

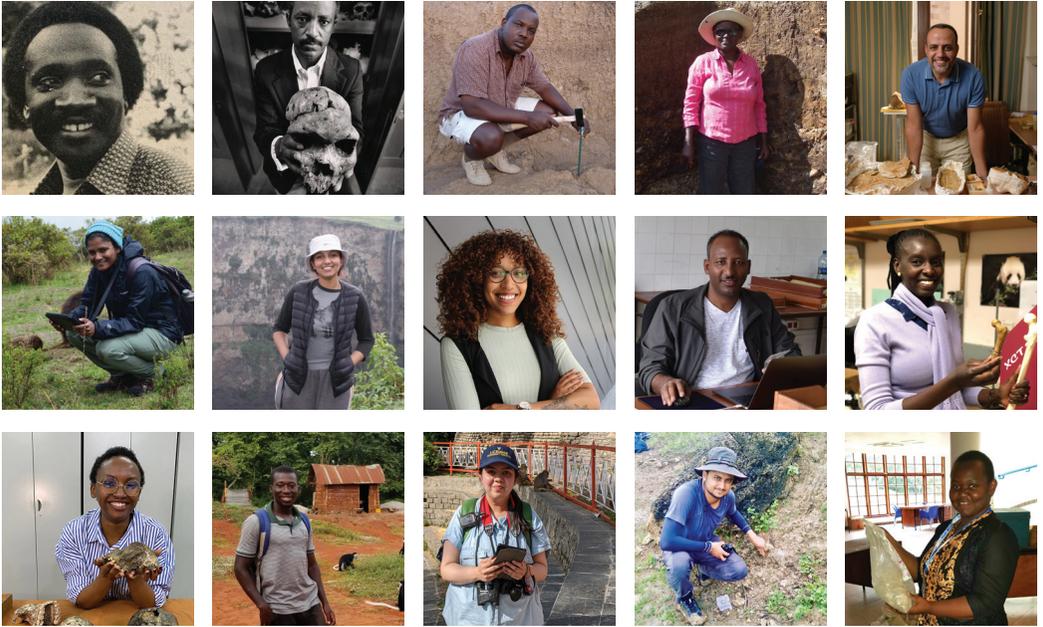


**92<sup>nd</sup> Annual Meeting**  
of the American Association of  
Biological Anthropologists  
**Online**  
**Reno, Nevada**

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Online: April 3-5, 2023  
Reno: April 19-22, 2023

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Middle: Sharmi Sen, Dagmawit Getahun, Lauren Schroeder, Chalachew Seyoum, Habiba Chirchir  
Bottom: Winfred Mbogo, Bright Yeboah, Bidisha Chakraborty, Deepak Choudhary, Mariam Bundala

PROGRAM OF THE  
**92<sup>ND</sup> ANNUAL MEETING  
OF THE AMERICAN  
ASSOCIATION OF BIOLOGICAL  
ANTHROPOLOGISTS**  
APRIL 3-5 & APRIL 19-22, 2023

---

To be held at  
**Online and in Reno, Nevada**

**AABA Scientific Program Committee**

Kristi L. Lewton, Chair

Donovan Adams	Elaine Guevara	Kathryn Reusch
Francisca Alves-Cardoso	Lauren Halenar-Price	Terry Ritzman
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Karen Baab	Amber Heard-Booth	Amy Schreier
Shara Bailey	Megan Holmes	Maja Šešelj
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Nicole Torres Tamayo

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Kerryn Warren

Chi Zhang

## **Program Assistant**

Amber Jaeger

## **Reno Advance Team**

Jonathan Bethard

Leslea J. Hlusko

Steven R. Leigh

Kristi L. Lewton

Stephanie Meredith

Marin Pilloud

Richard Scott

## **Local Arrangements Committee**

Marin Pilloud

Richard Scott

## **2022-2023**

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**Leslea J. Hlusko**

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Membership

**Julienne Rutherford**

History and Honors

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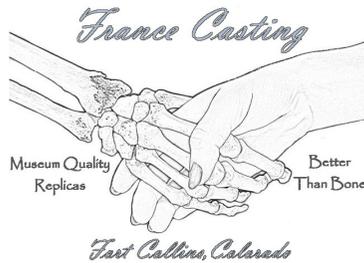
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# MESSAGE FROM THE AABA PRESIDENT

Welcome to the 92<sup>nd</sup> Annual Meeting of the American Association of Biological Anthropologists (AABA) in Reno, Nevada, our second meeting as the AABA. We are appreciative of the opportunity to meet in-person for the second straight year, and look forward to a productive and engaging conference. We're also able to utilize resources that we've developed over the last few years to offer virtual conference components, including a virtual conference (April 3-5). In addition, like last year, we'll be live-casting our invited symposia, business meeting, and Presidential Panel.

We continue to see negative effects of the pandemic on our Association, and the entire Executive Committee is working hard to ameliorate these. Our meetings in Denver and Reno have been a bit smaller than previous meetings, which places some stresses on the Association budget. With meetings in Los Angeles next year we hope to rebound in terms of our conference attendance, especially with such an exciting and engaging venue.

Beyond the Association, it seems that students and our junior colleagues have been affected by the pandemic in ways that, perhaps, our more experienced colleagues have avoided. In light of this, I would like to suggest that at our conferences this year, we seek opportunities to support our students, junior colleagues, and those in non-traditional academic or nonacademic roles who may have been more vulnerable to the pandemic. For example, you could make a specific effort to connect with them over their research in addition to attending presentations. The Association has historically been very supportive of our students and junior colleagues, particularly through Pollitzer Travel Grants and Cobb Research Awards. In addition, we can look for ways to provide collegial interactions and mentorship support at our conferences (and afterwards) to all of our members.

We have even more direct, easy, and engaging ways to support our students. For example, our Undergraduate Research Symposium (scheduled for Wednesday afternoon, April 19, and sponsored by our Committee on Diversity) offers ways to meet promising students and learn about their research and engage them in the field. The auction, which supports Pollitzer Travel Grants, will be conducted under the dedicated guidance of Dr. Shara Bailey and Madelynne Dudas. Our annual student paper awards program is continuing and we invite participation during the student awards ceremony at our closing reception. Colleagues seeking to support students at higher levels might consult with Student Programs Chair, Dr. Chelsey Juarez or incoming Executive Committee Student Liaison, Elise Adams. Those interested in supporting junior professionals, particularly through the Cobb Grant Program, should contact Professional Development Chair Dr. Lauren Schroeder or new Executive Committee Early Career Liaison Dr. Justin Lund.



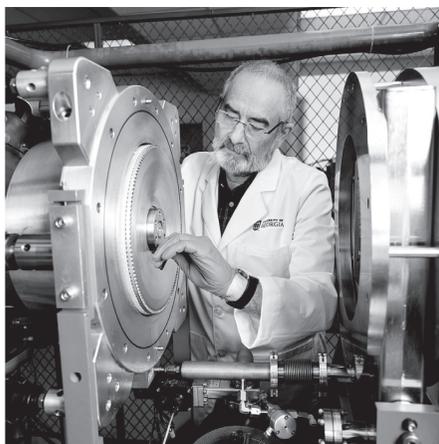
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# MESSAGE FROM THE AABA PRESIDENT

As always, we express our 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 our Program Committee, which has undertaken new tasks over the last several conferences. We thank our Local Arrangements Committee, Drs. Marin Pilloud and Richard Scott, along with our Reno Advance Team (Jonathan Bethard, Kristi Lewton, Stephanie Meredith, Lori Strong, and UNR graduate students, Ashley Baeza, Reecie Dern, Dori Kenessey, and Emily Smith) for their help. I also want to thank the AABA Executive Committee over the last two years for everything they have done. Their work on behalf of our members and association has been remarkable, involving considerable efforts throughout the year.

An fundamentally important element of our conference is to recognize the truly stellar achievements of our colleagues in several areas. Our most prestigious research award, the Charles R. Darwin Lifetime Achievement Award, has been conferred to Dr. John Fleagle (Stony Brook University). It would be hard to imagine the arc of our discipline without his many contributions, ranging from primate growth and development to primate behavior to nonhuman primate and hominin paleoanthropology. His advanced textbook set standards of research and teaching that have now enlightened generations of scholars. Dr. Andrea Taylor (Touro University) is this year's Gabriel W. Lasker Service Award based on her decades-long commitment to the Association, most recently including chairing our Harassment Committee for Awareness, Response and Equity (HCARE). Dr. Taylor currently serves as co-editor of the *Journal of Human Evolution*, a critical resource for our field. Dr. Cara Ocobock (University of Notre Dame) is this year's recipient of the AABA and Leakey Foundation Communication and Outreach Award in honor of Camilla M. Smith. Dr. Ocobock makes myriad aspects of our discipline accessible, relevant, and interesting. Her representations of our ideas and research have wide and lasting benefits. Please join me in congratulating these accomplished colleagues, with their awards presented at our annual business meeting.

Our Friday evening business meeting will include an important opportunity for member input. Specifically, along with awards presentations and reports, we will present a request for a revision of our Constitution and By-Laws to change directives for annual conference Local Arrangement Committees (an ad hoc committee, with numerous responsibilities specified by the Constitution and By-Laws). The committee's roles have changed in the last few years, so stipulations regarding the committee are obsolete. Regular members are encouraged to attend the meeting in order to provide perspectives on the proposed changes. If approved, the changes will be presented for finalization at the 2024 conference in Los Angeles.

# MESSAGE FROM THE AABA PRESIDENT

Beyond our scientific sessions, workshops, and other events, we'll be looking forward to special events that address critical issues for our discipline. First, we will be presenting a Presidential Panel on Community Engagement (co-sponsored by the Committee on Diversity and the Committee on Community Engagement). The Saturday panel will consider how we might develop stronger and more positive and impactful relations with communities. This is important across our many research specialties, so the vast majority of our colleagues should benefit from this discussion. Second, we will be hosting a Forum and Listening Session on Disability (online and in Reno), organized by Early Career Liaison, Dr. Katherine Kinkopf. This session will seek interaction around disability and help define steps our Association will take to promote full and open participation by all in our field. We hope to use information from this session to help future efforts, possibly including a Presidential Panel during our 2024 conference. Finally, we'll be hosting a Forum and Listening Session with our AABA Task Force on the Ethical Study of Human Materials, with co-chairs Drs. Ben Auerbach and Fatimah Jackson.

Vice President and Program Chair Kristi Lewton's welcome message gives an overview of the conference that she and the Program Committee have composed. As usual, the program offers a rich array of sessions, events, and workshops that will help members advance their research, teaching, and service.

We will be seeing some changes on this year's AABA Executive Committee. President-Elect, Dr. Leslea Hlusko, will become President at the conclusion of our annual business meeting, while I move to the role of Past President. We thank outgoing Treasurer, Dr. Graciela Cabana, for her service to the Association over the last two years. We look forward to working with incoming Treasurer, Dr. Jonathan Bethard. We also thank Yearbook of Biological Anthropology Editor, Dr. Lyle Konigsberg, for guiding this important journal over the last four years. Dr. Cabana will step into co-editorship of the Yearbook, along with Dr. Sheela Athreya. Other changes on our Executive Committee include outgoing Early Career Liaison to the Executive Committee, Dr. Katherine Kinkopf, and Student Liaison, Dori Kenessey. We thank them for their work over the last year. We'll be joined by Dr. Justin Lund in the Early Career Liaison role and Elise Adams as Student Liaison role, and welcome them to these important positions.

We will continue to be vigilant at this year's conference regarding COVID-19. Attendees should be vaccinated and wear masks during both podium and poster sessions. We ask that attendees be especially mindful of any updates or changes to conference policies and precautions. Furthermore, we ask that each attendee accept personal responsibility for protecting others, even if it means minor inconveniences such as masking or foregoing a handshake.

# MESSAGE FROM THE AABA PRESIDENT

The AABA remains committed to recognizing and ending harassment in our field, an especially important safety issue as we return to 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, including statements on ethics and sexual and other harassment. I remind everyone that an agreement to abide by the Code of Conduct was signed by everyone at the time of conference registration. We also maintain several resources to help address these issues:

- If you find yourself in a dangerous situation, call 911.
- You can report an incident through the confidential NAVEX website,, 24/7
- Our business support team also has a staffed e-mail address: [codeofconduct@burkinc.com](mailto: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.

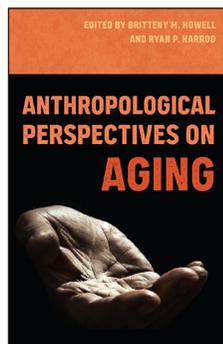
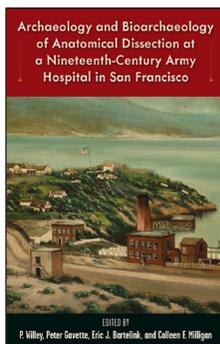
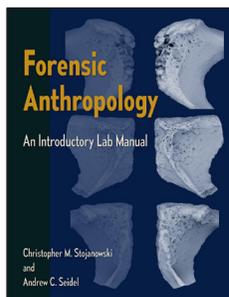
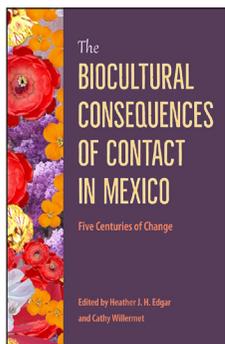
Reports of harassment may be subjected to review by the AABA Harassment Committee for Awareness, Response, and Equity (HCARE).

Thanks for all that you do to help make our annual conferences successful. It has been a pleasure and honor to serve as President of our remarkable association over the last two years. I have appreciated the role, and look forward to benefiting from the wisdom, experience, and energy of incoming President, Dr. Leslea Hlusko. We're looking forward to a great set of meetings, with productive and collegial scholarly interactions, and hopefully, fun with old and new friends. I hope that everyone has a great conference!

**Steven R. Leigh**

President

American Association of Biological Anthropologists



VISIT OUR BOOTH  
OR [UPRESS.UFL.EDU/AABA23](http://UPRESS.UFL.EDU/AABA23) AND USE CODE **AABA23**

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# MESSAGE FROM THE VP & PROGRAM CHAIR

## **Welcome to Reno!**

It is my great pleasure to welcome you to the 2023 meeting of the American Association of Biological Anthropologists. This year's meeting is the 92<sup>nd</sup> gathering of our community. Like last year, we will convene in two venues: online only from April 3-5 and in-person and online in Reno, Nevada from April 19-22. However you participate, we hope you find the conference vibrant and intellectually stimulating!

The full AABA 2023 program includes 759 peer-reviewed scientific presentations by authors from all over the world. Of these, 642 are scheduled to be presented during the in-person portion of the program in Reno. The online part of the program includes 117 abstract presentations, with 46 presenters choosing to present in both parts of the program. 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 (155 abstracts) are included in this year's program: five podium presentations will take place in Reno and be live-streamed onto the virtual platform, six poster symposia in Reno, and two symposia will be exclusive to the online program.

This Program provides an overview of the activities planned for the online and Reno portions of our annual meeting. More details are available on AABA's annual meeting website and through the virtual platform. For the in-person program, the main conference hotel is the Peppermill Reno Resort. Many thanks to our Reno Local Arrangements Committee, Marin Pilloud and Richard Scott, for helping AABA articulate with the local community. They have put together a wonderful list of Reno attractions; check it out on our website!

## **Vaccination Requirement**

Vaccination is required for attendance at AABA 2023, 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, Steve Leigh, at [bioanthpresident@gmail.com](mailto: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 required for all attendees (vaccinated or unvaccinated) at the AABA 2023 conference with a few exceptions. 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. Exceptions to the universal masking policy include:

# MESSAGE FROM THE VP & PROGRAM CHAIR

- Vaccinated speakers have the option to lower their masks while presenting if there is at least 10 feet of distance between the speaker and the audience. The front row of seating in each room will be at least 10 feet from the podium.
- Attendees can momentarily shift their mask to sip a drink while inside meeting rooms, but prolonged unmasking to eat or drink is not allowed in meeting rooms.
- Prolonged unmasking to eat or drink is allowed in the exhibit portion of the exhibit hall and other common areas of the conference venue, but NOT in the meeting rooms or poster sessions. We encourage attendees to eat and drink outdoors when possible. Fortunately, our venue has several large outdoor areas available.

Please be mindful of the variety of comfort levels with physical proximity. Ask colleagues before reaching out for a handshake or hug, and please pay attention to body language. Take a few steps back if someone looks uncomfortable.

If you have concerns about the Covid-19 safety policies or how they are being adhered to or implemented, Burk Associates Inc. (BAI), AABA's society management company, will have staff on the ground during the conference who will address safety issues and inform AABA attendees about our safety policies. We have established a call line for attendees to report COVID safety concerns during the meeting: 703-592-9946. BAI and members of AABA leadership will be available to respond to concerns raised in the conference center. They will also be regularly walking through conference spaces and available in-person.

## **The Online Program, April 3-5, 2023**

Scientific programming for the online part of the conference begins on Monday, April 3 and runs through April 5. Because attendees of the online program are located all over the world including Africa, Asia, Australia, Europe, North America, and South America, we have scheduled the scientific sessions to accommodate presenters in their own time zone. There are 18 exciting sessions planned, with two of these being invited symposia: *Archiving and sharing craniofacial data: from 1D to 3D and beyond* and *Reconstruction of activity in the past: what's going on in Latin America*. In addition to these sessions, we have also planned a *virtual Undergraduate Research Symposium* on Wednesday, April 5.

## **The Reno Program, April 19-22, 2023**

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

AABA 2023 programming in Reno begins on Wednesday, April 19 with the **Committee on Diversity Undergraduate Research Symposium** (open to everyone from 6:00-8:00pm) and the **Opening Reception** (8:00-11:00pm). On Thursday, April 20, scientific sessions

# MESSAGE FROM THE VP & PROGRAM CHAIR

scheduled for Reno begin. This portion of the program includes five invited podium symposia, six invited poster symposia, and 41 contributed sessions (20 poster and 21 podium sessions). All five of the invited podium symposia, the Business Meeting, and the President's Panel will be live-streamed on the virtual platform so that attendees can participate in these events either in-person or online.

## Overview of Session Schedule and Presenter Information

Morning podium sessions begin at 8:00am and end by 12:00pm. Afternoon podium sessions begin at 2:30pm and end by 6:00pm (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 a variety of mid-day events including workshops and committee meetings between 12:15pm and 2:15pm.

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 Tuscany A/B and live-streamed onto the virtual platform.

Contributed poster sessions and exhibitors booths will all be held in Tuscany D-F, a large open space where we can spread out for public health. Poster set-up will begin at 7:30am and should be completed by 8:00am. Posters should be taken down by 6:30pm. **Even-numbered poster presenters will stand by their posters from 4:00-5:00pm, with odd-numbered presenters attending from 5:00-6:00pm.** Invited Poster Symposia are held in smaller rooms and are assigned to a morning or afternoon time.

## Joint sessions

The joint AAAG/AABA invited podium session *Born Which Way?: Biological and Genetic Engagement in Sex, Gender, and Sexuality Research*, organized by Christopher A. Schmitt & L. Zachary DuBois, will be held on Friday morning. The HBA/AABA joint session *Human Biology: Adaptation across contexts* will be held Friday afternoon.

On Saturday at 12:30pm, we will hold the **AABA Committee on Diversity, Committee on Community Partnership, & Presidential Panel: *Community Engagement in Biological Anthropology***. This panel will have broad-reaching interest and impact across disciplinary subfields as it considers how biological anthropologists can meaningfully engage and collaborate with communities.

# MESSAGE FROM THE VP & PROGRAM CHAIR

## Workshops

This year we have planned 12 exciting and innovative workshops throughout the week (four on Wednesday, four on Thursday, three on Friday, and one on Saturday) 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 31). Our workshops provide professional development, science communication, and methodological training that should be of broad interest to our membership.

## Special Events

On Thursday morning (and online April 4<sup>th</sup> 6:00-7:30pm) we will host an **AABA Forum and Listening Session on Disability**, organized by Early Career Liaison, Dr. Katherine Kinkopf. This session will seek interaction around disability and help define steps our Association will take to promote full and open participation by all in our field. We hope to use information from this session to help future efforts and we welcome your ideas and feedback.

The **AAAS Dialogue on Science, Ethics, and Religion (DoSER)** and the **Personal Genetics Education Project (pgEd)** will host a screening and discussion of the film ***Science As Mastery: A Film about Race and Power*** on Thursday from 12:30-1:30pm.

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 Madelynne Dudas and Shara Bailey if you are interested in donating or learning more).

On Friday at 12:15 we will hold a **Forum and Listening Session with the AABA Task Force on the Ethical Study of Human Remains**, chaired by Drs. Ben Auerbach and Fatimah Jackson.

