, K. KUMAN, L. BRUXELLES, D. DOMINIC STRATFORD.
- Analysis of Temporomandibular Joint Morphology and Dental Arch Shape on the Prevalence of Dysfunction. J. MCCLUSKEY, L. ARSENAULT, A.M. HARDIN.
- From photogrammetry to micro-CT analysis, application of Virtual Anthropology techniques to the new human burials discovered at Cabeço da Amoreira (Final Mesolithic, Portugal). D. COUTINHO NOGUEIRA, R. GODINHO, N. BICHO, J. CASCALHEIRA, C. GONÇALVES, C. UMBELINO.
- Effects of Socioeconomic Status on Age at Death and Cause of Death . K.C. MCKENNA, K.B. BEANE.
- Assessing intra-regional biological affinities among Middle Neolithic populations in Switzerland, M.J. ANCTIL.

#### **Session 1**

# Dental Anthropology: Dental Perspectives from the Past to the Present Contributed Poster Presentations

Chair: Kenneth Tremblay
Diamond Ballroom

- 1 Dental microwear of late Paleogene/Neogene primates from the Turkana Basin of Kenya. L.K. FEHRINGER, P. PRINCEHOUSE, J. ROWAN, K. UNO, P.S. UNGAR.
- 2 From Iberia to Chukotka: assessing dental morphological variation across Eurasia. G. SCOTT, A.J. PASTORE, B. DUTRA, T.G. OLSON, J.F. HOFFECKER.
- 3 Using DMTA to Reveal Dietary Shifts Among the Ancient Mongolians of the Bronze Age. K.E. ADLER, J.T. ENG, M. HRIVNYAK, E. MYAGMAR, C.W. SCHMIDT.
- 4 Identified sources of interobserver error in ASUDAS trait definitions: An investigation of the persistent inconsistency in dental morphology scoring. D. DECHANT, L.E. CIRILLO.
- 5 Emerging resilience and patterns of stress: Microscopic evaluations of LEH defects among individuals from colonial Mórrope and Eten. M.L. SELLERS, H.D. KLAUS, C. ELERA, C. WESTER, E. BRACAMONTE, D.H. TEMPLE.
- 6 Examining the Dental Morphology of Donors within the JAW Collection. C.R. BURKS, R.L. GEORGE.
- 7 A closer look at the perinatal and infantile environment: A case study of deciduous microdental structures. E. SMITH, M. PILLOUD, C. ARIS.
- 8 Identity expression among Upper Paleolithic foragers through cheek plugs? Dental evidence from Arene Candide, Liguria. I. DORI, F. SEGHI, V.S. SPARACELLO, D. FRAYER, J. WILLMAN, A. RIGA, T. MORI, F. DI VINCENZO, A. PAPINI, M. BOGGIONI, J. MOGGI- CECCHI.
- 9 Using µCT scans to assess R-L differences in tooth size for studies of fluctuating asymmetry. K.N. GURIAN, D. GUATELLI-STEINBERG, E. DUNN.
- 10 Ancient Warriors: Inter- and Intra-population Variability of Dental Nonmetric Traits of Black Sea Scythians. S. LUKASIK, M. KRENZ NIEDBALA, V. SINIKA.
- 11 Investigating the relationship between elemental fluctuations and seasonality in baboon teeth. M. BHARATIYA, J. ELLIS, C. AUSTIN, M. ARORA, D.R. GREEN, N.D. LEONARD, W. MCGRAW, B. PAUL, L. SWEDELL, I.S. WILLIAMS, J. ZHAO, T.M. SMITH.
- 12 Romans Were Local: Iron Age Ancestral Continuity in the Eastern Adriatic. T.N. LOEWEN.
- 13 Why is my tooth blue? Implications of dental enamel diagenesis in studies of health in the past. L.A. KAVALE-HENDERSON, A.E. SNODDY, P. PETCHEY, H.R. BUCKLEY.
- 14 Dental mapping: A potential GIS application for identifying congenitally missing teeth. K.G. TREMBLAY
- 15 Trends in tooth development and eruption in a world-wide sample: the foundation of a generalized dental age estimation method. L.E. CIRILLO.
- 16 The role of the patterning cascade model in human premolar variation. M.L. MILITELLO, D.E. KENESSEY, C.M. STOJANOWSKI, K.S. PAUL.

- 17 Back to the "cyrtodonty" in Upper Pleistocene hominin teeth: evidence from the Arcy-sur-Cure Neandertals. J. HENRION, J. HUBLIN, B. MAUREILLE.
- 18 Dietary stress, tooth characteristics and the Patterning Cascade Model. E.C. BLANKENSHIP- SEFCZEK, A.H. GOODMAN, M. HUBBE, J.P. HUNTER, D. GUATELLI-STEINBERG.
- 19 Phylogenetic Analysis of the Lukeino Molar (KNM-LU 335) using Occlusal Morphology. A.N. BARRERA, N.W. POST, A. ORTIZ, A.S. HAMMOND, K.D. PUGH.
- 20 Incremental dentine microsampling: Reconstructing weaning age in rural Medieval Italy. C.L. GOLD, G. GOUDE, B. HOLT, K. SAYLE.

### Session 2

### Primatology: Behavioral Adaptations Across Ecological and Social Landscapes

#### Contributed Poster Presentations

Chair: Susan Howell
Diamond Ballroom

- 1 Annual Rainfall and Mammal Species Diversity in a Costa Rican Rainforest. M.S. SEABOCH, S.M. HOWELL, O.V. RAMÍREZ, E.A. FONSECA.
- 2 A comparison of the gut microbiota of two ateline species with variable diets and altitudinal ranges, the common woolly monkey (Lagothrix lagotricha poeppigii) and the yellow-tailed woolly monkey (Lagothrix flavicauda). E.L. PAIN, M.A. ZARATE, J. MARTIN, A. DI FIORE, C.A. SCHMITT.
- 3 Parasite Richness in Wild Lemur Populations. E. NOROMALALA.
- 4 First Report of Proline-Rich Proteins, a Counter Adaptation Against Dietary Tannins, in the Saliva of Diademed Sifakas (Propithecus diadema). E.J. VILLEDA, O. RASOLOFONIAINA, K.L. MAHEFARISOA, M.T. IRWIN.
- Inter-tissue isotopic variability in three sympatric primates (Pan troglodytes schweinfurthii, Cercopithecus ascanius, and Piliocolobus rufomitratus) from Kibale National Park, Uganda. M. MALONE, L. MACLATCHY, J. KINGSTON.
- 6 Resource use for three sympatric Costa Rican primate species (Alouatta palliata, Ateles geoffroyi, Cebus imitator). S.M. HOWELL, R. JENSCH, C. SMART, M. SEABOCH, O.V. RAMIREZ, F.A. FONSECA
- 7 Ontogenetic changes in experimental feeding behavior in tufted capuchins. S.L. CANINGTON, C. KANNO, C.B. YOAKUM, M. FOGAÇA, M.A. HOLMES, C.E. TERHUNE, J. DE OLIVEIRA, J. CHALK-WILAYTO, M.F. LAIRD.
- 8 Gibbons as seed dispersers in a mosaic forest in Huai Kha Khaeng Wildlife Sanctuary. D.I. STOKES-MALAVÉ, L.E. LIGHT, S.A. POINDEXTER.
- 9 Reuse revisited: Sleeping tree reuse by white-handed gibbons (Hylobates lar). K. STOUT, L.E. LIGHT.

- Habitat Selection and Home Range Composition of the Buraiga Chimpanzee Community, Kibale National Park, Uganda. W.I. EDWARDS, V.D. POPESCU, N. GUMA, G. BALYESIIMA, H. AGABA, L. NAKAMI, N.J. STEVENS.
- 11 Tamarins lost in translation: using machine learning to search for convergence and divergence in vocalization repertoires across Neotropical primate species. N. FINNEGAN, J. LYNCH.
- 12 Automated detection of red titi monkey (*Plecturocebus discolor*) duets in the Ecuadorian Amazon. S.M. VAN KUIJK, S. O'BRIEN, D.J. CLINK, J.G. BLAKE, A. DI FIORE.
- 13 The sound of conspecific laughter induces positive affect in bonobos: a cognitive bias experiment. S. WINKLER, I. LAUMER, E. CARTMILL.
- **14** Gaze following in wild chimpanzees (*Pan troglodytes schweinfurthii*). K.H. SABBI, I.G. MONROE, A. ROSATI, Z.P. MACHANDA.
- 15 Spider monkey social dynamics, habitat, and behaviors. I.J. PARRILLO, J. TERRANOVA, K. DINGESS.
- 16 Collective movement behavior of sulawesi moor macaques in an anthropogenic environment. J. TRINIDAD, H. SCHARF, N. OKA, E.P. RILEY.
- 17 Heterogeneous intergroup encounters in a single population of blue monkeys. E. THURAU, M. CORDS.
- 18 Ecological determinants of the multi-level society of gelada monkeys (*Theropithecus gelada*). N. HUSSEIN, E. NEVES, C. MILLER, N. NGUYEN, J. KERBY, P.J. FASHING, V.V. VENKATARAMAN.
- 19 A training-testing approach for the comparison of dominance rank reliability and its application to primate social systems. D. MAYO, J.T. FELDBLUM, I.C. GILBY, S. ROSENBAUM.
- **20 Old solutions for colonial problems: queering biological anthropology.** L. NONNAMAKER, K. CRUZ, M. DASARI, S.K. PATTERSON.

### **Session 3**

# Primatology: Assessing Primate Population Health and Conservation Strategies

Contributed Poster Presentations

Chair: Monica Wakefield
Diamond Ballroom

- 1 Environmental enrichment for laboratory primates: current practices and research trends. J.L. OWENS.
- 2 Nutritional supplements 'biscuits' increase regurgitation and reingestion behavior in captive gorillas (Gorilla gorilla gorilla). A. BLACKBURN, M.J. BRADSHAW, J. BARNES, N. SEAL FAITH, T. BARNHART, H. DAVIS LEITH, C. NURSEMENT, V. ORTEGA, L. BEEM, A. BAILEY, E.A. SANDHAUS.
- 3 Long-tailed macaque populations and community interactions in Cebu, Philippines. L.L. FIELDS.

- 4 Funky Monkeys: Aberrant Stereotypy in New World Primates at Jungle Friends Primate Sanctuary. M.L. FLEISHMAN, B. REID.
- 5 Assessing the concordance between IUCN species distributions for Nycticebus and community science sightings: A comparative analysis. M.K. RHEDDICK, H.E. HANGEN, S.A. POINDEXTER, L.E. LIGHT.
- 6 Presence of vancomycin resistance gene vanA in a declining population of mantled howler monkeys (Alouatta palliata palliata) at La Pacifica, Costa Rica. K. BROSSARD STOOS, J. MASON, M. KELAITA, K. BLANCO-PEÑA, I. HAGNAUER, L. COREWYN.
- 7 Energetic and Social Factors of Habituation Behaviors in Wild Bornean Orangutans (*Pongo pygmaeus wurmbii*) in Gunung Palung National Park, Indonesia. L.A. BRUBAKER-WITTMAN, T. SUSANTO, C. KNOTT.
- 8 Using stable carbon and nitrogen isotope values to estimate exposure to agricultural chemicals among green monkeys (*Chlorocebus sabaeus*) in St. Kitts. E.N. ROSE.
- 9 From part to whole: A novel approach to holistic welfare assessment in wild olive baboons (*Papio anubis*). M.L. WAKEFIELD, C.A. MOST.
- 10 Capacity building in aid of long-tailed macaque conservation. M. HANSEN, A. FUENTES.
- 11 Phylogeography and demographic history of Varecia variegata using mitochondrial DNA sequences. A. CHANDRASHEKAR, S. ENGBERG, L.E. EDWARD, C. PACIONI, A.L. BADEN.
- 12 Energetic trade-offs: Urinary C-peptide in the Zanzibar red colobus (*Piliocolobus kirkii*) across a habitat-disturbance gradient. K.A. YILMAZ, A.V. GEORGIEV, I. FÜRTBAUER, C.B. STANFORD.
- 13 A demographic analysis of transient dynamics in a wild population of white sifaka (*Propithecus verreauxi*) at Beza Mahafaly Special Reserve, southwest Madagascar. R.R. LAWLER.

#### Session 4

# Primatology: Productive Lives: New Views on the Primate Life Course Contributed Poster Presentations

Chair: Jessica Lynch Diamond Ballroom

- Generalized Additive Mixed Modeling of Primate Growth Spurts. S.R. LEIGH, D.J. NAUMENKO.
- 2 From Birth to Maturity: A Phylogenetic Investigation of Sexual Dimorphism in Primates. S.E. TAYLOR, J.G. SCHRAIBER, T. LASISI.
- 3 Wild-caught Cebus-Sapajus hybrid developmental trajectory, biometry and health. J.W. LYNCH.
- H. LIMA DE QUIEROZ, M.G. LIMA, O.P. MARQUES NETO, S. DOMINGUES, C. LOPES.
- **4** Maternal aye-aye (*Daubentonia madagascariensis*) anxiety peripartum. L.M. PACIULLI, R.V. OLSON, D.Q. WATTS.
- 5 Do fur isotopes detect weaning in dwarf lemurs? B.E. CROWLEY, M.B. BLANCO.

- 6 The Evolution of Primate Litter Size. J.H. MCBRIDE, T.A. MONSON.
- 7 Characterizing variation in black-and-white ruffed lemur (*Varecia variegata*) allomaternal care. A.L. BADEN, N. BEEBY, J. DELANEY-SOESMAN.
- 8 Social Group Interactions and Mating Patterns of the Cayo Santiago Rhesus Macaque Colony: A Retrospective Approach. M.Q. ZHAO, M. KAUR, S. KUNDU, R. GONG, Q. WANG.
- 9 Systematics and population genetics of a high-altitude primate in the Himalayas. K. AREKAR, N. TIWARI, M. KHALEEL, S. SATHYAKUMAR, P. KARANTH

### **Session 5**

### Primatology: From Tails to Teeth: Exploring Form-Function Relationships Across Primates

#### **Contributed Poster Presentations**

Chair: Chris Robinson
Diamond Ballroom

- Investigating risk avoidance during arboreal locomotion in wild primates. N.M. SCHAPKER, J. JANISCH, L.C. MYERS, W.G. COLE, A. MATAR, L.J. SHAPIRO, J.W. YOUNG.
- 2 It seems they glide: aerodynamics of vertical descent in Galago moholi. J.W. YOUNG, G. BOULINGUEZ-AMBROISE, E. BAKOS, T.L. HIERONYMUS, N.T. DUNHAM.
- 3 Hand use during food retrieval on arboreal substrates in northern tree shrews (*Tupaia belangeri*). A.T. VIEIRA, A.D. KEMP.
- 4 Travel or Treat?: An Analysis of Spider and Howler Monkey Prehensile Tail Use. L. LEHMAN, J. PRUETZ.
- 5 Semi-prehensile tail use in wild cercopithecid monkeys. L.C. MYERS, J. JANISCH, N.M. SCHAPKER, A. CUNDARI, A. HUSAIN, A. SILVA, J.W. YOUNG, L.J. SHAPIRO.
- 6 Identification of ecological, locomotor, and morphological indicators of semi-terrestriality in anthropoid primates. I.J. THOMPSON, B.A. PERCHALSKI, S.D. MADDUX, L.A. GONZALES.
- 7 Locomotion and habitat use of forest-living olive baboons (*Papio anubis*). L. GORGONE, J. ROTHMAN, L. SWEDELL.
- 8 Time-frequency analysis of hindlimb muscle electromyograms in bipedalism and quadrupedalism in Japanese macaque. R. GOTO, K. OKA, T. SHITARA, Y. NAKANO.
- 9 Remote Measurement of Morphological Traits on Wild Critically Endangered Yellow-Tailed Woolly Monkeys (*Lagothrix flavicauda*) in Perú. S.M. WEAVER, E.L. PAIN, F.M. CORNEJO, M. ALCIRA PORTOCARRERO LAPIZ, A. DI FIORE, C.A. SCHMITT.
- 10 Robusticity and articular shape variation within Alouatta. J. RUNESTAD CONNOUR, K.E. GLANDER.
- 11 Alouatta caraya femoral bone density and cortical thickness with respect to sex and age.
- 12 Proximal Tibia Morphology and the Evolutionary History of Locomotor Shifts in Primates. A.R. OTERO.

- 13 An analysis of the mandible of Troglodytes kooloo-kamba; a purported chimpanzee-gorilla hybrid. C.A. ROBINSON, M.A. BERTHAUME.
- **14 Dental shape complexity in Eastern chimpanzees and bonobos.** A. ROMERO, S. TORRIJOBOIX, L. FIORENZA, E. CUESTA-TORRALBO, J. GALBANY.
- 15 Temporal trends and geographical variation in dentition of Macaca sylvanus. C. STAN, C. TERHUNE.
- 16 Direct Assessment of Phytoload in Cercocebus Atys Diet to Further Identify Selective Agents of Thick Enamel. S.A. HUNTER, K.N. GURIAN, D. GUATELLI-STEINBERG, W. MCGRAW.
- 17 Antemortem tooth loss and craniofacial fluctuating asymmetry in captive olive baboons (*Papio anubis*). A.N. ROMERO, C.E. TERHUNE.
- 18 Endocranial volume in eastern chimpanzees (*Pan troglodytes schweinfurthii*) and western chimpanzees (*P. t. verus*). R. WRANGHAM.
- 19 Facial fluctuating asymmetry in three species of colobus monkeys. J. ERKENS, W. MCGRAW.
- 20 The use of macromorphoscopic analysis to examine nonmetric skull variation within a gorilla subspecies: Gorilla gorilla gorilla. C.J. THOMPSON.

#### Session 6

# Forensic Anthropology: Evaluating Casework Protocols and Methods Contributed Poster Presentations

Chair: Brenna Hassett
Diamond Ballroom

- 1 Leveraging biology and culture in forensic anthropology: An analysis of the factors that contribute to the identification of long-term unidentified persons. T.V. WILSON.
- 2 Best Practices for DNA Extraction from Burned Human Remains Using Rapid DNA Technology. A.Z. SPERBER, S. SAUT, L.S. ANTONELLI, B. SHOOK, A. KENDELL, J. CELENTANO.
- 3 The Impact of Case Protocol and Decedent Demographics on Positive Identification in Forensic Anthropology. T. DE CREE, E. GIACOMELLO, M. HAMILTON, Y. MANCERO TELLO.
- 4 As the bones churn: efficiency and observer reliability in documenting highly fragmented, burned human remains. S.H. BLATT, M. HODGES DELONE-RHOADS, T. MILES, P. MORALES LORENZO, J. BEDARD, S. UNWIN.
- 5 Guidelines for Forensic Anthropology in Northern France. Where Medicolegal Significance Meets Archaeological Relevance. B. BERTRAND, A. DESRUE, S. VATTEONI, S. OUDRY, D. DELOBEL, L. LE RU, X. PUPPINCK, H. MULTON, F. CHAMPAGNE, A. BÉCART, D. GOSSET, V. HÉDOUIN, F. FEVRE.
- 6 Machine learning and discriminant function analysis in the formulation of models for sex estimation using skull measurements of contemporary Black South Africans. M.O. UJADDUGHE, J. HABERFELD, J. PRITHULA, M.E. CHOWDHURY, M. BIDMOS, O. OLATEJU.
- 7 Evaluating Body Donation Procedures by Comparing Observed and Reported Antemortem Alterations in a Donated Skeletal Collection. S.I. RECK.

- 8 Feet apart: Using spatial analysis to model matches of commingled elements in a mass grave. B.R. HASSETT, H. SAĞLAMTIMUR.
- 9 Structural vulnerabilities and Indigenized harm reduction strategies for missing and murdered Indigenous peoples, Idaho. J.R. BEDARD, S.H. BLATT.
- 10 Preliminary Results of Quantitative Measurements for Age-at-Death Estimations of Three Pelvic Joints. K.E. BENNETT.
- 11 Human vs. animal bone: Less-destructive identification using scanning electron microscope. K. KELLEY, S. PACHECO-FORES, P. KELLEY, L. DONG.
- 12 Fluctuating Cranial Asymmetry among Housed and Unhoused Individuals in Los Angeles County. S.A. TORRES, E.E. FRICANO.
- 13 Resolution of commingled human remains using their elemental profile by Laser-Induced Breakdown Spectroscopy. K.M. LIVINGSTON, M. BAUDELET, N.V. PASSALACQUA, K. ZEJDLIK, J. BETHARD.
- 14 The influence of body size in estimating age-at-death from the auricular surface: An analysis of senescence of the features of the auricular surface. D.W. LAMB.
- 15 Body mass estimation based on bi-iliac breadth and femoral head diameter. M.L. RODRIGUEZ, D.L. CUNNINGHAM, D.J. WESCOTT, A.C. GONZALEZ.
- 16 Comparison of fracture characteristics in paired human ulnae loaded at two distinct loading rates. A.M. AGNEW, C. GODEN, R. HUNTER, J. MCGINLEY, Y. KANG, A. HARDEN.
- 17 Evaluation of missing data imputation methods for human osteometric measurements. X. LIU, J. PANG.
- What's baby eating? An Isotopic Characterization of Baby Foods and Formulas in the US. K. VEROSTICK, A. RANDALL, C. STANTIS, S. COVARRUBIAS, G. BOWEN.
- 19 Estimating vertebral column length from contiguous vertebrae segments for anatomical stature reconstruction. K.R. KALLMAN, A.M. ARNOLD, A. LOREDO, R.C. MCCARTHY, D.J. WESCOTT, D.L. CUNNINGHAM.
- 20 Utilizing FORDISC 3.1 on Simulated Partial Crania and the Implications for Skeletal Analysis. A.V. LANFRANCHI.

#### Session 7

# Genetics and Genomics: Diverse analytical approaches Contributed Poster Presentations

itributed Poster Presentation

Chair: Kendra Scheer
Diamond Ballroom

- 1 Modeling the impact of cultural processes and selection regimes on the fate of loci undergoing evolutionary mismatch. A.M. ARNER, A.J. LEA, N. CREANZA.
- 2 A gene selection analysis of the umami taste receptor encoded by TAS1R1 and TAS1R3 within humans and Pan species. M.L. CROSS, A. KITCHEN.
- 3 Molecular evolution of X-specific immunity genes in primates. C.L. MARIENCHECK, B.J. BRADLEY.