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. We will also take time to remember colleagues who passed away over the last year and 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 John Fleagle), the Gabriel W. Lasker Service Award (awarded to Andrea Taylor), and the AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith (awarded to Cara Ocobock). Please join us in celebrating this year's outstanding winners!

# MESSAGE FROM THE VP & PROGRAM CHAIR

Saturday brings our annual meeting to a close, with the **Student Awards Ceremony and Closing Reception** from 6:30-9:00pm. 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 2023 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 2023 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 69 talented, generous, and dedicated members of our Program Committee who conducted and completed symposium and abstract reviews thoughtfully, thoroughly, and expeditiously. Additional thanks go to the 27 members of the Program Committee who took on the task of organizing the contributed sessions for both the Reno and the Online programs.

I also want to express my deep gratitude to the Advance Team who met in Reno to set the schedule for the Reno program. Thank you to Jonathan Bethard, Leslea J. Hlusko, Steven R. Leigh, Stephanie Meredith, Marin Pilloud, and Richard Scott and to the extraordinary graduate student volunteers Ashley Baeza, Reecie Dern, Dori Kenessey, and Emily Smith. I also want to thank Maggie Hoffman for lending her incredible primate images to the AABA meetings swag!

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 amazing 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. I am especially grateful to Steve Leigh and Leslea Hlusko for generously sharing their knowledge of meetings planning details.

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 Reno or online!

**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 2023 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 (Tuscany Suite 3)**. 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 (Tuscany Suite 3) at the following times:

- Wednesday, April 19, 3:00 PM – 6:30 PM
- Thursday, April 20, 7:30 AM – 5:00 PM
- Friday, April 21, 7:30 AM – 5:00 PM
- Saturday, April 22, 7:30 AM – 11:00 AM

## Poster Presentations

- Poster set-up: 7:30 AM – 8:00 AM
- Posters take-down: 6:00 PM – 6:30 PM
- Even-numbered poster presenters: 4:00 PM – 5:00 PM
- Odd-numbered poster presenters: 5:00 PM – 6:00 PM

## Catering and Coffee Breaks

Coffee and/or a cash bar will be available at the following times in Tuscany D-F (the poster room and exhibition hall).

- Thursday, Friday, Saturday: 9:30 AM – 10:30 AM
- Thursday, Friday, Saturday: 4:00 PM – 6:00 PM

# GENERAL INFORMATION

## Registration

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

- Wednesday, April 19, 3:00 PM – 6:30 PM
- Thursday, April 20, 7:00 AM – 5:00 PM
- Friday, April 21, 7:30 AM – 5:00 PM
- Saturday, April 22, 7:30 AM – 1:00 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 Roma 1.

- Wednesday, April 19, 12:30 PM – 10:00 PM
- Thursday, April 20, 7:30 AM – 6:00 PM
- Friday, April 21, 7:30 AM – 6:00 PM
- Saturday, April 22, 7:30 AM – 6:00 PM

## Family and Lactation Respite Room

The Family and Lactation Respite Room will be available in Tuscany Suite 2.

- Wednesday, April 19, 1:00 PM – 10:00 PM
- Thursday, April 20, 7:00 AM – 6:00 PM
- Friday, April 21, 7:00 AM – 6:00 PM
- Saturday, April 22, 7:00 AM – 6:00 PM

## Quiet Room

Feeling anxious and need a moment to decompress? A Quiet Room, Tuscany Suite 1, with low lighting is available for attendees to rest quietly and recharge before diving back into the fray.

- Wednesday, April 19, 8:00 AM – 11:00 PM
- Thursday, April 20, 7:00 AM – 6:00 PM
- Friday, April 21, 7:00 AM – 6:00 PM
- Saturday, April 22, 7:00 AM – 6:00 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

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

American Association of Biological Anthropologists  
Los Angeles, CA • JW Marriot LA Live



Join us March 20-23, 2024, in Los Angeles, California for four days of education, networking, and professional development



# SOCIAL EVENTS/MEETING HIGHLIGHTS

All events take place at the Peppermill Reno Resort unless otherwise noted.

## Wednesday, April 19

### **AABA COD Undergraduate Research Symposium and Reception**

6:00 PM – 8:00 PM, Tuscany D-F, 4-6, 10-12

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 – 11:00 PM, Tuscany A-C**

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

## Thursday, April 20

### **AABA Forum and Listening Session on Disability, 10:00 AM – 12:00 PM, Tuscany 2**

This session will seek interaction around disability and help define steps our Association will take to promote full and open participation by all in our field.

### **AABA Silent Auction and Cash Bar, 3:00 PM – 7:00 PM, Tuscany C**

Bid on unique items at the Silent Auction benefitting our student travel awards.

## Friday, April 21

### **Forum and Listening Session with the AABA Task Force on the Ethical Study of Human Remains, 12:15 PM - 2:15 PM, Tuscany A-B**

The Task Force invites members of the association to share their experiences and concerns about seeking community partnerships in conducting research on human remains and biological samples.

### **AABA Business Meeting and Awards Presentation, 6:30 PM – 8:30 PM, Tuscany A-B**

Become involved in your association and celebrate the 2023 recipients of AABA's most prestigious awards: John Fleagle (Charles R. Darwin Lifetime Achievement Award), Andrea Taylor (Gabriel W. Lasker Service Award), and Cara Ocobock (AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith).

# BIOLOGY LETTERS

High impact research, reviews and opinion pieces in all areas of primate behaviour, genetics and human and non-human primate evolution.

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# SOCIAL EVENTS/MEETING HIGHLIGHTS

Saturday, April 22

**AABA Committee on Diversity, Committee on Community Partnership, & Presidential Panel: Community Engagement in Biological Anthropology**, 12:30 PM - 2:15 PM, Tuscany A-B

This AABA COD, CCP, and Presidential Panel provides an opportunity for panelists and attendees to discuss their experiences, challenges, and successes in community engaged research, while sharing advice and best-practices across a range of scholarly endeavors.

**AABA Student Awards and Closing Reception**, 6:30 PM – 9:00 PM, Edge

Celebrate the recipients of our student presentation and other awards, enjoy good food and a cash bar, and close the AABA 92<sup>nd</sup> Annual Meeting in grand style.

# Anthropology and social science journals from Chicago



## Journal of Anthropological Research

The *Journal of Anthropological Research* reaches out to anthropologists around the world, with special emphasis given to the detailed presentation and rigorous analysis of primary research.

[journals.uchicago.edu/JAR](http://journals.uchicago.edu/JAR)



## Current Anthropology

Established more than sixty years ago, *Current Anthropology* seeks to publish the best theoretical and empirical research across all subfields of the discipline, ranging from the origins of the human species to the interpretation of the complexities of modern life.

[journals.uchicago.edu/CA](http://journals.uchicago.edu/CA)



## HAU: Journal of Ethnographic Theory

*HAU: Journal of Ethnographic Theory* is an international journal which aims to situate ethnography as the prime heuristic of anthropology, and return it to the forefront of conceptual developments in the discipline.

[journals.uchicago.edu/HAU](http://journals.uchicago.edu/HAU)

## More journals from Chicago

American Journal of Archaeology

American Journal of Sociology

Bulletin of the American Society of Overseas Research

Economic Development and Cultural Change

International Journal of American Linguistics

Isis

Journal of Cuneiform Studies

Journal of Near Eastern Studies

Maarav

Near Eastern Archaeology

The Quarterly Review of Biology

Res: Anthropology and Aesthetics

Signs and Society

Osiris



THE UNIVERSITY OF CHICAGO PRESS JOURNALS

# WORKSHOPS AND PANELS

Note: Some workshops require pre-registration. Space may prohibit attendance if you have not pre-registered. All events take place at the Peppermill Reno Resort unless otherwise noted.

Wednesday, April 19

## **SlicerMorph: an open-source toolkit for 3D imaging and morphometric analysis**

1:00 PM – 5:00 PM

Organizers: Chi Zhang (Seattle Children's Research Institute) and A. Murat Maga (University of Washington & Seattle Children's Research Institute)

**Location:** Tuscany 9

This workshop is designed to introduce SlicerMorph, offer a 3D digital morphology workflow, and support geometric morphometrics data collection from 3D models.

*Registration required.*

## **Introduction to Ancient DNA Analysis**

1:00 PM – 5:00 PM

Organizers: Elena I. Zavala (University of California, Berkeley and San Francisco State University), Ainash Childebayeva (Max Planck Institute for Evolutionary Anthropology, and University of Kansas), Laurits Skov (University of California, Berkeley)

**Location:** Tuscany 1

This workshop will introduce both the laboratory and bioinformatic steps and considerations for ancient DNA analysis. *Registration required.*

## **Up Goer Five: Using Simple Language to Communicate Your Research to the Public**

1:00 PM – 4:00 PM

Organizers: C. Kinley Russell (The Johns Hopkins University School of Medicine) and Briana Pobiner (Smithsonian's National Museum of Natural History)

**Location:** Tuscany 8

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

## **COD-Women's Initiative (COD-WIN) Panel: Experiencing and negotiating the dynamics of power: beginning the conversation**

2:30 PM – 5:00 PM

Organizers: Anne Stone (Arizona State University) & Michelle Bezanson (Santa Clara University)

**Location:** Tuscany 7

A community conversation about experiences surrounding power dynamics, including roundtable discussion about recognizing power imbalances and strategies for addressing them. *Registration required.*

# WORKSHOPS AND PANELS

Thursday, April 20

## **Primate Interest Group Workshop**

12:15 PM – 2:15 PM

Organizers: Lydia E. O. Light (University of North Carolina at Charlotte), Michelle Rodrigues (Marquette University), and Andrew Halloran (Save the Chimps)

**Location: Tuscany 8**

The Primate Interest Group Workshop will bring together anthropological primatologists to discuss non-academic professional primatology opportunities available and the future direction of the interest group.

## **Social Network Analysis in R for Biological Anthropologists**

12:15 PM – 2:15 PM

Organizer: James Holland Jones (Stanford University)

**Location: Tuscany 1**

Social network analysis and graph visualization in R of data gathered in anthropological contexts. *Registration required.*

## **AABA Professional Development Committee Workshop: Let's Get Funded! Strategies for Writing Successful Grant Proposals**

12:15 PM – 2:15 PM

Organizer: Lauren Schroeder (AABA Professional Development Committee Chair)

**Location: Tuscany A-B**

What are the key elements for writing a winning proposal? What are the most common pitfalls? What are reviewers looking for? How do you meaningfully engage with the broader impacts of your proposed research? Join us for an insightful panel discussion and Q&A with representatives from the Wenner-Gren Foundation, National Science Foundation, and the Leakey Foundation.

## **Improv for Anthropologists: Boosting creativity, confidence, and collaboration for teachers, researchers, and public outreach through improvisational training**

6:00 PM – 8:00 PM

Organizers: Amanda L. Ellwanger (Georgia State University), Marc Kissel (Appalachian State University), and Natalia Reagan

**Location: Naples 4**

Participants will engage in a 2-hour improvisational theater workshop conducted by Reno Improv to foster creativity, confidence, and collaboration for teaching, research, and public outreach. *Registration required.*

# WORKSHOPS AND PANELS

Friday, April 21

## **Training for Equitable Peer Review in Biological Anthropology**

12:15 PM – 2:15 PM

Organizers: Trudy Turner (University of Wisconsin-Milwaukee) and Sheela Athreya (Texas A&M University)

**Location:** Tuscany 9

Understand the mechanisms of the peer review process. Presented by editors of the AJBA and the Yearbook. *Registration required.*

## **Identifying and Recording Periosteal New Bone Formation (PNBF) in Fetal-Infant Individuals**

12:15 PM – 1:45 PM

Organizer: Claire Hodson (University of Reading)

**Location:** Tuscany 1

Participants will explore, utilise, and evaluate a new recording scheme for periosteal new bone formation, developed by the workshop organiser, using osteological and radiological images. *Registration required.*

## **Leadership in a liminal space: chairing departments during times of uncertainty**

12:15 PM – 2:15 PM

Organizer: Amy Rector (Virginia Commonwealth University)

**Location:** Tuscany 3

All current, former, and future leaders of anthropology and related departments are welcome to join this conversation about responding to declining enrollments by anthropology students. *Registration required.*

Saturday, April 22

## **COD Disability workshop: Dialogues and Pathways Towards a more Accessible Biological Anthropology**

Saturday, April 22, 10:00 AM – 12:00 PM

Organizers: Katherine Kinkopf (Cal Poly Pomona) and Saige Kelmelis (University of South Dakota)

**Location:** Tuscany 2

In this solutions-oriented conversation, we will discuss what accessibility challenges exist in biological anthropology and share tools for how to best address these challenges.



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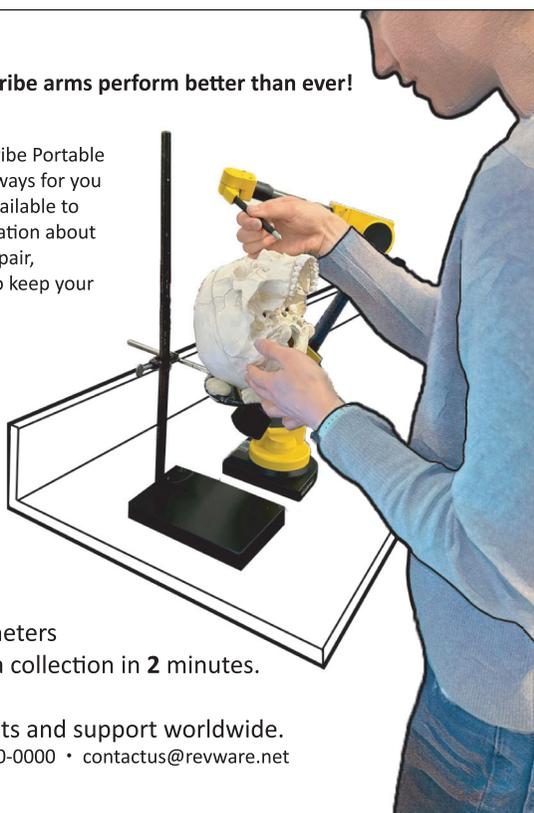
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# EVENTS

All events take place at the Peppermill Reno Resort unless otherwise noted.

## Tuesday, April 4

### AABA

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AABA Forum and Listening Session on Disability

6:00 PM – 7:30 PM

Online

## Wednesday, April 5

### AABA

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AABA COD Undergraduate Research Symposium

12:00 PM – 1:30 PM

Online

## Wednesday, April 19

### AABA

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AABA Executive Committee

8:00 AM – 5:00 PM

Naples 4

Quiet Room

8:00 AM – 11:00 PM

Tuscany Suite 1

AJBA Editorial Board Meeting

12:00 PM – 2:00 PM

Sorrento 1

Workshop: Up Goer Five: Using Simple Language to Communicate Your Research to the Public

1:00 PM – 4:00 PM

Tuscany 8

Workshop: Introduction to Ancient DNA Analysis

1:00 PM – 5:00 PM

Tuscany 1

Workshop: SlicerMorph: an open-source toolkit for 3D imaging and morphometric analysis

1:00 PM – 5:00 PM

Tuscany 9

AABA COD-Women's Initiative (COD-WIN) Panel: Experiencing and negotiating the dynamics of power: beginning the conversation

2:30 PM – 5:00 PM

Tuscany 7

AABA Registration

3:00 PM – 7:00 PM

Tuscany Registration (#1, #2)

# EVENTS

## **Speaker Ready & Press Room**

3:00 PM – 7:00 PM

Tuscany Suite 3

## **AABA Student Volunteer Training**

3:30 PM – 4:00 PM

Tuscany 8

## **AABA Student Mixer**

5:00 PM – 6:00 PM

Naples 3

## **AABA COD-WIN Happy Hour**

5:00 PM – 6:00 PM

Naples 5

## **AABA COD Undergraduate Research Symposium**

6:00 PM – 8:00 PM

Tuscany D-F, 4-6, 10-12

## **Opening Reception**

8:00 PM – 11:00 PM

Tuscany A-C

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## **HBA**

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### **Human Biology Association Poster Session**

8:00 AM – 12:00 PM

Tuscany D-F, 4-6, 10-12

### **Human Biology Association Registration**

8:00 AM – 5:00 PM

Naples Welcome Center

### **AJHB Editorial Board Meeting**

11:30 AM – 12:45 PM

Sorrento 2

### **Human Biology Association Session**

12:00 PM – 1:00 PM

Naples 5

### **Human Biology Association Podium Presentations**

1:00 PM – 6:00 PM

Naples 1, 2

### **Human Biology Association Welcome Reception**

6:00 PM – 9:00 PM

Sierra, 17th Floor, Peppermill Tower

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## **PPA**

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### **Paleopathology Association Registration**

8:00 AM – 12:00 PM

Capri Foyer

### **Paleopathology Podium Presentation 1**

8:00 AM – 6:00 PM

Capri 1, 2

### **Paleopathology Podium Presentation 2**

8:00 AM – 1:00 PM

Capri 4

### **Journal of Paleopathology Editorial Board Meeting**

6:30 PM - 8:00 PM

Executive Boardroom 1735

# EVENTS

## DAA

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### Dental Anthropology Association Workshop

1:00 PM – 5:00 PM

Sorrento 4

## Thursday, April 20

## AABA

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### AABA Past President's Breakfast

7:00 AM – 9:00 AM

Executive Boardroom 1735

### AABA Registration

7:00 AM – 5:00 PM

Tuscany Registration (#1, #2)

### Speaker Ready & Press Room

7:00 AM – 5:00 PM

Tuscany Suite 3

### Quiet Room

7:00 AM – 6:00 PM

Tuscany Suite 1

### Lactation/Family Respite Room

7:00 AM – 6:00 PM

Tuscany Suite 2

### Camp AABA Childcare

7:30 AM – 6:00 PM

Roma 1

### AABA COD IDEAS Subcommittee Meeting (by invitation)

8:00 AM – 9:00 AM

Sorrento 1

### Exhibitors/Posters

9:30 AM – 6:00 PM

Tuscany D-F, 4-6, 10-12

### Meet the Yearbook Editors-in-Chief!

10:00 AM – 12:00 PM

Tuscany D-F, 4-6, 10-12: Booth 10

### AABA Forum and Listening Session on Disability

10:00 AM – 12:00 PM

Tuscany 2

### Yearbook of Biological Anthropology Editorial Board Meeting

11:30 AM – 2:30 PM

Naples 4

### AABA COD LGBTQIAA Subcommittee Meeting

12:15 PM – 2:00 PM

Tuscany 7

### Workshop: Social Network Analysis in R for Biological Anthropologists

12:15 PM – 2:15 PM

Tuscany 1

### Workshop: Primate Interest Group

12:15 PM – 2:15 PM

Tuscany 8

# EVENTS

**AABA Professional Development Committee Workshop: Let's Get Funded! Strategies for Writing Successful Grant Proposals**

12:15 PM – 2:15 PM

Tuscany A-B

**Screening and discussion of "Science As Mastery: A Film about Race and Power"**

12:30 PM – 1:30 PM

Tuscany 9

**AABA Silent Auction**

3:00 PM – 7:00 PM

Tuscany C

**Drop in with AABA Officers**

4:00 PM – 5:00 PM

Tuscany D-F, 4-6, 10-12: Booth 3

**AABA COD IDEAS/International Mixer**

5:00 PM – 6:00 PM

Sorrento 1

**Workshop: Improv for Anthropologists: Boosting creativity, confidence, and collaboration for teachers, researchers, and public outreach through improvisational training**

6:00 PM – 8:00 PM

Naples 4

## HBA

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**Human Biology Association Registration**

8:00 AM – 5:00 PM

Naples Welcome Center

**Human Biology Association Podium Presentations**

8:00 AM – 5:00 PM

Naples 1, 2

**Human Biology Association Business Meeting**

5:00 PM – 6:00 PM

Naples 1, 2

**Human Biology Association Student Reception**

7:00 PM – 9:00 PM

Naples 3

## AAAG

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**AAAG Speed Networking**

2:30 PM – 5:00 PM

Sorrento 4

**AAAG Business Meeting**

7:00 PM – 9:00 PM

Sorrento 3

**AAAG Cocktail Reception**

8:00 PM – 10:00 PM

Sorrento 4

# EVENTS

## Other

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<b>Black in Biological Anthropology Speed Networking</b> 5:30 PM – 6:30 PM	Naples 5
<b>BA WMN Mentoring Happy Hour</b> 6:00 PM – 8:00 PM	Naples 6
<b>Journal of Human Evolution Editorial Board Meeting</b> 6:30 PM – 9:00 PM	Executive Boardroom

## Friday, April 21

## AABA

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<b>Quiet Room</b> 7:00 AM – 6:00 PM	Tuscany Suite 1
<b>Lactation/Family Respite Room</b> 7:00 AM – 6:00 PM	Tuscany Suite 2
<b>AABA Registration</b> 7:30 AM – 5:00 PM	Tuscany Registration (#1, #2)
<b>Speaker Ready &amp; Press Room</b> 7:30 AM – 5:00 PM	Tuscany Suite 3
<b>Camp AABA Childcare</b> 7:30 AM – 6:00 PM	Roma 1
<b>Exhibitors/Posters</b> 9:30 AM – 6:00 PM	Tuscany D-F, 4-6, 10-12
<b>Workshop: Identifying and Recording Periosteal New Bone Formation (PNBF) in Fetal-Infant Individuals</b> 12:15 PM – 1:45 PM	Tuscany 1
<b>AABA COD IDEAS Alumni Mixer/Speed Networking</b> 12:15 PM – 2:15 PM	Naples 6
<b>Workshop: Leadership in a liminal space: chairing departments during times of uncertainty</b> 12:15 PM – 2:15 PM	Tuscany 3
<b>Workshop: Training for Equitable Peer Review in Biological Anthropology</b> 12:15 PM – 2:15 PM	Tuscany 9

# EVENTS

**Forum and Listening Session with the AABA Task Force on the Ethical Study of Human Remains**

12:15 PM – 2:15 PM

Tuscany A-B

**Drop in with AABA Officers**

4:30 PM – 5:30 PM

Tuscany D-F, 4-6, 10-12: Booth 3

**AABA Business Meeting & Awards Presentation**

6:30 PM – 8:30 PM

Tuscany A-B

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## HBA

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**Human Biology Association Podium Presentations**

8:00 AM – 12:00 PM

Naples 1, 2

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## DAA

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**Dental Anthropology Association Speed Networking and Social Hour**

6:30 PM – 8:30 PM

TBD

**Dental Anthropology Association Business Meeting**

8:30 PM – 9:30 PM

Tuscany 9

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## Other

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**Leakey Foundation Baldwin Fellows Breakfast**

7:30 AM – 9:00 AM

Roma 2

## Saturday, April 22

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## AABA

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**AABA COD Steering Committee Meeting (by invitation)**

7:00 AM – 9:00 AM

Sorrento 2

**Quiet Room**

7:00 AM – 6:00 PM

Tuscany Suite 1

**Lactation/Family Respite Room**

7:00 AM – 6:00 PM

Tuscany Suite 2

**Speaker Ready & Press Room**

7:30 AM – 11:00 AM

Tuscany Suite 3

**AABA Registration**

7:30 AM – 1:00 PM

Tuscany Registration (#1, #2)

# EVENTS

<b>Camp AABA Childcare</b> 7:30 AM – 6:00 PM	Roma 1
<b>AABA Education Committee Meeting</b> 8:00 AM – 9:30 AM	Sorrento 1
<b>AABA COD International Committee Meeting</b> 9:00 AM – 10:00 AM	Sorrento 2
<b>Exhibitors/Posters</b> 9:30 AM – 6:00 PM	Tuscany D-F, 4-6, 10-12
<b>COD Disability workshop: Dialogues and Pathways Towards a more Accessible Biological Anthropology</b> 10:00 AM – 12:00 PM	Tuscany 2
<b>AABA COD, Committee on Community Partnership, &amp; Presidential Panel: Community Engagement in Biological Anthropology</b> 12:30 PM – 2:15 PM	Tuscany A-B
<b>AABA Student Awards Committee Meeting</b> 2:30 PM – 5:30 PM	Sorrento 2
<b>Drop in with AABA Officers</b> 4:30 PM – 5:30 PM	Tuscany D-F, 4-6, 10-12: Booth 3
<b>Student Awards &amp; Closing Reception</b> 6:30 PM – 9:00 PM	Edge

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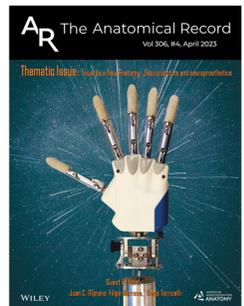
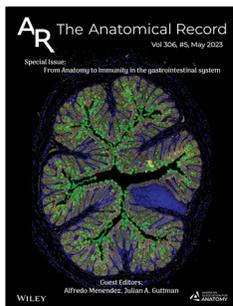
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Saturday, April 22.....	9:00 AM – 6:30 PM

## Meet the President and Executive Officers Booth 3

Thursday, April 20.....	4:00 PM – 5:00 PM
Friday, April 21.....	4:30 PM – 5:30 PM
Saturday, April 22.....	4:30 PM – 5:30 PM

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# ONLINE SCIENTIFIC PROGRAM

Session Title	Time (PDT)	#	Type
<b>Monday, April 3</b>			
<b>American Association of Biological Anthropologists</b>			
Human Biology: Growth and variation	6:00 AM – 7:30 AM	1	Online
Functional Anatomy: Bone biology and variation	10:00 AM – 11:30 AM	2	Online
Primatology: Assessing primate ecology and conservation	12:00 PM – 1:30 PM	3	Online
Bioarchaeology: Violence and societal change	2:00 PM – 3:30 PM	4	Online
Dental Anthropology: Applications in dental anthropology	4:00 PM – 5:30 PM	5	Online
Bioarchaeology: Inferring human experience using biomarkers	6:00 PM – 7:30 PM	6	Online
<b>Tuesday, April 4</b>			
<b>American Association of Biological Anthropologists</b>			
Archiving and Sharing Craniofacial data: from 1D to 3D and beyond	4:00 PM – 5:30 PM	7	Online
Forensic Anthropology: Methods and considerations	4:00 AM – 5:30 AM	8	Online
Functional Anatomy: Primate functional adaptation	6:00 AM – 7:30 AM	9	Online
Primatology: Primate behavior and sociality	10:00 AM – 11:30 AM	10	Online
Bioarchaeology: Paleopathology	12:00 PM – 1:30 PM	11	Online
Primatology: Understanding morphological variation and health	2:00 PM – 3:30 PM	12	Online
<b>Wednesday, April 5</b>			
<b>American Association of Biological Anthropologists</b>			
Reconstruction of activity in the past: what's going on in Latin America	8:00 AM – 9:30 AM	13	Online
Bioarchaeology: Human biological variation	2:00 AM – 3:30 AM	14	Online
Bioarchaeology: Skeletal biology and trauma	4:00 AM – 5:30 AM	15	Online
Paleoanthropology: Hominin anatomy and behavior	6:00 AM – 7:30 AM	16	Online
Paleoanthropology: Quantitative methods and dating in paleoanthropology	10:00 AM – 11:30 AM	17	Online
Forensic Anthropology: Taphonomy and identification	4:00 PM – 5:30 PM	18	Online

# MONDAY, APRIL 3, ONLINE SESSIONS

## Session 1

### Human Biology: Growth and variation

#### Contributed Presentations

*Chair: Andrew Best*

- **Basiscranial Sexual Dimorphism Using a Landmark-Based Geometric Morphometric Approach.** B.H. MOSS.
- **Quantifying Multivariate Human Growth: Using a Gaussian Copula to explore the dependency structure of human growth traits.** C.A. WOLFE, K.E. STULL.
- **The sky's not the limit: Ultramarathoners and the metabolic ceiling.** A.W. BEST, A. MCGROSKY, Z. SWANSON, R. RIMBACH, J. MCCONAUGHY, C. OCOBOCK, H. PONTZER.
- **Nonlinear modeling of long bone ontogeny to investigate final adult size.** E.Y. CHU, K.E. STULL.
- **Detecting marginalised groups and epidemic stress in the historical record through cause of death entries in the 1918-19 influenza pandemic in Cape Breton Island (Unama'ki), Nova Scotia, Canada.** J.M. PARISH.
- **Variations in mandibular cortical bone thickness and density with aging and tooth loss, using micro-focus X-ray computed tomography (micro-XCT).** C.E. THEYE, M. STEYN, A.C. OETTLÉ.
- **Hard working people during the transition from the pre-Neolithic to Neolithic at Man Bac, Vietnam.** O.M. PEARSON, H. MATSUMURA, M.F. OXENHAM, N. DUNG, N. CUONG, T. HIEP.

## Session 2

### Functional Anatomy: Bone biology and variation

#### Contributed Presentations

*Chair: Nicole Grunstra*

- **The human pubic symphysis is an evolutionary trade-off.** N.D. GRUNSTRA.
- **Human-specific variation in conserved embryonic enhancers may underlie differences in human skeletal muscle important for bipedal locomotion.** S.R. QUEENO, A. OKAMOTO, D. RICHARD, M.C. O'NEILL, T.D. CAPELLINI, K.N. STERNER.
- **Facial Asymmetry in Children with and without Orofacial Clefts Aged 3 Months to 2 Years: 3D Landmarks-based Method Study.** L. KOZEJOVA JAKLOVA, K. HARNADKOVA, K. KOCANDRLOVA, J. DUPEJ, J. VELEMINSKA.
- **Platyrrhine proximal humerus morphology reflects phylogeny and locomotor differences related to glenohumeral joint function.** L.M. ZACHARY, J.T. GLADMAN.
- **Vertebral morphology in the primate post-transitional spine reflects locomotor pattern.** A.L. MACHNICKI, P.L. RENO, A.D. SYLVESTER. WITHDRAWN
- **Potential effects of body size on skeletal maturation.** M. CAVANAHA, M. ŠEŠELJ.

# MONDAY, APRIL 3, ONLINE SESSIONS

## Session 3

### Primateology: Assessing primate ecology and conservation

#### Contributed Presentations

Chair: Stephanie Meredith

- Daytime Foraging Behavior of Semi-Free Ranging *Lemur catta* at the Lemur Conservation Foundation in Myakka City, Florida. E. GULLEDGE, L.E. LIGHT, E. PATEL, T. BRANSFORD, T. FISHER.
- Assessing orangutan habitat quality and the conservation value of a secondary forest within Gunung Palung National Park, Borneo, Indonesia. V.R. ZDANOWICZ, T. SUSANTO, B. BARROW, T. SETIA, C.D. KNOTT.
- Seasonality in activity budgets and cathemerality across the 24-hour cycle in two Malagasy lemurs, and the impact of methodological choices on interspecific comparisons. M.T. IRWIN, V. RAHALINARIVO, H.F. RAKOTOMANANA, J. RANDRIANASY, J. RANAIVOARISOA, B. RAMORASATA, J.F. RAHARISON, K.E. SAMONDS.
- ~~Age-related variation in material and geometric properties of fruits in wild white-faced capuchins (*Cebus capucinus*). J. CHALK WILAYTO, J.G. CASORSO, R. LOPEZ NAVARRO, S. CHEVES-HERNANDEZ, A.D. MELIN, B.S. LIU, S. KIM, M. DUTRA FOGAÇA, M.A. HOLMES, C.E. TERHUNE, M.F. LAIRD. WITHDRAWN~~
- ~~B3GET: A generalized agent based model of primate ecology, evolution, and social behavior. K.N. CROUSE, C.L. LEHMAN, M.L. WILSON. WITHDRAWN~~
- Examining the Dual Hormone Hypothesis in Wild Male Mountain Gorillas (*Gorilla beringei beringei*). N.M. GREBE, W. ECKARDT, J. SCHMIDT, D. MAYO, R. UMUHOZA, R.M. SANTYMIRE, T.S. STOINSKI, S. ROSENBAUM.

## Session 4

### Bioarchaeology: Violence and societal change

#### Contributed Presentations

Chair: Brian Padgett

- The Bioarchaeology of Experience: A Theoretical Approach to Interpretations of Skeletal Trauma. B.D. PADGETT.
- The Largest Headhunting in Prehistoric Asia: Human Skull Hunting at the Honghe Site in Heilongjiang, China. G. GAO, Q. ZHANG, X. SUN, W. ZHANG, Q. ZHANG, Q. WANG.
- ~~Contested Conceptions: Racialization, postmortem subjectivity, and improving community research practice. A.S. CUNNINGHAM. WITHDRAWN~~
- A Paleodemography Study of Violence: Age and Sex Distribution Patterns of Cranial Trauma in the 1<sup>st</sup> millennium BCE Turpan Basin, Xinjiang, China. L. AN, Z. LI, W. ZHANG, A. WANG, Q. ZHANG.
- Transitioning societies: Post-earthquake Kourion (KAGC) - Human behavior and health after a mass disaster. A.C. DAVIS, H.B. CARSON, H. HILL, M. SNOW, M. GIVEN, X. KYRIAKOU.

# MONDAY, APRIL 3, ONLINE SESSIONS

## Session 5

### Dental Anthropology: Applications in dental anthropology

#### Contributed Presentations

*Chair: Miguel Delgado*

- Cooperative genetic interaction and dental developmental timing. V. SGHEIZA, H. LIVERSIDGE.
- Long lost cousins or distant neighbours? The dental morphology of early South-East Asian migration. T. HUGHES, S. SURESH, M. BOCKMANN, K. DAVIS, A. BROOK.
- Population-specific vs. pooled dental samples: an argument for more generalizable age estimation methods. L.E. CIRILLO.
- Population continuity or replacement in Monterenzio Vecchio, Italy revisited. Dental affinities during the 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE. M.J. ANCTIL, J.D. IRISH.
- A Test of Identical Twin Mirroring in the Dentition. T. MCCRARY, K.S. PAUL, T. HUGHES, A.H. BROOK.
- Individual behaviours imprinted in teeth of southern African hunter-gatherers and hunter-herders during the Holocene. J. OLSZEWSKI, V.E. GIBBON.

## Session 6

### Bioarchaeology: Inferring human experience using biomarkers

#### Contributed Presentations

*Chair: Tabasom Ilkhan*

- Paleogenomic insights of ancient Mexico: Genetic origin and sex determination of human remains from the archaeological zone of Cañada de la Virgen. D. OROZCO-PEREZ, V. VILLASISLAS, M. NIEVES-COLÓN, M. ÁVILA-ARCOS, R. MONTIEL, G. ZEPEDA GARCÍA MORENO, A. MORENO-ESTRADA, K. SANDOVAL.
- Oral Health and Microbiome Diversity in 18<sup>th</sup> Century African Descended Individuals from Charleston, South Carolina. R.E. FLESKES, S.J. JOHNSON, T.P. HONAP, J.K. GILMORE, L. OUBRÉ, A.A. OFUNNIYIN, C.M. LEWIS, T.G. SCHURR.
- ~~Osteological specimens and the human bone trade: An anthropological responsibility.~~ J. BEDARD. WITHDRAWN
- The Uncertain Death – Estimating Mortality Structure by Random Sampling. D. MOSER, S.L. PICHLER, K. FUCHS.
- Minimizing contamination while collecting sediment samples from human burials for DNA analysis. C.N. TRAN, C.T. GARCIA, M. VALENTE, F. BERNA, H.F. CARDOSO, D. YANG.
- Indigenous maternal inheritance and resilience in colonial lambayque, Peru. L. ABEL, B.L. TURNER, H.D. KLAUS, L.L. ROGERS.
- Plumbing New Depths in Industrialization: Anthropogenic Lead Exposure Amongst Individuals from Two English Towns. S.A. MCGUIRE, M. HUBBE, W.J. PESTLE, A. SHARIFI, A. POURMAND.

## MONDAY, APRIL 3, ONLINE SESSIONS

- **Ontogenetic changes to trabecular bone microstructure compared to other measures of growth.** A.C. BERESHEIM, S. PFEIFFER, M. GRYPAS, C. DUDAR.
- **The insects in the hive and your mind's eye! Maasai Children's Empathetic Attitude towards Honeybees.** Z. MUNSHI, N. LESIO, A. KIHWELO, E. LAIZER.
- **Reconstructing the Mobility Pattern in the Center of the Iranian Plateau during the Bronze Age, Kafarved-Varzaneh.** T. ILKHAN, B. RAFI'ALAVI, A. SOLTYSIK.

## TUESDAY, APRIL 4, ONLINE SESSIONS

### Session 7

#### **Archiving and Sharing Craniofacial data: from 1D to 3D and beyond** **Invited Symposium**

*Chair: Noriko Seguchi. Co-organizer: Stephen Ousley*

2023 marks the 50<sup>th</sup> anniversary of W.W. Howells' landmark publication "Cranial Variation in Man." Howells made his craniometric data available online over two decades ago and many anthropologists have used them to test various hypotheses. The collection of craniofacial data evolved into three-dimensional landmark coordinate data using digitizers, osteological surface scans, and CT scans from cadavers. These data, above all, are measures of human variability; many different hypotheses can be tested, and more questions can be answered. That said, there are gaps in geographic and temporal coverage as well as differences in data collection practices. There are several recent examples of researchers whose data and computer programs were removed along with their university web pages immediately after retirement. How can researchers preserve their collected data so they can be used in the future by others? This poster symposium will inform the community of craniofacial datasets; that data collection has evolved to answer different questions; about efforts to extract, standardize, preserve, and share data; about the continued value of craniofacial data; about geographic and temporal coverage and the potential for further research. Ethical concerns, including consultation with descendant communities, dealing with archived data or remains collected unethically, and similarities and differences in ethical challenges around the world will be discussed. **ADDENDUM:** The issue of data preservation was made particularly poignant recently as Dr. Stephen Ousley, the co-organizer of this symposium, suddenly passed away in November 2022 after this symposium was accepted. His contributions to the field of anthropology were significant, and this symposium represents some of his final work. Steve's last years were very busy, advancing knowledge in the field of anthropology and helping students and colleagues with their work. This symposium is dedicated to Steve and will celebrate his work and honor him as a scholar.

**Discussant: Benjamin Auerbach.**

- **Old Data and New Problems: Mining Journals and Archives prior to 1950.** C.M. STOJANOWSKI, W.N. DUNCAN.

## TUESDAY, APRIL 4, ONLINE SESSIONS

- 3D data from South Africa to meet the challenges of forensic identification. E.N. L'ABBE, G.C. KRUGER, M.W. KENYHERCZ, L. LIEBENBERG, O. SAPO, K.E. STULL.
- Analysis of Fluctuating Asymmetry of mandibular morphology using interlandmark distances and landmark-based-3DGM: A study on 3D mesh models of Japanese human remains from the 19<sup>th</sup> and 20<sup>th</sup> centuries. N. HASUDA, N. SEGUCHI.
- Organizing anatomical 3D data for long-term storage and frequent reuse. S. SCHLAGER, F. ENGEL.
- Sharing and repurposing 3D craniomandibular landmark datasets: Landmark definitions, observer error, and ethical concerns. N. VON CRAMON-TAUBADEL.
- Development and Challenges for longevity in big data resources. H.J. EDGAR, S. DANESHVARI BERRY.
- The Process of 3D Digitization and Data Sharing in Archaeology: A Case Study of Ongagawa-Style Pottery and Skeletal Remains in Japan. K. TAMURA, T. NAKAGAWA, K. NOSHITA, A. KANEDA, H. NAKAO.
- Collaboration and Exchange: Generating reference datasets. K.R. KAMNIKAR, D. JIMÉNEZ, J.T. HEFNER.
- Data Sharing and Repositories in the Craniofacial Identification Domain: The Collaborative Facial Soft Tissue Depth Data Store (C-Table). C. STEPHAN, P. GUYOMARC'H, T. HONA.
- The Kyushu University Museum Skeletal Collection 3D Surface Scan Sharing Project and Related Ethical Considerations. N. SEGUCHI, S. YONEMOTO, J.F. LOFTUS III.
- ~~From Traditional Models to Post-Colonial Partnership: 30 years of Craniometry in Museum and University Labs.~~ G.M. HEATHCOTE. WITHDRAWN
- Traditional craniometric data for Asia and the Pacific: a resource for biological and forensic anthropology. M. PIETRUSEWSKY.
- The Forensic Data Bank after almost 40 years: data standards, data preservation, and lessons learned. S.D. OUSLEY, R.L. JANTZ.

### Session 8

#### Forensic Anthropology: Methods and considerations

##### Contributed Presentations

*Chair: Jieun Kim*

- ~~Exploring the Accessibility and Usability of 3D Reconstruction in Anthropological Contexts.~~ E.L. WIEDENMEYER, P. BANKS. WITHDRAWN
- Intersectional Forensic Anthropology: Moving Towards an Equitable Ethical Framework. S.M. ROSEN.
- ~~The Accuracy and Bias of Transition Analysis Age Estimation Priors in Historical and Modern Populations.~~ S.S. RAMCHARAN, A.M. SIMON, L. CABO. WITHDRAWN
- Use of Laser-Induced Breakdown Spectrometry (LIBS) in sorting commingled human remains. K. ZEJDLIK, K. LIVINGSTON, G. MEYERS, J.D. BETHARD, M. BAUDELET.