- 4 A potentially adaptive increase in AMY1 copy number in Peruvian populations. K. SCHEER, L. SIAO, A. MORALES-RIVERA, K. JORGENSEN, T. BRUTSAERT, A. BIGHAM, O. GOKCUMEN.
- 5 eQTL analysis of cold adaptation regulation in Peruvian Quechua populations. E. YOUNG, V. BATTISTA, M. KIYAMU, G. ELIAS, J. ISHERWOOD, O. GARCIA, K. EVANS, M. INCLAN, M. RIVERA-CHIRA, F. LEON-VELARDE, M. SHRIVER, L. PEARSON, T.D. BRUTSAERT, A. BIGHAM.
- 6 Complete Phylogeography of Mitochondrial Haplogroups P and Q. V. PANDYA, N. DEMATTEO, R. DEUTSCH, C. MAYSONET, A. ROSS, M. SHAMOON-POUR.
- 7 DNAm of stress-related genes in persons living with HIV. C.J. TOMLINSON, L. RYNIKER, H. COOK, R. SCHWARTZ, A. NON.
- 8 Epigenetic signatures of intergenerational exposure to violence. C.J. MULLIGAN, E.B. QUINN, D. HAMADMAD, C.L. DUTTON, L. NEVELL, A.M. BINDER, C. PANTER-BRICK, R. DAJANI.
- 9 The role of genes and environment in human dental arch shape a twin study. T. LIN, M. MEADE, T.E. HUGHES.
- 10 Whole blood gene expression patterns associated with osteoporosis-like bone loss in a free- ranging rhesus macaque. C.E. COSTA, C.M. TURCOTTE, S. KUO, T.M. RYAN, A. RAGHUNATH, L. DEMARS, C. RESEARCH UNIT, J.E. NEGRON-DEL VALLE, D. PHILLIPS, M. PLATT, L.J. BRENT, M.J. MONTAGUE, M.I. MARTINEZ, M.M. WATOWICH, S.A. WILLIAMS, S. ANTÓN, N. SNYDER-MACKLER, J.P. HIGHAM, G. HOUSMAN.
- 11 Skeletal muscle gene expression is associated with differences in mobility and signatures of osteopenia. L.E. NEWMAN, C.M. TURCOTTE, M.R. SANCHEZ ROSADO, M.I. MARTINEZ, C. RESEARCH UNIT, M.J. MONTAGUE, M.L. PLATT, L.J. BRENT, S.A. WILLIAMS, S.C. ANTÓN, N. SNYDER-MACKLER, J.P. HIGHAM.
- 12 Unraveling the genetic basis of skeletal muscle endurance to understand hominin locomotor evolution. S.R. QUEENO, A.S. OKAMOTO, M.C. O'NEILL, T.D. CAPELLINI, K.N. STERNER.
- 13 Comparing the performance of double-stranded vs. single-stranded DNA library protocols on ancient microbial DNA recovery and microbiome reconstruction. K. BURGE, I. VELSKO, C. WARINNER.
- 14 Evaluating efficacy of single- vs double-stranded DNA library preparation strategies for ancient microbiome research. H.M. PALACIOS, T.P. HONAP, D.J. KENNETT, K.M. PRUFER, C.M. LEWIS, JR.
- 15 Metabarcoding of Environmental DNA from Soil: A Promising Tool for Assessing Mammalian Community Composition. A. DI FIORE, E. PÁEZ CRESPO.
- 16 Comparative analysis: Dentin, auditory ossicles, and petrous portion sampling for ancient human DNA. M.L. HASSLER, J.H. STONE, J. ZOLIK, L.N. POTT, M.A. ELLIS, M. NIEVES- COLÓN.
- 17 A Reference Mitogenome for Lagothrix lagotricha poeppigii using Portable Oxford Nanopore Sequencing. M.A. ZARATE, A. DI FIORE, C.A. SCHMITT.
- **18 Optimizing Kraken2 Databases for Species Identification.** A. LEE, R. SINGLETON, K. HUGHES, N. RUNYANG, P. SUDMANT, C. HOFMAN.
- 19 Somatic Mutation and Adaptive Flexibility: Neural Plasticity and the NF1 Gene in Hominin Evolution and Beyond. A.J. ALVESHERE, V.M. RICCARDI.

### Session 8

# Genetics and Genomics: New insights into human population history Contributed Poster Presentations

Chair: C. Eduardo Amorim
Diamond Ballroom

- 1 Ancient DNA Reveals the Genetic Connection of the Neolithic to Bronze Age Population in the Eastern Nihewan Basin. J. LI, W. NIE, Y. ZHANG, H. ZHU, H. ZHOU, D. CAI, J. LI.
- 2 Human mitochondrial DNA informs about early wheat cultivation and its introduction routes from the Levant to Central Europe. M.J. TOMEO.
- 3 Ancient Mitogenomes from Belize Provide Insights into the Mobility and Migration of Ancient Communities in Mesoamerica and the Caribbean. C.D. CLEARY, A.J. LOCKER, L.C. SPRINGS, M.M. BADILLO, R.W. SMITH, A.W. REYNOLDS.
- 4 Using Human Mitochondrial DNA Genomes to Reveal Patterns of Migration of the haplogroup L1b1a3. I.Q. BRISTOL, M. VILAR, N. COSTELLO.
- 5 Biocultural analyses lend insights into local population histories in ancient Fuegian-Patagonians. C.M. BALENTINE, M. ALFONSO-DURRUTY, R. FLESKES, V. NARASIMHAN, A.W. REYNOLDS, F. MORELLO, M. VILAR, M. SAN ROMÁN, L.C. SPRINGS, D.A. BOLNICK.
- 6 Using Uniparental DNA to Recover the Colonial Population History of Nuestra Señora de Belén, New Mexico. B.L. DITTMER, A.J. LOCKER, C.D. CLEARY, S. SISNEROS, M.A. TÓRREZ, C. RALSTON, J. BENN TORRES, P. STONE, D.L. MARTIN, R.W. SMITH.
- 7 Ancient Human DNA from the Osmore River Valley, Peru: Demographics, Disease, and Adaptation. M.E. MCCARTY, A. CRANE, K.E. BLEVINS, A. DAHLSTEDT, K.J. KNUDSON, J.E. BUIKSTRA, F.D. ANGELIS, C. AMORIM, A.C. STONE.
- 8 Ancient DNA Reveals Diverse Mitogenomic Lineages in an Afro-diasporic Peruvian Population. L. POTT, J. ZOLIK, J. SANTA CRUZ ALCALÁ, C. MAASS, M.A. NIEVES-COLON.
- 9 Pinniped-derived Mycobacterium tuberculosis strains along the pre-conquest Osmore Drainage Valley, Perú. K.E. BLEVINS, A.E. CRANE, M. MCCARTY, A. DAHLSTEDT, K.J. KNUDSON, J.E. BUIKSTRA, A.C. STONE.
- 10 The genetic differentiation of early South Americans. C. POSTH.

### Session 9

# Education in Biological Anthropology: Education, Public Engagement, and Professional Development

#### **Contributed Poster Presentations**

Chair: Donovan Adams
Diamond Ballroom

- 1 Establishing identity: Reconstructing the demographic profile of a human osteological teaching collection. M. LUCAS, M. ELMORE, C. CHEN, C. COCKERILL, M. DAVIS, V. PHAM, M. KOLMANN, L. FUSELIER, K.E. MARKLEIN.
- 2 Restoring identity: A paleopathological examination of deceased individuals from a human osteological teaching collection. M. ELMORE, M. LUCAS, C. CHEN, M. DAVIS, V. PHAM, M. KOLMANN, L. FUSELIER, K.E. MARKLEIN.
- 3 Erasing identity: Presenting postmortem skeletal alterations as evidence of structural apathy in a human osteological teaching collection. L. TURPIN, M. ELMORE, M. LUCAS, C. CHEN, M. DAVIS, M. KOLMANN, L. FUSELIER, K.E. MARKLEIN.
- 4 Learning from casts? Testing assigned ancestry using FORDISC. K.R. DRISCOLL, S. PATTERSON, S. MARTIN.
- 5 Using anthropological ethics frameworks to inform museomics research on natural history museum collections. V. CHENG, S. SABOOWALA, S.Z. VILCHIS, J. DIAZ, R. MALHI.
- 6 Using "narrative" in an introduction to biological anthropology course to improve student understanding of human evolution and support anti-racist pedagogies. K. FISH.
- 7 Assessing the Impacts of a Genetics Education Partnership with High School Teachers. R.C. O'MALLEY, N. VINCENTEN, R. BOWMAN, H. KIM, G. MCNEIL, T. WU, M. GELBART.
- 8 Mentally Institutionalized African Americans During the 1918 Spanish Flu. S.C. JACKSON- SIMS.
- 9 The HUMANITY exhibition: a model for decolonizing human evolution museum displays. W. BLACK, T. CAMPBELL, A. SEPHTON, N. MAZIBUKO, R. PICKERING, R. ACKERMANN.
- 10 Cultural Marxism, Anthropology, and Social Media. D.M. ADAMS, C.M. TRENT.
- 11 Anthrozoology, travel health, and conservation medicine in the Galápagos islands. D.M. ORTIZ, M. VILLA, S. STELLBURG, C. LETLOW, T. LONG, G. READ, E. THUM, D. CHACON, J. GUILLEMOT. M.P. MUEHLENBEIN.
- 12 Financial barriers to graduate student success in biological anthropology. A.E. HOUKES, L. CIRILLO.
- 13 Mentorship beyond landing the dream job: guidelines for building and maintaining research laboratories in molecular anthropology. C.M. MILLER, M.A. NIEVES-COLÓN.

### **Session 10**

# Human Behavior: Cultural Influences on Life History

### Contributed Poster Presentations

Chair: Brian Wood
Diamond Ballroom

- 1 How do clinicians define and use race and genetic ancestry? C. RABAY, R.M. RAJAGOPALAN, A.L. NON.
- 2 Exploring the Origins and Cultural Significance of Cranial Deformation in Northeast Asia: Evidence from a 10,800-Year-Old Case Study. R. ZOU, Q. ZHANG, Y. NIU.
- 3 The Resilience of Kin Networks under Market Integration in a Matrilineal Society. R. LIU, S. MATTISON.
- 4 Maternal Connections: The Circulation of Support During Pregnancy Among Shodagor Women. A. TEMPLON, K. STARKWEATHER.
- 5 The Behavioral Ecology of Gender and wealth inequalities in Southwest China. S.M. MATTISON, P.M. MATTISON, B.A. BEHEIM, R. LIU, T. BLUMENFIELD, C. SUM, M.K. SHENK, E. SEABRIGHT, S. ALAMI, N. MACLAREN, K. WANDER.
- 6 Exploring the Ecological Context of Female Drug Use in the Ethnographic Record: Roles of Gender Inequality, Fertility, and Famine. D. RINKS, C. ROULETTE.
- 7 Culturally-determined Interspecies communication and cooperation between humans and honeyguides. B.M. WOOD, C.N. SPOTTISWOODE.
- 8 Muscle activation patterns over the life course among the Tsimane. T. DORSHORST, J. STIEGLITZ, B. HOLT.
- 9 Sleep architecture and nighttime vigilance in a rural agropastoral community in South Africa. E. KILIUS, M. LI, D.R. SAMSON.
- 10 Occupational belonging and food insecurity: A cross sectional study among Haitian and Dominican tourism workers in the Dominican Republic. K.C. KRAUSE, C.M. MEYER KRAUSE.
- 11 The influence of evolutionarily significant human facial characteristics on perceived attractiveness: An experimental approach. E.S. THUM.
- 12 Evolutionary Foundations of Privacy Perceptions. S.E. KLITGAARD.
- 13 Unrealistic optimism during COVID: Evolutionary explanations for risky behaviors. M.P. MUEHLENBEIN, J. GASSEN, T. NOWAK, S.P. WEAVER, E.J. BAKER.
- 14 Variation and uniformity in the linguistic expression of mindreading across four languages. A.M. SMITH, C. BARRETT, E.A. CARTMILL.

#### **Session 11**

### Human Biology: Energy, Mortality and Phenotypes

#### **Contributed Poster Presentations**

Chair: Alessandro Lisi Diamond Ballroom

- 1 Energy limitation during early life impairs fat oxidation: evidence from children and adolescents in Vanuatu. M. BHUIYAN, K. KOTRA, P. MATTISON, A. MCGROSKY, D. MERCADO, H. PONTZER, M.C. TOWNER, K. WANDER, S. MATTISON, I.J. WALLACE.
- 2 The interplay of sociability and head-load carrying on energy expenditure: implications for efficient mobility strategies. Y. YOUN, C.M. WALL-SCHEFFLER.
- 3 Variation in vitamin D levels (serum 25-hydroxyvitamin D) in NHANES 2015-2016. K.J. WEINSTEIN.
- 4 The Human Extended Lifespan an Endocrine Hypothesis. A. REIS, M. KASER.
- 5 Inflammation Mediates the Relationship Between Moderate to Vigorous Physical Activity and Telomere Length in Middle to Older Age Adults. A. NANDA, S. MALTAGLIATI, D.H. ASLAN, G.E. ALEXANDER, Y.C. KLIMENTIDIS, D.A. RAICHLEN.
- 6 Bacteria Killing Assay; Novel ex vivo method for immunocompetence in human. T.J. NOWAK, J. GASSEN, S. PRALL, R. PATEL, A. THURMAN, D. ARANA, V. KRISHNAN, M.P. MUEHLENBEIN.
- 7 Malaria Mortality Favors Patriliny. M. HILDE-JONES, E. ZAGHENI, J.H. JONES.
- 8 From Ellis Island to Ellis County: Differential Mortalities among Descendants of Eastern European Immigrants in New York and Texas. A.R. MAGPIONG, R.G. NELSON, A.W. REYNOLDS, R.W. SMITH.
- 9 Proportional Mortality During the 1918 Influenza Pandemic in Alaska. E. TINKER-FORTEL, L. SATTENSPIEL, S. MAMELUND.
- 10 Contrasting evidence of a short-term scarring effect following two synergistic epidemics of measles and scarlet fever: Investigation of age-cause-specific contributions to life expectancy change. H.T. BATTLES, P.M. ROBERTS.
- 11 Unraveling the impact of admixture and adaptation on patterns of genetic diversity at the TAS2R bitter taste receptor genes in distinct African populations from Cameroon. A. LISI, J. LIU, C. BATTAGGIA, R. JOHNSON, P. ANAGNOSTOU, G. DESTRO BISOL, M.C. CAMPBELL.
- 12 Understanding the Influence of Colonial Contact on Asymmetry Trends in Cranial Morphology among Black South Africans over the late 19th and 20th Centuries. C.J. LEE, J. MOLNAR, A. WATANABE, E. DICKINSON, F.E. GRINE, C.S. MONGLE, B.K. BILLINGS, V. MNGOMEZULU. C. TURCOTTE.
- 13 Global variation in childhood intestinal absorptive capacity: An overlooked factor influencing energetics, phenotype, and health. M. PFAFF-NASH, S.S. URLACHER.
- 14 Can we use iliac flare to infer gut size in humans? O. ROMERO, J. UY.
- 15 Factors Influencing Patient Satisfaction During PCOS Diagnosis. A. SAMSONOV, M. MUEHLENBEIN.

#### **Session 12**

# Symposium: The growth and development of sub-adult hominins: multidisciplinary approaches

#### **Invited Podium Symposium**

Chaisr: Debra Bolter, Noël Cameron
Platinum D.

Historically, it has been rare for immature hominin specimens to be recovered with associated dental and postcranial remains. In the last decades, the fossil assemblages for sub-adult remains have increased, with integrated specimens now available from several taxa such as Australopithecus afarensis, Australopithecus sediba, Paranthropus robustus, Homo ergaster, Homo erectus, Homo neanderthalensis, and Homo naledi, with the potential to associate additional immature remains in larger assemblages. The aim of this symposium is to further our understanding of hominin evolution through investigating immature remains, and to recognize a specialty field within paleoanthropology to study growth, development, maturity patterns and life history. This symposium brings together researchers from multiple areas—hominin paleoanthropologists, field primatologists, comparative anatomists, developmental biologists, forensic anthropologists, biological anthropologists and human auxologists—to discuss wide-ranging methods and techniques to apply to immature specimens in the fossil record. The concepts and approaches stem from an April 2023 workshop, sponsored by the Wenner-Gren Foundation (Gr. CONF-900), in response to the discovery of sub-adult hominin remains at various sites, but primarily in South Africa in the Rising Star Cave System. Workshop participants were experts in these fields and discussed the potential contribution each of these cognate areas could make in clarifying the processes of growth and development in our hominin ancestors, and selective pressures shaping these patterns through evolution. In this symposium, we broaden our contributors to continue the conversation of common language, applications, and methods across multiple disciplines to study how development and growth may have evolved across hominins.

8:00 am Improving the non-human ape model outgroup in hominin evolution: a review of available data on growth and development. J.D. PRUETZ, D. BOLTER. 8:15 am Variation in Orangutan Development and Body Size: Implications for Assigning Sex and Age to Fossil Hominins. C.D. KNOTT, E.R. BROWN, F.S. HARWELL, A.E. KRALICK, J.C. LAMAN, C.A. O'CONNELL, A. RIZAL, A.M. SCOTT, T. MITRA SETIA, T. SUSANTO. Exploring covariation in epiphyseal fusion in extant and extinct hominins. K.E. STULL, 8:30 am C.A. WOLFE. 8:45 am Growing a brain, growing a body: the evolution of hominid encephalization. T.A. MONSON, A.P. WEITZ, M.F. BRASIL. 9:00 am Brain Energetics and the Evolution of Hominin Growth and Development: Implications for Paleoanthropology. C. KUZAWA. 9:15 am How much variation can we expect in subadult growth due to geographic and environmental variation? Evidence from H. sapiens. L.M. SCHELL.

Divergent trajectories between the Neanderthal and modern human ribcage development: paleobiological implications. D. GARCÍA-MARTÍNEZ, M. BASTIR.

9:30 am

- 9:45 am BREAK.
- 10:00 am Exploring Covariation in Dental Development across Modern Humans, Non-Human Primates, and Homo naledi. C.A. WOLFE, K.E. STULL, J.C. BOUGHNER.
- 10:15 am Enamel growth of Homo naledi. P. MAHONEY, G. MCFARLANE, A. TAUROZZI, P. MADUPE, M. O'HARA, K. MOLOPYANE, E. CAPPELLINI, S. ELTON, J. HAWKS, M. SKINNER, L. BERGER.
- 10:30 am Homo naledi and the evolution of infancy. Z. COFRAN, H.M. GARVIN, D. RADOVČIĆ.
- 10:45 am An assessment of the craniodental and postcranial material from juvenile Homo naledi recovered in the Rising Star Cave System. J.K. BROPHY, D.R. BOLTER, J. HAWKS.
- 11:00 am Neanderthal Teenagers: Puberty, Growth Spurts and Adolescence? L. RÍOS.
- 11:15 am Discussant: John Hawks.

#### **Session 13**

### Forensic Anthropology: Methods for Examining Human Variation and Taphonomy

#### **Contributed Podium Presentations**

Chair: Madeline Atwell
Platinum A-B

- **8:00** am Shifting paradigms in facial approximation. T.M. HOULTON, N. JOOSTE.
- 8:15 am Adult Body Mass Estimation using Femur Cross-Sectional Properties. E.Y. CHU, A.D. SYLVESTER, W.B. ZBIJEWSKI, G. SHI, L.A. MECKEL, D.L. CUNNINGHAM, D.J. WESCOTT.
- 8:30 am A comparison of stature estimation methods for contemporary American Indians. E. RANGEL, K.R. KAMNIKAR, N. APPEL, H.J. EDGAR.
- 8:45 am Evaluating Deep Learning Networks for the Identification of Secondary Osteon in Human Cortical Bone. J.G. GARCÍA-DONAS, Y. LIU, E.F. KRANIOTI, E. TRUCCO, S.J. MCKENNA
- 9:00 am Evaluating the Efficacy of Artificial Neural Networks in Classifying Isotopic Signatures: Applications for Forensic Provenancing. T.A. DELGADO, E.J. BARTELINK, R.C. TILLQUIST.
- 9:15 am Boiled vs. bottled: Analyzing oxygen isotope signatures from Taiwanese water to aid anthropological investigations. K.M. MCILHENNYMILLER.
- **9:30** am Evaluating Sampling Design Effects in Isotope-Based Geolocation Assignments. C. STANTIS, L. CHESSON, K. VEROSTICK, G. BERG, G. BOWEN.
- 9:45 am BREAK.
- 10:15 am Piecing together the scavenged: Utilizing global information systems (GIS) to map and analyze locations of previous scavenging research within the United States. K.C. MCGFHFF

- 10:30 am geoFOR: Comparative trends between medicolegal death investigation and human decomposition facility cases using a large forensic taphonomy database. K.E. WEISENSEE, M.M. ATWELL, C. EHRETT, N. NISBET.
- 10:45 am Forensic taphonomy: The impact of carrion biomass load on experimental outcomes. M.J. SPIES, D.A. FINAUGHTY, V.E. GIBBON.
- 11:00 am The revealing of past and present human remains in Swiss Alpine glaciers. S. LOESCH, L. INDRA, G. CASPARI, M. MILELLA, K. BAUER.

#### **Session 14**

# Primatology: Assessing Risk Factors and Consequences to Group and Population Health

#### **Contributed Podium Presentations**

Chair: Elizabeth Lonsdorf
Platinum C

- 8:00 am Integration of the gut microbiome and immune system in response to habitat disturbance in white-faced capuchins (Cebus imitator) at the Taboga Forest Reserve. J.M. LUCORE, J.C. BEEHNER, K.R. AMATO, M.E. BENÍTEZ.
- 8:15 am Where the small things are: Modelling edge effects on mouse lemur population density and distribution in northwestern Madagascar. S.M. LEHMAN, F.M. MALABET, M.S. RAMSAY, C. CHELL, B. ANDRIATSITOHAINA, U. RADESPIEL.
- 8:30 am Surveying and Genotyping an Insular Population of Dwarf Lemur (*Cheirogaleus*) from Northwestern Madagascar. H. RIJAMANALINA, A.T. MCLAIN.
- 8:45 am Engineering algorithms for camera trap data: recent advances and new challenges for primate identification in the savannas of Sénégal. H. CHEN, A. REIBMAN, S. LINDSHIELD, P. NDIAYE, Y. NDIAYE, J.D. PRUETZ.
- 9:00 am Strontium isotopes track female dispersal in Taï chimpanzees. R.D. BOUCHER, R. WITTIG, S.R. LEMOINE, A. MARO, X. WANG, P.L. KOCH, V.M. OELZE.
- 9:15 am Employing local ecological knowledge to understand slow loris ecology in anthropogenic landscapes. L.F. QUARLES.
- 9:30 am Effective Primate Conservation Requires a Focus on Human Well-being: The Importance of Evaluating the Consequence of Protected Areas on Human Happiness. D. ROMANELLO, H. MAMITIANA RAKOTOHARY, J. EVAH RAHARINIAINA MIRANA, R.J. LEWIS.
- 9:45 am BREAK.
- 10:00 am Gastrointestinal parasitism in capuchin monkeys: Effects of individual, social, and environmental factors in patterns of parasitic infection in a wild population. M.C. HENRIQUEZ, H. HAMOU, J. HASS, J. CHURCHER, S. ROMERO MORALES, L. SWEDELL, A.D. MELIN.

- 10:15 am Veterinary care and patterns of injuries and mortalities for a population of urban dwelling long-tailed macaques (*Macaca fascicularis*) at the Ubud Monkey Forest over a four-year period. J.E. LOUDON, M.E. HOWELLS, C.A. WOLFE, N. SUTARJANA, I. BUANA, W. BUDA, I. WANDIA, I. ARTA PUTRA, M. PATTERSON, A. FUENTES.
- 10:30 am Contact aggression differently predicts injury risk in male and female chimpanzees. M. EMERY THOMPSON, Z.P. MACHANDA, E. OTALI, M. KOBUSINGYE, R.W. WRANGHAM, M.N. MULLER.
- 10:45 am Age and sex differences in clinical signs of health in wild chimpanzees (Pan troglodytes schweinfurthii). E. LONSDORF, M. STANTON, D. MWACHA, D. MJUNGU, T. GILLESPIE, Z. MACHANDA, M. MULLER, E. OTALI, R. WRANGHAM, M. EMERY THOMPSON.
- 11:00 am Network insights of tuberculosis infection and social behavior of free-ranging long-tailed macaques in Thailand. N. AIEMPICHITKIJKARN, S. MALAIVIJITNOND, S. MEESAWAT, K.N. BALASUBRAMANIAM, B. MCCOWAN.
- 11:15 am Does oxytocin modulate cortisol in ring-tailed lemurs? A test of the social buffering effect. L.T. KUMPAN, C.M. DREA, J.A. TEICHROEB.
- 11:30 am Suggested influence of management and social environment features in captive squirrel monkey (Saimiri) gut microbiome. K. DOBSON, C. BURGES, P. CLARK, S. SCHAPIRO, S. LAMBETH, M. BLAIR, J. PRUETZ, C. CARLOS-SHANLEY.
- 11:45 am Monkeys and Microbes: Examining gut and oral microbiota in SIV-infected sooty mangabeys. T.H. WILDE, C. MADDEN, Y. VODOVOTZ, B. BEISNER, J. RAMSEY, M. CRANE, J. COHEN, A. CERQUEDA, T. MEEKER, M. GARDNER, A. FLOYD, W. MCGRAW, V. HALE.