## TUESDAY, APRIL 4, ONLINE SESSIONS

- Experimental design matters: effects of clothing and carrion biomass load on forensically relevant scavenging in Cape Town, South Africa. K.S. ADAMS, D.A. FINAUGHTY, V.E. GIBBON.
- **Biocultural forensic anthropology: A bioarchaeological approach to understanding inequality and vulnerability in long-term unidentified persons.** T.V. WILSON. WITHDRAWN
- Evaluating cortical bone speed of sound (SOS) measured by a non-invasive ultrasound bone sonometer as an alternative age-at-death indicator for elderly: a pilot study. J. KIM, E.R. LESLIE, H. KEDWAIL, R. ALLEN.
- Employing the power of the Tooth Fairy or Ratón Pérez in developing a community-engaged scientific collection of deciduous teeth. M. MARTÍNEZ DE PINILLOS, L.J. HLUSKO, M. MODESTO, I. TOWLE, M. MARTINÓN-TORRES, C. MORENO-TORRES, P. FERNANDEZ, L. MARTÍN-FRANCÉS.

### Session 9

#### Functional Anatomy: Primate functional adaptation

##### Contributed Presentations

*Chair: Adam Foster*

- **Trabecular response to variation in loading environments in the hominoid clavicle.** R. SCHWARTZ, H.N. FARRELL, Z. ALEMSEGED. WITHDRAWN
- Exploring astragalar morphology by means of a high density sliding semilandmark approach: insights on the evolution of primate locomotor behavior. O. MONCLÚS-GONZALO, D.M. ALBA, A. FABRE, J. MARIGÓ.
- The scaling of motor unit density in skeletal muscle as a framework for understanding functional adaptation and evolution. A.D. FOSTER, J. BAIRD, S. BOGAN, A. CHOUDRY, P. DOSHI, V. MURUGANANDAM, M. TOLER.
- A novel workflow for quantifying 3D skeletal anatomy of living humans for morpho-functional analysis. A.B. LAWRENCE, K.M. MIDDLETON, J.B. HALL, J. THOMAS, T.M. GUESS, C.V. WARD.
- **Morphological differences in the macaque upper limb.** B. KENYON-FLATT, N. VON GRAMON-TAUBADEL. WITHDRAWN

### Session 10

#### Primate behavior and sociality

##### Contributed Presentations

*Chair: Kris Sabbi*

- Postural behaviors in response to substrates and food size in non-housed bearded capuchin monkeys (*Sapajus libidinosus*) and ring-tailed lemurs (*Lemur catta*). S.L. CANINGTON, J. CHALK-WILAYTO, K.A. WRIGHT, M.F. LAIRD.
- Parent-offspring affiliative behavior in white-faced saki monkeys. E.C. ASKREN, M. ŠEŠELJ.

## TUESDAY, APRIL 4, ONLINE SESSIONS

- **Dominance style and strategic sociality among alpha males in a community of wild chimpanzees (*Pan troglodytes schweinfurthii*).** K.H. SABBI, E.J. MATTHEWS, Y. ZHANG, M. EMERY THOMSON, M.N. MULLER, E. OTALI, R.W. WRANGHAM, Z.P. MACHANDA.
- **Exploring the Evolution of Vocal Range in Non-Human Primates.** K.M. MCCOLLUM, K.Q. MAYNARD, S.A. POINDEXTER.
- **Absolute, Relative, and Conditional Sociality Metrics.** K.C. LEE, K.E. LANGERGRABER.
- **Vocal communication in black and white ruffed lemurs (*Varecia variegata*) at Mangevo, Ranomafana National Park, Madagascar.** C.H. BATIST, M.N. RAZAFINDRAIBE, F. RANDRIAMANANTENA, A.L. BADEN. WITHDRAWN
- **Do white-faced capuchin monkeys have social norms?: New data from the Lomas Barbudal Monkey Project in Costa Rica.** S.E. PERRY.
- **Morphological and molecular identification of helminths reveals species diversity in the gastrointestinal parasite communities of white-faced capuchin monkeys (*Cebus imitator*).** M.C. HENRIQUEZ, H. HAMOU, J. CHURCHER, J. HASS, S. ROMERO MORALES, L. SWEDELL, A.D. MELIN.

### Session 11

#### Bioarchaeology: Paleopathology

##### Contributed Presentations

*Chair: Francisca Alves-Cardoso*

- **Periodontal pathogens and osteoclastogenesis: How osteoimmunology can complement paleopathology.** E.P. GARDNER, M.G. GATSOS, A. VASHISHTA, S.M. URIARTE, F. CRESPO.
- **Are cribrous lesions a reflection of growth? An investigation of cranial and postcranial cribrous lesions in a British study sample.** J.L. AUSTEN, M.E. LEWIS.
- **Understanding Hidden Heterogeneity in Frailty through the Social Determinants of Health: A case study from Ancient Egypt.** A.E. AUSTIN.
- **Oral Disease at Al-Qinifab, Sudan: Reassessing the Saso and Kondo (2019) Method.** J.R. STAMER, B.J. BAKER.
- **Comparing oral pathology in the Imperial Roman period and Late Antiquity in Dyrrachium/Dyrrachion (modern-day Albania).** M. KOCI, B. KYLE, L.J. REITSEMA, U. TOTA.
- **Stable oxygen isotopic indicators of geographic residence in the early Colonial Basin of Mexico – the case of El Japón, Xochimilco, Mexico.** E. ALARCÓN TINAJERO, D.K. MOREIRAS REYNAGA.

## TUESDAY, APRIL 4, ONLINE SESSIONS

### Session 12

#### Primateology: Understanding morphological variation and health

##### Contributed Presentations

Chair: Zachary Cofran

- **Facial asymmetry, inbreeding, and stress in Cross River gorillas (*Gorilla gorilla diehli*)**—A.J. SPIES, H. GLOWACKA, A. ERIKSEN, J.S. MASSEY, M. ARLEGI, Y. HEUZÉ, M.W. TOCHERI, K. MCGRATH. WITHDRAWN
- **Mountain and lowland gorillas have different rates of craniodental lesions.** J.A. ZEMAN, C.E. TERHUNE, S.B. COOKE, C.A. KIRCHHOFF.
- **Craniodental Lesions in the Genus *Pan*.** C.M. SAPATA, S.B. COOKE, C.E. TERHUNE, C.A. KIRCHHOFF.
- **Comparative Methodological Approaches to Capturing 3D Data to Study Shape Variation of the Proximal Humerus and the Scapulae in Extant and Fossil Lemurs.** L.M. DAY, J. TIGNOR, M. VERGAMINI, A.L. RECTOR.
- **The primate forelimb: vascularization and innervation branching patterns.** M.J. VANHOOF, C. WAGEMANS, T. VAN LEEUWEN, E.E. VEREECKE.
- **Variation in the flexor sheath ridge morphology of primates.** S.N. JOHNSON, J. HAWKS.
- **Investigating Muscle Attachments and Shape Variation of the Scapulae in Extant Non-human Primates.** M. VERGAMINI, L.M. DAY, J. TIGNOR, E. GAGARIN, A.L. RECTOR.
- **Cranionasal sexual size dimorphism in proboscis monkeys (*Nasalis larvatus*) is associated with growth beyond dental maturity in males, but not in females.** K.L. BALOLIA, P.L. FITZGERALD.

## WEDNESDAY, APRIL 5, ONLINE SESSIONS

### Session 13

#### Reconstruction of activity in the past: what's going on in Latin America

##### Invited Symposium

Chair: Soledad Salega. Co-organizer: Claudia Rojas-Sepúlveda

Studies focusing on the reconstruction of past physical activity have several years of development. From early descriptions of bone changes and the identification of specific activities, research has shifted to broader and population-level interpretations. A range of bone modifications have also been proposed to help account for these activities, as well as different recording and data processing methodologies. However, making inferences regarding activity—and how to do it—has been questioned and debated. This is related to new advances in knowledge about bone tissue and the development and application of novel techniques. In Latin America, investigations on this topic developed by local as well as foreign researchers have been increasing in recent years, but

## WEDNESDAY, APRIL 5, ONLINE SESSIONS

they are still less shared outside regional meetings, and seldom incorporated to debates. Thus, the aim of this symposium is to discuss the advances as well as the limitations of studying activity in the past, by considering the recording, analysis and interpretation of bone changes that are usually associated with the physical activity that people performed while alive. The focus is on scientific productions in Latin America and with special consideration of the local context researchers usually face: sample size, training, access to equipment and grants, among others. This symposium includes researchers from different stages in their career path that have studied or are currently studying physical activity in the past in Latin America. They will present results regarding different time spans and historical contexts, from archaeological settings to contemporary populations. The closing discussion is meant to integrate their advances into the broad context of international debates, as well as acknowledging current difficulties and possible solutions.

**Discussants:** Claudia Rojas-Sepúlveda & Soledad Salega.

- **Should we reconsider what we know about physical activity patterns in hunter-gatherers? Recent evidence of past populations from the southern extreme of South America.** R. ZÚÑIGA THAYER, J. SUBY.
- **Using external auditory exostoses to track temporal changes in human aquatic activities in pre-Columbian Panama.** V.V. SÁNCHEZ AGUILARTE, J. RIVERA SANDOVAL, N.E. SMITH-GUZMÁN.
- **Bioarchaeological approaches to physical activity and lifestyle among Pre-Hispanic populations from central Argentina (late Holocene).** S. SALEGA.
- **Evaluation of enthesal changes in horticultural groups from Central Chile (0-1400 CE) from a materialist approach.** M. HERRERA-SOTO, L. SANHUEZA, L. LUNA.
- **Sex differences in life conditions in the population of Cercado Grande de los Santuarios (Tunja, Colombia. 2350-450 AP): physical activity and physiological stress.** C.M. ROJAS-SEPULVEDA, M. SANCHEZ-HASTAMORIR.
- **Prevalence of enthesal changes in modern male Colombian individuals.** M. ACOSTA, C. HENDERSON, E. CUNHA.
- **Bogotá workers: observation of enthesal changes in a sample from the Central Cemetery of Bogotá associated with the Republican Period.** L. RUGE-VELASCO, C. ROJAS-SEPÚLVEDA.

### Session 14

#### **Bioarchaeology: Human biological variation**

##### **Contributed Presentations**

*Chair: Victoria Gibbon*

- **The daily grind: Ecological variations in activity patterns among southern African hunter-gatherer/herders from the Holocene.** E.S. DINKELE, V.E. GIBBON.
- **Restitution with community-centered science in South Africa: Sutherland Nine.** V.E. GIBBON, L. FERIS, J. GRETZINGER, K. SMITH, S. HALL, N. PENN, T.E. MUTSVANGWA, C.M. WILKINSON, S. SCHIFFELS, S. ALVES, J.C. SEALY.

## WEDNESDAY, APRIL 5, ONLINE SESSIONS

- **Strontium isotopes reveal mobility dynamics in the Middle Iron Age mixed-funerary ritual necropolis of Piovego, Padua, Northeastern Italy.** G. CAPASSO, F. LUGLI, M. BECK DE LOTTO, L. BONDIOLI, M. CUPITÒ, M. VIDALE.
- **Adjustment of subsistence strategy -enthesal changes of the ancient population in the Houtaomuga site, Northeast China.** R. ZOU.
- **The bony labyrinth and the population history of pre-Colonial Brazil – A virtual anthropology approach.** M. CORREIA, M. DIMITRI, T. LIMA, J. MACRON, L. SPÓSITO, R. OLIVEIRA, V. WESOLOWSKI, A. STRAUSS.
- **Two Cases of Ankylosing Spondylitis in Central Plains, China, Western Han (3<sup>rd</sup> Century BCE – 1<sup>st</sup> Century CE).** X. ZHAN, J. SHAO, Y. ZHU, H. YEH.
- **Physical Effects of Castration on the Male Skeleton.** K.L. REUSCH.
- **Detecting dental cortisol through mass spectrometry: Recent methodological advances.** L. QUADE, L. KUČERA, S. GROSSOVÁ, M. KRÁLÍK.
- **Shaping Childhood: morphological and developmental patterns of juvenile long bones.** S.Y. STARK.

### Session 15

#### **Bioarchaeology: Skeletal biology and trauma**

##### **Contributed Presentations**

*Chair: Victoria Gibbon*

- **A Neolithic special: The headless dead from Vráble, Slovakia (5250-4950 BCE).** K. FUCHS, Z. HUKELOVÁ, A. BISTÁKOVÁ, I. CHEBEN, M. FURHOLT, T. KÜHL, K. SZILÁGYI, M. WUNDERLICH.
- **Multiple cranial pathological conditions: A complex case using a bioarchaeology of care framework.** D. KOTZE, G.D. GUNSTON, L. HE, V.E. GIBBON.
- **Precolonial violence: Analysis of traumatic injuries from a communal burial site in South Africa.** C.G. MOLE, D.D. STYNDER, J.C. SEALY, V.E. GIBBON.
- **Dry bone and virtual modality interchangeability for the estimation of sex on the human pelvis.** S. BRAUN, N. SCHWENDENER, F. KANZ, S. LÖSCH, M. MILELLA.
- **Assessment of metrical mandibular and postcranial sex estimation parameters in southern African Holocene San and Khoekhoe populations.** S. MALEK, J.C. SEALY, V.E. GIBBON.
- **Bilateral Hip Dysplasia: A Case Study from 17<sup>th</sup> – 19<sup>th</sup> Century South Africa.** C.M. VOEGT, G. GUNSTON, M. NORTJE, J. SEALY, L. HE, V. GIBBON.

Session 16

**Paleoanthropology: Hominin anatomy and behavior**

**Contributed Presentations**

*Chair: Caley Orr*

- **A New Hominin Patella from Kromdraai, South Africa.** C.K. MILLER, J.M. DESILVA, B. ZIPFEL, J. BRAGA. WITHDRAWN
- **The shape of the Neanderthal pelvis: implications of a new reconstruction of Kebara 2 for childbirth.** R. RMOUŤILOVÁ, M. HAEUSLER. WITHDRAWN
- **Ontogenetic shape changes in the hominoid clavicle and the morphology of the *Australopithecus afarensis* juvenile DIK-1-1.** H.N. FARRELL, Z. ALEMSEGED. WITHDRAWN
- **Cortical bone structure of the proximal phalanges varies in relation to hand use and posture in hominoids.** S.M. SYEDA, Z.J. TSEGAI, M. CAZENAVE, M.M. SKINNER, T.L. KIVELL.
- **Cut marks at the BK II site, Olduvai, suggest broadening of extractive technologies during the early Pleistocene.** M.J. ARMOUR-CHELU.
- **Palaeoecological and climatic evaluations during the Middle-to-Upper Palaeolithic transition in the Italian Peninsula through stable isotopic analysis.** M. ROMBONI, M.F. ROLFO, G. BOSCHIAN, D. MARCHI, S. TOFANELLI.
- **“People with disabilities are left with another layer of complexity”: Inclusive design and science communication in college paleobiology and paleoanthropology courses.** T. LEPORE, J. LU, L. ARMSTRONG, L.J. HLUSKO.

Session 17

**Paleoanthropology: Quantitative methods and dating in paleoanthropology**

**Contributed Presentations**

*Chair: Chi Zhang*

- **The dental enamel proteome of *Paranthropus robustus*.** P.P. MADUPE, P.L. RÜTHER, C. KOENIG, I. PATRAMANIS, N. HLAZO, M. MACKIE, A. TAUROZZI, M. TAWANE, F. WELKER, L. SCHROEDER, C. ZANOLLI, F. RACIMO, J.V. OLSEN, R.R. ACKERMANN, E. CAPPELLINI.
- **Paleomagnetic-based age estimates of primates and associated vertebrate fauna from the middle Miocene locality of Ramnagar (Jammu and Kashmir, India).** D. CHOUDHARY, C.J. CAMPISANO, C.C. GILBERT, M. ARIF, S.P. SINGH, B.A. PATEL, R. KUMAR, W.A. WAZIR, P. KUMAR, B. PHARTIYAL, R. PATNAIK.
- **Nature of the early African hominin fossil record.** R.T. MCRAE, B.A. WOOD.
- **Virtual reconstruction of crania of *Homo naledi* from the Rising Star cave system, South Africa.** J. HAWKS.

## WEDNESDAY, APRIL 5, ONLINE SESSIONS

- An open-source photogrammetry pipeline for acquiring 3D biological models. C. ZHANG, S. MATHER, A. MAGA.
- A quantitative genetic analysis of selection in the non-human hominid cranium over four ontogenetic stages. M.J. COOPER, E.A. SIMONS, N. VON CRAMON-TAUBADEL.

### Session 18

#### **Forensic Anthropology: Taphonomy and identification**

##### **Contributed Presentations**

*Chair: Arodi Farrera*

- Analyzing interrater reliability using the Refined Classification system for Thermally Damaged Human Remains by Body segment. C. JUAREZ, E. POPE, A. GALLOWAY.
- Crime concealment and body disposal using hydrochloric acid: A taphonomic and genetic appraisal. A. GANESALINGAM, L.J. ROYLE, V.E. GIBBON, G. SILVESTRI, D.A. FINAUGHTY.
- Keep Calm and Carrion: A Re-evaluation of Scavenging Patterns in the Western United States and Implications for Search Structure in Medicolegal Investigations. C.D. COLLINS.
- Visual comparisons for personal identification in forensic anthropology: a scoping review. J.L. CAMPBELL, P.R. AVENT, A.L. VANBAARLE, L.N. BUTARIC.
- A validation and assessment of interobserver error for the FSS method of frontal sinus identification. P.R. AVENT, J.L. CAMPBELL, L.N. BUTARIC.
- The impact of a non-binary sex estimation on accuracy of males and females. E. SIERRA-SERRANO, S. REID, J. ALBANESE.
- Face stimuli anonymization from known databases. A. FARRERA, K. RODRÍGUEZ VÁZQUEZ, L. CUEVAS REMIGIO, G. ORTIZ LAGUNES, S. PADILLA REYNAUD, G. PALAFOX PALAFOX.

# RENO SCIENTIFIC PROGRAM

All events take place at the Peppermill Reno Resort unless otherwise noted.

Session Title	Room	Time	#	Type
<b>Thursday, All Day</b>				
<b>American Association of Biological Anthropologists</b>				
Bioarchaeology: Biocultural variation in human health experiences	Tuscany D, E, F	8:00 AM – 6:00 PM	1	Poster
Bioarchaeology: Biomolecular approaches to the past	Tuscany D, E, F	8:00 AM – 6:00 PM	2	Poster
Bioarchaeology: Evaluating stress, pathology, and trauma	Tuscany D, E, F	8:00 AM – 6:00 PM	3	Poster
Bioarchaeology: Mortuary treatment and taphonomy	Tuscany D, E, F	8:00 AM – 6:00 PM	4	Poster
Paleoanthropology: Postcranial form and function	Tuscany D, E, F	8:00 AM – 6:00 PM	5	Poster
Functional Anatomy: Bone and tissue biology	Tuscany D, E, F	8:00 AM – 6:00 PM	6	Poster
Human Biology: Physical activity and growth	Tuscany D, E, F	8:00 AM – 6:00 PM	7	Poster
<b>Thursday, Morning</b>				
<b>American Association of Biological Anthropologists</b>				
American First Routes: an Interdisciplinary View	Tuscany A – B	8:00 AM – 12:00 PM	8	Podium
Functional Anatomy: Musculoskeletal functional morphology and biomechanics	Tuscany 1	8:00 AM – 12:00 PM	9	Podium
Bioarchaeology: From atoms to ancestors: isotopic bioarchaeology	Tuscany 3	8:00 AM – 12:00 PM	10	Podium
Paleoanthropology: New fossils and new interpretations	Tuscany 9	8:00 AM – 12:00 PM	11	Podium
Integrating dental wear	Tuscany 8	8:00 AM – 12:00 PM	12	Poster
<b>Thursday, Afternoon</b>				
<b>American Association of Biological Anthropologists</b>				
Queering research: uses of LGBTQIA+ perspectives and queer theory in biological anthropology	Tuscany A – B	2:30 PM – 5:45 PM	13	Podium
Human Behavior: Adaptability and cultural change	Tuscany 1	2:30 PM – 4:00 PM	14	Podium
Dental Anthropology: Applications and methods	Tuscany 3	2:30 PM – 6:00 PM	15	Podium
Primateology: The social landscape	Tuscany 9	2:30 PM – 6:00 PM	16	Podium
Symposium: A Session to Honor the Legacy of Bill Kimbel	Tuscany 8	2:30 PM – 6:00 PM	17	Poster

# RENO SCIENTIFIC PROGRAM

<b>Friday, All day</b>				
<b>American Association of Biological Anthropologists</b>				
Genetics and Genomics: Anthropological 'omics	Tuscany D, E, F	8:00 AM – 6:00 PM	18	Poster
Paleoanthropology: Hominid cranial morphology and systematics	Tuscany D, E, F	8:00 AM – 6:00 PM	19	Poster
Primatology: Behavior	Tuscany D, E, F	8:00 AM – 6:00 PM	20	Poster
Primatology: Diet, ecology, and conservation	Tuscany D, E, F	8:00 AM – 6:00 PM	21	Poster
Primatology: Ontogeny and phylogeny	Tuscany D, E, F	8:00 AM – 6:00 PM	22	Poster
Primatology: Anatomy and physiology	Tuscany D, E, F	8:00 AM – 6:00 PM	23	Poster
<b>Friday, Morning</b>				
<b>American Association of Biological Anthropologists</b>				
AAAG/AABA Joint Symposium: Born Which Way?: Biological and Genetic Engagement in Sex, Gender, and Sexuality Research	Tuscany A – B	8:00 AM – 9:45 AM	24	Podium
A century of Sir Arthur Keith's stages of hominoid evolution	Tuscany A – B	10:00 AM – 12:00 PM	25	Podium
Functional Anatomy: Skeletal biology and development	Tuscany 1	9:00 AM – 11:15 AM	26	Podium
Bioarchaeology: Demography, identity, and risk	Tuscany 3	8:00 AM – 12:00 PM	27	Podium
Primatology: Investigating environmental impacts on diet, behavior, and conservation	Tuscany 9	8:00 AM – 12:00 PM	28	Podium
Human Evolutionary Biomechanics: Past, Present, and Future	Tuscany 8	8:00 AM – 12:00 PM	29	Poster
<b>Friday, Afternoon</b>				
<b>American Association of Biological Anthropologists</b>				
Toward a holistic approach – Investigating the genetic underpinnings of phenotypic variation	Tuscany A – B	2:30 PM – 6:00 PM	30	Podium
HBA/AABA Joint Session: Human Biology: Adaptation across contexts	Tuscany 1	2:15 PM – 4:00 PM	31	Podium
Bioarchaeology: Tales from the teeth	Tuscany 1	4:15 PM – 6:00 PM	32	Podium
Forensic Anthropology: Methods, perspectives, and future directions	Tuscany 3	2:30 PM – 6:00 PM	33	Podium
Paleoanthropology: Reconstructing environments and behavior	Tuscany 9	2:30 PM – 5:15 PM	34	Podium
Un – presentations: Translating Biological Anthropology Research via Creative Expression	Tuscany 8	2:30 PM – 6:00 PM	35	Poster

# RENO SCIENTIFIC PROGRAM

<b>Saturday, All day</b>				
<b>American Association of Biological Anthropologists</b>				
Paleoanthropology: Paleoecology and hominin behavior	Tuscany D, E, F	8:00 AM – 6:00 PM	36	Poster
Education in Biological Anthropology: Approaches, ethics, and engagement	Tuscany D, E, F	8:00 AM – 6:00 PM	37	Poster
Functional Anatomy: Postcranial functional morphology	Tuscany D, E, F	8:00 AM – 6:00 PM	38	Poster
Dental Anthropology: Population variation and applications	Tuscany D, E, F	8:00 AM – 6:00 PM	39	Poster
Human Biology: Demography, health, and disease	Tuscany D, E, F	8:00 AM – 6:00 PM	40	Poster
Paleoanthropology: Paleobiology beyond hominids	Tuscany D, E, F	8:00 AM – 6:00 PM	41	Poster
Forensic Anthropology: Perspectives in forensic anthropology	Tuscany D, E, F	8:00 AM – 6:00 PM	42	Poster
<b>Saturday, Morning</b>				
<b>American Association of Biological Anthropologists</b>				
Human Biology: Growth, development, and bone health	Tuscany 1	8:00 AM – 9:45 AM	43	Podium
Human Biology: Stress, disease, and health	Tuscany 1	10:15 AM – 12:00 PM	44	Podium
Paleoanthropology: Comparative morphology and experimental analyses	Tuscany 3	8:00 AM – 12:00 PM	45	Podium
Genetics and Genomics: Ancient biomolecules	Tuscany 9	8:00 AM – 12:00 PM	46	Podium
Forensic Anthropology as Practiced in the United States: Qualifications, Standards, and Ethical Practice	Tuscany 8	8:00 AM – 12:00 PM	47	Poster
<b>Saturday, Afternoon</b>				
<b>American Association of Biological Anthropologists</b>				
Primateology: Exploring bodily correlates of behavior	Tuscany 1	2:15 PM – 4:00 PM	48	Podium
Primateology: Evolutionary mechanisms of sex, stress, and signals	Tuscany 1	4:00 PM – 5:45 PM	49	Podium
Bioarchaeology: Embodying health and wealth	Tuscany 3	2:15 PM – 5:30 PM	50	Podium
Genetics and Genomics: Anthropological genetics	Tuscany 9	2:15 PM – 5:45 PM	51	Podium
Coming to the Caribbean – Celebrating 85 Years of Rhesus macaques at Cayo Santiago; New Endeavors of Non – Human Primate Research	Tuscany 8	2:15 PM – 6:00 PM	52	Poster

# THURSDAY, APRIL 20, ALL DAY SESSIONS

## Session 1

### **Bioarchaeology: Biocultural variation in human health experiences**

#### **Contributed Poster Presentations**

*Chair: Katharine Woollen*

Tuscany D, E, F

- 1 The application of random forest modeling to histological age-at-death estimation of the human rib. S.R. MAVROUDAS, N.P. HERRMANN.
- 2 Application of the auricular surface osteometric method for subadult sex estimation on a Medieval sex identified skeletal collection from Austria. F. KANZ, C. REISINGER, S. LÖSCH, M. BAS.
- 3 Quantifying sexual dimorphism of the bony labyrinth and biological sex distribution in Lagoa Santa, Brazil. B. ATHIE TERUEL, M. CORREIA, A. UHL, A. STRAUSS, H. REYES-CENTENO.
- 4 Sex-based differences in mortality and metabolic disease in subadult skeletal assemblages of Tell Hisban. C.M. NICHOLSON, M.A. PERRY, T.N. ZECZYCKI.
- 5 The effect of sex on risk of mortality in two Ottoman-era populations from Hungary. S.L. YAUSSY.
- 6 A Social Autopsy of Maternal and Fetal Mortality Rates from the Milwaukee County Poor Farm Cemetery (1882-1925). K.C. WOOLLEN, C.N. WHITE, J.F. BYRNES.
- 7 Indigenous maternal inheritance and resilience in colonial lambayque, peru. L. ABEL, B.L. TURNER, H.D. KLAUS, L.L. ROGERS.
- 8 The Effects of Socioeconomic Status on Female Health at St. Benet Sherehog. A.S. SLACK, C.P. ANDERSON.
- 9 Differential Stature for Men and Women in the Southwest (A.D. 900-1425): A Biocultural Examination of Gendered Patterns. E.R. EDMONDS, J. FREIBERGER, D.L. MARTIN.
- 10 Bone Strength in the Medieval and Early Modern Black Friars Cemetery, Odense, Denmark. K. PARKER, J. STOCK, R. HOPPA.
- 11 Prevalence of growth arrest lines and their relationship to burial goods in an Early Medieval juvenile skeletal sample from Germany. J. MEYER.
- 12 Investigating physiological stress and disease in St. Henry's Cemetery, East St. Louis, IL (11S1742), 1866-1908. K.C. BEST, J.R. SPENCER.
- 13 Investigating the Relationship Between Vertebral Neural Canal Size Variation and Mortality Risk Among Modern Documented Americans. C.L. ZNACHKO.
- 14 The Skeletal Frailty Index (SFI) and the Biological Index of Frailty (BIF): A Comparison in the Middle Sicán, North Coast of Peru. K.M. SARGENT.
- 15 Paleodemography of the Neolithic Age in Northern China with Special Reference to the Hamin Disaster Site. M. SIMON, Q. ZHANG, M. SIKORA, H. WILLMOTT, S. DEWITTE, Q. WANG.
- 16 Defects of Non-survivors: Linear Enamel Hypoplasia in Juveniles at Umm al-Jimal. C. CHISDOCK.
- 17 Dental morphological affinities among Precolumbian Costa Rica and their potential affinities with Mesoamerican Postclassic. A. CUCINA, A. ORTEGA-MUÑOZ, M. AGUILAR BONILLA.

## THURSDAY, APRIL 20, ALL DAY SESSIONS

- 18 Macroscopic assessment of dental pathology from the Meroitic Nubian cemetery 8-B-5.A on Saï Island, Sudan. A. DIAZ, S.M. FUEHR, A.O. LIMA, T.L. DUPRAS, V. FRANCIGNY.
- 19 Two Cases of Ankylosing Spondylitis in Central Plains, China, Western Han (3<sup>rd</sup> Century BCE – 1<sup>st</sup> Century CE). X. ZHAN, J. SHAO, Y. ZHU, H. YEY.
- 20 Examining the Gender Similarities Hypothesis in the Community of St. Bride's Lower (1600-1849 CE). T. PEACOCK.
- 21 Shaping Childhood: morphological and developmental patterns of juvenile long bones. S.Y. STARK.

### Session 2

#### **Bioarchaeology: Biomolecular approaches to the past**

##### **Contributed Poster Presentations**

*Chair: Donovan Adams*

Tuscany D, E, F

- 1 Neolithic human remains from Ljubičeva pećina (Istria, Croatia). I. JANKOVIĆ, J.C. AHERN, V. MARTINOIA, M. NOVAK, R. BECKER, S. MIHELIĆ.
- 2 Pastoral subsistence among Jordanian nomads during the Ottoman Period (1299-1922 CE), Jordan. M.A. JUDD, C.E. EBERT, L.A. GREGORICKA.
- 3 A Stable Isotopic Analysis of Diet across Three Millennia of Maya Settlement at Santa Rita Corozal, Belize. M.M. AMATO, A.J. LOCKER, A.F. CHASE, D.Z. CHASE, A.S. CHASE, M. BADILLO, L.C. SPRINGS, T. TUNG, A.W. REYNOLDS, R.W. SMITH.
- 4 The Early Medieval Transition: Diet Reconstruction, Mobility, and Culture Contact in the Ravenna Countryside, Northern Italy. A. TEMKINA.
- 5 Inferring geographic origins from individuals buried along the *Camino de Santiago* pilgrimage route: Insights from the Silo of Charlemagne cemetery. A.M. ZUREK-OST, E.J. BONTHORNE.
- 6 Dietary reconstruction after the fall of the Huari Empire in the Andean Highlands: Further studies of stable isotopes from human dental calculus. S.C. KUZMINSKY, S.R. POULSON, G. SCOTT, T.A. TUNG.
- 7 The Dogs of Krasnosamarskoe: The Use of a Novel Dentine Microsampling Technique to Investigate Canid and Human Diets. A. LEE, R. SCHULTING, D. ANTHONY.
- 8 The Fault of a Filling: A Case Study Analysis of Dental Fillings from 18<sup>th</sup>-19<sup>th</sup> Century Halifax, Nova Scotia. T.K. BETSINGER, A.B. SCOTT, A. LANGILLE, K.L. RASMUSSEN.
- 9 Craniometric variation among the Meroitic elite interred at Saï Island, Sudan: Implications for the understanding of mobility. B.J. RAISOR, S.M. FUEHR, T.L. DUPRAS, Y. ARDAGNA, V. FRANCIGNY.
- 10 Factors influencing cranial variation among prehistoric Japanese forager populations. L.T. BUCK, L.P. MENENDEZ, I. DE GROOTE, B.R. HASSETT, H. MATSUMURA, J.T. STOCK.

## THURSDAY, APRIL 20, ALL DAY SESSIONS

- 11 Minimizing contamination while collecting sediment samples from human burials for DNA analysis. C.N. TRAN, C.T. GARCIA, M. VALENTE, F. BERNA, H.F. CARDOSO, D. YANG.
- 12 English Monkeys? Multi-isotope analysis of three possible *Chlorocebus* individuals from Nottingham Castle. K.E. FAILLACE, K. POOLE, R. MADGWICK.
- 13 Investigating diachronic dietary patterns in the ancient Greek colony of Ambracia: Stable isotope analysis ( $\delta^{15}\text{N}$ ,  $\delta^{13}\text{C}$ ) from bone collagen of human and animal remains. A. GEORGIADOU, E. GANIATSOU, K. XANTHOPOULOS, V. PAPAPOPOULOU, C. PAPAORGOPPOULOU.
- 14 Investigating the urban side of diet: reconstructing infant and adult diets through sequential and bulk isotopic collagen in the multicultural site of ancient Thessaloniki. E. GANIATSOU, A. GEORGIADOU, N. CHOUPA, A. AIDONIS, A. SOULELES, T. PROTOPSALTI, S. TZEVENI, K. KONSTANTINIDOU, S. VASILEIADOU, C. PAPAORGOPPOULOU.
- 15 WEaning Age FiNder (WEAN): a mathematical method to estimate weaning duration from stable isotope ratios of dentinal collagen. A. SOULELES, E. GANIATSOU, C. PAPAORGOPPOULOU.
- 16 Biohistory of a city. Exploring the population structure of ancient Thessaloniki, Greece. A. AIDONIS, G. LYRAS, S. PROTOPSALTI, S. TZEVENI, S. VASILEIADOU, K. KONSTANTINIDOU, E. KALLIGA, C. PAPAORGOPPOULOU.

### Session 3

#### **Bioarchaeology: Evaluating stress, pathology, and trauma**

##### **Contributed Poster Presentations**

*Chair: Anna Osterholtz*

Tuscany D, E, F

- 1 Ethics in bioarchaeology: A bibliometric review of recently published articles. G.K. SCOTT, M.A. PILLOUD.
- 2 Complicating categories: How historical documents can impact osteological interpretations. A. LIEURANCE, C. BAILEY, A. WISSLER.
- 3 Reclaiming Life Narratives: Reconstructing lived experiences of individuals in historical documented collections. L. NICHOLS, M. UMAR, K. WIDRICK, C. DEGAGLIA, A. WISSLER, A. REYNOLDS, F. CRESPO, S. DEWITTE, M. ZUCKERMAN.
- 4 Futures of Bioarchaeology and Personhood: Osteobiography of Two Individuals from the Hamann-Todd Collection. K.B. ISABLE, M. PILLOUD.
- 5 Relatedness of Cause of Death and Skeletal Markers of Physiological Stress in the Hamann-Todd Collection. A.M. SIMON, T.D. MELLENDORF, C.M. CHEVERKO, M.A. CLARK, M. HUBBE.
- 6 Social Control and Cooperation: A bioarchaeological approach to understanding how communities react to periods of stress in the U.S. Southwest. R.P. HARROD, K.M. BAUSTIAN.

## THURSDAY, APRIL 20, ALL DAY SESSIONS

- 7 **Examining frailty relative to persistent late-stage acquired syphilis infection in individuals within historical documented collections.** M. UMAR, L. NICHOLS, K. WIDRICK, C. DEGAGLIA, A. WISSLER, A. REYNOLDS, F. CRESPO, S. DEWITTE, M. ZUCKERMAN.
- 8 **Sex, stress, and syphilis: Assessing heterogeneity in frailty to acquired syphilis using skeletal stress markers and nutritional status.** K.J. WIDRICK, A. REYNOLDS, M. UMAR, L. NICHOLS, C. DEGAGLIA, A. WISSLER, F. CRESPO, S. DEWITTE, M. ZUCKERMAN.
- 9 **Evidence of emerging inequality in the Middle Period San Pedro de Atacama oases using enthesal patterns.** C.M. CHEVERKO, S.A. SCHRADER, C.M. TORRES, W.J. PESTLE, M. HUBBE.
- 10 **Dis/Ability and Deviant Burials: Enthesal Changes Among the La Plata Population.** K.D. STANSBURY.
- 11 **Evaluating Enthesal Changes and Pathological Conditions in Bronze Age Arabia using the Patella.** J. CABAÑAS, A. LINDBERG, L.A. GREGORICKA, J. ULLINGER.
- 12 **Examining Temporal Bones for Evidence of Pearl Diving in Prehistoric Arabia.** M. HULL, C. RIJAL, L.A. GREGORICKA, J. ULLINGER.
- 13 **Variation in the rotational profile of the lower limb in industrial era modern humans.** J.S. WOLLMANN, M.E. CAMERON, B. VIOLA.
- 14 **Daily Activity Patterns among People Interred in Umm an-Nar Communal Tombs from Southeastern Arabia.** J. ULLINGER, L.A. GREGORICKA, L. ALLEN, J. CABAÑAS, S. CAMINITO, M. HULL, A. LINDBERG, C. RIJAL, A. SARGENT, S. SMITH-ESCUDERO.
- 15 **Hard working people during the transition from the pre-Neolithic to Neolithic at Man Bac, Vietnam.** O.M. PEARSON, H. MATSUMURA, M.F. OXENHAM, N. DUNG, N. CUONG, T. HIEP.
- 16 **Physical Effects of Castration on the Male Skeleton.** K.L. REUSCH.
- 17 **Analyzing vertebral pathologies on individuals from the 8-B-5.A cemetery on Sai Island, Sudan.** A.O. LIMA, S.M. FUEHR, A. DIAZ, T.L. DUPRAS, V. FRANCIGNY.
- 18 **A case of pediatric thalassemia from Phaleron Cemetery (Athens, Greece): Implications for life and death.** J.E. ROTHWELL, H. LIEDL, J.E. BUIKSTRA.
- 19 **Spondylolysis in the past: a meta-analysis of bioarcheological and clinical literature.** N.A. NGUYEN, J. WOOD, J.D. BETHARD.
- 20 **A rare case of permanent teeth fusion from late medieval / early modern period Sisak, continental Croatia.** M. NOVAK, I. ERJAVEC, M. CARIC, J. BURMAZ, D. LOS, M. CAVKA, M. VODANOVIC.
- 21 **Four potential cases of hyperostosis frontalis interna in a California historic population.** B.E. HERNDON.
- 22 **Maternal-Infant Health in Roman Tragurium: Bioarchaeological Investigations of the Very Young.** A.J. OSTERHOLTZ, L. PARAMAN, J. PAIGE.
- 23 **Transitioning societies: Post-earthquake Kourion (KAGC) - Human behavior and health after a mass disaster.** A.C. DAVIS, H.B. CARSON, H. HILL, M. SNOW, M. GIVEN, X. KYRIAKOU.
- 24 **Developmental Plasticity of the Spinal Column: A NMDID case study.** J. DEWEY.
- 25 **A Hidden Thread: Detections of Systemic Inflammation via the European History of Health Project Database.** M. DUNCANSON, F. CRESPO, M. HUBBE, C. LARSEN.

## THURSDAY, APRIL 20, ALL DAY SESSIONS

- 26 Nasal trauma during the Jersey Bluff Phase of the Lower Illinois River Valley. M.E. CAREY, A.T. MAYES.
- 27 Patterns of Craniofacial Trauma Among 19<sup>th</sup> Century Individuals From the Santa Clara Valley: Aspects of Structural Violence and Fighting. D. ADCOX, S. FRIEND, T. LAMBRIGGER, C. COLLINS, E. BARTELINK, C. MILLIGAN.
- 28 A bioarchaeological analysis of structural violence and healthcare in the Middle Archaic (6000 – 3000 BC) Midwest. A. SCHRENK, L. TREMBLAY.
- 29 Periodontal pathogens and osteoclastogenesis: How osteoimmunology can complement paleopathology. E.P. GARDNER, M.G. GATSOS, A. VASHISHTA, S.M. URIARTE, F. CRESPO.
- 30 Assessing Classification Performance and Interobserver Error of the (hu)MANid Program on a Sample of Prehistoric Southwest Native American Individuals. A.M. GODOY, N.C. NEFF, D. MULHERN.