#### **Session 15**

### Bioarchaeology: Isotopes, Mobility, and Migration

#### **Contributed Podium Presentations**

Chair: Sofia Pacheco-Fores

#### Platinum E

- 8:00 am Tracing human-animal-environment interactions using isotopic analyses in Bahrain. C.B. SMITH, J. LITTLETON.
- 8:15 am "Until death do us part": A multidisciplinary study on joint human-animal burials from the Late Iron Age necropolis of Seminario Vescovile (Verona, Northern Italy).

  Z. LAFFRANCHI, S. ZINGALE, U. TECCHIATI, V. COIA, A. PALADIN, L. SALZANI, I. DORI, S. LÖSCH, J. RYAN- DESPRAZ, A. ZINK, M. MILELLA.
- 8:30 am A new method for measurement of nitrogen isotopes in tooth dentine at high temporal resolution. T.M. SMITH, J.N. ÁVILA, E. SUDRON, Y. WANG, I.S. WILLIAMS.
- 8:45 am On the verge of greatness: Preliminary remarks from isotopic investigation into the foundation of the kingdom of Alwa. J.A. CIESIELSKA.
- 9:00 am Isotopic evidence of subsistence patterns in Lebanon during the 5th/6th century CE. A. SOŁTYSIAK, R. FETNER, T. WALISZEWSKI, A. IZDEBSKI.

- 9:15 am Scales of fragmentation in the Lower Danube: subistence of late antique and early medieval populations. R.A. FETNER, G. VASILE, A. SOŁTYSIAK, A. IZDEBSKI.
- 9:30 am "Immigrants We Get the Job Done:" Migration and Identity in an Emerging Urban Center during the American Revolution. S.A. MCGUIRE, C.A. FRANCE, J.S. BEATRICE, A. POURMAND.
- 9:45 am BREAK.
- 10:15 am Territorial mobility in Switzerland during the La Tène period: the CELTUDALPS isotopic dataset. M. MILELLA, Z. LAFFRANCHI, D.C. SALAZAR-GARCÍA, S. ZINGALE, V. HAUSSENER, S. LÖSCH, A. ZINK.
- 10:30 am Ancient DNA in Context: Port Cities and Mobility in the Iron Age and Roman Mediterranean. H. MOOTS, M. ANTONIO, Z. GAO, M. LUCCI, L. BONDIOLI, A. SPERDUTI, F. CANDILIO, A. COPPA, R. PINHASI, J. PRITCHARD.
- 10:45 am Deconstructing the monolith: integrating biogeochemistry and biodistance to better understand the migrant experience. S.I. PACHECO-FORES.
- 11:00 am Phenetic Evidence of Social Change: Using population affinity to investigate social networks and mobility from the Iron Age to Early Medieval period in Wessex, England. K.E. FAILLACE.
- 11:15 am Investigating Patterns of Gene Flow in the Cranial Morphology of East and Southeast Asian Populations. M.K. GREEN, M. HUBBE.
- **11:30** am Maintenance and Mobility of Neolithic Communities in Anatolia. M.A. PILLOUD, S.D. HADDOW, M. SOMEL, C.J. KNÜSEL, D.M. ADAMS, C.S. LARSEN.
- 11:45 am Extensive pedigree analyses reveal young women's mobility in early medieval Europe. D. PANY-KUCERA, M. BERNER, B. TOBIAS, K. WANG, Z. HOFMANOVÁ, P. KLOSTERMANN, K. WILTSCHKE-SCHROTTA, F. DAIM, J. KRAUSE, W. POHL, S. EGGERS.

### **Session 16**

# Genetics and Genomics: Human history, migration, and population dynamics Contributed Podium Presentations

. Chair: Shevan Wilkin Platinum F-G

- 8:00 am Exploring the effects of European colonization on Khoe-San descendent communities in South Africa. S. EDINGTON, D.R. AL-HINDI, N. FONT-PORTERIAS, A. SUROWIEC, J.W. MYRICK, C. UREN, P.J. NORMAN, M. MÖLLER, B.M. HENN, A.W. REYNOLDS.
- 8:15 am Genetic histories of the Adivasi and Sinhalese populations in Sri Lanka. J.A.

  URBAN ARAGON, E. BANDYOPADHYAY, C. DE LA FUENTE CASTRO, D. WITONSKY, A.S.

  FERNANDO, A.H. WELIKALA, J.T. KOTELAWALA, K. TENNEKOON, R. RANASINGHE, N. RAI,

  M. RAGHAVAN.
- 8:30 am Tracing Down the Genetic History of Vadnagar Archaeological Complex in India Using Genomics and Palaeoanthropology. B. AHLAWAT, L. KUMAR, A. AMBEKAR, J.S. SEHRAWAT, N. RAI.

- 8:45 am Investigating the admixture history of humans in the Indian Himalayas using ancient genomics. E. BANDYOPADHYAY, C. DE LA FUENTE CASTRO, D. WITONSKY, E. SINGH, V. NAUTIYAL, M. RAGHAVAN, N. RAI.
- 9:00 am Reconstructing the Demographic History of Neolithic and Megalithic Populations of Burzahom, Kashmir: Insight into Ancient Genome. A. DWIVEDI, R. RAJPAL, L. KUMAR, N. RAI.
- 9:15 am Reconstructing the Demographic History of South Asia: Insights into Ancient to Modern Genome. N. RAI.
- 9:30 am Genetic History and Population Structure of Kazaks in Jetisuu as Informed by Genome-wide SNP Data. A. ASKAPULI, M.G. VILAR, M. ZHABAGIN, Z. SABITOV, T.G. SCHURR, Z. ZHUMADILOV, J. HAWKS, N. SAITOU.
- 9:45 am BRFAK.
- 10:00 am Ancient DNA Analyses of Mongolian Aurochs Shows Connections to Ancient East Asian Cattle. K.E. WITT, K. BRUNSON, S. MONGE, S. WILLIAMS, L. JANZ.
- 10:15 am The Genetic History of Roman Dacia. C. AMORIM, I. BUZIC, K. KASSADJIKOVA, A. BOLOG, A. TIMOFAN, M. GLIGOR, L. FEHREN-SCHMITZ, F. DE ANGELIS.
- 10:30 am From the late Roman period to the Early Middle Ages in modern Slovenia: Population changes on the crossroads. D.N. VYAS, I. KONCZ, T. MILAVEC, N. FARAGÓ, T. LESKOVAR, Y. TIAN, B.G. MENDE, M. BAUSOVAC, A. KRUH, B. ŽUPANEK, A. GASPARI, S. VACCARO, P. FRANCALACCI, T. VIDA, W. POHL, J. KRAUSE, P.J. GEARY, K.R. VEERAMAH.
- 10:45 am The Genomic and Oral Histories of the Lipan Apache. F. CABRAL, A. CAMPELO DOS-SANTOS, B. BARCENA, R. SOTO, Y. LKETE, M. DEGIORGIO, J. LINDO. WITHDRAWN
- 11:00 am Paleogenomic and Isotopic Evidence of Maya Persistence at Late Postclassic and Early Colonial Chactemal (Santa Rita Corozal), Belize. R.W. SMITH, A.J. LOCKER, A. PEDERSON VALLEJOS, R. RODRIGUEZ, M. BADILLO, L.C. SPRINGS, T. TUNG, J. BENN TORRES, A.S. CHASE, D.Z. CHASE, A.F. CHASE, A.W. REYNOLDS.
- 11:15 am Taxonomic and functional profiling of oral metagenomes from ancestral Maya reveals impacts of dietary transitions. S.J. JOHNSON, T.P. HONAP, P.A. LYNCH, D.J. KENNETT, K.M. PRUFER, C.M. LEWIS.
- 11:30 am Humans as reservoirs: Historical microbiomes uncover hidden zoonotic pathways. K.M. RAYFIELD, K.S. HUGHES, T.C. RICK, K. SANKARANARAYANAN, S.S. SHOLTS, C.A. HOFMAN.
- 11:45 am Widening the recoverable skeletal proteome with a sequential enzyme approach. S.E. WILKIN, L. LANNIGAN, N. MONTES, M. COLLINS, V. SCHUENEMANN, A. TAUROZZI.

### **Session 17**

# Symposium: Bridging Disciplines with Bone Biology

Invited Poster Symposium

Chairs: Victoria M Dominguez, Sophie Mavroudas
Platinum H-I

Bone is a dynamic tissue serving a multitude of functions across extant vertebrate species, while being one of the best records of our evolutionary past because of its long-term preservation. As such, skeletal biology plays an outsized role across anthropological subfields and other disciplines, a role that while often overlooked can serve as a guide for developing interdisciplinary research to inform studies of past and present populations and individuals. How bone develops, grows, and adapts are inextricably linked to how the skeleton responds, both in living bodies and in post-mortem environments. This proposed symposium features 18 presentations from researchers in Japan, Mexico, Scotland, the United States, and Wales that cover a multitude of subfields and disciplines using both 2D and 3D microstructural analysis. The presentations highlight the use of skeletal biological theory and methods in applied research. Researchers at all levels, both in their careers and on their focus in bone's hierarchical structure, present materials illustrating how skeletal biology acts as a bridge across disciplines to answer basic science questions using new and newly repurposed techniques. The aim of this symposium is to spark collaborative interest across the myriad bone biology disciplines to introduce new approaches and foster new research perspectives. The ultimate goal of this symposium is to pull the best from the individual subfields and lead to innovative ideas and approaches.

Introduction: Sophia Mavroudas & Victoria M. Dominguez

- 1 Age and sex-related changes along the length of the human clavicle in an elderly Scottish sample using Pore Extractor 2D. K. WATSON, C. CUNNINGHAM, J.G. GARCÍA-DONAS.
- 2 Preliminary Investigation of Regional Clavicle Cortical Porosity using Pore Extractor 2D. E.T. BRZEZINSKI, M.E. COLE, R.L. HUNTER, J.P. RAMIREZ, A.M. AGNEW.
- 3 Histological and micro-CT perspectives on the regionality of porosity in the human rib. M.E. COLE, A.M. AGNEW.
- 4 Microstructure and Homology in the Human Upper and Lower Limb. B.A. COLOHAN, V.M. DOMINGUEZ, J.A. STRAIN.
- 5 Differences in adult human femoral external shape and cortical and trabecular bone structure associated with body mass index. D.L. CUNNINGHAM, D.J. WESCOTT, A.D. SYLVESTER, W.B. ZBIJEWSKI, E.Y. CHU, L.A. MECKEL, G. SHI, S. BAKER, T. DE CREE, C. DUNHAM.
- 6 Region Dependent Patterns of Trabecular Bone Growth in the Human Proximal Tibia. S. SMITH-ESCUDERO, J.R. GOLIATH.
- 7 Evaluating the relationship between brown adipose tissue thermogenesis and bone mineral density in young adults in New York City. S. PIRTLE, F.C. MADIMENOS, S.B. LEVY.
- 8 Exploring the impacts of physiological stress on cortical bone through novel statistical modeling. J.Z. GOLDSTEIN, T.P. GOCHA, N.P. HERRMANN, L.R. PRICE, A.M. AGNEW, T.G. BROMAGE, Y.M. JUWAYEYI.

- 9 Digging Deeper with a Biocultural Approach to Bone Biology. L.A. MECKEL, J. GEBER.
- 10 Histotaphonomy as a proxy for post-mortem treatment in archaeological contexts: how can it help? A. BRICKING, R. MADGWICK.
- 11 Is the cortical-robusticity-threshold hypothesis necessary for discerning the applicability of collagen fiber orientation (CFO) analysis in understanding load history of hominin and chimpanzee femoral necks? J.G. SKEDROS, J.T. CRONIN.
- 12 Histological human bone identification based on drifting osteon prevalence. K.M. FRENCH, S.R. MAVROUDAS, V.M. DOMINGUEZ.
- 13 Linking Bone Microstructure to Skeletal Trauma Analysis and Interpretation in the Tibia. A.L. HARDEN, M.E. COLE, A.M. AGNEW.
- 14 Bridging the lab bench to the field: assessing bone health and integrity in population-based field research in human biology. F.C. MADIMENOS.

### **Session 18**

# Symposium: Beyond Bones, Bodies, and Behavior: Shifting the Disciplinary Landscape towards Biocultural Bodies

#### **Invited Podium Symposium**

Chairs: Andreana S. Cunningham, Isis Dwyer, Delande Justinvil
Platinum D

"There is...an historical basis for an embracive and holistic conception of anthropology, in which the interface between biology and culture, rather than a disputed boundary, is a primary arena of inquiry." Taking inspiration from historical anthropologist George Stocking Jr.'s 1988 volume "Bones, Bodies, and Behavior: Essays on Biological Anthropology," the source of the opening quote, this symposium seeks to present new directions and dimensions of studying the biological body. Biological anthropologists across all subfields engage in types of embodied research, including but not limited to the body as material culture, scientific data, evolutionary map, or migratory record. Each paper will take up a theoretical, methodological, or practical approach to connecting bioanthropological perspectives, both present and past, to critical interventions across allied fields and cognate disciplines. Through a diverse panel of scholars, this symposium hopes to speak to these processes of shaping/re-shaping our relationship to the body. Thinking alongside the topical range of Stocking's text, this session brings together scholars from diverse subfields of biological anthropology, including primatology, paleoanthropology, forensic anthropology, bioarchaeology, anthropological genetics, and human biology. Their papers traverse various bioanthropological engagements with the body as inseparable from broader sociocultural notions of corporeality across critical biocultural theories, feminist traditions, native epistemologies, queer science studies, and modern standards of data ethics, accessibility, and preservation. Central themes of the symposium that co-constitute the conceptual framework of this symposium include: memory as embodied histories; institutions as embodied spaces; pathology as embodied violence; and repair as embodied futures. In light of recent calls-to-action pertaining to the protection of and ethical practices around human remains, the goal of this symposium is to ignite interdisciplinary discussions that collectively recalibrate anthropological treatment of bodies along critical biocultural axes.

- 2:30 pm "There were symptoms since he was little". Looking for symptoms of renal medullary carcinoma before the cancer is diagnosed. H. HUANG, A. MALHERBA, R. JOHNSON, L. MADRIGAL.
- 2:45 pm Embodied DNA: Towards a Theoretical Conceptualization of Community Engagement in Ancient DNA Research. R.E. FLESKES.
- 3:00 pm Birthing Across the Diaspora: Making Sense of Embodiment through Black Parenting and Pregnancy. C.K. CONNORS, R.G. NELSON.
- 3:15 pm Discussant: Lorena Madrigal.
- 3:30 pm Lessons from Anthro-Cast: Ethical Futures in Casting, Curation, and Repair. I. DWYER, C. MUSIBA, S.B. SHOLTS.
- 3:45 pm Beyond the Report: The Disparities Facing the Missing and the Invisible Unmissed. J.R. GOLIATH, Y. AVILES-SALEH, J. LYNTON COX.

- 4:00 pm Exploring the ethics of great ape skeletal remains research: historical perspectives and contemporary solutions. A.E. KRALICK, S.L. CANINGTON, A.R. ELLER, K. MCGRATH.
- 4:15 pm Discussant: Sheela Athreya.
- 4:30 pm Fraught (re)conceptions: Diasporic decedents and paths to commemoration. A.S. CUNNINGHAM, C.M. DE LA COVA.
- 4:45 pm Digital facial imaging as restorative action? Methodological and ethical considerations for applying virtual forensic facial imaging techniques to heritage and restitution contexts. K. SMITH, P. MAMATHUBA.
- 5:00 pm Archaeology of Black (M)othering: Somatic Legibility and Black Feminist Excavations of Dispossessed Lives in Historic Western Maryland. A. MCDOUGLE, D.C. JUSTINVIL.
- 5:15 pm Discussant: Rachel Watkins.

### **Session 19**

#### **Human Biology: Modelling Disease**

#### **Contributed Podium Presentations**

Chair: Grazyna Jasienska Platinum A-B

- 2:30 pm Inflammation has opposing effects on heart and brain health in later life among the Tsimane and Moseten of Iowland Bolivia. J.E. ARONOFF, C.L. JENKINS, D. BOGEN, A.R. GARCIA, R.C. THOMPSON, L.S. WANN, A.H. ALLAM, B.A. BEHEIM, M.L. SUTHERLAND, J.D. SUTHERLAND, D.E. RODRIGUEZ, D.E. MICHALIK, C.J. ROWAN, G.P. LOMBARDI, D.K. CUMMINGS, T.S. KRAFT, P.L. HOOPER, K. BUETOW, C.E. FINCH, A. IRIMIA, M. GATZ, J. STIEGLITZ, M.D. GURVEN, H. KAPLAN, G.S. THOMAS, B.C. TRUMBLE.
- 2:45 pm Application of regular equivalence blockmodeling to identify epidemiological roles associated with hookworm infection in rural Madagascar. T.M. BARRETT, G.C. TITCOMB, M. PENDER, R.A. KRAMER, V. SOARIMALALA, J. MOODY, C.L. NUNN.
- 3:00 pm Investigating biological and social factors in epidemic spread in an institutionalized population: A modeling study. J. DIMKA.
- 3:15 pm Poorer growth at 1 year among HIV exposed uninfected children compared to HIV unexposed children in Kenya. D.J. GLASS, M. KINGE, I. NJUGUNA, C. MCGRATH, K. LAWLEY, H. MORAA, A. ONYANGO, D. WAMALWA, D. ENQUOBAHRIE, E. SHATTUCK, G. JOHN- STEWART.
- 3:30 pm Quality of Life, Religion/Spirituality, and Dementia Risk Among Black People in the US. E.E. GRIFFITH, P.A. ROBBINS, K.L. BENTLEY-EDWARDS.
- 3:45 pm Higher resilience and hope predict lower perceived stress in war refugees from Ukraine. G. JASIENSKA, M.V. FLINN, A. GALBARCZYK, M. KLIMEK, U.M. MARCINKOWSKA, M. MIJAS, M.P. MUEHLENBEIN, L. NAYDONOVA, S. SHREYER, M. ŚCIBOR.
- 4:00 pm The association between body size and risk of death during the 1918 influenza pandemic in Alaska. T.P. VAN DOREN, L.E. STEELE, E. TINKER-FORTEL, L. SATTENSPIEL.

4:15 pm Make no bones about it: Preliminary evidence that polycystic ovary syndrome (PCOS) is an evolutionary mismatch disease that may have benefitted bone health in ancestral populations. C. MANTHEY-PIERCE, T. CEPON-ROBINS, A. WARRENER.

### Session 20

#### **Functional Anatomy: Hominoid bone biology**

#### Contributed Podium Presentations

Chair: Maureen Devlin Platinum C

- 2:30 pm Higher latitude is associated with lower bone mass and higher remodeling in the midshaft femur of Medieval humans. M.J. DEVLIN, M.N. COSMAN.
- 2:45 pm Comparison of the trabecular development within the juvenile human distal tibia and talus. R.A. REID. C. DAVIES. C. CUNNINGHAM.
- 3:00 pm Understanding ageing in the elderly: a combined histomorphometric approach to cortical and trabecular bone in the clavicle. C.Q. WILSON, C. CUNNINGHAM, J.G. GARCÍA-DONAS.
- 3:15 pm Limited age-related trabecular and cortical bone loss in chimpanzees differs from patterns of loss in humans. M.N. COSMAN, M.J. DEVLIN, L.M. MACLATCHY.
- 3:30 pm Calcaneal trabecular structure in Pan and Gorilla. C.M. HARPER, B.A. PATEL.
- **3:45 pm** Functional morphology of the human dental arcade. J. LAWRENCE.
- 4:00 pm Deconstructing human nasal adaptation: An iterative assessment of morphological influences on intranasal air conditioning in two and three dimensions. L.A. WARD, H.H. PATABENDIGE, E.O. CHO, T.R. YOKLEY, B.H. DENNIS, S.D. MADDUX.

### Session 21

### **Genetics and Genomics: Nonhuman primates**

**Contributed Podium Presentations** 

Chair: Luca Pozzi Platinum F

2:30 pm Genomic diversity and demographic history of the non-anthropoid primates.

J.D. ORKIN, L. KUDERNA, N. HERMOSILLA-ALBALA, C. FONTSERE, M.L. AYLWARD, N.

ANDRIAHOLINIRINA, P. BALARESQUE, M.E. BLAIR, J. FAUSSER, I.G. GUT, M. GUT, M.W.

HAHN, R. HARRIS, J.E. HORVATH, C. KEYSER, A.C. KITCHENER, M.D. LE, E. LIZANO,

S. MERKER, G.H. PERRY, C.J. RABARIVOLA, M. RAVEENDRAN, C. ROOS, D. WU, A.

ZARAMODY, G. ZHANG, L. POZZI, J. ROGERS, K. FAHR, T. MARQUES BONET.

- 2:45 pm Not one, but multiple radiations underlie the biodiversity of Madagascar's endangered lemurs. L. POZZI, K.M. EVERSON, M.A. BARRETT, M.E. BLAIR, M.E. DONOHUE, P.M. KAPPELER, A.C. KITCHENER, A.R. LEMMON, E.M. LEMMON, C.J. PAVÓN-VÁZQUEZ, U. RADESPIEL, B. RANDRIANAMBININA, R.M. RASOLOARISON, S. RASOLOHARIJAONA, C. ROOS, J. SALMONA, A.D. YODER, R. ZENIL-FERGUSON, D. ZINNER, D.W. WEISROCK.
- 3:00 pm Assessment of Genetic Ancestry From a Captive Baboon Colony. C. KENDALL, G. DEBORTOLI, A. NOORANIKHOJASTEH, D. CHRISTIAN, D. NEWMAN, S. COLE, K. SAYERS, E. PARRA, M. SCHILLACI, B. VIOLA.
- 3:15 pm Cellular aging of the prefrontal cortex and cerebellum in chimpanzees. E.E. GUEVARA, W.D. HOPKINS, C.C. SHERWOOD.
- 3:30 pm Investigating cell-type specific shifts in metabolic gene expression between human and chimpanzees. T.M. ZINTEL, P. JASON, C.C. BABBITT.
- 3:45 pm Examination of gene-by-environment interactions in primate skeletal cells. G. HOUSMAN.
- 4:00 pm Comparative functional analysis of the prostate-specific KLK3 enzyme in hominoids reveals the impact of sexual selection. E.F. KAHVECI, H. JENKINS, A.M. COLVIN ZIELEN, M.I. JENSEN-SEAMAN

#### **Session 22**

# Functional Anatomy: Nonhuman primate craniodental functional anatomy Contributed Podium Presentations

Chair: Taylor Polvadore
Platinum F-G

- 2:30 pm Comparative relationship reconstruction from external and internal molar crown shape in a sample of pedigreed macaques. A. ORTIZ, K.S. PAUL, A.N. ROMERO, M.H. HANAFIAH, M.L. MILITELLO, C. TURCOTTE, S.C. ANTÓN.
- **2:45 pm** The role of dentition in Aotus mandibular growth. J.E. LAMBETH, K.P. FRANKLIN, K.A. PRUFROCK, T.D. SMITH, V.B. DELEON.
- 3:00 pm Ontogeny of jaw muscle fiber types in tufted and untufted capuchins. O.R. ARES, C.B. YOAKUM, M. DUTRA FOGAÇA, A.B. TAYLOR, C.F. ROSS, J. CHALK-WILAYTO, M.F. LAIRD, C.E. TERHUNE, M.A. HOLMES.
- 3:15 pm Ontogeny of masticatory muscle architecture in tufted and untufted capuchins. T.A. POLVADORE, C.B. YOAKUM, P.M. TAYLOR, M.A. HOLMES, M.F. LAIRD, J. CHALK- WILAYTO, C. MISUE KANNO, J. AMÉRICO DE OLIVEIRA, M. DUTRA FOGAÇA, C.F. ROSS, A.B. TAYLOR, C.E. TERHUNE.
- **3:30** pm Multiple Component Sulci Form the Chimpanzee Lunate Sulcus. G.D. BOCKO, S.D. HURST.
- 3:45 pm The Accessory Bone at the Bregma in the Skulls of Rhesus Macaques from Cayo Santiago. A. MCCLOUD, G. FRANCIS, Q. WANG.
- 4:00 pm Moving great ape osteobiographies forward: Digitally linking macro and micro data and media at the individual level. L.Y. RASKIN, M.C. O'HARA, A.I. ERSKINE, M. ŠEŠELJ.

# THURSDAY, MARCH 21, AFTERNOON SESSIONS

### **Session 23**

# Symposium: William L. Jungers, a giant in the fields of paleoanthropology, size and scaling, and functional morphology: A commemorative tribute

#### **Invited Poster Symposium**

Chair: Liza J. Shapiro, Laurie Godfrey, Christine Wall, & Roshna Wunderlich
Platinum H-I

This symposium is dedicated to Bill Jungers, whose influence on the field of biological anthropology spanned nearly 50 years, contributing enormously to our understanding of the evolution and functional morphology of primates, in particular early hominins and subfossil lemurs, primate postcranial functional morphology, and the influence of size and scaling on the evolution of primate form and function. Bill conducted paleontological fieldwork at numerous subfossil sites from the northern to the southern tips of Madagascar, and his quantitative approach to evolutionary morphology and the effects of body size on morphology and adaptation set the standard for excellence in these areas. Bill published more than 175 research articles, co-authored two and edited/co-edited four books, and was the recipient of more than 50 research grants. His work has been cited more than 18,000 times. At Stony Brook University/Department of Anatomical Sciences where he spent most of his career, Bill was a beloved educator and mentor to hundreds of graduate students, medical students and postdoctoral researchers. He earned the prestigious title of Distinguished Teaching Professor at SBU, and received numerous teaching and mentoring awards. Bill's service to his department, university and field were truly exceptional. He served as Chair of his department for nine years, was editor of the Journal of Human Evolution for seven years, served on the editorial boards of several other journals, the advisory boards of the Duke Lemur Center and the Turkana Basin Institute, and was Research Associate at Association Vahatra in Antananarivo, Madagascar. He also served on the AABA Executive and Program Committees. Bill's accomplishments and expertise, along with his fun-loving, warm and welcoming personality, have been an inspiration to scores of colleagues, collaborators, students and postdocs. We honor his legacy by showcasing research covering his myriad interests and emphasizing the breadth of his incredible legacy.

Discussants: Jonah Ratsimbazafy and Susan Larson.

- 1 Introduction to the symposium: The contributions and legacy of Bill Jungers to the field of biological anthropology. L.J. SHAPIRO, L.R. GODFREY, C.E. WALL, R.E. WUNDERLICH.
- 2 The man who searched for Madagascar's hidden past treasures, and who was himself a living treasure Dr William L. Jungers. J.H. RATSIMBAZAFY.
- 3 Late survivors: Traditional ecological knowledge and the timing of extinction of Madagascar's large-bodied Holocene vertebrates. Z.S. KLUKKERT, L.R. GODFREY, R.R. DAWSON, E. HEKKALA, P.C. WRIGHT, E.S. NOMENJANAHARY, B.Z. FREED.
- 4 The subfossil occurrence and paleoecological implications of the small mammal fauna at Tsimanampesotse, SW Madagascar. M.R. BORTHS, B.E. CROWLEY, L.R. GODFREY, H.A. RASOLONJATOVO, S.M. GOODMAN, E. HEKKALA, J. ALUMBAUGH, K.M. MULDOON.

# THURSDAY, MARCH 21, AFTERNOON SESSIONS

- 5 How wet is "wet": Comparing pluvials in southern Madagascar. P. FAINA, S.J. BURNS, L.R. GODFREY, R.R. DAWSON, D. MCGEE, B.H. TIGER, N. SCROXTON, L. RANIVOHARIMANANA, K. DOUGLASS.
- 6 Subfossil birds at Vintany Cave: a key to understanding the past ecology and recent history of Tsimanampesotse National Park. H.A. RASOLONJATOVO, S.M. GOODMAN, L. RANIVOHARIMANANA, L.R. GODFREY, K.M. MULDOON.
- 7 Frontal bone allometry and differentiation in Homo erectus and other archaic Homo fossils. K.L. BAAB. M.J. ROGERS. S. SEMAW.
- 8 Modularity and mosaic evolution in the macaque skull: A study of multivariate shape variation in phylogenetic context. T.M. COLE III, M.S. COLE.
- 9 Re-evaluation of morphometric variation among Plio-Pleistocene hominin distal humeri: 28 years later. M.R. LAGUE.
- **10** Body Size and Scaling in Indriid Biology. R.E. WUNDERLICH, P. LEMELIN, R.R. LAWLER.
- 11 Reconstructing behavior in large-bodied, extinct Cryptoprocta species and their impact on Malagasy lemurs past and present. L.R. GODFREY, M.E. LEWIS, B.E. CROWLEY, Z.S. KLUKKERT.
- 12 Quantifying Distal Phalanx Variation in Subfossil Lemurs. S.A. MAIOLINO.
- 13 The evolution of dental development and life history in extinct and extant Malagasy lemurs. G.T. SCHWARTZ, K.E. SAMONDS, N.J. RAHANTAHARIVAO, G.H. PERRY, L.R. GODFREY.
- 14 Metacarpophalangeal joint orientation and function in extant anthropoids and fossil hominoids. A.A. PATEL, C.M. ORR, S. ALMÉCIJA, M.W. TOCHERI, W.L. JUNGERS.

### **ONLINE**

# Symposium: The Application of Artificial Intelligence (AI) in Biological Anthropology and Related Subfields

#### **Invited Symposium**

Chairs: Mario Modesto-Mata, Stephanie Canington

Artificial intelligence (AI) groups different statistical and mathematical techniques which enable machines to mimic human behaviour. As a subset of AI we can find machine learning (ML), which allows machines to improve/learn with experience. Deep learning (DL) is a subfield of ML and it consists of the development of artificial neural networks. Although these scaled-up terms were theoretically defined in the second half of the 20th century, the absence of powerful computers at the time able to run millions of simultaneous calculations slowed down their use and their implementations. In recent years, the presence of affordable powerful computers and servers, along with open-source programming languages such as R and Python that are widely used in the creation of self-made algorithms, democratized the development and implementation of AI in a huge diversity of fields. The application of AI within science began many years ago; however, it is relatively new within the field of biological anthropology. In this symposium we aim to give an overview of how AI has been applied in anthropology and their subfields. We also aim to understand their current limitations and how their results and predictions compare with those arrived at through classical statistical methods. As AI is a huge and lively field, we hope to answer whether computer engineers are required along with anthropologists or if anthropologists themselves can acquire sufficient knowledge to confidently apply these techniques. Ultimately, we would like to explore the optimal ways to facilitate the use of the trained models to other scientists, as well as to expand the use of these techniques in other fields and to create synergies between anthropologists.

- 8:00AM The when, why and how of employing machine learning and mathematical modeling for behavioral data analysis: examples from marmosets. N. PHANIRAJ, R.K. BRÜGGER, K. WIERUCKA, V. KULKARNI, J.M. BURKART.
- 8:15AM Artificial neural networks predict perikymata counts on worn teeth from two key paleoanthropological sites: Atapuerca (Spain) and Omo valley (Ethiopia).

  M. MODESTO-MATA, L.J. HLUSKO, F. GUY, J. BOISSERIE, M. MARTÍNEZ DE PINILLOS GONZÁLEZ, I. TOWLE, J. ARSUAGA, J. BERMÚDEZ DE CASTRO.
- 8:30AM Integrating machine learning and artificial intelligence in understanding dental enamel development. P.W. MILLER, M.C. O'HARA.
- 8:45AM The use of pose-estimation and large language models in decoding great ape communication. C. HOBAITER.
- 9:00AM PrimateFace: Large-scale resource for cross-species primate facial analysis. F. PARODI, J.K. MATELSKY, C. KIMOCK, M.L. PLATT, K.P. KORDING.

### **Session 24**

# Symposium: Undermining the production of race science Invited Podium Symposium

Chairs: Charles C. Roseman, James H. Jones
Platinum D

Race science is a hybrid academic and para-academic interdisciplinary effort to produce literature that argues that humans are divisible into biological races that have evolved differences among them in traits of dubious definition such as intelligence, temperament, and industriousness. Race science practitioners are housed in think tanks and respected academic institutions and together form a network connecting academe to white nationalist groups. The theoretical pillars of race science are made of shadow versions of genetics, life history theory, and prehistory among other fields and producing effective counters to these points requires a response encompassing a range of disciplines.

Considerable effort has been applied to the humanistic anthropology and history of race science. Less attention has been devoted to exploiting the many theoretical flaws of each of these conceptual pillars of race science to undermine it on its own terms. Moreover, the ways in which biological race is imbricated in mainstream theory and method makes our work as mainstream scientists all too easy to use in minimally altered form in race science. This symposium seeks to complement the substantial body humanistic and social scientific work detailing the racism of race science by: 1) Demonstrating the theoretical flaws of race science in a manner that is technically sound, comprehensive, and accessible to a general scientific audience and 2) Developing concrete changes to mainstream evolutionary theory and method that make it more difficult for race scientists to use mainstream scholarship in their work. The results of this symposium will form the basis for a comprehensive and in-depth guide that will aid scholars of human evolution in writing effective reviews to make it more difficult for race science to get into the literature and to improve our own scholarship when it comes to issues at the intersection of race and biology.

- 8:00 am Do the math or someone will do it to you: Re-strategizing approaches to combating race science. C.C. ROSEMAN.
- 8:15 am Errors in Translation: Bioanthropology, The Public Sphere, and the Rise of Race Logics. A.P. VAN ARSDALE, R.G. NELSON.
- 8:30 am Looking within: Why race scientists easily exploit anthropological science. S.G. ATHREYA, G. CABANA, M.M. GLANTZ.
- 8:45 am A reality-based understanding of human intergroup relations, past and present, undermines racist tropes. A.C. PISOR.
- 9:00 am Aiding and abetting racism in the biological and behavioral sciences. H. BARRETT.
- 9:15 am The use and misuse of proxy phenotypes in genotype-phenotype research. C.C. CATALDO-RAMIREZ, T.D. WEAVER, B.M. HENN.

- 9:30 am To fight race science, double down on the genome: complex physiological and psychological phenotypes are determined by millions of regulatory interactions within the genome that are highly conserved in primates and universal in humans. E.H. HAGEN.
- 9:45 am BREAK.
- 10:00 am Misinterpretations of admixture regression in racial hereditarian research. K.A. BIRD, A.A. ZAIDI.
- 10:15 am Archaic introgression into modern humans: can it be co-opted into race science? F.A. VILLANEA.
- 10:30 am The Misuse of Life History Theory in Racist Pseudo-Science. J.H. JONES.
- 10:45 am If science is broken, how do we fix it? An analysis of how race science spreads through the mainstream academic literature. R. SEAR.
- 11:00 am Discussant: Tina Lasisi.
- 11:15 am Discussant: Richard Bribiescas.

#### **Session 25**

## Human Behavior: Alloparenting: Can you get enough sleep?

#### **Contributed Podium Presentations**

Chair: Beatrice Caffe Platinum A-B

- **10:00 am Toddler gestural accommodation in Portuguese nursery schools.** E.D. RODRIGUES, C. HOBAITER, M. HENDERSON, C. GRUND, A.J. SANTOS.
- 10:15 am Characterization of infants' caregiving environments and their relationship to maternal investment: the MIMBE Study. B.Q. CAFFE, J. WILLIAMS, M. GARTSTEIN, M. MCGUIRE, M.K. MCGUIRE, C.L. MEEHAN.
- 10:30 am Social drive explains rapid adaptation and eco-evolutionary feedback in small-scale human societies. J.S. MARTIN, B. BEHEIM, M. GURVEN, H. KAPLAN, J. STIEGLITZ, B. TRUMBLE, A. JAEGGI.
- 10:45 am Birth seasonality peak corresponds with detrimental health and mortality outcomes in modern Mexico. C.A. DAVIS, T. KRAFT, S. MACFARLAN.
- 11:00 am How does reproductive skew in humans compare to that of other mammals? P.L. HOOPER, C.T. ROSS, J.E. SMITH, A.V. JAEGGI, E. SMITH, S. GAVRILETS, K.R. HILL, M. BORGERHOFF MULDER.
- 11:15 am Seasonal sleep variation among rural South African agropastoralists. M. LI, D.R. SAMSON
- 11:30 am Sleep habits and their drivers: a cross-cultural ethnographic survey across small-scale societies. K.D. REINHARDT, M. COCKERILL, M. HACKL, V.V. VENKATARAMAN.

### **Session 26**

# Paleoanthropology: Morphological Signatures of Locomotion

#### **Contributed Podium Presentations**

# Chair: Austin Lawrence Platinum C

- 8:00 am First insights into the inner ear otolith system of Australopithecus and Paranthropus. C.M. SMITH, A. URCIUOLI, M. CAZENAVE, J. BRAGA, A. BEAUDET, S. ALMÉCIJA, J.T. LAITMAN. A.S. HAMMOND.
- **8:15** am The cervical vertebrae of DIK 1-1. F. MCGECHIE, T.K. NALLEY, N. GRIDER-POTTER, Z. ALEMSEGED.
- **8:30** am Locomotor signals in the clavicle of Australopithecus afarensis. H.N. FARRELL, Z. ALEMSEGED.
- **8:45** am Inferences from the radius of Ardipithecus ramidus. I.F. ARAIZA, M.R. MEYER, S.A. WILLIAMS.
- 9:00 am Radial to ulnar strength is an arboreal signal in extant hominids and early hominins.

  C.B. RUFF, K.J. CARLSON, L. BURGESS, J. KAPPELMAN, T. JASHASHVILI, J.L. HEATON,

  T.R. PICKERING, R. CROMPTON, A. BEAUDET, D. STRATFORD, K. KUMAN, A.J. HEILE, R.J.

  CLARKE.
- 9:15 am Assessing inter- and intraspecific variation in carpal articular surface geometry in catarrhines. L.E. HUNTER, M.W. TOCHERI, Z. ALEMSEGED.
- 9:30 am Effects of hip joint orientation and skeletal torsion on human locomotor biomechanics: Implications for interpretations of hominin locomotor diversity. A.B. LAWRENCE, J.B. HALL, K.M. MIDDLETON, J. THOMAS, A. ALSHARAFI, S. WEISS, T.M. GUESS, C.V. WARD.
- 9:45 am BREAK.
- 10:00 am Alternative biomechanical strategies of Neandertals and Homo sapiens femora during the Pleistocene. Q. COSNEFROY, G. BERILLON, T. CHEVALIER, A. KUBICKA, C. DE BECDELIEVRE, H. MAY, F. MARCHAL.
- 10:15 am Analyzing variation in early hominin knee shape using a deformation-based approach. C.K. MILLER, V.A. ZIMMER, J.M. DESILVA.
- 10:30 am Shape variation in the cuboid: cercopithecoids, hominoids, and a reappraisal of OH 8. K. KOMZA, L. SCHROEDER, T.W. DAVIES, B. VIOLA.
- 10:45 am Impacts of locomotor mode and limb dominance on carpal and tarsal scaling. A.D. ANAYA, Z. OLIVER, J. STONE, D. BOYER.
- 11:00 am Reconstructing and evaluating morphological differences in the upper and lower limbs of Australopithecus, Paranthropus, and early Homo, using non-homologous fragments. J. ARAMENDI, L. COURTENAY.
- 11:15 am WITHDRAWN.

- 11:30 am Sex differences in the positional behavior of chimpanzees (*Pan troglodytes schweinfurthii*) living in the dry and open habitat of Issa Valley, Tanzania. R.C. DRUMMOND-CLARKE, T.L. KIVELL, L. SARRINGHAUS, F.A. STEWART, A.K. PIEL.
- 11:45 am Expanding assemblages of early Pleistocene hominin footprints at Koobi Fora, Kenya. K.G. HATALA, N.T. ROACH, J.W. HARRIS, E.K. NDIEMA, D. KIPKEBUT, A. LONGAYE, H. SALE, A. SILA, A.K. BEHRENSMEYER.

#### **Session 27**

#### Bioarchaeology: Stress, Health, and Care

#### **Contributed Podium Presentations**

Chair: Eric Bartelink
Platinum F

- 8:00 am Childhood frailty and mortality in medieval and early modern Aberdeen, Scotland.

  J.M. DITTMAR. B. VAN TIEL. R. CROZIER. M.F. OXENHAM.
- 8:15 am Cribra Femoralis in the Juvenile Skeletal Assemblage from Cueva de Sangre, Guatemala. R.M. MAYORAL, M.M. BLEUZE, J.E. BRADY. WITHDRAWN
- 8:30 am Patterns of juvenile vulnerability at three Bronze Iron Age sites in the Turpan region, Western China. G. GAO, S. KONG, L. WANG, Q. WANG, Q. ZHANG. WITHDRAWN
- 8:45 am Unveiling the Identities of the Juvenile Mummies from the Capuchin Catacombs of Palermo, Sicily. K.E. SQUIRES, M.D. VINER, W. HOBAN, R. LOYNES, K.D. VAN SCHAIK, D. PIOMBINO-MASCALI.
- 9:00 am Identifying links between childhood diet, weaning practices, and IGD formation in adults from Tell Hisban, Jordan. D.L. HUSKEY, M. PERRY, R. TYKOT.
- 9:15 am Stress in transition? A diachronic analysis of population health in Hellenistic and Roman Anatolia. E.A. BEWS.
- 9:30 am Investigating skeletal stress and oral health among the working class in urbanizing Colombia: evidence from a cemetery in Bogotá. S.A. HALL, K.J. KNUDSON, C.M. ROJAS-SEPÚLVEDA.
- 9:45 am BRFAK.
- 10:00 am Ash and Bone: Exploring skeletal biomarkers of chronic indoor air pollution via a rodent model. C.K. LAPOSKI, D. FALCI, H. MORANT, W. LUCHON III, G. HARTMAN.
- 10:15 am Recent Advances in LC-MS/MS Analysis of Ancient Hormones. S. SCHRADER, K. BREWSTER, R. HALL, M. GIERA, E. SÁNCHEZ-LÓPEZ.
- 10:30 am Regional and Temporal Patterns of Dental Disease in Prehistoric Central California.

  E.J. BARTELINK.
- 10:45 am Sketching experience from osteomyelitis in Indigenous Californians of the Bay Area.

  A. CAINE, A. CANZONIERI, D. SHOUP.
- 11:00 am Porcelain gallbladder and other evidence of gallbladder disease and treatment at Asylum Hill. J.E. MACK, R.H. DIDLAKE.

- 11:15 am Redefining the treponemal history through pre-Columbian genomes from Brazil. V.J. SCHUENEMANN, K. MAJANDER, M. PLA-DIAZ, L. DU PLESSIS, N. ARORA, J. FILIPPINI, L. PEZO LANFRANCO, S. EGGERS, F. GONZÁLEZ-CANDELAS.
- 11:30 am An archaeogenetic and paleopathological evaluation of an early medieval Iberian community at La Olmeda (Spain, 6th 11th c. CE). L. COPPOLA BOVE, V. VILLALBA-MOUCO, C. KIRKPATRICK, A. ROHRLACH, T. LAMNIDIS, A. VIGIL-ESCALERA GUIRADO, M. BOTELLA LÓPEZ, J. KRAUSE, K. BOS.
- 11:45 am Archaeotoxicological findings in the 17th century Ca' Granda crypt: mercury, opium and cannabis as medical remedies. G. GIORDANO, M. MATTIA, L. BIEHLER-GOMEZ, F. SLAVAZZI, P. GALIMBERTI, F. SARDANELLI, C. CATTANEO, D. DI CANDIA.

#### Session 28

# Primatology: Socioecological Dynamics Across Temporal Scales Contributed Podium Presentations

Chair: Stephanie Poindexter

Platinum F-G

- 8:00 am DNA metabarcoding reveals fine-resolution partitioning of arthropods in a community of cheirogaleid lemurs in Southwestern Madagascar. A.K. ROWE, A. KOENIG, Z.M. RIDGWAY, E.S. NOMENJANAHARY, P.C. WRIGHT, E.L. CLARE.
- 8:15 am Comparing Three Non-Invasive Methods for Assessing Seasonality of Insectivory in a Community of Nigeria-Cameroon Chimpanzees in Mbam & Djerem National Park, Cameroon. T.C. ANDRES-BRAY, F. KENTATCHIME, P.M. DADJO, E.E. ABWE, M. GONDER.
- 8:30 am Stable isotope analysis of dietary protein in savanna chimpanzees (*Pan troglodytes*) from Sénégal: effects of tool-assisted hunting and anthropogenic disturbance. S. LINDSHIELD, E. FLAHERTY, P. NDIAYE, Y. NDIAYE, J.D. PRUETZ.
- 8:45 am Mushrooms in a Mosaic: The Importance of Fungi for a Primate Community in the Issa valley, western Tanzania. A.K. PIEL, T. SCHULZE, F.A. STEWART.
- 9:00 am Ecology differentially constrains male and female sociality in wild chimpanzees. M. HOFFMAN, Z.P. MACHANDA, I.C. GILBY.
- 9:15 am Sharing a tree, not behavior: Activity budgets and (moderate levels of) behavioral synchrony in white-handed gibbons. L.E. LIGHT, M.L. ROMANO.
- 9:30 am Virtual female primates in B3GET have highest reproductive success in mediumsized groups. K.N. CROUSE, N.P. DESAI, C.L. LEHMAN, M.L. WILSON.
- 9:45 am BREAK.
- 10:15 am Climatic influences on space use and activity in a nocturnal primate. S.A. POINDEXTER, K.Q. MAYNARD, S. WORAGOOL, T. SAVINI.
- 10:30 am Combining direct and indirect contests to compare intergroup relationships in sympatric primates. M. BROWN, A.M. ASHBURY, S.E. ALAVI.