### Session 4

#### **Bioarchaeology: Mortuary treatment and taphonomy**

##### **Contributed Poster Presentations**

*Chair: Elizabeth Sawchuk*

Tuscany D, E, F

- 1 Sacrifice and Human Remains as Diety Effigies in Classic and Early Postclassic Cholula, Mexico. J.T. WATSON, M. SÁENZ SERDIO, C. CEDILLO ORTEGA, C. MCPHERSON, B. HERNDON.
- 2 Examining Paleopathological Preservation in Cremated Human Skeletal Remains from the Archaic Period Phaleron Site Athens, Greece. M. WALSH, J. CEREZO-ROMÁN, J. BUIKSTRA.
- 3 A burial shrouded by the remnants of life: how mortuary treatment and reconstruction of life course can reveal personhood of an infant from Victorian San Francisco. S. DURDEN.
- 4 The effect of commingling on skeletal preservation: Assessing postmortem alteration of human remains from human interference at the Graeco-Roman site of Kourion's Amathus Gate Cemetery. P. MCCHEYNE, D. BARI, M. GIVEN, X. PAULA KYRIAKOU.
- 5 Destruction or Transformation? Investigating Cremation burials from the Bronze Age of Scotland. E. CHAUMONT-STURTEVANT, R. CROZIER, M.F. OXENHAM.
- 6 Deciphering diagenesis: The utility of histotaphonomy in bioarchaeological contexts using a case study from medieval Portugal. T.M. TROMBLEY, A.E. BLAKE, A. MATIAS, S.C. AGARWAL.
- 7 Effects of long-term storage conditions on microbial composition in dental calculus. C. TA, E. SKELLY, M. HANDSLEY-DAVIS, R. EISENHOFER, J. KAIDONIS, L.S. WEYRICH.
- 8 Community-level patterns of interpersonal violence: A study of fragmented and commingled crania from Early Bronze Age Bab adh-Dhra', Jordan. K. PORTER, J. JOHNSTON, S.G. SHERIDAN.
- 9 Methodological Advances in Cementochronology (TCA) for Taphonomically Altered Samples. S. KELMELIS, T. COLARD, S. NAJI, E. PUBERT, J. HOGGARTH, J. AWE.

Session 5

**Paleoanthropology: Postcranial form and function**

**Contributed Poster Presentations**

*Chair: Carrie Mongle*

Tuscany D, E, F

- 1 **Cortical bone structure of the proximal phalanges varies in relation to hand use and posture in hominoids.** S.M. SYEDA, Z.J. TSEGAI, M. CAZENAVE, M.M. SKINNER, T.L. KIVELL.
- 2 **Linking vertebral trabecular microstructure variation to hominoid locomotion, Part 1: *Homo sapiens*.** M. VALCARCEL, S. MUSGRAVE, S. TALE, A. GHahremaninezhad, W.J. PESTLE.
- 3 **Lateral iliac flare does not correlate with gluteal abductor moment arms in humans.** R.W. COOK, J. CHANDAR, I. THOMPSON, G.S. YAPUNCICH, C.S. WALKER, S.E. CHURCHILL.
- 4 **Variation in intra and inter-specific cortical thickness in extant primate femoral diaphyses: a comparative framework for inferences of behavioral diversity in early hominins.** A. VECINO GAZABÓN, A.S. HAMMOND, C.S. MONGLE, C. RUFF, M. PINA, M. CAZENAVE.
- 5 **A New Hominin Patella from Kromdraai, South Africa.** C.K. MILLER, J.M. DESILVA, B. ZIPFEL, J. BRAGA.
- 6 **Stw 573 fibula suggests a human-like popliteus muscle.** A.C. IDSO, A.S. HAMMOND.
- 7 **Trabecular signals of ankle posture in two distal tibiae from Sterkfontein Member 4.** Z.J. TSEGAI, A. PIETROBELLI, B. ZIPFEL, T.L. KIVELL, M.M. SKINNER.
- 8 **Calcaneal Functional Morphology of Large-Bodied Fossil Colobines.** M. ANDERSON, E. GRADY, J. FRANKLIN-GARZA, T.C. PRANG.
- 9 **The fossil second metatarsal from the Middle Pleistocene site of Sedia del Diavolo (Latium, Italy).** A. RIGA, A. PROFICO, H. RICE, T. MORI, A. NAVA, L. MANCINI, D. TREOSSI, D. RADOVCIC, L. BONDIOLI, D. MARCHI.

## Session 6

### **Functional Anatomy: Bone and tissue biology**

#### **Contributed Poster Presentations**

*Chair: Katherine Kinkopf*

Tuscany D, E, F

- 1 **Modeling airflow during the nasal cycle in 3D: Implications for variation in 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.
- 2 **Testing the Respiratory-Energetics Hypothesis: An investigation of metabolic demands and nasal size across human populations.** A.P. KELLY, S.D. MADDUX.
- 3 **Primate Basal Metabolic Rates Diverge from Values Predicted from Organ Size.** E. HINZ, H. PONTZER, A. MCGROSKY.
- 4 **Paleopathology in an extinct giant platyrrhine primate from the Late Pleistocene of Brazil.** A. VIEIRA ARAUJO, M. TRINIDADE DANTAS, M. COZZUOL, H. ARAÚJO-JÚNIOR, A. LIPARINI, R. RIBEIRO, F. DE SOUZA BARBOSA, L.B. HALENAR-PRICE.
- 5 **The scaling of motor unit density in skeletal muscle as a framework for understanding functional adaptation and evolution.** A.D. FOSTER, J. BAIRD, S. BOGAN, A. CHOUDRY, P. DOSHI, V. MURUGANANDAM, M. TOLER.
- 6 **Diving into dimensionality: Using multivariate methods to explore variation in intracortical bone area in a multi-scalar perspective.** K.M. KINKOPF, T.M. TROMBLEY, S.C. AGARWAL, J.A. SECKINGER, G. RICCOMI, S. MIINOZZI, S. CAMPANA, V. GIUFFRA.
- 7 **Microstructural properties of bone and the effect of pixel size.** S.F. HASSAN, L. LUNA CENTENO, T. SKORKA, P.S. CONTI, A.K. HUTTENLOCKER, B.A. PATEL, T. JASHASHVILI.
- 8 **Age-related remodeling and trabecular volume in the fibular midshaft using histology and micro-CT.** B.A. COLOHAN, V.M. DOMINGUEZ, W.E. HARCOURT-SMITH.
- 9 **Impacts of adverse early life environments on bone length in wild Amboseli baboons.** K.A. TUOSTO, O. MWEBI, D. PATTERSON, S.C. ALBERTS, S.C. MCFARLIN.
- 10 **Variation in volume fractions of multiple skeletal elements in a diverse sample of Holocene humans.** D.N. BRUCE, T. JASHASHVILI, M.R. DOWDESWELL, E. CHENG, E. ZHU, K.A. TOMMY, S. KUO, L.J. DEMARS, J.P. SAERS, J.R. JOHNSON, A.D. GORDON, J.T. STOCK, T.M. RYAN, K.J. CARLSON.
- 11 **Structural Variability in Long Bones as a Marker for Sex Specific Daily Activities.** U.P. TOMCZAK, T.E. DUNN.
- 12 **3D visualization of human cortical bone remodeling spaces using micro-CT data.** X. WEI, D.M. COOPER.
- 13 **Signals of Dietary Adaptation in the Hardness and Stiffness of Primate Tooth Enamel.** F.R. FOSTER, R.S. SCOTT, A.B. MANN.

Session 7

**Human Biology: Physical activity and growth**

**Contributed Poster Presentations**

*Chair: Ian Wallace*

Tuscany D, E, F

- 1 **Cognitive Demands of Bipedal Walking.** D.H. ASLAN, D.A. RAICHLLEN.
- 2 **Fat and lean body mass change following weight cycling in mice, a model for humans in energetically unstable environments.** I.D. HERMSMEYER, M.N. COSMAN, R. HURWITZ, A. STOKEL, M.J. DEVLIN.
- 3 **Herding, playing, eating, and learning: Samburu pastoralist kids daily activities.** J.S. PLEMMONS, C.E. HILTON, B.S. STRAIGHT.
- 4 **Myokine secretion during low-intensity physical activity: dose response of interleukin 6 to walking duration.** T.M. KISTNER, D.E. LIEBERMAN.
- 5 **Implications of morphometric variation in the human fifth metatarsal for restoring functionality after fracture.** L. LUNA CENTENO, S.F. HASSAN, A.I. AUTHOY, T. JASHASHVILI.
- 6 **Exploring the Laws of Developmental Direction using a Documented Skeletal Collection.** J.S. NELSON, L. HARRINGTON, E. HOLLAND, H.F. CARDOSO.
- 7 **Associations between age, physical activity, and physical and cognitive function in Hadza foragers.** K. SAYRE, G.E. ALEXANDER, H. PONTZER, B.M. WOOD, D.A. RAICHLLEN.
- 8 **Habitual physical activity levels and foot strength and stiffness.** C. LAUER, N.B. HOLOWKA, T.S. KRAFT, I.J. WALLACE.
- 9 **Early growth and adult epigenetic age acceleration.** M. HILDE-JONES, C.P. RYAN, C.W. KUZAWA.
- 10 **Effects of occupation-related physical activity on limb bone shaft strength among contemporary people in the United States.** A. ABEYTA-BROWN, T. BUSBY, I.J. WALLACE.
- 11 **Why is excess body weight associated with greater bone strength?** H. COOK-GRAVER, J. MEYER, M. PEÑA MUÑOZ, A. MARTINEZ, J. MARTINEZ, A.R. HARRIS, R. RIOS, T. BUSBY, I.J. WALLACE.
- 12 **The relationship between handedness and facial asymmetry in adults.** K. HARNÁDKOVÁ, L. KOŽEJOVÁ JAKLOVÁ, K. KOČANDRLOVÁ, J. DUPEJ, J. VELEMÍNSKÁ.
- 13 **Breastfeeding and complementary feeding practices among mothers in Belém, Brazil: Dietary diversity and infant nutritional implications.** S.R. FANNIN, B.A. PIPERATA, A. BRITO DE AZEVEDO, C. SANTOS DO NASCIMENTO, R. BITTENCOURT TAVARES OLIVEIRA, C. ARAUJO DA PAZ, J. MENDONÇA FREIRE PEREIRA, V. DE CÁSSIA TAVARES DA SILVA.
- 14 **Frequent caretaking not associated with health risks in non-custodial grandmothers.** S. SHREYER, A.F. DORSEY.

# THURSDAY, APRIL 20, MORNING SESSIONS

## Session 8

### **American First Routes: an Interdisciplinary View**

#### **Invited Podium Symposium**

*Chair: C. Eduardo Amorim. Co-organizer: Tábita Hünemeier*

**Tuscany A-B**

The American continent was the last to be colonized by our species. Most genetic studies point to an entry into North America approximately 15,000 years ago, after a population stand-still of a few millennia in Beringia. Although the dates of the initial settlement have been a consensus among the different areas of knowledge, the routes taken by the first immigrants – as well as the later expansions within the continent – are still the subjects of intense discussion. Most studies point to the movement of people from northeast Asia to Beringia, and subsequent entry into North America. However, there is a growing number of studies pointing to a more complex scenario. For instance, new lines of evidence show a relationship between Native American and Southeast Asian populations, which could be due to late migrations to North America or reverse migrations from Beringia. In addition, the so-called “population Y,” a population with Australasian-related ancestry, has also been shown to have contributed to some present-day and ancient Indigenous American populations. This shows a diversity of origins of Native Americans, which, at least in part, could be the result of different routes taken by the first immigrants into the continent. Finally, how the geographic and demographic expansions occurred within the Americas, mainly in the late Holocene, is still a subject of investigation, with few models having been proposed. The present symposium intends to address these open questions related to the peopling of America and shed light on the routes of entry and dispersion in the continent through an interdisciplinary discussion involving researchers from different academic disciplines.

- 8:00 am** Cranial morphological structure of North and South American populations: Implication for discussions about the early human occupation of the American continents. C. DAVIS, M. GREEN, D. FIDALGO, M. HUBBE.
- 8:15 am** The Coastal Migration Theory: Testable Hypotheses and Research Progress. L. DAVIS, D. MADSEN.
- 8:30 am** *Helicobacter pylori*'s historical journey through Siberia and the Americas. S. GHIROTTI.
- 8:45 am** Out of a Beringian Incubator? D.H. O'ROURKE, J. TACKNEY, C. KISIELINSKI, L. NORMAN, R. MANDEL, J. HOFFECKER, R. SCOTT.
- 9:00 am** Integrating Genetic and Archaeological Patterns for the Peopling of Northeast Asia, Beringia, and the Americas. B.A. POTTER.
- 9:15 am** Ancient DNA insights into America's pre-conquest pathogen landscape. K.E. BLEVINS, S. WININGEAR, A.C. STONE.
- 9:30 am** Discussant: Jennifer Raff.
- 9:45 am** Break.
- 10:15 am** Genomic perspectives on the settlement of the Caribbean and their implications for seafaring in the Archaic Age of the Americas. K. NÄGELE.

## THURSDAY, APRIL 20, MORNING SESSIONS

- 10:30 am **The genomic landscape of Native American peoples.** M. ARAUJO CASTRO E SILVA, M. RIBEIRO RODRIGUES, P. SACUENA, M. CÁTIRA BORTOLINI, J. GUERREIRO, F. SANTOS, J. GERALDO MILL, D. COMAS, T. HÜNEMEIER.
- 10:45 am **A call for incorporating conceptual tools from the extended evolutionary synthesis for discussing human expansions in South America.** L.P. MENÉNDEZ.
- 11:00 am ***Mycobacterium tuberculosis* diversity across the pre-Hispanic Andes.** E.A. NELSON, A.K. LANKAPALLI, M. SPYROU, A. CHILDEBAYEVA, Å. VÅGENE, E. GUEVARA, J. TOYNE, T.A. TUNG, A. HERBIG, K.I. BOS.
- 11:15 am **Indigenous peoples in eastern Brazil: insights from 19<sup>th</sup> century genomes.** D. CRUZ DÁVALOS, Y. ARIZMENDI CÁRDENAS, M. BRAVO-LOPEZ, S. NEUENSCHWANDER, S. REIS, M.Q. BASTOS, J. STENDERUP, F. YEDIAY, V. VILLA-ISLAS, C.S. REYNA-BLANCO, C. RODRIGUES-CARVALHO, T. HÜNEMEIER, M.E. ALLENTOFT, C.G. AMORIM, J. MORENO-MAYAR, M.C. ÁVILA-ARCOS, A. MALASPINAS.
- 11:30 am **The spread of genes and culture in the Late Holocene of South America.** T. HÜNEMEIER.
- 11:45 am **Discussant: C. Eduardo Amorim.**

### Session 9

#### **Functional Anatomy: Musculoskeletal functional morphology and biomechanics**

##### **Contributed Podium Presentations**

*Chair: Anna Warrener*

##### **Tuscany 1**

- 8:00 am **Skeletal effects of cold exposure in a model of dysfunctional brown adipose tissue.** R. TUTINO, M.N. COSMAN, R. HURWITZ, M. SCHULER, A. STOKEL, I. HERMSMEYER, M.J. DEVLIN.
- 8:15 am **Lives on the move: the dietary and biomechanical impact of mobility in transhumance populations. The case of the Pindus Vlachs, Greece.** C.L. FERNÉE, A.R. HOLLAND, E. SANDOVAL, K.P. TRIMMIS.
- 8:30 am **A preliminary study of normalized metacarpal length in terrestrial baboons and mixed-locomotion chimpanzees.** V.A. LOCKWOOD.
- 8:45 am **Ontogeny of impact loading in quadrupedal chimpanzees and gorillas.** A. ZEININGER, D. SCHMITT, H. PONTZER, D. RAICHLN, K.G. HATALA, R.E. WUNDERLICH.
- 9:00 am **Chimpanzee climbing: testing classic hypotheses of forelimb and body position.** N.E. THOMPSON, M. LOUKERIS, M.C. O'NEILL.
- 9:15 am **Optimal control simulations of three-dimensional walking in humans and bipedal chimpanzees.** M.C. O'NEILL, A. SUNDARARAJAN, B.R. UMBERGER.
- 9:30 am **Heel-striking reduces the lower limb joint work required for human walking.** N.B. HOLOWKA, Z.M. APOLITO, R.K. FANSIWALA, C.A. MASSIMI, K.G. PALMISANO, M.C. O'NEILL.

## THURSDAY, APRIL 20, MORNING SESSIONS

9:45 am BREAK.

- 10:00 am A novel workflow for quantifying 3D skeletal anatomy of living humans for morpho-functional analysis. A.B. LAWRENCE, K.M. MIDDLETON, J.B. HALL, J. THOMAS, T.M. GUESS, C.V. WARD.
- 10:15 am Allometric scaling in human lower-limb muscle cross-sectional area: implications for locomotion and sexual dimorphism. A. WARRENER.
- 10:30 am Inner ear otolith organ morphology predicts head and neck orientation: Uncovering the link between balance and posture in primates. C.M. SMITH, A.S. HAMMOND, S. ALMÉCIJA, I.S. CURTHOYS, J.T. LAITMAN.
- 10:45 am Prolonged cyclical loading, dietary properties, and the saturation response in growing jaws. S.E. LAD, H. DING, C.E. ALVAREZ, R.J. ANDERSON, J.M. MCKINNON, O.P. HEMING, D.F. LIGGIO, J.C. COURI, W.W. ABERGER, T.J. THORNTON, H.M. MORRIS, F.T. LOCKIE, M.J. RAVOSA.
- 11:00 am Ontogenetic biomechanics of tufted (*Sapajus*) and untufted (*Cebus*) capuchin mandibles. T.A. POLVADORE, C.B. YOAKUM, P.M. TAYLOR, M. DUTRA FOGAÇA, M.A. HOLMES, M.F. LAIRD, J. CHALK-WILAYTO, C.E. TERHUNE.
- 11:15 am 3D anatomy of otomandibular connections and their significance for cranial evolution in primates and other mammals. C.M. HOLLIDAY, E. COONEY, K. FRAZIER.
- 11:30 am Strepsirrhine gum-feeders have short skulls: searching for the evolutionary morphology of gummivory. A.M. BURROWS, C. LAW, S. LOPEZ-TORRES, K.R. SELILG, M.T. SILCOX.
- 11:45 am One of these is not like the others: Re-evaluating the association of nasal projection with climate. E.O. CHO, L.N. BUTARIC, S.D. MADDUX.

### Session 10

#### Bioarchaeology: From atoms to ancestors: isotopic bioarchaeology

##### Contributed Podium Presentations

*Chair: Chris Stantis*

Tuscany 3

- 8:00 am Tooth enamel nitrogen isotope ratios as a novel proxy for diet reconstruction in the archaeological record: a case study from Central America. J.N. LEICHLITER, A.E. SHARPE, J.D. CYBULSKI, M. VINK, A. MARTINEZ-GARCIA, T. LÜDECKE.
- 8:15 am First insights into human mobility in Neolithic Belgium using strontium isotopic analysis and proteomics: a case study of Grotte de La Faucille (Sclayn, Province of Namur). I. VAN HATTUM, M. COSTAS-RODRÍGUEZ, P. CROMBÉ, F. VANHAECKE, K. HOBIN, S. DALED, J. PALMER, H. VANDENDRIESSCHE, M. DHAENENS, Q. GOFFETTE, H. COLLET, P. CATTELAÏN, M. TOUSSAÏN, I. DE GROOTE.
- 8:30 am Bioavailable strontium isoscapes for sub-Saharan Africa and their use in provenance studies. X. WANG, G. BOCKSBERGER, V.M. OELZE.

## THURSDAY, APRIL 20, MORNING SESSIONS

- 8:45 am Cultural transformations, migration and possible dietary shift during the 2<sup>nd</sup> Millennium BC in Eastern Central Europe - a bioarchaeological approach. T. HAJDU, A. GÉMES, T. SZENICZEY, K. GYENESEI, K. KISS, K. FÜLÖP, J. TARBAY, A. MCCALL, M. VICZE, A. HORVÁTH, L. PALCSU, I. MAJOR, M. MOLNÁR, E. MOLNÁR, A. MARCSIK, K. P. FISCHL, G. SZABÓ, E. MESTER, V. SZEVEÉNYI, G. KULCSÁR, I. PAP, J. DANI, V. KISS.
- 9:00 am "Celts" down the Alps. New isotopic data on territorial mobility among the Late Iron Age *Cenomani* of Verona (NE Italy, 3<sup>rd</sup> -1<sup>st</sup> c. BCE). Z. LAFFRANCHI, S. ZINGALE, D. SALAZAR-GARCÍA, S. LÖSCH, M. DE LA CRUZ CÓRDOBA, G. ARENZ, V. COIA, A. PALADIN, L. SALZANI, S. SZIDAT, U. TECCHIATI, A. AMATO, I. DORI, A. ZINK, M. MILELLA.
- 9:15 am An analysis of phenotypic diversity and mortuary treatment of females at Early Bronze Age Karataş-Semayük, Anatolia (c. 2700-2300 BCE). D.M. ADAMS, M.A. PILLOUD, A. BÜYÜKKARAKAYA.
- 9:30 am Answering nature's call: Diet, agricultural practices and climate change at Altenerding (Germany) during the Early Medieval Period (400-700CE). D.L. NEIDICH, M.A. JUDD, S. LÖSCH.
- 9:45 am BREAK.
- 10:00 am Tracking the life histories of enslaved individuals from 18<sup>th</sup> and 19<sup>th</sup> century mid-Atlantic North America using stable isotopes: comparison to the African site of Elmina, Ghana. C.A. FRANCE, D.W. OWSLEY, K.S. BRUWELHEIDE, E.S. RENSCHLER, K.G. BARCA, C.R. DECORSE.
- 10:15 am Resolution: comparing isotopic weaning profiles in permanent and primary teeth from the Tooth Fairy Project. J. BEAUMONT.
- 10:30 am The origins and life histories of enslaved Africans from Lagos (Portugal) revealed by multi isotope analysis. V.M. OELZE, X. WANG, L. BAO, C. LEIRIÃO, J.B. OGUNSETIRE, A. GONZALEZ RUIZ, L. SANCA, N. TUCKER, S.N. WASTERLAIN, M. FERREIRA.
- 10:45 am A stable isotope approach to dietary composition and sex-based dietary differences in late medieval-early modern Romania. J.M. WATSON, B.M. OGDEN, A. JANZEN.
- 11:00 am Investigating mummy bundles found at the Wari imperial site of Huaca del Loro, Nasca, Peru (650-1000 CE). C.M. KELLNER, E. BRAUNSTEIN, S. BRAUNSTEIN.
- 11:15 am Plumbing New Depths in Industrialization: Anthropogenic Lead Exposure Amongst Individuals from Two English Towns. S.A. MCGUIRE, M. HUBBE, W.J. PESTLE, A. SHARIFI, A. POURMAND.
- 11:30 am Impact of sample pretreatment on enamel strontium isotope data. B.E. CROWLEY, E.M. SIMPSON, S.J. HAMMER, J.M. SMITH, T.M. JOHNSON.
- 11:45 am As above, so below: deposition, modification, and reutilization of human remains at Marmoles cave (*Cueva de los Marmoles*: Southern Spain, 4000-1000 cal BCE). M. MILELLA, R.M. MARTÍNEZ SÁNCHEZ, S. PICHLER, J. VERA RODRÍGUEZ, M. MARTÍNEZ FERNÁNDEZ, J. CÁMARA SERRANO, Z. LAFFRANCHI.