- 10:45 am The movement ecology of orangutan male bimaturism: alternative male tactics impact the sinuosity, total displacement, length, and speed of path trajectories. F.T. SHORT, S.E. ALAVI, C. SCHUPPLI, T. MITRA SETIA, E.R. VOGEL.
- 11:00 am Geometry of ranging behavior in the African apes. M. SURBECK, R. SUPPLE, A.P. MASSARO, M.M. ROBBINS, M.L. WILSON.
- 11:15 am Ecological and social pressures shape chimpanzee nest site selection. J.M. SCHULTZ, S.L. ROVIAS, M. HOFFMAN, I.C. GILBY.
- 11:30 am Relevance of Chimpanzee Predation on Non-Cercopithecoid Mammals for Human Evolution. A.P. WATTS.
- 11:45 am Primate Social Organization Evolved from a Flexible Pair-Living Ancestor. A.V. JAEGGI, C. OLIVIER, J.S. MARTIN, C. PILISI, P. AGNANI, C. KAUFFMANN, L. HAYES, C. SCHRADIN

### **Session 29**

# Symposium: Kaye's Communities: Recognizing the Research, Teaching, and Mentorship of Kaye E. Reed

#### **Invited Poster Symposium**

Chairs: Amy L. Rector, Irene E. Smail
Platinum H-I

Kaye Reed's career studying mammalian community ecology has not only furthered our understanding of hominin paleoecology and mammalian evolution, she has also inspired others to follow in her footsteps and dedicated time and resources to creating opportunities for them to do so. Her research spans a broad temporal, spatial, and taxonomic scale, from modern primate communities, to Makapansgat paleoecology, to her current field site at Ledi-Geraru in Ethiopia.

Kaye's work contributes to contextualizing the origins and evolution of bipedality, what is known about the earliest members of the genus Homo, and how communities of mammals respond to climatic change both today and in the past. Her work highlights the importance of recognizing and reconstructing contexts and the critical ecological parameters that tied hominins to their habitats. Given the breadth and depth of her research, Kaye's scholarship has influenced nearly every discipline of paleoanthropology. Just as importantly, Kaye's contributions to biological anthropology extend well beyond her own research. As a non-traditional graduate student herself, Kaye recognized the need to mentor a new and diverse generation of young scholars, from undergraduate and graduate students to postdocs and junior faculty. She is the exemplar of integrating her scholarship and teaching, and this profound legacy is carried on by her trainees. With this symposium, we would like to highlight the diversity of Kaye's research and the long-lasting impacts of her mentorship on our field.

1 Kaye Reed's impact on paleoanthropology: a network analysis. A.L. RECTOR, H. EDMONDS, J. HODGKINS, K.L. LEWTON, T.K. NALLEY, A. SHAPIRO, I.E. SMAIL, D. VERGAMINI, M. VERGAMINI.

- 2 Diverse thinking in biological anthropology and data science: methods and mentoring. A.E. SHAPIRO.
- 3 My Evolving Understanding of Primate Communities with Kaye Reed. J.M. KAMILAR.
- 4 What, if anything, is a primate community? I.E. SMAIL.
- 5 Faunal Analysis and the Stratigraphic Contiguity of the Black Mousterian Archaeological Level (> 45,000 BP) at Arma Veirana, Italy. S. MANASSEE, J. HODGKINS, C. ORR.
- 6 Changing Mammal Communities across Southern Africa in the Terminal Pleistocene. A.L. NORWOOD, J. ROWAN, J. FAITH.
- 7 Revisiting the systematics of antilopin bovids from Makapansgat Limeworks. E.M. LOCKE, J.J. ROWAN, J. FAITH, D. DE JAGER, K.E. REED.
- 8 Importance of Reed's paleocommunity research for understanding carnivoran paleoecology. M.E. LEWIS.
- 9 Paleoecology of the Hadar carnivore guild: New insights from enamel stable isotopes. J.R. ROBINSON, I.A. LAZAGABASTER, J. ROWAN, M.E. LEWIS, L. WERDELIN, C.J. CAMPISANO, K.E. REED.
- 10 From Paucity to Plenitude: Linking Hominin Diet, Habitat, and Nutrition. M. SPONHEIMER, O.C. PAINE, P.S. UNGAR, J.A. LEE-THORP.
- 11 Paleoenvironments of Australopithecus afarensis and implications for early hominin habitat preferences. D.F. SU, K.E. REED.
- 12 Biogeographic evolution of eastern African mammal faunas over the last 6 Myr. J. ROWAN, A. DU, E.J. LUNDGREN, J.T. FAITH, L. BEAUDROT, C.J. CAMPISANO, J.C. JOORDENS, I.A. LAZAGABASTER, E.M. LOCKE, I.E. SMAIL, K.E. REED, J.M. KAMILAR.
- 13 Review of Eurygnathohippus from Ledi-Geraru, Afar Depression, Ethiopia. E. SCOTT, K.E. REED.
- 14 Temporal trends in Aepyceros horn cores: Interpreting the ecology of hominin landscapes. A. VILLASEÑOR, L.K. DELEZENE, A.K. BEHRENSMEYER, K.E. REED.
- 15 The evolution of suid third molars and isotopic ecology over 10 million years of environmental change in eastern Africa. I.A. LAZAGABASTER, N.E. LEVIN, K.E. REED, Y. HAILE- SELASSIE.
- 16 The evolution and development of the bicondylar angle. B. VILLMOARE, K.L. LEWTON.

### **Session 30**

# Symposium: Women have always been here: Working towards a biological anthropology of women

#### **Invited Podium Symposium**

Chairs: Katharine C. Woollen, Kathleen D. Stansbury
Platinum D

In the field of biological anthropology, studies have utilized male subjects as a default research population. Feminist anthropology has repeatedly sought to address these disciplinary oversights. Despite this, biological anthropology has failed to truly embrace how a multiplicity of standpoints and social theories can speak to the lived experiences of women. The subsequent failure to include a diverse background of subjects and viewpoints perpetuates marginalization and the white cis- heteropatriarchy. We seek to rectify the shortcomings of biological anthropological research and consider women at the center of research analyses. The goal of this symposium is to embrace the intellectual power of the feminist standpoint, in which the identities of women are successfully represented and situated within biological anthropological research practices. One important move toward embracing the possibilities of feminist biological anthropology is to study reproductive capability, not as the biological destiny of women, but as one aspect of their biologically lived experience that may or may not be tied to womanhood. Situated research approaching this and similar research questions enables biological anthropology to challenge the biological determinism of women's lived experiences. The research presented embraces social theories, new methodologies, and critical reflexivity to demonstrate the continued place of feminist research in the discipline. We call on participants and audience members to recognize both the intellectual and social merit of research purposefully situated in a socially theoretical and feminist milieu. By embracing situated research praxis in biological anthropology, we demonstrate the complexities of womanhood by exploring their lived experiences, spheres of power, and influence. In doing so, we can work toward a biological anthropology of women, where women are consistently considered a legitimate, vital, and visible part of biological anthropological inquiry, not as an essentialized category, but as an intersectional and holistic aspect of lived experience.

2:30 pm	Composting together: A systematic review embracing the Chthulucene. K.D.
	STANSBURY, K.C. WOOLLEN.

- 2:45 pm The DOMINA project: revisiting the condition of women in Milan over 2,000 years through their skeletal remains. L. BIEHLER-GOMEZ, S. YAUSSY, C. MORO, P. MORANDINI, M. MATTIA, L. RODELLA, B. DEL BO, C. CATTANEO.
- 3:00 pm Crafty women: Life and death of a potter from Kerma period Sudan. B.J. BAKER.3:15 pm The intersections matter: Sex, site, and survivorship in Ottoman-era Hungary. S.L.
- YAUSSY.

  3:30 pm Maternal placentophagy: exploring practitioner satisfaction following consumption-
- 3:30 pm Maternal placentophagy: exploring practitioner satisfaction following consumptior of the placenta postpartum. J. PAIGE, D.C. BENYSHEK. WITHDRAWN
- 3:45 pm Women's Health in Industrial-Era London. D.A. BOYD, S.L. YAUSSY.

- 4:00 pm On f\*ckability: Fitness, reproductive success, and the role of non-reproductive individuals in evolutionary theory. R. VOYT.
- 4:15 pm The Woman of Drybread: One person's life on the goldfields of Otago, New Zealand.
  A.E. SOHLER-SNODDY, C. KING, L. KAVALE-HENDERSON, K. COOKE, J. MISZKIEWICZ, P. PETCHEY, H. BUCKLEY.
- 4:30 pm Women of the North: A biocultural analysis of identity and social roles in the Arctic and Subarctic. R.P. HARROD, K.A. OGILVIE.
- 4:45 pm But some of us are brave: A Black feminist's work in bioarchaeology. A.M. LANS.
- 5:00 pm Discussant: Anne Grauer.

### **Session 31**

## Genetics and Genomics: Evolution, adaptation, and health

#### **Contributed Podium Presentations**

Chair: Kelsey Witt Dillon Platinum A-B

- 2:30 pm Initial results from the palaeoproteomic analysis of Australopithecus africanus dental enamel. P.P. MADUPE, I. PATRAMANIS, A.J. TAUROZZI, M. MACKIE, M. TAWANE, C. MOLLER, F. RACIMO, L. SCHROEDER, J.V. OLSEN, C. ZANOLLI, R.R. ACKERMANN, E. CAPPELLINI.
- 2:45 pm The primate gut microbiota contributes to interspecific differences in host metabolism. K.R. AMATO, S. KUTHYAR, W. LEE, D. REIMAN, H. JIANG, S. CHITTA, E. WATERS, B. LAYDEN, R. SUMAGIN, L.D. MANZANARES, G. YANG, M. SAVO SARDARO, S. GRAY, L.E. WILLIAMS, Y. DAI, J.P. CURLEY, C.R. HANEY, E.R. LIECHTY, C.W. KUZAWA, E.K. MALLOTT
- 3:00 pm Characterization of pre-Hispanic oral microbiomes among marine and agricultural diets in coastal populations from the Atacama Desert. M.A. APATA, T. HONAP, C. LEWIS, M. CASTRO, V. SILVA-PINTO, K. KNUDSON, M. WILSON, A. STONE.
- 3:15 pm Genomic adaptation in ancient Brazilian shell mound builders. T. HUNEMEIER, K. NUNES, T. FERRAZ, R.B. LEMES, X.S. VILLAGRAN, C. POSTH, A. STRAUSS.
- 3:30 pm Unraveling the Evolutionary Threads: insight into the polygenic adaptations to pathogens across human history. F. DE ANGELIS, C. AMORIM.
- 3:45 pm Mitonuclear Discordance and Metabolic Function in Admixed Polynesian Populations. R.R. DICKERSON, R. TAKEI, M. CADZOW, T.G. SCHURR, S. CASTEL, A. EMDE, K. WASIK, A.L. GOSLING, T.R. MERRIMAN.
- 4:00 pm Beyond Continental Groups: shifting from Static Clusters to Dynamic Communities in Genetic Networks. M. PALMA, Y.P. GARCIA, B.E. LOPEZ-ANGELES, C.Q. LOPEZ, K. BIRD, T. LASISI, A.C. LEWIS, A. ZAIDI, M. SOHAIL.

# Session 32

# Paleoanthropology: The Hominin Niche: Diet, ecology and environments Contributed Podium Presentations

Chair: E. Grace Veatch
Platinum C

2:45 pm	Developing a macro-archaeological infrastructure to help assess the relationship between hominin technological and biological change. J.N. PAIGE, C. PERREAULT.
3:00 pm	$\label{eq:pre-sympatric} \mbox{Pre-sympatric Niche Divergence in Early Homo and Paranthropus.} \mbox{ A.S. ULUUTKU, } \mbox{B.A. WOOD.}$
3:15 pm	Variation in the diet of Neandertals from El Sidrón, Spain. F.L. WILLIAMS, C.W. SCHMIDT, J.L. DROKE, G. BECAM, M. DE LUMLEY.
3:30 pm	Trophic structure of the faunal assemblage at the Last Interglacial Middle Paleolithic Neanderthal occupation site Neumark-Nord, Germany using multi-isotope analyses of tooth enamel. J.N. LEICHLITER, T. TACAIL, M. VINK, L. KINDLER, W. ROEBROEKS, S. GAUDZINSKI-WINDHEUSER, H. VONHOF, T. TÜTKEN, A. MARTÍNEZ-GARCÍA, T. LÜDECKE.
3:45 pm	It's Biocultural all the way down: Understanding The Pleistocene hominin niche. A FUENTES, J. HAWKS, M. KISSEL, K. MOLOPYANE, P. SPIKINS.
4:00 pm	Homo floresiensis and Komodo Dragons consumed Stegodon at Liang Bua. E.G. VEATCH, N. ALAMSYAH, I. JULIANTO, A. PELISSERO, M. PANTE, T. SUTIKNA, M.W. TOCHERI.
4:15 pm	Behavioral drive during human evolution. L.D. FANNIN, C.M. SEYOUM, V.V. VENKATARAMAN, J.D. YEAKEL, T.E. CERLING, N.J. DOMINY.
4:30 pm	Reconstructing woody cover in African habitats using Bayesian modeling and 3D shape variation of the bovid astragalus. M.G. KELLY, Z. ALEMSEGED.
4:45 pm	The Isotopic Ecology of a Serengeti Insectivore and Applications to Hominin Paleoecology. T.W. LABARGE, J.K. NJAU.
5:00 pm	Herbivore migration during the Last Glacial Period of Kenya. K. O'BRIEN, K. PODKOVYROFF, D.P. FERNANDEZ, C.A. TRYON, T.E. CERLING, L. ASHIOYA, J. FAITH.
5:15 pm	Niche partitioning in fossil bovids near the Mio-Pliocene boundary at Lothagam, Turkana Basin, Kenya. L.T. SANKAU, D.R. GREEN, K.T. UNO, J.J. ROWAN.
5:30 pm	Remote fossil prospecting in the Cradle of Humankind: Assessing variable importance for cave site prediction using Random Forest models. M.J. FURTNER, R.I. ANEMONE I. WANG M.V. CARLIANA M. LOMBARD, J.K. BROPHY

#### **Session 33**

## Functional Anatomy: Hominoid morphology and biomechanics

#### **Contributed Podium Presentations**

Chair: Nicholas Holowka

#### Platinum E

- 2:30 pm Natural terrain causes high variability in walking stride parameters in Semai horticulturalists. N.B. HOLOWKA, Z.M. APOLITO, T.S. KRAFT, A.J. LEA, Y.A. LIM, K. NG, K.D. REINHARDT, K. TAM, T.B. TING, I.J. WALLACE, V.V. VENKATARAMAN.
- 2:45 pm In vivo midfoot joint location estimation using external skin markers. S.G. LAUTZENHEISER, C.M. HARPER.
- 3:00 pm Terrestrial positional behavior of wild Pongo pygmaeus. E. ORLIKOFF, A. MARSHALL, T. STILLWELL, L. SARRINGHAUS, L. MACLATCHY.
- 3:15 pm Pelvic incidence and pelvic tilt impact greater sciatic notch shape. S.M. ZALESKI.
- 3:30 pm Exploring placenta evolution: Insights into placenta morphology, life history traits, and cancer. C. PARMEGGIANI, M. BOYD, M. SZAFRANIEC, A. WILLIS, Z. COMPTON, W. MELLON, T. HARRISON, A. AKTIPIS, C. MALEY, A.M. BODDY.
- 3:45 pm The relationships between skull shape, muscle morphology, and muscle force vector orientation during chewing in hominids. K.C. SELLERS, F.B. PRADO, A. SMITH, Z. ALEMSEGED, C.A. ROBINSON, A. TAYLOR, C.V. WARD, A. WILKEN, J. IRIARTE-DIAZ, H. FARRELL, O. PANAGIOTOPOULOU, C. ROSS.

#### Session 34

## **Human Biology: Epigenetics and COVID**

#### **Contributed Podium Presentations**

Chair: Elizabeth Clausing
Platinum F-G

- 2:30 pm Exploring genome-wide DNA methylation changes following glucocorticoid exposure in iPSC- derived neuroprogenitor cells. E.S. CLAUSING, S. BENASSI, C.A. NASAMRAN, M.C. MARCHETTO, A.L. NON.
- 2:45 pm Effects of Prenatal Stress on Bone Development of the Offspring. S. AMUGONGO BROWN, A. RENDAHL, H. CHIRCHIR.
- 3:00 pm Were Fewer Boys Born in the US During the COVID-19 Pandemic: A test of the Trivers Willard Hypothesis. P.E. CLEAVER, A. LEE, A. NON.
- 3:15 pm One description does not fit all: Different interactions between MTHFR C677T genotypes and serum folate levels. C.A. MACLEAN, M. DIMANLIG, L. MADRIGAL.
- 3:30 pm Relationships among testosterone, age, and coronavirus-19 disease risk in men. M.I. PATTON, J. GASSEN, T. NOWAK, S.P. WEAVER, E.J. BAKER, M.P. MUEHLENBEIN.

3:45 pm Mysterious drops in preterm birth and overmedicalization of childbirth: Reflections on the COVID-19 pandemic. L.C. REJZEK, A. LEE, A. NON.

4:00 pm Iron deficiency, anemia, and risk for COVID-19 among healthcare workers. K. WANDER, O.O. OGUNLEYE, E.N. NWAGU, U.S. UNIGWE, A.N. ODO, C.M. CHINEDU, S.A. OMILABU, O.B. SALU, B.S. OWOLABI, B.I. OSIKOMAIYA, A.O. OLAITAN, C.U. CHUKWU, C.O. NDIOKWELU, E. CHIOMA, C. AZUBUIKE, O.A. ODUBIYI, Y.A. HASSAN, O. NIFEMI, M.K. AKINRINLOLA, R.A. RAHEEM, S. AMINA, O.O. FADIPE, R.A. ANYANWU, M.R. ORENOLU, M.A. ABDULLAH, O.D. ISHAYA, C.J. AGULEFO, I.E. AKASE, M. GAUCK, Z. HUANG.

4:15 pm Did preterm birth rates shift by nativity among Hispanic women in the United States during the COVID-19 pandemic? Z.P. LEAL, S. LIM, J. OLINER, A.L. NON.

### **Session 35**

# Symposium: Rethinking primate and human origins: A symposium honoring Matt Cartmill

**Invited Poster Symposium** 

Chairs: Natalie M. Laudicina, Aaron A. Sandel, Erica Cartmill
Platinum H-I

Matt Cartmill's contributions to the fields of research and teaching in biological anthropology have been profound and far-reaching. Cartmill's research has not only expanded our knowledge of early primate evolution, through his seminal work on the visual predation hypothesis, but also shed light on adaptation within the hominin lineage, cognition, locomotion, and the intersection of biology and culture. Through his engaging teaching style and ability to convey complex scientific concepts in a clear and accessible manner, Cartmill has inspired countless aspiring biological anthropologists, anatomists, and medical students. This symposium brings together researchers whose work has been deeply influenced by Cartmill's scholarship and whose wide range of expertise embodies the scope of Cartmill's career. By assembling a group of scholars with diverse research interests, career stages, and disciplinary backgrounds and engaging them in dialogue with a panel of discussants, we hope to illustrate and emulate Cartmill's dedication to interdisciplinary collaboration and his commitment to bridging the gap between the sciences and humanities. Cartmill's combination of paleoanthropology, comparative anatomy, philosophy, and cognitive science, has enriched our understanding of human uniqueness and the evolutionary processes that shaped us. By encouraging cross-disciplinary dialogue and incorporating diverse perspectives, he has fostered a vibrant intellectual community that transcends traditional disciplinary boundaries. Cartmill's impact on the AABA and the field of biological anthropology more broadly has been tremendous. Cartmill is a Guggenheim and AAAS Fellow, former president of the American Association of Physical Anthropologists, former editor-in-chief of the American Journal of Physical Anthropology, co-founder of the International Journal of Primatology, and the 2019 recipient of the Charles R. Darwin Lifetime Achievement Award. This symposium honors and celebrates the continuing career and lasting legacy of Matt Cartmill in biological anthropology and beyond.

- Discussants: Natalie Laudicina, Eugenie Scott, J. Michael Plavcan, Terrence Deacon.
- 1 Back to basics: Cartmill and the analysis of cranial integration, allometry and adaptation.
  M.J. RAVOSA.
- 2 Vindija Cave (Croatia) and the Nature of Neandertal-Early Modern European Introgression. F.H. SMITH, I. KARAVANIĆ, J. MAUCH LENARDIĆ, S. RADOVIĆ, I. JANKOVIĆ.
- 3 Hominoid locomotion: Miocene and modern insights. L. MACLATCHY, S. NAMAGANDA, L. SARRINGHAUS.
- 4 The Typical Body Segment Approach to Getting a Job. J.D. PAMPUSH, D.T. TARARA, H. HORBALY, S.E. LAD.
- 5 Applying Cartmill's Test for Adaptation to Human Internal Nasal Anatomy. T.R. YOKLEY.
- 6 The Brain Is Not the Most Energetically Expensive Organ. C.P. HEESY.
- 7 Expansion of primate neocortical visual areas is associated with improved visual acuity in crown haplorhines but not in Eocene stem haplorhines (Omomyoidea). R.F. KAY, K.L. ALLEN, E. KIRK, P.E. MORSE, C. ORGAN.
- 8 Primate postorbital morphology and the question of omomyoid phylogenetic relationships. E.C. KIRK, C.J. CAMPISANO, A.L. DEINO, S. EGBERTS, A.D. KEMP, I.K. LUNDEEN, B. RODWELL.
- 9 What does it take to refer iconically? E.A. CARTMILL.
- 10 DiceCT: an anatomical visualization method never used by Matt Cartmill, but that closely follows his fundamental teachings. A. HARTSTONE-ROSE.
- 11 Why all the variation in primate hyoid chain morphology? C.F. ROSS, P. LI, Z. LUO.
- 12 According to Matt Cartmill, using the word "unique" to describe humans is complicated, but it may be a good term for describing Matt. W. TREVATHAN, K. ROSENBERG.
- 13 How to answer the big questions in biological anthropology. A.A. SANDEL.

#### **Session 36**

## Paleoanthropology: Comparative and Phylogenetic Analysis of Craniodental Morphology

#### **Contributed Poster Presentations**

Chair: Zana Sims
Diamond Ballroom

- 1 Ecological and phylogenetic signals in catarrhine root morphology. Z.R. SIMS.
- 2 Estimates of Canine Sexual Dimorphism in Miocene Catarrhines using Six Different Methods. E.M. MATTHEWS.
- 3 Geometric morphometric analyses of the enamel-dentine junction of the premolars and molars of the Miocene hominine Anadoluvius turkae. D.R. BEGUN, A. SEVIM-EROL, D. ALBA, R.M. MARTIN, T. KÖROĞLU, C. ZANOLLI.
- 4 An improved approach to the taxonomic assignment of hominins using molar crown outlines: Algorithmic crown outline reconstruction. J. GALWAY-WITHAM, G. OXILLIA, S. BENAZZI, S.E. BAILEY.
- 5 Sex-biased sampling may influence *Homo naledi* tooth size variation. L.K. DELEZENE, J.E. SCOTT, J.D. IRISH, A. VILLASEÑOR, M.M. SKINNER, J. HAWKS, L.R. BERGER.
- 6 A comparative morphometric analysis of hominin lower third molars from Woranso-Mille, Afar State, Ethiopia. A.E. SLOTTER, Y. HAILE-SELASSIE.
- 7 Implications of the australopithecine diet for the emergence of unique hominin subsistence strategies and social structures. R.A. AUL.
- 8 Paleoproteomic analyses of Early-Middle Pleistocene hominids from the Sangiran Dome.

  J. KUBAT, F. DEMETER, O. KULLMER, F. SCHRENK, C. ZANOLLI, A. BACON, E. CAPPELLINI.
- 9 New auditory ossicles of Homo naledi (Rising Star Cave, South Africa). L. BLAIR, M. ELLIOTT, M. CONDE-VALVERDE, I. MARTINEZ, J. ARSUAGA, D. DE RUITER, J. HAWKS, L. BERGER, R. QUAM.
- 10 The mismeasure of recent human endocranial volumes. J. HAWKS.
- 11 The evolvability of *Paranthropus boisei* skull morphology in the context of feeding biomechanics. H. JUNG, C. ROLIAN, D. STRAIT, K.L. BAAB.
- 12 Ontogenetic Variation and Evolutionary insights from the Suprainiac area in the Middle Pleistocene Population of Sima de los huesos. A. PANTOJA-PÉREZ, J. ARSUAGA.
- 13 Morphology of the early Upper Paleolithic Zlatý kůň mandible, Czech Republic. S. BEJDOVA, R. RMOUTILOVA, H. MAY, I. CREVECOEUR, H. ROUGIER, J. VELEMINSKA, P. VELEMINSKY, J. BRUZEK.
- 14 Preliminary study: A total-evidence approach to hominin phylogenetics using 3DGM data. N.W. POST, K.D. PUGH, S.A. CATALANO, S. ALMÉCIJA, A.S. HAMMOND.
- 15 Neighbor-net analysis of extant apes supports reliability of fossil hominin results. J.R. GAUTNEY.

16 Cranial patterns of fluctuating asymmetry in hybrid canids (Canis latrans var.): implications for the hominin fossil record. L. NAGENDRAN, M.A. CONAWAY, N. ZDJELAR, L. SCHROFDER

### Session 37

## Paleoanthropology: Postcranial Variation and Covariation

#### **Contributed Poster Presentations**

Chair: Jeanelle Uy Diamond Ballroom

- 1 Annular Ring Size and Position in Australopithecus. A.M. DALY, D. EZRA, A. BARASH, S.A. WILLIAMS.
- 2 Reevaluating the taxonomy of a lumbar vertebra (Omo 105-7) from lower Omo basin (Plio-Pleistocene) using 3D geometric morphometrics. X. WANG, M.R. MEYER, S.A. WILLIAMS.
- 3 Can gut size be inferred from ribcage form? J. UY, T. MIYABE-NISHIWAKI.
- 4 An analysis of cranial and pelvic covariation, with implications for the evolution of cephalopelvic disproportion in non-human primates. M.J. COOPER, N. VON CRAMON-TAUBADEI
- 5 Comparison of medical vs. micro-computed tomography in the assessment of cortical bone thickness distribution in the primate femoral diaphysis. A. VECINO GAZABÓN, A. PROFICO, F. GRINE, C.S. MONGLE, A. BARRERA, E. FUENTES, A.S. HAMMOND, M. CAZENAVE.
- 6 New postcranial fossils of Proconsul major from Napak, Uganda. R.M. SHERWOOD, L.M. MACLATCHY.
- 7 Predicting the intermembral index of Ardipithecus ramidus: new insights from phylogenetic regression modeling on a large comparative sample. T. GARCES, W. HARCOURT-SMITH.
- 8 Coevolution of modern humans hands and feet. M. ARLEGI, A. PABLOS, C. LORENZO.
- 9 Rearfoot Form and Function in Hominin Bipedalism: Insights from Finite Element Analysis. A.C. IDSO, H. PONTZER, W.E. HARCOURT-SMITH.
- 10 Title: Navicular height changes due to added burden and increasing velocity. Y. VELEZ HERNANDEZ. C.M. HARPER. S.G. LAUTZENHEISER. P. KRAMER.
- 11 A three-dimensional virtual assessment of hominoid hallucal divergence. T.C. PRANG.
- 12 An investigation of the understudied skeletal elements of the Brazilian subfossil platyrrhines: The talus. J.K. SPEAR, L.B. HALENAR-PRICE, S.A. WILLIAMS, T. PRANG.
- 13 Bonobo and chimpanzee metacarpal bone density: Implications for understanding theorigin of gracile morphology. L. SAMUEL, T. KIVELL, H. CHIRCHIR.
- **14** The effect of hybridisation on variation: a macaque model. L.T. BUCK, D.C. KATZ, R. ROGERS ACKERMANN, L.J. HLUSKO, S. KANTHASWAMY, T.D. WEAVER.
- 15 Locomotor development and climbing in Homo naledi. J.P. SAERS.

#### **Session 38**

## Paleoanthropology: Paleoprimatology

#### Contributed Poster Presentations

Chair: Zachary Cofran
Diamond Ballroom

- 1 First known cervical vertebrae of Shoshonius cooperi: implications for omomyoid relationships. B. RODWELL, L.J. SHAPIRO, E.C. KIRK.
- 2 Primates and other mammals from Tipton Buttes, Great Divide Basin, Southwestern Wyoming: Biochronology and Systematics of an Early Eocene fossil community. R.L. ANEMONE, N.M. LAUDICINA, C. KUFELDT, T.R. YOKLEY.
- 3 µCT scan data unveil previously undocumented morphology in the oldest known plesiadapiform cranium. J.W. CROWELL, K. BEARD, S.G. CHESTER.
- 4 Sr/Ca Ratios Indicate Dietary Categories of Early North American Primates. M.I. HAMILTON, B.L. DRAKE.
- 5 Evaluating morphological change in the maxillary dentition of an anaptomorphine (Omomyidae) lineage from the Willwood Formation (early Eocene) in the Bighorn Basin of Wyoming, USA. K.L. RUST, K.C. BEARD.
- 6 A fossil galagid from the middle Miocene of Napudet, northern Kenya. M.P. HINTERMEISTER, E.R. SEIFFERT, N.S. VITEK, A. SIDDIQUI, I.O. NENGO, G.A. RUSSO.
- 7 New Late Miocene cercopithecid fossils from the Lemudong'o Formation, southern Kenya. J.L. ARENSON, C.C. GILBERT, S. AMBROSE, F.K. MANTHI, E. DIMAGGIO, D. YANG, A.S. HAMMOND.
- 8 First macaque fossils from Sudan. M.F. BRASIL, B. KRAATZ, R. BUSSERT, S. TSUKAMOTO, K. SALIH, A. EISAWI, F. BIBI.
- 9 Revaluating evidence for Theropithecus darti from the Luangwa Valley, Zambia, during the Pliocene. L.H. EASON, L.K. DELEZENE, T.K. NALLEY, A.L. RECTOR, J.M. PLAVCAN.
- 10 Preliminary Geometric Morphometric Identification of Cercopithecoidea Teeth from Laetoli, northern Tanzania. G.M. JONES, A.S. DEANE, C. MUSIBA.
- 11 Reassessing the taxonomy of Pleistocene papionins from Sterkfontein, Makapansgat and Swartkrans using a nonmetric analysis of mesio-lingual maxillary molar morphology. A.K. PREGIBON, F.L. WILLIAMS.
- 12 New Theropithecus fossils from Woranso-Mille (3.5–3.33 Ma): their implications for the evolution of the lineage. H.G. REDA, Y. HAILE-SELASSIE, S.R. FROST.
- **13** Updated analysis of fossil cercopithecid monkeys from Kromdraai B. C.C. GILBERT, S.R. FROST, D.W. KGOTLENG, B.A. PATEL, C. STEININGER.

### **Session 39**

# Paleoanthropology: Faunal Analysis and Taphonomy

#### **Contributed Poster Presentations**

Chair: Zachary Cofran
Diamond Ballroom

- Body size differences between modern and fossil eastern African mammal assemblages suggest increased predatory pressures in Pliocene paleocommunities. B. ADRIAN, K.E. REED, D.F. SU.
- 2 Paleoecological and Temporal Context of Area 123 Hominins in East Turkana, Kenya. O.A. GOODCHILD, M.G. KELLY, S. MELAKU, F. FORREST, D.R. BRAUN, D.V. PALCU, E.K. NDIEMA.
- 3 Effects of two systematic collection protocols on faunal abundance and diversity: A costbenefit analysis in the Koobi Fora Formation. M. HULL, A. ENNY, S. ROBERTS, D.R. BRAUN.
- 4 Turnover of Mio-Pliocene large mammal communities at Lothagam (West Turkana, Kenya). E.A. OMONDI, J. ROWAN.
- 5 Paleoecological implications of the late glacial hyena den from Besaansklip (southwestern Cape, South Africa). K. SOKOLOWSKI, K. O'BRIEN, V. HARE, D. YARIAN, L. ROUSSOUW. J. FAITH.
- 6 Variation in faunal composition among phases of fossil collection in the Lemudong'o Formation, SW Kenya. D. YANG, F.K. MANTHI, E.N. DIMAGGIO, R.N. KINYANJUI, S.H. AMBROSE, A.S. HAMMOND.
- 7 Zooarchaeological Analysis at Area 8A Fossil Assemblage at Koobi Fora, Kenya. E.F. GONZALEZ ALVAREZ, D.R. BRAUN, E. NDIEMA, F. FORREST.
- 8 An analysis of hominin fossil preservation at Hadar, Ethiopia using Uberon Ontology. J. JOHNSON, D. REED.
- 9 Vole (Microtus guentheri) stable isotopes as proxies of MIS6 paleoenvironment: Implications for modern human and Neanderthals interactions in the southern Levant. L. GUTHRIE, M. BELMAKER.
- 10 Using micromammal faunal analysis to contextualize vegetation structure local to the development of early human behavior in Pleistocene Morocco. C.E. BRANDES, D.N. REED.
- 11 Plants as agents of bone surface modifications; Root-etching and implications for the fossil record. S.C. CURRAN.
- 12 Disappearing Trackways: Assessing of Erosion at Laetoli Site A Trackways Using UAV and DSLR Photogrammetry. K.N. GENORD, B. FLAVIAN KITOHA, M. CORBIN, O. RUSUBY, N. SOTE, D. NGASA, C. MUSIBA, A. DEANE, G. JONES, S. REAMER, K. PONTIERI, J. KAYE.
- 13 Cultural World Heritage Sites: An imbalance of conservation techniques and funding between the global north and global south using Laetoli, Tanzania, East Africa animal and human trackways as a case study. M.L. CORBIN.
- 14 Using stable isotope ecology of modern herbivores as a model to reconstruct palaeoenvironments. M.M. LETHUBA, J.C. SEALY.

- 15 East African bovids show specialized molars to feed on a wear-inducing diet during the late Pliocene. W.H. REDA, Z. ALEMSEGED.
- 16 Who made early stone tools? Assessing the overlap of hominins with Oldowan assemblages. E.M. FINESTONE.

### **Session 40**

# Functional Anatomy: Appendicular primate functional anatomy/tissue biology

#### **Contributed Poster Presentations**

Chair: Neysa Grider-Potter
Diamond Ballroom

- 1 Tests of morphological convergence in hindlimb bone cross-sectional properties in saltatory primates, rodents, and marsupials. K.L. LEWTON, J. HAFFIE, K.C. HSU, C.A. KNITT.
- 2 Investigating the influence of taxon, body size, and sex on shape variation in African ape distal femora. S.E. FRIESEN, M.A. CONAWAY, L. SCHROEDER.
- 3 Geography and subsistence strategy and their relationship to human femur morphology. N.M. HUNT, L.J. DEMARS, S. KUO, J.P. SAERS, K.J. CARLSON, A.D. GORDON, J.T. STOCK, T.M. RYAN.
- 4 Testing Distal Tibia Shape Convergence in Mammals with Hindfoot Reversal. C. ORMSBY.
- 5 The efficacy of resin-based stereolithography 3D-printing of trabecular bone as a non-invasive option for mechanical testing. G.V. CALHOUN, T.A. POLVADORE, W.S. MCGRAW, D.J. DAEGLING.
- 6 Brace yourself: Investigating the advantages of subtalar joint mobility during walking on an uneven surface. Z.M. APOLITO, N.B. HOLOWKA.
- 7 Reconstructing the leaping ability of early fossil primates using hip and knee morphology. S.W. IRVINE, E.D. JOSLIN, H. SEXTON, E.J. SARGIS.
- 8 Evaluating the Accuracy of External Limb Measurements for Predicting Skeletal Lengths from CT Scans. M. OCHOA, P.A. KRAMER.
- 9 Multi-Bone Micro-CT Scanning with a leap towards reproducibility and efficiency using automated tools. T. JASHASHVILI, S. LIU, K.J. CARLSON.
- 10 Femoral-pelvic interactions during growth in a cross-sectional sample of 4-23 year olds from England. H. KURKI, C. WALL-SCHEFFLER, M.E. CAMERON, S. DECRAUSAZ, J.T. STOCK, J.E. WILLIAMS, M.S. FEWTRELL, J.C. WELLS.
- 11 Cortical bone reflects signals of intrinsic hand muscles in Homo sapiens and Pan troglodytes across the metacarpus. N.G. STEER, Z.J. TSEGAI, K.M. MIDDLETON, C.M. HOLLIDAY, C.V. WARD.
- 12 Biomechanics of stone tool production: a novel approach to percussive force measurement in flintknapping experiments. C. BARROSO-MEDINA, S. LIN, M.W. TOCHERI, M. SREENIVASA.

- 13 Grip Force and the Role of the Digits in Human Throwing. K.G. PALMISANO, K.G. HATALA, N.T. ROACH, E. WILLIAMS-HATALA, N.B. HOLOWKA.
- 14 Hand use in Gorilla based on asymmetry of first metacarpal entheses. L.A. BOWLAND.
- 15 Variation in Distal Humerus Morphology Among Eastern Gorilla Populations. R.S. JABBOUR.
- 16 Activity Levels and the Humeral Carrying Angle in a Recent Human Population. K.D. LAURIA, L.W. COWGILL.
- 17 A geometric morphometric study of scapular ontogeny in modern humans. E. NOBLE, J. HAWKS.
- 18 Interdigit Variation in Proximal Phalangeal Curvature and Metacarpophalangeal Joint Dorsal Canting in Homo sapiens, Pan paniscus, and Macaca mulatta. T.E. HOBBS, B.A. PATEL, C.M. ORR.
- 19 Limited dietary energy intake during growth has long-lasting negative effects on limb bone diaphyseal strength in capuchin monkeys. M.P. BUTLER, J.W. YOUNG, J.G. FLEAGLE, I.J. WALLACE.
- 20 Kinematic strategies across substrates of varying risk and complexity in Sapajus apella. N. GRIDER-POTTER, A. KEMP, M.F. LAIRD, D. ODELE, J. YOUNG, C. ROSS, K.A. PHILLIPS.

#### Session 41

# Anatomy: Axial primate functional anatomy/tissue biology

**Contributed Poster Presentations** 

Chair: Tim Smith
Diamond Ballroom

- 1 Sensitivity of musculoskeletal models to changes in pelvic tilt. A. HARWARD, P.A. KRAMER.
- 2 Interspecific variation in numbers of presacral vertebrae in amniotes: where do mammals stand? S.A. WILLIAMS, J.K. SPEAR, D.A. MIANO, C.E. COSTA, M.R. SHATTUCK, A. GÓMEZ- OLIVENCIA.
- 3 Are sacralization of a lumbar vertebra and lumbarization of a sacral vertebra a paired duality, with opposite expressions but with the same domains of homeotic transformation in humans? R.G. TAGUE.
- 4 Movement in the Miocene: A SPHARM analysis of fossil catarrhine tali to infer locomotor behavior. C.J. LLERA MARTÍN, A.S. ULUUTKU, I.D. ARNEY.
- When the youngsters teach the old timers: Inferring turbinal identification in adult primates based on ontogenetic stages. F. WAGNER, V.B. DELEON, T.D. SMITH.
- 6 Balancing Act: Snout Length and Midfacial Function in Mammals. N.A. KING, T.P. EITING, A.A. CURTIS, V. CHHAYA, V.B. DELEON, S.E. SANTANA, T.D. SMITH.
- 7 What are bigger snouts for? Looking to non-primates for answers. V.R. HUDSON, H.D. O'BRIEN, P.M. GIGNAC, T.D. SMITH.

- 8 Asymmetrical heat and moisture exchange during the nasal cycle: Investigating the influence of mucosal congestion on human nasal form and function. B. TRAN, L.A. WARD, H.H. PATABENDIGE, V.C. NAIR, E.O. CHO, T.R. YOKLEY, B.H. DENNIS, S.D. MADDUX.
- 9 Variation in body composition in relation to evolutionary models of human thermoregulation. A. REIF, M. GOODSTEIN, L. WARD, E.O. CHO, C. OCOBOCK, L. COWGILL, S.D. MADDUX.
- 10 How Mangabey Molar Form Differs Under Routine vs. Fallback Hard-Object Feeding Regimes. D. GUATELLI-STEINBERG, J. GRIMM, C. RENTERIA, I. MAERET, D. AROLA, W. MCGRAW.
- 11 Symphyseal biomechanics of extant hominids during simulated chewing. F.B. PRADO, A. SMITH, C.A. ROBINSON, A. TAYLOR, C. WARD, K. SELLERS, A. WILKEN, J. IRIARTE-DIAZ, O. PANAGIOTOPOULOU, H. FARRELL, C.F. ROSS.
- 12 Craniofacial Complex of Cleft Palate in Newborn Callithrix jacchus. K.P. FRANKLIN, C.J. VINYARD, T.D. SMITH, V.B. DELEON.
- 13 Experimental validation of simulated bite force-gape tradeoffs in Eulemur and Varecia. M.F. LAIRD, S.K. DAVIDSON, T. POLVADORE, C.E. TERHUNE, A.B. TAYLOR, C.F. ROSS, J. IRIARTE-DIA7
- 14 Influence of environmental effects on fluctuating asymmetry of cranial nonmetric traits in rhesus macaques (*Macaca mulatta*) on Cayo Santiago. L. KOHN, T. KENSLER, D. GUATELLI-STEINBERG, M. ZHAO, G. FRANCIS, Q. WANG.
- 15 Sexual Selection and the Interaction between Facial Breadth and Canine Dimorphism. C.L. CLAYTON, J. PLAVCAN.
- 16 Craniofacial length and breadth dimorphism in primates. J. PLAVCAN.
- 17 The role of tooth germ follicles in jaw osteogenesis in primates. T.D. SMITH, K.A. PRUFROCK, S.E. DOWNING, V.R. HUDSON, L.E. GORDLEY, J.C. BOUGHNER, A.M. BURROWS, V.B. DELEON.
- 18 Exploring the relationship between hyoid position and basihyal shape in an ontogenetic sample of tufted capuchins. P.M. TAYLOR, T.A. POLVADORE, C.B. YOAKUM, J. CHALK-WILAYTO, M.D. FOGAÇA, M.A. HOLMES, M.F. LAIRD, C.E. TERHUNE.
- 19 Quantifying human body surface area: A comparison of photogrammetry and CT scanning to estimation techniques. M. GOODSTEIN, A. REIF, L. WARD, E.O. CHO, C. OCOBOCK, L. COWGILL, S.D. MADDUX.
- 20 The scaling of axon diameter to skeletal muscle volume as a framework for understanding functional adaptation and evolution. A.D. FOSTER, J. BAIRD, S. BOGAN, A. CHOUDRY, P. DOSHI, V. MURUGANANDAM, M. TOLER.

#### **Session 42**

# Bioarchaeology: Advances in Theory, Method, and Ethics

#### **Contributed Poster Presentations**

Chair: Christopher Schmidt
Diamond Ballroom

- 1 A New Method for the Study of Activity Indicator Facets on the Distal Tibia. Y. AN, D.M. SANDOVAL, M.M. BLEUZE, J.E. BRADY.
- 2 A Comparison of Inter-State Human Skeletal Remains Trafficking Laws: Case Studies from Washington State and Recommendations for Improved Protections. J.M. BERGER, A. GARCIA- PUTNAM, G.L. TASA.
- 3 Contour Analysis of Stone and Steel Tool Cut Marks. A. CREAL, D. SCHMIDT.
- 4 Mortality and cause of death in 19th/20th century Americans from the Hamann-Todd collection. K. GODDE, S.M. HENS.
- 5 First burials give insights into mortuary rites at Göbekli Tepe, Pre-Pottery Neolithic Türkiye. J. GRESKY, L. CLARE, N. KARUL.
- 6 Introducing an "Indigenous-Life-History" approach: Supporting informed and informative bioarchaeology. M.E. HARDIE.
- 7 Sex ratio interpretation: An analysis of methods to estimate biological sex in a commingled and fragmentary skeletal assemblage from Midnight Terror Cave, Belize. J.F. JUETTE, M.M. BLEUZE, J.E. BRADY.
- 8 Trends in NAGPRA Literature. A.M. MUSCH, M. HUBBE.
- 9 Sex-based differences in dental microwear texture among the adults from Herculaneum. C.W. SCHMIDT, R. D'ANASTASIO.
- 10 Comparisons of the skeletal preservation between the owners and sacrificial victims in ancient burials (A.D. 5th-6th centuries), South Korea. M. SEO, D. KIM, E. WOO.
- 11 Testing the application of sedaDNA techniques for potential recovery of leached DNA during decomposition. C.N. TRAN, H. CARDOSO, D. YANG.

#### Session 43

## Bioarchaeology: Biology, Behavior, and Embodiment

#### Contributed Poster Presentations

Chair: Elizabeth Berger
Diamond Ballroom

- 1 A high incidence of antemortem rib fractures in a historical Chinese population. E. BERGER, W. YE, L. YANG.
- 2 Bioarchaeology of Care: A Case Study from Nineteenth Century Mississippi. B.C. BROWN, M.K. ZUCKERMAN, N.P. HERRMANN, D.T. ANDERSON.