Session 11

**Paleoanthropology: New fossils and new interpretations**

**Contributed Podium Presentations**

*Chair: Carolin Röding*

Tuscany 9

- 8:00 am Withdrawn.
- 8:15 am **New Pliocene cercopithecoid primates from Laetoli, Tanzania (1998-2022).** A.S. DEANE, H. HURST, E. ABELLA, J. DESILVA, E. MCNUTT, S. RUBIN, E. GUSTAFSON, K. VINCENT, D. BECKETT, M. CORBIN, C. MUSIBA.
- 8:30 am **Reanalysis of *Kapi ramnagarensis* supports its classification as a stem hylobatid.** C.C. GILBERT, A. ORTIZ, K.D. PUGH, C.J. CAMPISANO, B.A. PATEL, N.P. SINGH, J.G. FLEAGLE, R. PATNAIK.
- 8:45 am **Separating signal from noise in *Sahelanthropus*.** M.R. MEYER, J.P. JUNG, I.F. ARAIZA, S.A. WILLIAMS.
- 9:00 am **Updated biochronology of South African Plio-Pleistocene fossil assemblages using cercopithecoid monkeys.** S.R. FROST, F.J. WHITE, H.G. REDA, C.C. GILBERT.
- 9:15 am **Morphometric variation among Plio-Pleistocene hominin proximal radii.** M.R. LAGUE.
- 9:30 am **Fossil pelves attributed to early *Homo*: variants and variation.** E.R. MIDDLETON, S.C. ANTÓN.
- 9:45 am BREAK.
- 10:00 am **New Oldowan Locality Sare River (ca. 1.7 Ma) Provides Evidence of Diverse Hominin Behaviors on the Homa Peninsula, Kenya.** E.M. FINESTONE, T.W. PLUMMER, T.H. VINCENT, S.A. BLUMENTHAL, P.W. DITCHFIELD, L.C. BISHOP, A.I. HERRIES, C.V. PALFERY, T.P. LANE, E. MCGUIRE, J.S. REEVES, D.R. BRAUN, S.K. BARTILOL, N. KIPRONO ROTICH, J.A. PARKINSON, C. LEMORINI, I. CARICOLA, R.N. KINYANJUI, R. POTTS.
- 10:15 am **A new, early Pleistocene hominin footprint site from Koobi Fora, Kenya.** K.G. HATALA, N.T. ROACH, C. NYETE, A.A. LONGAYE, L.N. LEAKEY.
- 10:30 am **An anatomical reconstruction of KNM-WT 15000 (*Homo erectus*).** M. HAEUSLER, C.B. RUFF.
- 10:45 am **On the trunk muscles of Kebara 2 neanderthal.** E. BEEN, M. SACHAR, Y. RAK, A. BARASH.
- 11:00 am **The shape of the Neanderthal pelvis: implications of a new reconstruction of Kebara 2 for childbirth.** R. RMOUÏLOVÁ, M. HAEUSLER.
- 11:15 am **Predicting the position of hip bones within the pelvic girdle: A case study of the Kebara 2 Neanderthal.** M.T. ADEGBOYEGA, M. GROTE, T.D. WEAVER.
- 11:30 am **Maxillo-dental affinities of the juvenile enigmatic Northwest African Aterian fossil from Mugharet el'Aliya.** C. RÖDING, S. EL-ZAATARI, C. STRINGER, R.S. LACRUZ, K. HARVATI.

# THURSDAY, APRIL 20, MORNING SESSIONS

11:45 am **The first occurrence of a Middle Pleistocene Hominin from the Central Highlands of Kenya.** N.R. MALIT, K.L. BAAB, F.M. KIRERA, V. WAWERU, D.P. MIGGINS, J. NGALLA, C. OMUOMBO, R. KINYANJUI, A. GROSSMAN, F. NDERITU, L.N. CHEGE, R. KINYUA.

## Session 12

### **Integrating dental wear**

#### **Invited Poster Symposium**

*Chair: Almudena Estalrich. Co-organizer: Kristin L. Krueger*  
Tuscany 8

Tooth wear is an inevitable consequence of having and using your teeth. Attrition, abrasion, and erosion are the factors leading to this wear, and researchers use a diverse range of techniques and methodologies to understand them, especially in fossil, recent past, and contemporary organisms. From the nano-level to microwear signatures to the overall macrowear picture, the variability of wear patterns has provided researchers with clues to reconstruct dietary and behavioral strategies within and among species. These analyses have also allowed for the reconstruction of environments, giving us insight into adaptations of past populations, or how anthropic environmental modifications affect living species. While dental wear has been studied for centuries, the past four decades have brought forth a wide spectrum of techniques and targeted species and populations. This has created a huge amount of data, enhancing our knowledge of the past. This symposium offers an opportunity to bring together recent work from those at all career stages (i.e., graduate students to emeritus professors) to characterize and update the state of dental wear research, foster new collaborations, and work cooperatively to address limitations, challenges, and future avenues.

**Discussants:** Mark F. Teaford, Kristin Krueger, and Almudena Estalrich.

- 1 Expanding on Potential Applications of Dental Microwear Texture Analysis to Wildlife Management.** A.S. PETERSON.
- 2 Dietary variation in young Neandertals from France, Pech de l'Azé 1 and Hortus II, using dental microwear texture analysis.** F. L'ENGLE WILLIAMS, C.W. SCHMIDT, J.L. DROKE, G. BECAM, M. DE LUMLEY.
- 3 Canine Microwear in Relation to Diet in Four Sympatric Sumatran Primates.** P. PUJANTARI, L. DELEZENE, J. PLAVCAN, M. TEAFORD, P. UNGAR.
- 4 Dental Microwear Texture Analysis between occlusal and buccal surfaces.** R. HERNANDO, M. LOZANO, A. SOURON, J.C. WILLMAN.
- 5 Dental microwear reflects maturity-related feeding behavior in Virunga mountain gorillas.** J. GALBANY, W. ECKARDT, T.S. STOINSKI, A. PÉREZ-PÉREZ, A. MUDAKIKWA, M.R. CRANFIELD, K. GILARDI, R. MUVUNYI, S.C. MCFARLIN, A. ROMERO.
- 6 Application of 3D digital microscopy to the study of non-alimentary dental wear.** M. LOZANO, R. HERNANDO, J. BERMUDEZ DE CASTRO, E. CARBONELL, J. ARSUGA, A. ROMERO.

## THURSDAY, APRIL 20, MORNING SESSIONS

- 7 **How enamel thickness, mineral concentration and mechanical properties influence tooth wear and fractures in catarrhine molar crowns.** I. TOWLE, L.J. HLUSKO, M. DE PINILLOS, M. MODESTO, J.D. IRISH, C. LOCH.
- 8 **Dental microwear complexity as a defining feature of early agriculturalists in the American Midwest.** E.M. LAGAN, C.W. SCHMIDT, L. FIORENZA, R.A. COOK, M. HUBBE, D. GUATELLI-STEINBERG.
- 9 **Differences in elemental composition within enamel suggest differences in wear.** K.L. KRUEGER, L. CASTREJON, A. FOK, C. SCHMIDT, R. ELLERBRAKE, G. KELLER.
- 10 **Para-masticatory dental wear: Patterns of variation between Paleolithic, Mesolithic and Neolithic populations from Northern Spain.** A. ESTALRRICH.
- 11 **Age-dependent dental topography variability in Eastern Chimpanzees.** A. ROMERO, S. TORRIJO-BOIX, L. FIORENZA, A. PÉREZ-PÉREZ, J. GALBANY.

# THURSDAY, APRIL 20, AFTERNOON SESSIONS

## Session 13

### **Queering research: uses of LGBTQIA+ perspectives and queer theory in biological anthropology**

#### **Invited Podium Symposium**

*Chairs: Samantha M. Archer and Alexandra E. Kralick*

Tuscany A-B

Diverse voices within and outside of biological anthropology have, for several decades, called for the acknowledgement and acceptance of the ways in which hegemonic knowledge and implicit bias have and continue to negatively impact our scholarship. In more recent years, awareness has grown around these topics and several symposia have been organized around this very issue at the AABAs. This symposium adds to this growing awareness by specifically focusing on how queer theory changes and transforms scientific knowledge about the human body and experience within biological anthropology. Queer theory is a body of scholarship with several possible definitions; for the purposes of this symposium, queer theory refers to the lived experiences of LGBTQIA+ people that have been extrapolated into scholarship and knowledge regarding same-sex and non-normative desire, compulsory heterosexuality, monogamy, and heteronormative behavior, transgender and gender non-conforming experience, and the intersectional experience of these phenomena along the lines of race, class, disability, nationality, and more. This Session brings together scholars from diverse areas of biological anthropology, including human and non-human primate osteology, forensic anthropology, bioarchaeology, primate social behavior, anthropological genetics, and human biology, several of who merge their scholarship with critical biocultural theory and feminist, Black, Indigenous, and queer science studies. Scholars will discuss both the theoretical and practical implications of explicitly incorporating queer theory into their work as a means of working towards a more objective scientific practice throughout the discipline as well as how biological anthropology can better serve LGBTQIA+ communities to increase knowledge, awareness, and understandings of queer bodies, health, and lived experiences. With this panel, we aim to bring together a multifaceted and interdisciplinary group of scholars whose work demonstrates how queer theory reshapes and transforms our knowledge of human bodies, health, evolution, variation, and more.

- 2:30 pm** **Applying Queer Theory to Biological Anthropology: History, Discourse, and the Introduction of a New Reference Library.** T. FLAHERTY, K.D. STANSBURY, S. BLATT, A. MICHAEL, M. ISA.
- 2:45 pm** **Heteronormativity and reproduction in biological anthropology.** M.A. WILSON.
- 3:00 pm** **Applying Queer Theory to Understanding Sex as a Spectrum.** F. BOUDERDABEN, D. BOYD.
- 3:15 pm** **No bones about it: human sexual polymorphism and ranges of morphological variation in human skeletal sex indicators.** C.M. ASTORINO.
- 3:30 pm** **Human sexual variation in the classroom: A graphing activity.** S. SABOOWALA.
- 3:45 pm** **Queering Primate Osteology: Orangutan Skeletons Challenge Normative Assumptions of Binary Sex and Gendered Behavior.** A.E. KRALICK.

## THURSDAY, APRIL 20, AFTERNOON SESSIONS

- 4:00 pm Of monsters and monkeys: Queering the study of genetic chimerism in primates. R. VOYT.
- 4:15 pm Body by Colonialism: Interrogating the False Binary in Bioarchaeology. B.J. SCHAEFER.
- 4:30 pm Homosexualizing risk: Queer theory and human monkeypox infection. J. LUND.
- 4:45 pm Just gal pals! The differential treatment of sexual behavior among nonhuman great apes. M.A. RODRIGUES, K.E. GRAHAM.
- 5:00 pm Discussant: L. Zachary DuBois.
- 5:15 pm Discussant: Rick W. A. Smith.
- 5:30 pm Discussant: Agustin Fuentes.

### Session 14

#### Human Behavior: Adaptability and cultural change

##### Contributed Podium Presentations

*Chair: Eric Shattuck*

Tuscany 1

- 2:30 pm Exploring the relationship between perceived home and neighborhood safety and sleep in a sample of indigenous Wixárika living in Guadalajara, Mexico. L. MCKINNON, E.C. SHATTUCK, R. CROCKER SAGASTUME, I. RAMOS H., P. TEMAI GONZÁLEZ, A. VILLASEÑOR, Y. MARTIN, P. PÉREZ, S. MUÑOZ, T.S. SUNIL, D.R. SAMSON.
- 2:45 pm Exploring sleep, health, and social threat among Indigenous Wixárika living in Guadalajara, Mexico. E.C. SHATTUCK, L. MCKINNON, R. CROCKER SAGASTUME, I. RAMOS HERRERA, P. GONZÁLEZ, A. VILLASEÑOR, Y. MARTIN, P. PÉREZ, S. MUÑOZ, T.S. SUNIL, D.R. SAMSON.
- 3:00 pm Market integration alters sleep-wake patterns among Malaysian Orang Asli. K.D. REINHARDT, T.S. KRAFT, A.J. LEA, I.J. WALLACE, A. ARNER, R. NGUI, Y.A. LIM, S.K. CHOW, I. SAYED, C. NICHOLAS, K. NG, M. ANTLER, V.V. VENKATARAMAN.
- 3:15 pm Culture-bound attitudes surrounding Philippine politics, health, and stress in pregnant Filipina women. K. CHUA, Z. PAMONAG, L.L. FRANCISCO, J.G. ASUNCION, A.W. BIGHAM.
- 3:30 pm Social norms promote adaptive collective decision-making in hunter-gatherers. V.V. VENKATARAMAN, J. HOFFMAN, K. FARQUHARSON, Z.H. GARFIELD, T.S. KRAFT.
- 3:45 pm Adaptations spread faster and are more sustainable when they arise in minority subpopulations in heterogeneous societies. M.A. TURNER, I. HARRYMAN, A.L. SINGLETON, C. MURAIDA, M. HARRIS, J.W. STRASSER, A. PATIL, R.F. ARTHUR, C.A. LOPEZ, J. JONES.

# THURSDAY, APRIL 20, AFTERNOON SESSIONS

## Session 15

### Dental Anthropology: Applications and methods

#### Contributed Podium Presentations

Chair: Leslea Hlusko

Tuscany 3

- 2:30 pm New hominin fossils from Drimolen Cave and their bearing on microevolution in *Paranthropus robustus*. A. LEECE, J. MARTIN, D. STRAIT, G. SCHWARTZ, A. HERRIES.
- 2:45 pm Tooth crown biomechanics in the molars of *Australopithecus africanus* and *Paranthropus robustus*. R.S. SENDER, D.S. STRAIT.
- 3:00 pm Biodistance Analysis of Nonmetric Dental Variation in Medieval and Early Modern Hungary. L.L. DERN, S. ÉVINGER, T. HAJDU, T. SZENICZEY, M.A. PILLOUD, A.J. PASTORE, J.L. WALBRECKER, L. KIS, R.L. PERASH, G. SCOTT.
- 3:15 pm Long lost cousins or distant neighbours? The dental morphology of early South-East Asian migration. T. HUGHES, S. SURESH, M. BOCKMANN, K. DAVIS, A. BROOK.
- 3:30 pm Kinship, postmarital residence patterns and dental diversity among Muisca chiefdoms in the Northern Andes. M. DELGADO, D. BENITEZ, H. REYES-CENTENO.
- 3:45 pm Unique growth pattern and long-lasting isolation – do they affect dental morphology in the Baka pygmies? P.G. ŠIMKOVÁ, G.W. WEBER, F. RAMIREZ-ROZZI, C. FORNALI.
- 4:00 pm The missing data problem: Imputation methods for dental nonmetric traits. T. VLEMINCQ-MENDIETA, E.Y. CHU, L.L. DERN, G.R. SCOTT.
- 4:15 pm Withdrawn.
- 4:30 pm Modeling amelogenesis and tooth shape with continuum models of ameloblast movement using a new variable: ameloblast transition rate (ATR). P.W. MILLER, M.C. O'HARA.
- 4:45 pm Enamel growth variation in pathological samples and its potential uses as a diagnostic tool in biological and forensic anthropology. C. ARIS, K. HEMER, M. WEALE, E. STREET, A.J. COLLINGS.
- 5:00 pm Temporal Changes in Childhood Exposure of Heavy Metals from Historic San Francisco. D. MALARCHIK, J.W. EERKENS, T. OSTRANDER.
- 5:15 pm Evaluating Dental Wear Methods in Estimating Age-at-Death. C.A. BOYER.
- 5:30 pm Chewing efficiency and abrasive diets explain tooth size variation in a community of African primates. L.D. FANNIN, D. GUATELLI-STEINBERG, J. ARFT-GUATELLI, M. CLAUSS, N.J. DOMINY, W.S. MCGRAW.
- 5:45 pm Employing the power of the Tooth Fairy or Ratón Pérez in developing a community-engaged scientific collection of deciduous teeth. M. MARTÍNEZ DE PINILLOS, L.J. HLUSKO, M. MODESTO, I. TOWLE, M. MARTINÓN-TORRES, C. MORENO-TORRES, P. FERNANDEZ, L. MARTÍN-FRANCÉS.

# THURSDAY, APRIL 20, AFTERNOON SESSIONS

## Session 16

### **Primateology: The social landscape**

#### **Contributed Podium Presentations**

*Chair: Erica Cartmill*

Tuscany 9

- 2:30 pm **Playing with Others' Expectations: Playful Teasing in Four Species of Great Apes.** E.A. CARTMILL, I.B. LAUMER, S.L. WINKLER, F. ROSSANO.
- 2:45 pm **A landscape archaeological approach to accumulative stone throwing (AST) in West African chimpanzees (*Pan troglodytes verus*).** R.A. NAKANO, A.K. KALAN.
- 3:00 pm **Dominance style and strategic sociality among alpha males in a community of wild chimpanzees (*Pan troglodytes schweinfurthii*).** K.H. SABBI, E.J. MATTHEWS, Y. ZHANG, M. EMERY THOMSON, M.N. MULLER, E. OTALI, R.W. WRANGHAM, Z.P. MACHANDA.
- 3:15 pm **Social status and cognitive control in chimpanzees.** A. CANTWELL, P. BARNES, K. SABBI, Z. MACHANDA, A.G. ROSATI.
- 3:30 pm **Sex differences in semi-free ranging chimpanzees: Insights into evolution of chimpanzee social behavior.** M.A. BRYER, P. BARNES, K.H. SABBI, J. RUKUNDO, Z.P. MACHANDA, A.G. ROSATI.
- 3:45 pm **Economics of territorial behavior of chimpanzees (*Pan troglodytes*) at Gombe National Park, Tanzania.** M.L. WILSON, A.P. MASSARO, A.E. PUSEY.
- 4:00 pm **Bonobo party composition and proximity social networks.** F.J. WHITE, A.J. HICKMOTT.
- 4:15 pm **Do white-faced capuchin monkeys have social norms?: New data from the Lomas Barbudal Monkey Project in Costa Rica.** S.E. PERRY.
- 4:30 pm **Intergroup encounters in wild white-faced capuchins of the Taboga Forest Reserve.** S.A. KOVALASKAS, A. COLOSIMO, J.C. BEEHNER, T.J. BERGMAN, M.E. BENÍTEZ.
- 4:45 pm **Stronger maternal social bonds and higher rank are associated with accelerated infant maturation in Kinda baboons.** I.A. SCHNEIDER-CREASE, A.H. WEYHER, B. MUBEMBA, J.M. KAMILAR, M. PETERSDORF, K.L. CHIOU.
- 5:00 pm **Morphological and molecular identification of helminths reveals species diversity in the gastrointestinal parasite communities of white-faced capuchin monkeys (*Cebus imitator*).** M.C. HENRIQUEZ, H. HAMOU, J. CHURCHER, J. HASS, S. ROMERO MORALES, L. SWEDELL, A.D. MELIN.
- 5:15 pm **Socially-mediated microbial transmission influences the early life black-and-white colobus monkey gut microbiome.** D.M. CHRISTIE, E.C. WIKBERG, P. SICOTTE, B. BOHANNAN, N. TING.
- 5:30 pm **Comparing aggression in bonobos and chimpanzees: Self-domestication or convergence with monkeys?** M. MOUGINOT, M. SURBECK, M.L. WILSON, N. DESAI.
- 5:45 pm **B3GET: A generalized agent-based model of primate ecology, evolution, and social behavior.** K.N. CROUSE, C.L. LEHMAN, M.L. WILSON.