- 3 Biological Interaction Patterns in the Colonial Lambayeque Valley Complex, Peru: New Perspectives on Colonial-Era Population Structures from Dental Phenotypic Variation. H. FIEDLER, H.D. KLAUS.
- 4 Recent biological distance assessments of the Green River Archaic burial sample from 150H2. N.P. HERRMANN, K.A. CRUZ, J.A. GEE.
- 5 Co-occurrence of skeletal stress indicators: enamel hypoplasia and facial fluctuating asymmetry vs reduced vertebral dimensions. M. KRENZ-NIEDBALA, M. GRATKOWSKA, S. ANDRZEJCZAK, S. ŁUKASIK.
- 6 Expanding investigations of cranial vault modification and social landscapes among ancient Andean communities using 3D imaging and geometric morphometrics. S.C. KUZMINSKY, E. RANGEL, T.A. TUNG, M. HUBBE.
- 7 Hungarian Spina Bifida. H.R. LOTT, A. BAILEY.
- 8 Adaptive responses in pelvic morphology during growth in forager populations. M. MACKINNON, H.K. KURKI, L. COWGILL, L. HARRINGTON.
- 9 Inner Ear's Sexual Dimorphism in Late Holocene Humans from South America: An Interdisciplinary Assessment Combining Morphological, Archaeological, and Genetic Data. L.P. MENÉNDEZ, M. LOPEZ-SOSA, C. RIOS, H. GROH, M. BERON, S. PASTOR, L. TISSERA, P. NOVELLINO, R. BARBERENA, A. SOLARI, S. MONTEIRO DA SILVA, A. PESSIS, G. MARTIN.
- 10 Using geometric morphometrics to assess labor's impact on metacarpal morphology in ancient Mesoamerica. P.J. MERCIER, S. FREIDLINE, S. BARBER, L. WILLIAMS, A. MAYES, A. JOYCE, S. KING.
- 11 Dental Wear Indicative of Spinning Found in the Midnight Terror Cave Assemblage. M. MOUSALU, M.M. BLEUZE, J.E. BRADY.
- 12 "Bolinao Skull": male or female? Morphological traits of a human cranium, mandible, and dentition with goldworks retrieved from a 14th-15th century site in northern Philippines. C.D. RAMOS, M.A. BOLUNIA.
- 13 Exploring the preservation and etiology of ossified thyroid cartilage in the bioarchaeological record: A case study of four individuals buried at the Roman necropolis of Histria, Romania. K.L. REINBERGER, E.C. FLEMING, A. RABINOWITZ.
- 14 Sex, death, and disability: Intersections of identity at Carrier Mills, IL (6000 3000 BC). A. SCHRENK.
- 15 Biological relationships at pre-colonial Tlatelolco as reconstructed fom adult tooth size. T. SEUPAUL, K.S. PAUL, K.E. BLEVINS, J. MANSILLA LORY, J.E. BUIKSTRA.
- 16 A Biocultural Analysis of a Roman Tomb from Ancient Hierapytna, Crete, Greece. S.K. SMITH, V. APOSTOLAKOU.
- 17 Exploring Relationships Between Entheseal Changes and Historically Documented Life Histories. E.L. WIEDENMEYER.
- 18 Behavioral Patterns of the Western Rong Population during the Eastern Zhou Period (2300- 2100 BP) in the Dunping Cemetery, Northwestern China. S. YANG, Z. HU, J. GUO, X. SUN.
- 19 Trophy or Vessel? Skull artifact from Liangzhu Culture site in Neolithic China. Q. ZHANG, Y. FEI, Y. ZHAO, Q. ZHANG..

### **Session 44**

# Bioarchaeology: Human and Animal Biomolecular Investigations Contributed Poster Presentations

Chair: Verena Schuenemann Diamond Ballroom

- 1 Exploring life course through diet: Breastfeeding and weaning in medieval Croatia. C.A. CRONKHITE, A.J. OSTERHOLTZ, I. VALENT, R. ČIMIN, D.H. TEMPLE, C.A. FRANCE.
- 2 Genetic structure in the Medieval coastal town of Noli (Liguria, Italy). B. HOLT, I. GORDON, H. MOOTS, C. DE LA FUENTE, E. BANDYOPADHYAY, D. WITONSKI, C. GOLD, E. KOCH, M. RAGHAVAN.
- 3 Animal management strategies at the Wari imperial site of Huaca del Loro, Nasca, Peru (A.D. 650-950) using isotopic analyses of camelid bone. C.M. KELLNER, C. CONLEE, A. NORIEGA.
- 4 Isotopic data from the Roman site of Scupi in Macedonia. J.S. KRIGBAUM, G.D. KAMENOV, J. HEILMANN, F. CURTA, M.B. PANOV.
- 5 The Bioarchaeology of Prehistoric Agricultural/Metalworking Communities in Central Thailand. C. LIU, K. MUDAR, V.C. PIGOTT, S.M. LARA, J.S. KRIGBAUM.
- 6 Genomic Insights from Buca del Corno: Exploring Copper Age Burials in Central Italy. M. ROMBONI, F. DE ANGELIS, K. KASSADJIKOVA, M. BONATO, L. FEHREN-SCHMITZ, C. AMORIM.
- 7 Consider the Teeth: Assessing the Viability of Dentinal Collagen Preservation for Isotopic Analysis at Phaleron Cemetery (700-480 BCE). J.E. ROTHWELL, J.R. STAMER, M. DE LA ROSA MARTINEZ, K.J. KNUDSON, J.E. BUIKSTRA.
- 8 Isotopic insights into dietary shifts and life history changes in Southern Europe during the Metal Ages (3600-400 cal. BCE). A. VARALLI, V. SPARACELLO, I. DORI, R. SKEATES, E. STARNINI, D. GRÖCKE.
- 9 Intra-tooth variation of stable carbon, nitrogen, and oxygen isotopes in fossilized equid tooth enamel from Neumark-Nord 2, Germany. M. VINK, J. LEICHLITER, S. BROEMME, T. TACAIL, L. KINDLER, W. ROEBROEKS, S. GAUDZINSKI-WINDHEUSER, T. TUETKEN, H. VONHOF, A. MARTINEZ-GARCIA, A. HENRY, T. LUEDECKE.
- 10 Preliminary study of the feasibility of extracting ancient proteins from Plio-Pleistocene eastern African contexts. K. WANZA, P. MADUPE, G.B. TROCHÉ, Y. SAHLE, R.R. ACKERMANN, E. CAPPELLINI.
- 11 Investigating growth and stress of Merovingian children and adolescents from Großvargula and Sondershausen-Bebra. M.M. WARNER, J.V. MEYER, K.M. PRUFER.
- 12 Exploring childhood and adulthood diet in late medieval-early modern Romania using stable isotope analysis of enamel and bone collagen. J.M. WATSON, A. JANZEN.

### **Session 45**

# Bioarchaeology: Populations in Transition – Intersections of Health, Paleodemography and Paleoepidemiology

#### **Contributed Poster Presentations**

Chair: Alexandria Orozco
Diamond Ballroom

- 1 The More the Merrier? Re-examining Health Outcomes of Urbanization from the European History of Health Project Database. M.E. DUNCANSON, M. HUBBE, C.S. LARSEN.
- 2 Cosmopolitan Herculaneum? A multi-isotope study of the victims of Mt. Vesuvius (79 CE). J. HEILMANN, R. D'ANASTASIO, G. KAMENOV, J. KRIGBAUM.
- 3 Gender and Health: Paleoepidemiology of an Institutionalized Population in Nineteenth-Century Colorado. R. JAMES.
- 4 Fertility and Stress in Colonial Peru: A Transition Analysis-Based Paleodemographic Reconstruction of Birthrates and Female Health in the Lambayeque Valley Complex. G.K. KÜHNE, H.D. KLAUS, F. CRESPO.
- 5 Earlier Holocene diet and lifestyle shaped past and present global health and well-being. C.S. LARSEN, G.R. SCHUG, M. STONEKING, G.R. MILNER, C.M. LEWIS, L. FIBIGER, J. PEARSON, J.T. STOCK.
- 6 Health impacts of agricultural intensification and urbanisation in Early China: A bioarchaeological analysis of disease patterns, subsistence economies, and lived environments in Shaanxi from 3000 BC to AD 220. M. LI, C.A. ROBERTS, P.A. ROWLEY-CONWY, L., CHEN, O., GENG, D., ZHAO, H., ZHAO.
- 7 Adulthood longevity of males and females during a Japanese prehistoric period, Jomon, estimated from reduction of dental pulp cavity, with additional information from clavicles. T SASAKI
- 8 The effects of selective mortality on stature on the north coast of Peru. J. SHAFFER, H. KLAUS, D. TEMPLE.
- 9 The Neolithic Reorganization: A Preliminary Synthesis of Paleodemography from Neolithic Age to Iron Age in Northern China. M. SIMON, Q. ZHANG, M. SIKORA, H. WILLMOTT, S. DEWITTE, Q. WANG.
- 10 The effect of developmental stress on survival in the Hamann-Todd Collection. A.M. SIMON, M. HUBBE.
- 11 Marasmus and Morality: Infant Deaths at a Catholic Infant Asylum in Buffalo, New York in 1880. R. WAKEFIELD-MURPHY, J. WALKER, D. NEIDICH, M. ZUMPANO.
- 12 The Geographic Spread of the 1918 Influenza Pandemic in Alaska. A. WISSLER, L. SATTENSPIEL, U. KHAKEREL, S. MAMELUND.

### **Session 46**

# Bioarchaeology: Womb to Tomb – Skeletal Evidence of Stress, Disease, and Violence Across the Life Course

#### **Contributed Poster Presentations**

Chair: Jenna Dittmar Diamond Ballroom

- Stress Chronologies in a Late Ottoman Bedouin Cemetery from Tall Hisban, Jordan: A Histological Evaluation of Stress during the Tanzimat Land Reforms. K.R. COCKERILLE, M. PERRY, D.H. TEMPLE.
- 2 A Case Study of an Enlarged Mandibular Condyle from the Phaleron Cemetery in Athens. B.L. CUNNINGHAM, J.R. STAMER, P. TRITSAROLI, J.E. BUIKSTRA.
- 3 Bioarchaeological analysis of an elite Xiongnu site, Yamaan us, in western Mongolia. J.T. ENG, M. HRIVNYAK, E. MYAGMAR, D. KHATANBAATAR, J. MUNKHDELGER.
- 4 Bone Health Among Ancient Maya Females from the Midnight Terror Cave, Belize. T. GALVEZ, M.M. BLEUZE, J.E. BRADY.
- 5 Childhood stress explored through micro-enamel hypoplasia in two post-medieval Dutch populations of differing socioeconomic status. R.A. HALL, S.A. SCHRADER.
- 6 Spina bifida occulta within the Archaic Greek cemetery of Phaleron. L.A. HAYES, A.A. CORMIER, J.E. BUIKSTRA.
- 7 Stature, frailty, and mortality in working class Americans: Evidence for structural racism. S.M. HENS, K. GODDE.
- 8 Time-resolved histological and isotopic analysis of rachitic human teeth in an archaeological population: implications for paleopathology and paleodietary research. E.J. KENDALL, A.E. SNODDY, R. KENDALL, H. KOON.
- 9 Prevalence of cribia orbitalia and porotic hyperostosis in Dyrrachium (modern-day Durres, Albania) in the Roman and Late Antiquity periods. M. KOCI, B. KYLE, L. REITSEMA, E. SHEHI, U. TOTA.
- 10 Maxillary Sinusitis in Ancient Xinjiang: Investigating Respiratory Health in Bronze Age to Early Iron Age Populations and its Environmental Determinants. S. KONG, Q. ZHANG, R. YU.
- 11 Beyond battle scars: An analysis of injury patterns in the eastern Eurasian Steppe. Y. LIU.
- 12 Death end for a Hun warrior A migration period (5th -6th cent. AD) burial from Eastern Austria. F. KANZ, C. LEHN, F. MAIXNER, C. REISINGER, A. ZINK, K. GROSSSCHMIDT, P. JETTMAR, J. SCHWARZÄUGL, S. ZINGALE.
- 13 Examination of the Relationship Between Linear Enamel Hypoplasia, Mortality, and Chronic Morbidity in a Modern Greek Sample. E.C. MCCOLLISTER, L.G. KOUTLIAS.
- 14 Effects of social status on degenerative joint disease risk and severity in early medieval Thuringia, Germany. J. MEYER.
- 15 Perimortem trauma in children reveals Neolithic conflict in northwestern Italy (Liguria).
  V.S. SPARACELLO, I. DORI, A. VARALLI, C. PANELLI, S. ROSSI, A. RIGA, F. SEGHI, S. ERRIU, R. MAGGI, E. STARNINI, J. MOGGI-CECCHI.

- 16 Temporal Trends in Pacific Coast Athapaskan Stature: A Comparison of Archaeological and Early Reservation Period Data. G.L. TASA, A. GARCIA-PUTNAM, J.M. BERGER.
- 17 Faith and medieval mouths: dental pathological lesions in a multi-faith Portuguese skeletal assemblage. T.M. TROMBLEY, H. SANTOS, M. LIBERATO, A. MATIAS, S.C. AGARWAL.
- 18 Opening the Can of Worms: exploring porotic hyperostosis, endemic parasites, human ecology, and nutrition in pre-contact Eastern North American populations. M.C. VAN DER VEEN, D.E. HOPWOOD.

#### **Session 47**

## Symposium: Central Asia: at the crossroads of Eurasia **Invited Podium Symposium**

Chairs: Ainash Childebayeva, Guido Gnecchi-Ruscone, Tayler Hermes Platinum D

Central Asia is a region with a substantial history of human innovation and long-distance interaction. Located at the center of Eurasia within the vast Steppe grasslands, deserts, and mountains, the region has been an important locale between East Asia, the Near East, and Europe. From the spread of Neanderthals and Denisovans in the Paleolithic until the Medieval times during the rise of nomadic empires, Central Asia has remained crucial for researchers examining a plethora of anthropological topics. Today, Central Asian populations represent an intermediate position within a genetic cline between western and eastern Eurasia. However, archaeological and ancient DNA studies have identified a dynamic and diverse human landscape with influences coming both from the east and the west at different times. Moreover, ancient pathogen studies have uncovered a fitful history of Yersinia pestis (causative bacterium of plaque) with bidirectional waves of transmission east and west. In terms of technological development, Central Asia is known as the earliest evidence of horse domestication at Botai during the Eneolithic in Northern Kazakhstan followed by a long history of equestrian culture developed in the western steppes, in addition to rich metallurgical traditions that spread throughout Eurasia. Since the Iron Age, Central Asia has been the hub of sophisticated nomadic cultures that interacted with neighboring civilizations introducing and spreading technologies across Eurasia. They are known through the ethnonyms such as Scythians, Sakas, Huns, Avars that are often terms constructed by external sources. This symposium brings together researchers from around the globe who study ancient Central Asia and its impactful biological systems, including human, animal, and pathogen genetics, microbiome sciences, and the region's foundational historical and archaeological underpinnings. We hope to provide a solid overview of the current work in Central Asia and facilitate new discussions on future research synergies in Central Asia.

- Geographies of Otherness: Names, Narratives, and Images of Eurasian Nomads in 8:00 am Late Antique and Medieval Sources. S. LICCARDO, W. POHL.
- 8:15 am The genomic tales of early medieval steppe populations settled in Central Europe. G. GNECCHI RUSCONE, Z. RÁCZ, S. LICCARDO, W. POHL, T. VIDA, J. KRAUSE, Z. HOFMANOVÁ.
- The Cart Before the Horse: Disentangling narratives of domestication and transport 8:30 am along the Great Steppe Routes. A. VENTRESCA-MILLER.
- 8:45 am Genetic Insight into the Paternal Genealogy of the Kazakh population through Y-chromosome analysis. M. ZHABAGIN, Z. SABITOV.
- 9:00 am Fine-scale Analysis of Population Genetics and Signatures of Selection in Central Asian pastoralists. A. CHILDEBAYEVA, G. GNECCHI-RUSCONE, L. MUSRALINA, N. ALTYNOVA, E. KHUSSAINOVA, S. IVANOV, C. JEONG, L. DZHANSUGUROVA, J. KRAUSE.
- 9:15 am Genomic insights on mobility, integration, and regional contact across Bronze Age Eurasia. M. FRACHETTI.

- 9:30 am BREAK.
- 10:00 am Early herders of Inner Asia, T. HERMES.
- 10:15 am A Central Asian perspective into the history and evolution of plague. M.A. SPYROU.
- 10:30 am A meta-analysis of ancient and present-day Central Eurasian genome data to revise ancestries from archaic hominins. A. RYMBEKOVA, M. KUHLWILM.
- 10:45 am Phenotypes of Pigmentation and Vitamin D Metabolism in Ancient Individuals from Central Eurasia. L. DJANSUGUROVA, A. CHILDEBAYEVA, A. MUSTAFAYEVA, Z. KUMARBEKOV, S. TOKMURZINA, N. ALTYNOVA, E. KHUSSAINOVA, G. GNECCHI-RUSCONE, C. JEONG, J. KRAUSE.
- 11:00 am Reconstructing the Genetic Relationship between Ancient and Present-day Siberian Populations. H. GILL. J. LEE. C. JEONG.
- 11:15 am Cranial Modification and Social Identity in Early Islamic Rural and Urban Populations of Central Asia. E. BULLION, S. MONROE, D. HANSEN II.
- 11:30 am Discussant: Tina Warinner.
- 11:45 am Discussant: Choongwon Jeong.

#### Session 48

### Bioarchaeology: Development, Biomechanics, and Behavior Contributed Podium Presentations

Chair: Michelle Cameron Platinum A-B

- 8:00 am Interpreting Childhood Growth Disruption: Findings from a Medieval Toulousian Cemetery (10th-13th Century, France). H. WELSH, M.B. BRICKLEY.
- 8:15 am Assessing childhood and adolescent lifeways through fracture patterns in four postmedieval Dutch communities (1650–1850 CE). M.D. LANGLOIS, M.B. BRICKLEY.
- 8:30 am Seeing Stress in Small Spines: A Biomechanical Approach to Spinal Lesion Distribution in Children from a Post-Medieval Industrial Dutch Community. A. TUTWILER, R. SCHATS, S.A. SCHRADER.
- 8:45 am Pubertal timing during the late Avar period in Austria. P. KLOSTERMANN, M. BERNER, D. PANY-KUCERA, B. TOBIAS, K. WANG, Z. HOFMANOVA, K. WILSCHKE-SCHROTTA, S. EGGERS.
- 9:00 am Exploring the Association Between Biomarkers of Developmental Adversity and Adult Mortality in a Modern Greek Skeletal Sample. L.G. KOUTLIAS, M. CHOVALOPOULOU, E.C. MCCOLLISTER.
- 9:15 am Advancing the Quantification of Bone Surface Morphology and Texture through 3D Scans and 2D Images. J. RYAN-DESPRAZ, S. LÖSCH, M. MILELLA.
- 9:30 am Variation in the rotational profile of the lower limb as it relates to activity. J.S. WOLLMANN- REYNOLDS, E. STACEY, N. PETERSON, C. AL-ZAYADI, B. VIOLA, M.E. CAMERON.

- 9:45 am BREAK.
- 10:15 am Physical activity patterns and age-related bone loss in Ancient Nubia. K.E. SANDERS.
- 10:30 am An Examination of Vertebral Osteoarthritis in Victims from the Midnight Terror Cave, Belize, A.M. CHAN, M.M. BLEUZE, J.E. BRADY.
- 10:45 am (Bi)Pedal Predicaments: Osteoarthritis in the hallucal metatarsophalangeal joint. M.E. ALBEE.
- 11:00 am Habitual activity induced musculoskeletal stress markers among coastal prehistoric foragers in Yayoi Japan. A.M. ATKINS, C.J. BAE.
- 11:15 am Spatial approaches aid interpretations in Holocene Southern African Ancestral KhoeSan bioarchaeology. M.E. CAMERON.
- 11:30 am The effects of castration on the skeleton: a case study from the Linglong Lane Cemetery in Beijing, China. D. DU.

#### Session 49

## Primatology: Social Dynamics of Fertility, Bonding, and Fitness part A **Contributed Podium Presentations**

Chair: Stephanie Fox Platinum C

- 10:00 am Reproductive tactics in aging male chimpanzees. M.N. MULLER, K.H. SABBI, M. EMERY THOMPSON, D.K. ENIGK, L. HAGBERG, Z.P. MACHANDA, A. MENANTE, E. OTALI, R W WRANGHAM
- 10:15 am Patterns of Paternity in Verreaux's Sifaka (Propithecus verreauxi) at the Ankoatsifaka Research Station in Kirindy Mitea National Park, Madagascar. R.J. LEWIS, L. ABONDANO, S.M. VAN KUIJK, H. DESTAIN, T.M. EPPLEY, M. TABOADA, G.L. BUENO, D.A. RODELAS TOKUN HAGA, S.R. TECOT, A. DI FIORE.
- 10:30 am Genomic signatures of male reproductive skew in chimpanzees and bonobos (genus Pan). R.J. SEEGRABER, C.M. BRAND, T.H. WEBSTER.
- 10:45 am Friends or Frenemies: Understanding the Quality of Male Bonds Among Wild Chimpanzees. Z.P. MACHANDA, A. MENANTE, E. OTALI, M. KOBUSINGYE, M.N. MULLER, R.W. WRANGHAM, M. EMERY THOMPSON.
- 11:00 am Prestige in chimpanzees: learning through social relationships across the lifespan. R.B. REDDY, L. SAMUNI, A.A. SANDEL, I.R. CLARK, K.E. LANGERGRABER, R.N. DERBY, B.J. FINKEL, K.C. LEE, J.C. MITANI, J. NEGREY, A. SARKAR, D.P. WATTS, T. ZENG, J. HENRICH.
- 11:15 am Caught in the middle: Variation in the physical and behavioral development of male olive baboons (Papio anubis). K.A. HAWKS, C.A. MOST.
- 11:30 am Bonobo bromances, bonobo frenemies: How do sociosexual behaviors vary in malemale bonobo relationships? M.A. RODRIGUES.
- 11:45 am Age-related physiological dysregulation progresses slowly in semi-free-ranging chimpanzees. M.F. COLE, P. BARNES, J. RUKUNDO, M. EMERY THOMPSON, A.G. ROSATI.

#### **Session 50**

# Paleoanthropology: New Approaches to Old Questions

#### Contributed Podium Presentations

Chair: Calev Orr Platinum F

- 8:00 am Morphological variation of the Australopithecus afarensis maxilla. H. HANEGRAEF, F. SPOOR.
- 8:15 am Macroevolution of the hominin basicranium. G.A. RUSSO, E. KIRK, A.C. NISHIMURA, N.W. POST, C.S. MONGLE.
- New fossil discoveries from Woranso-Mille and the status of Australopithecus 8:30 am deviremeda. Y. HAILE-SELASSIE. S.M. MELILLO.
- 8:45 am Hominid Taxonomy in the Omo, Ethiopia: New fossils and new analytical approaches for isolated teeth. L.J. HLUSKO, F. GUY, M. MARTÍNEZ DE PINILLOS, M. MODESTO-MATA, I. TOWLE, M.F. BRASIL, J. BOISSERIE.
- 9:00 am Hominin postcranial remains from Drimolen Main Quarry in the Cradle of Humankind, South Africa. C.M. ORR, A.B. LEECE, J.M. MARTIN, G.T. SCHWARTZ, B.A. PATEL, M.W. TOCHERI, S. BAKER, D.S. STRAIT, A.I. HERRIES.
- 9:15 am Cute dogs bear the cost of dystocia: an analogy with the obstetrical dilemma in humans. M. HAEUSLER, K. ROSENBERG, N.D. GRUNSTRA.
- 9:30 am Renewed research in the Kibish Formation with revised chronology. C. SEYOUM, A. ASRAT, T. BEDANE.
- 9:45 am BREAK.
- 10:00 am Life and death in the Middle Paleolithic of Qafzeh, Israel through comprehensive taphonomic study of hominin remains. N. SALA, A. PANTOJA-PÉREZ, L. MARTÍN-FRANCÉS, H. MAY, I. HERSHKOVITZ.
- 10:15 am Solutions to the Nomenclatural Muddle of the Middle Pleistocene, D.N. REED.
- 10:30 am Using evolutionary quantitative genetics in taxonomy: a case study from the African Middle Pleistocene. L. SCHROEDER, K. KOMZA.
- 10:45 am Total number of neurons is not necessarily a better measure of cognitive ability than overall brain size. P. SCHOENEMANN.
- 11:00 am Manubriosternal variation in anthropoid primates: implications for thorax form in fossil taxa. E.R. MIDDLETON, M.T. ALWELL, C.V. WARD.
- 11:15 am The Turkana boy turns 40: a new reconstruction of the pelvis of KNM-WT 15000 and its projected adult morphology. N. TORRES-TAMAYO, C. FORNAI, N.M. WEBB, M. WOODERT, V. KRENN, M. KISTLER, M. HAEUSLER.
- 11:30 am How to identify early Homo? Geometric morphometric approach based on multiple craniodental structures. C. ZANOLLI, T.W. DAVIES, O. KULLMER, F. SCHRENK, M.M. SKINNER.
- 11:45 am MoTChA: A point-cloud registration and measurement package for automatically collecting morphological data. Y. SEKHAVATI, J. MUSKOPF, A. SEKHAVATI.

### **Session 51**

### Human Biology: Faces, Foraging and Fetal Positioning

#### Contributed Podium Presentations

Chair: Cristina Gildee

# Platinum F-G

- 8:00 am Food Insecurity in Childhood as an Indicator of Sleep Health Later in Life. M.C. KOPELS, E.C. SHATTUCK, J. ROCHA, C.J. ROULETTE, D.C. BENYSHEK.
- 8:15 am A transdisciplinary, bioculturally sensitive and sustainable approach towards inclusive prosthetic design. M.A. BERTHAUME, G. RANSON.
- 8:30 am Lower limb prosthetic use in northern Sri Lanka: a biomechanical and prosthetic wear study. G. RANSON, M.A. BERTHAUME.
- 8:45 am Differences in regional bone mineral density with age in NHANES. C. GILDEE, P.A. KRAMER.
- 9:00 am Cognitive-locomotor interactions during human foraging, D.H. ASLAN, M. SAYRE, M.H. LAI, H. PONTZER, G.E. ALEXANDER, B. WOOD, D.A. RAICHLEN.
- 9:15 am Effects of aging on excess post-exercise oxygen consumption. I.J. WALLACE, S. KLEPACZ, J. MARTINEZ, T. TORRES THOMPSON, T.S. KRAFT, C.M. MERMIER, F.T. AMORIM.
- 9:30 am Does Endocranial Shape Change Occur After the Majority of Brain Growth is Complete? Y.S. SHEKEL, S.E. YAWITZ, A.H. SORENSON, C. PHELY-BOBIN, A. PILKANE, A.M. VALLE, P. NG, R.S. JABBOUR, G.D. RICHARDS.
- 9:45 am BREAK.
- 10:00 am Endocranial Shape Variation and its Impact on Neural, Dural, and Cranial Base Structure. S.E. YAWITZ, A.H. SORENSON, Y.S. SHEKEL, C. PHELY-BOBIN, R.S. JABBOUR, G.D. RICHARDS.
- 10:15 am FACEFIT: Craniofacial morphology as a determinant of the fitted filtration efficiency of disposable respiratory protection. J. GRIFFIN, M. MCINROE, E.R. PENNINGTON, W. STEINHARDT, H. CHEN, J. SAMET, S. PRINCE.
- 10:30 am The variation of maternal and fetal energy requirements and their role in birth timing. C. CORDEY, N.M. WEBB, M. HAEUSLER.
- 10:45 am No support for the V.A.G.G.I.N.A. hypothesis as an alternate explanation for pelvic sex differences. D. HUDSON, S. CHEN, G.A. RUSSO, S. BEIYI, H. CHUAN.
- 11:00 am Is human birth really comparatively difficult? A review of dystocia among placental mammals, N.D. GRUNSTRA.
- 11:15 am Do biomarkers associated with placentation hold potential for early risk detectionof postpartum hemorrhage? J.N. RUTHERFORD, E. ABRAMS, E. ERICKSON, H. RUVALCABA, L. WOODS, S. LAPSLEY, M. KOENIG, WITHDRAWN
- 11:30 am Latent group biological variation in inflammation related biomarker trajectories over 30 days. M.L. COX, M. WILSON, K. LEE, M. ROGERS-LAVANNE, K. CLANCY.

### **Session 52**

## Symposium: Endurance locomotion in humans: Diverse perspectives on long distance advantages

#### **Invited Poster Symposium**

Chairs: Cara M. Wall-Scheffler, Martin Hora, Michal Struška Platinum H-I

The purpose of this symposium is to bring together people who study human's unique ability to maintain long distance, endurance locomotion from a variety of perspectives, including energetics, thermoregulation, hydration, aging, and landscape familiarity. We will consider long distance locomotion besides running, including walking, load carrying, and locomotion over variable terrain. Furthermore we will examine and discuss activity accomplished by a diverse range of people, including males and females in reproductive age, post-menopausal females and older males. Most importantly, questions of how endurance capabilities could have evolved will be discussed: are humans 'over-evolved' for our endurance abilities? Was there a specific selection pressure or did endurance abilities arise as the result of other changes-developmental changes or selection for other activities? How is it that people can maintain their mental abilities, including rapid assessment of sensory data while pushing their bodies to extreme fatigue during locomotion? Symposium participants come from a range of biological disciplines, including evolutionary biology, anthropology and exercise physiology. Our participants also use a variety of methodologies and approaches, including experiments, mathematical modeling, large public sports datasets, and theoretical approaches to elucidate evolutionary understanding of endurance capabilities.

#### Discussant: David Carrier.

- 1 Unveiling the human form: A multisegment model for estimating body surface area and volume. P.A. JAREŠOVÁ, M. HORA, T.L. KORDSMEYER, J. STERN, L. PENKE, V. SLÁDEK.
- Role of body proportions on thermoregulation during endurance locomotion in the heat. 2 M. HORA, M. STRUŠKA, P.A. JAREŠOVÁ, C. WALL-SCHEFFLER, V. SLÁDEK.
- Exploring the limits of energy expenditure and water turnover in modern, free-range 3 humans. B. RUBY.
- The effect of ambient temperature on ultramarathon performance in males and females. 4 M. STRUŠKA, M. HORA, C. WALL-SCHEFFLER, V. SLÁDEK.
- 5 Women carry loads longer: Morphological adaptations to long distance loaded transport. C.M. WALL-SCHEFFLER, M.J. MYERS.
- 6 The 9+-month Marathon: How pregnancy may have shaped human endurance capacities. C. OCOBOCK, B. NATTERSON-HOROWITZ.
- 7 Ultra-endurance sport as a model to study physiological and cognitive energetic tradeoffs. D.P. LONGMAN, J.C. WELLS, J.T. STOCK.
- 8 Human fatigue resistance: from limitation to regulation. F. MARINO.
- 9 Longevity is a special kind of endurance. M.J. MYERS, C.M. WALL-SCHEFFLER.

# SATURDAY, MARCH 23, AFTERNOON SESSIONS

#### **Session 53**

## HBA/AABA Joint Symposium: Terminology, Theory, and Method for the Study of Inequality of Health: Breakthroughs or Barriers?

#### Invited Podium Symposium

Chair: Heather J.H. Edgar, Lexi O'Donnell Platinum D

Biological anthropologists in many subfields are interested in the causes, manifestations, and consequences of inequality. Human biologists and bioarchaeologists have long focused on these issues; interest among forensic anthropologists is more recent but quickly growing. Terms have proliferated to describe the theoretical and practical components of research in the area, such as allostatic load, embodiment, frailty, morbidity, social determinants of health, stress, structural violence, structural vulnerability, and weathering. Some of these terms derive from allied fields including public health and sociology. Many are related to the Developmental Origins of Health and Disease body of theory. Are these terms just different ways of saying the same thing, each native to their own field, or do they describe components of inequality that are different in important ways? If they are different, are the distinctions related simply to the indicators used to measure the effects of each? Or, are the differences are related to the timescale involved, such as within a lifetime, intergenerational, or across centuries?

This symposium will bring together researchers from across the areas of biological anthropology that investigate inequality and health through these various theoretical and practical lenses. Participants will address questions about the meaning of the terminology they use and the ways they implement their perspectives in their specific research. The goal is to facilitate communication among subfields and perhaps, build consensus.

- 2:30 pm Stress by any other name? Terminology, Theory, and Method for the Study of Inequality of Health. H.J. EDGAR, E. MOES, L. O'DONNELL, G.G. HANNIGAN.
- Colonization and inequities in child development: What can Biological 2:45 pm Anthropologists contribute, and how should we do it? P.A. NEPOMNASCHY, M. MACGREGOR, A. ROWLANDS, K.G. SALVANTE.
- Buried in iron shackles: A case study in how modern bioarchaeological method, 3:00 pm theory, and terminology help us tell stories of the past. B. KYLE, L.J. REITSEMA, M. QUADIR, A. MITTNIK, D. REICH, S. VASSALLO.
- Frailty or resilience? Hazards-based and cumulative phenotype approaches to 3:15 pm discerning signals of health inequality in human skeletal data. S.N. DEWITTE, S.L. YAUSSY, K.E. MARKLEIN, D.E. CREWS.
- Inequality Emerging: Habitual Activity in Relation to Diet and Mortuary Practices at 3:30 pm Zvejnieki, Lake Burtnieks, Latvia. D.H. TEMPLE, G. ZARINA, I. ZAGORSKA.
- 3:45 pm Living and Dying in Modern New Mexico: Structural Vulnerability and the Embodiment of Social Inequity in a US Forensic CT Sample. A.P. WINBURN, K.A. MILLER WOLF, M.G. MARTEN, A. SCHWARTZ, E. ROMDENNE, K. KIRK, T. PERRITT.

- 4:00 pm Why terminology matters: Exploring structural inequities in forensic recovery time. E.J. ADAMS, J.R. GOLIATH.
- Short and healthy, tall and frail: disentangling height and health in skeletal samples. 4:15 pm C.B. MCPHERSON, L. O'DONNELL, E.C. HILL, H.J. EDGAR.
- 4:30 pm What's stress got to do with it? Quantifying measures of physiological stress and their relationship to inequality in a contemporary pediatric decedent sample. L. O'DONNELL, E. HILL, J. PEREZ.
- Discussant: Alex Brewis. 4:45 pm 5:00 pm Discussant: Haagen Klaus.

### Session 54

### Functional Anatomy: Nonhuman primate postcranial functional anatomy Contributed Podium Presentations

Chair: Catalina Villamil Platinum A-B

- Skeletal Health and Pathology in Cayo Santiago Rhesus Macaques A 2:30 pm Contextualization of Individual, Familial and Population History. G.N. FRANCIS, Q. WANG.
- 2:45 pm Effects of age on trabecular bone morphology in the rhesus macague upper limb. A. RAGHUNATH, S. KUO, L.J. BRENT, N. SNYDER-MACKLER, S.A. WILLIAMS, J.P. HIGHAM, L.J. DEMARS, M.I. MARTINEZ, S.E. BAUMAN, C. RESEARCH UNIT, T.M. RYAN, S.C. ANTÓN, C.M. TURCOTTE.
- 3:00 pm Vertical jumping agility as a key measure of performance in strepsirrhine primates. M. BRADLEY-CRONKWRIGHT, G. YAPUNCICH, G. BOULINGUEZ-AMBROISE, N. DUNHAM. A. ZEININGER, D. SCHMITT, J.W. YOUNG, D.M. BOYER.
- Assessing Perinatal Limb Bone Strength in Leaping and Quadrupedal Primates. A. 3:15 pm MOSSOR, J. BUSKEN, G. BOULINGUEZ-AMBROISE, T. SMITH, J. YOUNG.
- Investigating size effects on heritability: a case study using the primate vertebral 3:30 pm column. C.I. VILLAMIL, J.J. NEGRÓN, E.R. MIDDLETON.
- Later pubic symphyseal fusion in female primates and the accuracy of virtual 3:45 pm reconstructions of the adult primate pelvis. T.C. RAE, N. TORRES-TAMAYO, E. HIRASAKI, L.T. BUCK, L. BETTI.
- 4:00 pm Cephalopelvic constraint in six monkey genera. N.M. LAUDICINA, M. CARTMILL.

### **Session 55**

### Primatology: Social Dynamics of Fertility, Bonding, and Fitness part B Contributed Podium Presentations

Chair: Megan Petersdorf Platinum C

- 2:30 pm Comparative Reproductive Patterns and Seasonality Between Subspecies of Captive Rhesus Macagues (Macaca mulatta). E.N. HART, H. KUBISCH, K.P. FALKENSTEIN, R.S. MEINDL.
- 2:45 pm Imprecise female fertility signals facilitate extended mating effort in the Kinda baboon. M. PETERSDORF, A.H. WEYHER, M. HEISTERMANN, A. GOVAERTS, J.L. GUNSON, S. SIAME, J.P. HIGHAM.
- 3:00 pm Reproductive aging patterns in wild female geladas. J.A. FEDER, I.A. SCHNEIDER-CREASE, J.C. BEEHNER, T.J. BERGMAN, N. SNYDER-MACKLER, A. LU.
- 3:15 pm Pelvic shape development and (no) menopause: a case of Japanese macaques. N. MORIMOTO.
- 3:30 pm Socially integrated female chimpanzees have lower offspring mortality. J.T. FELDBLUM, K.K. WALKER, M.A. STANTON, E.V. LONSDORF, C.M. MURRAY, A.E. PUSEY.
- 3:45 pm Social tolerance as a component of relationship quality among wild female chimpanzees, Pan troglodytes schweinfurthii. S.A. FOX, M.N. MULLER, N. CAMARGO PEÑA, N. THOMPSON GONZÁLEZ, Z. MACHANDA, E. OTALI, R. WRANGHAM, M. EMERY THOMPSON.
- 4:00 pm Systematic review of same-sex sexual behavior in non-human primates. E. CUNNINGHAM, R. VOYT, R. REDDY, A. SANDEL, H. CHAPMAN TRIPP, M.E. BENÍTEZ.

### **Session 56**

### Bioarchaeology: Ethical Community Engagement and Marginalization Contributed Podium Presentations

Chair: Dario Piombino-Mascali Platinum E

- 2:30 pm Trends in Bioarchaeology: Marginalization studies from 1970 to 2023. C.N. ROSE, D.M. ADAMS.
- 2:45 pm The Woodland Cemetery and African American Burial Ground Historic Preservation Project: Researching the Complicated History of Clemson University's On-Campus Burial Ground, A. BAILEY.
- 3:00 pm Bioarchaeology in the time of climate change: a case study from Turkana, northern Kenya, E.P. WILSON, C. CHEPKORIR, S. GOLDSTEIN, J. EKUSI, C. KIRWA, L.C. MYERS, E. NDIEMA, A. JANZEN, K. GRILLO, E. HILDEBRAND, E. SAWCHUK.

- 3:15 pm Running out of Space: Historic Mass Graves, Ossuaries, and Exhumations in Contemporary Urban San Juan, Puerto Rico. J.L. MARRERO-ROSADO, S.C. AGARWAL.
- 3:30 pm "Eight mummies, eight stories". Imaging the Radziwiłł family and their fellow citizens of Kedainiai, Lithuania (17th-18th centuries AD). D. PIOMBINO-MASCALI, R. GIRČIUS, A. TAMOŠIŪNAS, R. JANKAUSKAS, R. BRINDZAITĖ, J. KOZAKAITĖ.
- The Maya are a People of Movement: An Isotopic Assessment at Chactemal (Santa 3:45 pm Rita Corozal), Northern Belize. A.J. LOCKER, L.J. BAKER, A. PEDERSON VALLEJOS, R. RODRIGUEZ, M. BADILLO, L.C. SPRINGS, T.A. TUNG, D.Z. CHASE, A.F. CHASE, A.S. CHASE, A.W. REYNOLDS, R.W. SMITH.

### **Session 57**

### **Dental Anthropology: Insights from Dentition**

### Contributed Podium Presentations

Chair: Kate McGrath Platinum F-G

- 2:30 pm Beyond Enamel: Stable Isotope Values and Radiocarbon Dating of Dental Calculus from a Medieval Icelandic Sample. A.J. PASTORE, G.R. SCOTT, S. POULSON, G. ZOEGA.
- Tooth wear has a greater effect on molar pulp volume reduction than aging in 2:45 pm Macaca fascicularis. K.R. SELIG, P.E. MORSE, J.D. PAMPUSH, R.F. KAY.
- Exploring pitting enamel defects as a potential new tool for phylogenetic 3:00 pm connections in fossil hominins. I. TOWLE. M. MARTÍNEZ DE PINILLOS. M. MODESTO. MATA, M.C. O'HARA, F. GUY, J. BOISSERIE, L.J. HLUSKO.
- Comparing dental stress markers in Sima de los Huesos hominins and classic 3:15 pm Neandertals. K. MCGRATH, L. MARTÍN-FRANCÉS, M. LOZANO, A. FRANCÈS-ABELLÁN, L. LIMMER, A. LOCKEY, S. EL ZAATARI, J. ARSUAGA, M. MARTINÓN-TORRES.
- Integrating the evolution of placental birth with evidence from neonatal lines in 3:30 pm mammal teeth. T. LEPORE. E. DENG. C. LOWERY.
- 3:45 pm Monitoring the early Holocene Nile Valley biological diversity: a comparison of different 3D geometric morphometrics approaches on the enamel-dentine junction. N. MARTIN, A. THIBEAULT, L. VARADZINOVÁ, S.H. AMBROSE, D. ANTOINE, P. BRUKNER HAVELKOVÁ, M. HONEGGER, J.D. IRISH, P. OSYPIŃSKI, F. SANTOS, D. USAI, N. VANDERESSE, L. VARADZIN, R.J. WHITING, C. ZANOLLI, P. VELEMÍNSKÝ, I. CREVECOEUR.
- 4:00 pm The deciduous hominin molars from the Shungura and Usno Formations (Omo Valley, Ethiopia). M. MARTÍNEZ DE PINILLOS, L.J. HLUSKO, F. GUY, I. TOWLE, M. MODESTO-MATA, J. BOISSERIE.
- An evaluation of the patterning cascade model in the human lower diphyodont 4:15 pm dentition. D.E. KENESSEY, C.M. STOJANOWSKI, K.S. PAUL.
- Molar form in grasshoppers correlates with diet, suggesting convergence between 4:30 pm molar form and dietary physical properties in grasshoppers and mammals. M.J. MORLEY, M.A. BERTHAUME.

### **Session 58**

### Symposium: 60 years of studying human evolution: The ongoing contribution of Yoel Rak to Paleoanthropology

### **Invited Poster Symposium**

Chairs: Alon Barash, Ella Been Platinum H-I

In 1961, a 17-year-old Yoel Rak embarked on a hitchhiking journey across Israel, leading him to the Amud cave meeting Hisashi Suzuki, and igniting a passion for studying human fossils that has spanned over six decades. The purpose of this symposium is to honor Yoel's enduring contributions to paleoanthropology and the immense inspiration he has provided to others. As an anatomy teacher for 40 years, Yoel Rak has educated hundreds of medical students with a hands-on approach, emphasizing cadaver dissection—a philosophy still valued by Israeli physicians. His close and intimate knowledge of the human body is a key contributor to understating hominin fossils. Field experience is another pillar of Yoel's expertise. He began excavating in 'Ubeidiya and explored nearly all of Israel's prehistoric sites, including Kebara and Amud. His extensive excavations in Ethiopia's Hadar region led to the groundbreaking discovery of the first Australopithecus afarensis skull. Above all, his unparalleled skill in deciphering hominin bones has been invaluable to our understanding of key stages in human evolution. From groundbreaking work on the "Australopithecine face" to revealing the "Skull of Australopithecus afarensis," and from studying "Lucy's pelvic anatomy: its role in bipedal gait" to the pioneering examination of the "Kebara 2 Neanderthal pelvis: first look at a complete inlet," Yoel Rak's numerous research papers, and the ripples they created —whether supporting or challenging his original research—underscore his significant role in shaping the narrative of human evolution. Beyond being a dedicated educator and exceptional scholar, Yoel Rak is a cherished friend, an outstanding colleague, an excellent cook, and a true source of inspiration to us all.

- The evolution of vertebral shape throughout human evolution. N. ARGAMAN, E. BEEN, A. 1 BARASH.
- Hip stabilization in an australopithecine hip: the influence of shape on muscle activation. 2 P.A. KRAMER, A.D. SYLVESTER.
- Reconstructing the evolutionary processes that produced cranial differences between 3 Neandertals and humans. T.D. WEAVER, S. FREIDLINE, P. GUNZ.
- 4 Neanderthal pelvis: implication of different reconstructions. R. RMOUTILOVA, M. HAEUSLER.
- 5 Reconstruction of Amud 7 baby Neandertal, and its implication for Neandertal evolution. E. BEEN, Y. RAK, A. BARASH.
- Face-to-face encounter with the Taung child: facial ontogeny in southern African early 6 hominins. B.A. WOOD, J. BRAGA.
- 7 Taking a broad view of the evolution of the human pelvis. K.R. ROSENBERG.
- 8 The role of the Eastern Mediterranean in human evolution: Recent results from Greece. K. HARVATI.

- Skeletons in the Closet: reanalysis of mammalian fauna from the early Pleistocene 9 site of 'Ubeidiya, Israel, and the implications for early Homo dispersals from Africa. M. BELMAKER.
- 10 Identifying Denisovan Fossils using ancient DNA Methylation. N. MISHOL, D. GOKHMAN, L. CARMEL.
- 11 Yoel Rak: Architect of Understanding. M. WOLPOFF, R. CASPARI.

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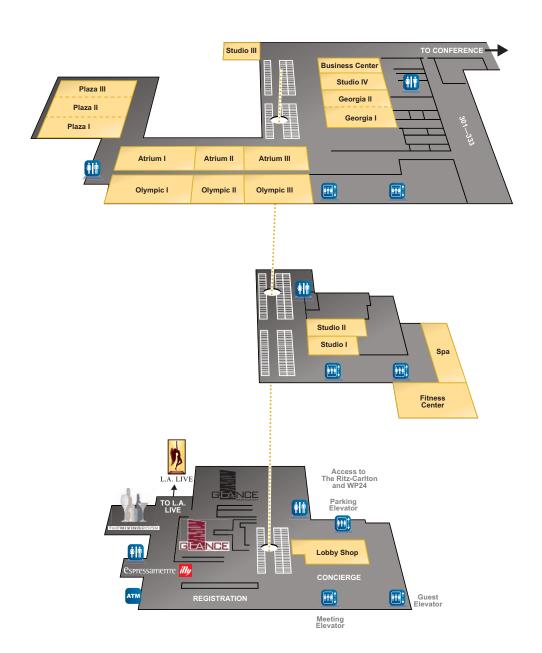
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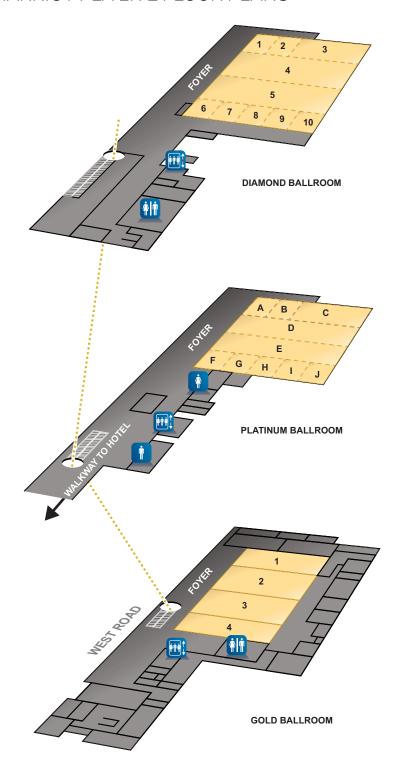
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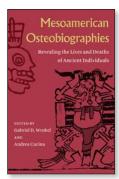
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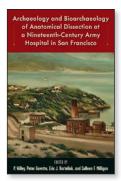


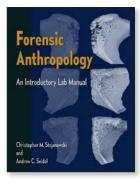
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