## Session 17

### Symposium: A Session to Honor the Legacy of Bill Kimbel

#### Invited Poster Symposium

Chair: Shara E. Bailey. Co-organizer: Amy Rector

Tuscany 8

This symposium honors the many contributions Bill Kimbel has made to the field of paleoanthropology, and the legacy he has left behind. Bill's impact on the field of paleoanthropology began in 1976 when he joined the International Afar Research Expedition. A decade later he joined the Institute of Human Origins, first in Berkeley and later Arizona State University. The primary corpus of Bill's work comprises the study of fossils recovered from Hadar and other sites in the Afar Region, Ethiopia. Together with co-authors—often students—he investigated the evolution of *Australopithecus afarensis*, the evolution of form and function of the hominid face, the critical transition of *Australopithecus* to *Homo*, and the theoretical foundation of the species concept and delineating species in the fossil record. Bill was a meticulous and discerning scholar; his attention to detail and his ability to tell the evidence-based story of our ancestors made our field better. His love of science and the active discovery of the fossil remains of our ancestors has influenced hundreds of students and careers. During the course of his impressive career as an educator, he served as committee chair for ten PhD students, was a committee member for at least 30 graduate students, and inspired innumerable undergraduate students. He was a dedicated and generous mentor, and a warm and thoughtful friend. Bill's impact on the field of paleoanthropology, the community in Ethiopia, and a generation of students was immense. Those who have known Bill as a colleague, as a mentor, and as a friend know what it means to stand on the shoulders of a giant. We seek to honor that legacy in myriad ways with this symposium.

Discussants: Bernard Wood & Donald C. Johanson.

- 1 **The legacy of Bill Kimbel's impact on paleoanthropology: a network analysis of his work.** A.L. RECTOR, L.K. DELEZENE, K.L. LEWTON, T.K. NALLEY, D.H. VERGAMINI, M. VERGAMINI.
- 2 **Mandibular biomechanics of extant and fossil hominids: a collaboration with W. Kimbel.** A.L. SMITH, Z. ALEMSEGED, C.A. ROBINSON, C.F. ROSS, A. TAYLOR, C. WARD.
- 3 **"The best scanners you'll ever have": how 3D technology can complement what we see with our own eyes, and where nothing but the fossil will do.** J. LAWRENCE.
- 4 **An assessment of the effectiveness of partial mandibles for identifying hominid specimens to species.** C. ROBINSON, Z. ALEMSEGED, C.F. ROSS, A. SMITH, A. TAYLOR, C. WARD.
- 5 **Locomotor energetics in *Propithecus coquereli*: costs of terrestrial locomotion using arboreal anatomy.** N. GRIDER-POTTER, A. MCGROSKY, R. WUNDERLICH, N. HESLER, A. ZEININGER, D. SCHMITT.
- 6 **The status of *Australopithecus*.** Z. ALEMSEGED.
- 7 **100 Years of *Australopithecus*: Raymond Dart's Unpublished Manuscript on the Taung Child.** P. MADISON, B. WOOD.

## THURSDAY, APRIL 20, AFTERNOON SESSIONS

- 8 **A new early Pliocene hominin mandible from Ileret, Kenya, with implications for the origins of *Australopithecus*.** C.V. WARD, W.H. KIMBEL, J.E. LEWIS, C.L. KIDNEY, F.H. BROWN, R.L. QUINN, W.J. SANDERS, M.G. LEAKEY, L.N. LEAKEY.
- 9 **Comparative ontogenetic analysis of the occipital condyles in humans, chimpanzees, gorillas, and *Australopithecus afarensis*.** T.K. NALLEY, F. MCGECHIE, N. GRIDER-POTTER, J.E. SCOTT, W.H. REDA, Z. ALEMSEGED.
- 10 **The meaning of megadonty: predicting dietary mechanical properties in *Australopithecus* and *Paranthropus* using relative premolar size.** J.E. SCOTT, C.A. ROBINSON, L.K. DELEZENE, D.J. DE RUITER.
- 11 **An evaluation of the use of developmental simulations for taxonomic assessment.** H. GLOWACKA, J.S. MASSEY, T.B. RITZMAN.
- 12 **Jaw size and cranial shape: how developmental constraints impact skull evolution.** B.A. VILLMOARE, B. HEISLER, J. FISH.
- 13 **Revisiting variation in the mandibular teeth of *Australopithecus afarensis*.** L.K. DELEZENE, A. VILLASENOR, J.E. SCOTT.
- 14 **Tales from the Oltet Valley of Romania: Implications for hominin dispersals into Eurasia during the early Pleistocene.** C.E. TERHUNE, R. CROITOR, S.C. CURRAN, V. DRAGUSIN, A. PETCULESCU, B. POBINER, C. ROBINSON, M. ROBU, L. WERDELIN.
- 15 **From *Australopithecus* to *Homo*: what the outliers (*Homo floresiensis*, *Homo naledi*, and *Homo luzonensis*) tell us about “the transition that wasn’t”.** C.M. ORR, M.W. TOCHERI.
- 16 **Distribution and chronostratigraphy of *Australopithecus afarensis* specimens from Hadar, Ethiopia.** C.J. CAMPISANO, A.L. DEINO.

# FRIDAY, APRIL 21, ALL DAY SESSIONS

## Session 18

### Genetics and Genomics: Anthropological 'omics

#### Contributed Poster Presentations

*Chair: Raquel Fleskes*

Tuscany D, E, F

- 1 **Prevalence of antimicrobial resistance in the human gut microbiome among diverse populations lifestyles.** H.A. KIRIT, A. HUSSAN, S. NAZIR, D. JACOBSON, T.S. KAGONE, A. OZGA, A.J. OBREGON-TITO, R.Y. TITO, C.M. LEWIS JR., K. SANKARANARAYANAN.
- 2 **Oral Health and Microbiome Diversity in 18<sup>th</sup> Century African Descended Individuals from Charleston, South Carolina.** R.E. FLESKES, S.J. JOHNSON, T.P. HONAP, J.K. GILMORE, L. OUBRÉ, A.A. OFUNNIYIN, C.M. LEWIS, T.G. SCHURR.
- 3 **Metagenomic analysis of an early Christian cemetery Godalming of the Late Anglo-Saxon to Early Norman period (Surrey, UK, 800-1125 AD).** E.A. NELSON, N. BROOMANDKHOSHBAHT, S. LEGGETT, F. DE ANGELIS, T. RAE, R. POULTON, L. FEHREN-SCHMITZ, L. BETTI, C. AMORIM.
- 4 **Short- and Long-Term Effects of Common Consolidants on DNA Degradation/Analysis.** S. EDINGTON, S. KNUTSON, R.W. SMITH, A.W. REYNOLDS.
- 5 **Birnirk Inuit Genetic Relatedness and Burial Organization on the Alaskan North Slope.** S.L. UNKEL, J. TACKNEY, L.E. NORMAN, A.M. KRUS, A.M. JENSEN, C. ALIX, O. MASON, D.H. O'ROURKE.
- 6 **Ancient DNA Study of an Afro-Diasporic Population in La Quebrada, Peru.** L. POTT, J. ZOLIK, J. SANTA CRUZ ALCALÁ, C. MAASS, M. NIEVES COLÓN.
- 7 **Paleogenomic Insights into the Composition of an Ancient Urban Neighborhoods Near the Puchituk Terminus, Caracol.** C.D. CLEARY, A.J. LOCKER, D.Z. CHASE, A.F. CHASE, A.S. CHASE, M.M. BADILLO, J. BENN TORRES, A.W. REYNOLDS, R.W. SMITH.
- 8 **Phylogenetic analysis of mitochondrial DNA haplogroup X2a, and its implications for the peopling of North America.** N.J. ST. HILLAIRE, S. LEE, N. COSTELLO, M.G. VILAR.
- 9 **An examination of the European ancestry component of self-identified Afro-Puerto Ricans.** E.C. ULRICH, M.A. NIEVES-COLÓN, J. BENN TORRES.
- 10 **Investigating Prehistoric Migration into the Japanese Archipelago through Phylogenetic Networks.** S. LEE, M.G. VILAR, N.J. ST. HILLAIRE, N. COSTELLO.
- 11 **Paleogenomic insights into cooperation and conflict in the ancient Andes from positive selection on oxytocin pathway genes.** J.K. RILLING, S.K. JOSEPH, E. WAGMAN, N. DIAB, N. RYU, M. LEE, R. HAAS, M.S. ALDENDERFER, J. LINDO.
- 12 **Sex-biased gene regulation varies across human populations as a result of adaptive evolution.** A.Z. REYNOLDS, S.D. NIEDBALSKI.
- 13 **Identifying selection signatures across Mexican Indigenous populations using a new bioinformatics tool for whole-genome data.** F. MIRON, A.W. REYNOLDS, D. PÉREZ-CALIXTO, E. MORETT, I. AGUILAR-ORDÓÑEZ.

## FRIDAY, APRIL 21, ALL DAY SESSIONS

- 14 **Evidence Of Selection In The *Fabp4* Gene Region Suggests Thermoregulatory Adaptation To Cold Temperatures In Savanna Monkeys.** C.M. GAGNON, H. SVARDAL, A.J. JANINSKA, N.B. FREIMER, P.J. GROBLER, T.R. TURNER, C.A. SCHMITT.
- 15 **Profiling age-related patterns of gene expression in the hippocampus of rhesus macaques.** T.J. ANDERSON, S. PETERSON, M. WATOWICH, S. KOHAMA, K.N. STERNER.
- 16 **A transcriptomic and epigenomic atlas of cell types across the macaque brain.** K.L. CHIOU, X. HUANG, M.O. BOHLEN, S. TREMBLAY, D.R. O'DAY, C.H. SPURRELL, A.A. GOGATE, T.M. ZINTEL, A.R. DECASIEN, C. RESEARCH UNIT, M.G. ANDREWS, M.I. MARTÍNEZ, L.M. STARITA, M.J. MONTAGUE, M.L. PLATT, J. SHENDURE, N. SNYDER-MACKLER.
- 17 **X-linked variation in chimpanzees (*Pan troglodytes verus*) offers potential insights into sexual dimorphism of disease susceptibility.** C.L. MARIENCHECK, C.C. SHERWOOD, W.D. HOPKINS, J.J. ELY, B.J. BRADLEY.
- 18 **Field-optimized selective sequencing of MHC-containing chromosome 17 of the vervet (*Chlorocebus aethiops*) using Oxford Nanopore technology.** R.M. DECAMP, L.R. HAUFF, M.E. CHANEY, A.J. TOSI, C.M. BERGEY.
- 19 **Differential gene expression between the proximal and distal developing calcaneus: Implications for primate evolution.** K.M. KJOSNESS, S. PARK, L.N. WILSON, D.B. MENKE, P.L. RENO.
- 20 **Identifying growth plate specific genes using the unusual ossification of the mammalian metatarsal and pisiform.** P.L. RENO, K.M. KJOSNESS, S. PARK, L. WILSON, S.N. DOELP, S.A. WALLACE, D.B. MENKE.
- 21 **Growth hormone receptor (GHR) polymorphisms and their association with craneofacial variation in a sample of Mexican mestizo and Indigenous populations.** M.A. CONTRERAS-SIECK, G. MACÍN PÉREZ, T. HÜNEMEIER, V. ACUÑA-ALONZO, J.A. GÓMEZ-VALDÉS.
- 22 **The evolutionary genomics of Type 2 Diabetes.** L. PEREZ, L. MOYSE, G. PERRY.
- 23 **Mitonuclear Discordance and Metabolic Function in Admixed Polynesian Populations.** R.R. DICKERSON, R. TAKEI, M. CADZOW, S. CASTEL, A. EMDE, K. WASIK, T.G. SCHURR, A.L. GOSLING, T.R. MERRIMAN.
- 24 **The T allele of the MTHFR gene in Turkish populations is associated with negative fertility outcomes.** C. MACLEAN, M. DIMANLIG, L. MADRIGAL.
- 25 **Genome Wide Investigation of High-Altitude Adaptation in Tibetan Monpa.** K.T. ZHU, P.S. CONTRERAS, S. GHOSH, T.D. BRUTSAERT, A.W. BIGHAM.
- 26 **New Y-SNP in QM3 indigenous populations of Colombia.** M. ESPITIA FAJARDO, N. RIVERA FRANCO, Y. BRAGA GOMEZ, G. BARRETO RODRIGUEZ.

## Session 19

### **Paleoanthropology: Hominid cranial morphology and systematics**

#### **Contributed Poster Presentations**

*Chair: Sarah Freidline*

Tuscany D, E, F

- 1 **A quantitative genetic analysis of selection in the non-human hominid cranium over four ontogenetic stages.** M.J. COOPER, E.A. SIMONS, N. VON CRAMON-TAUBADEL.
- 2 **Evolutionary modeling of the hominid face.** K.D. PUGH, S.A. CATALANO, M. PÉREZ DE LOS RÍOS, J. FORTUNY, B.M. SHEARER, A. VECINO GAZABÓN, A.S. HAMMOND, S. MOYÀ-SOLÀ, D.M. ALBA, S. ALMÉCIJA.
- 3 **Mosaicism in the hominoid cranium and its impact on phylogenetic inference using 3D landmark data.** J. GALWAY-WITHAM.
- 4 **Testing hypothesis about modularity related to chewing biomechanics in the hominine skull.** H. JUNG, D. STRAIT, C. ROLIAN, K.L. BAAB.
- 5 **ANTERIOR TEETH AND THE MANDIBULAR SYMPHYSIS: A Morphometric Analysis of Correlation in Extant Hominids.** A.N. BARRERA, C.A. ROBINSON.
- 6 **Mandibular corpus shape as a taxonomic indicator through ontogeny.** C.O. CORNEJO OCHOA, I. ARNEY, J. MASSEY.
- 7 **Bone modeling variability in the human mandible.** M.L. HUBBART, A. SCHUH, S.E. FREIDLINE.
- 8 **Integrating shape, cortical thickness, and bone modeling data: ontogeny and robusticity in the chimpanzee mandible.** S.E. FREIDLINE, A. SCHUH, Z. TSEGAI, S. NATAHI.
- 9 **Integrating shape, cortical thickness and bone modeling data: A novel method applied to an ontogenetic series of chimpanzees mandibles.** S. NATAHI, Z.J. TSEGAI, A. SCHUH, S.E. FREIDLINE.
- 10 **Hominids share similar bone modelling patterns of maxillary development.** A. SCHUH, Y. HEUZÉ, S.E. FREIDLINE.
- 11 **Virtual reconstruction of crania of *Homo naledi* from the Rising Star cave system, South Africa.** J. HAWKS.
- 12 **Digitization of the cast collection of *Homo erectus* remains from Zhoukoudian, China.** A.S. HAMMOND, A. VECINO GAZABÓN, N. TOEWS, E. FUENTES, B. MAUREILLE, S. XING, C. ZANOLLI.
- 13 **Early Origins of the Genus *Homo*: Taxonomic and Phylogenetic Assessment of KNM-ER 5431.** B. HEISLER.
- 14 **Are early hominins in the Turkana Basin consistent with Hutchinson's Rule?** A.S. ULUUTKU, B.A. WOOD.
- 15 **Bayesian tip-dating approaches to inferring the hominin tree.** C.S. MONGLE, K.D. PUGH, D.S. STRAIT, F.E. GRINE.
- 16 **Nature of the early African hominin fossil record.** R.T. MCRAE, B.A. WOOD.
- 17 **Identifying ambiguous bovids from the Gladysvale Cave External Deposits and their implications for paleoenvironmental reconstruction.** J.K. BROPHY, G.J. MATTHEWS.

## Session 20

### Primateology: Behavior

#### Contributed Poster Presentations

Chair: Michael Wilson

Tuscany D, E, F

- 1 Home range size of Critically Endangered Coquerel's sifaka (*Propithecus coquereli*) across an anthropogenic landscape in northwest Madagascar. C. CHELL, H. RAHARINIRINA, F. MERCADO MALABET, S.M. LEHMAN.
- 2 Potential Health Correlates with Social Connectedness in Captive Olive (*Papio hamadryas anubis*) and Olive/Yellow Hybrid (*P. h. cynocephalus*) Baboons. S.J. COTTON, C.K. LUTZ, F.J. WHITE.
- 3 Female-female social relationships are enduring in mountain gorilla group. R.N. DERBY, R.E. MORRISON, W. ECKARDT, T.S. STOINSKI, A.A. SANDEL.
- 4 Ecological Advantages of Color Vision and Color Vision Deficiency in Capuchin Monkeys Under Controlled Conditions. S.L. EPSTEIN, M.H. BABB, F.J. WHITE, B. WILSON, S.F. BROSNAN.
- 5 You are What You Eat: The Dietary Composition and Activity Budget of the Mantled Howler Monkey (*Alouatta palliata*) at La Suerte Biological Research Station in Costa Rica. M.L. FLEISHMAN.
- 6 The impact anthropogenic deforestation on the behavior of mantled howler monkeys (*Alouatta palliata palliata*) at La Selva Biological Station, Costa Rica. S.M. HOWELL, O. RAMIREZ, E. FONSECA.
- 7 Howling for taller trees: Mantled howler monkeys (*Alouatta palliata*) howl more in forest interior than edge in Costa Rica. F.V. KASER, C. JOHNSON, M. ENNIS, N. PETE, I. PACHECO, M. WASSERMAN, L.M. BOLT, A.L. SCHREIER.
- 8 First study of a mother aye-aye's (*Daubentonia madagascariensis*) anxiety behaviors peripartum. R.V. OLSON, L.M. PACIULLI, D.Q. WATTS.
- 9 Ecology, Group Size, and The Evolution of Aggression in *Pan*. G.T. RENNER, M. MOUGINOT, K. CROUSE.
- 10 Mantled howler monkey (*Alouatta palliata*) howling behavior across a small forest fragment and larger continuous forest in Costa Rica. A.L. SCHREIER, F.V. KASER, C. JOHNSON, M. ENNIS, M. WASSERMAN, L.M. BOLT.
- 11 Functions of food-associated calling in the Rekambo chimpanzee (*Pan troglodytes troglodytes*) community in Loango National Park, Gabon. L. WARSHAWSKI, A. KALAN.
- 12 Absolute, Relative, and Conditional Sociality Metrics. K.C. LEE, K.E. LANGERGRABER.
- 13 Individual differences in baseline cortisol and cortisol reactivity among wild chimpanzees (*Pan troglodytes*) at Kanyawara. M.F. COLE, S.A. FOX, M.N. MULLER, E. OTALI, Z. MACHANDA, R.W. WRANGHAM, M. EMERY THOMPSON.
- 14 Characterization of color vision variation in a group of wild *Ateles belzebuth* in Amazonian Ecuador. S. RETTKE, D. SNODDERLY, A. LINK, A. DI FIORE.

# FRIDAY, APRIL 21, ALL DAY SESSIONS

## Session 21

### **Primateology: Diet, ecology, and conservation**

#### **Contributed Poster Presentations**

*Chair: Sharon Gursky*

Tuscany D, E, F

- 1 **Community knowledge and personal experiences with long-tailed macaques in Leyte and Bohol, Philippines.** L.L. FIELDS.
- 2 **Primate Ecotourism in Madagascar: The Effect of COVID-19 on Human Occupancy in Andasibe's Forests.** L.K. HAYNES, C. FILLA, D. MAYO, J. RASOJIVOLA, R. RAFALIARISON, Z.J. FARRIS, K. VALENTA.
- 3 **Islands of change: Zanzibar red colobus, climate change, & human-wildlife interactions.** J. MCCARTER, N. TING, A.V. GEORGIEV, T.R. DAVENPORT.
- 4 **Effects of transect selection and seasonality on lemur density estimates in Betampona Strict Natural Reserve, Madagascar.** E.J. VILLEDA, B.D. GERBER, Z.J. FARRIS.
- 5 **An Analysis of Pet Primate Ads for Five Freedoms of Animal Welfare.** M. SEABOCH, S. CAHOON.
- 6 **Age-related variation in material and geometric properties of fruits in wild white-faced capuchins (*Cebus capucinus*).** J. CHALK-WILAYTO, J.G. CASORSO, R. LOPEZ NAVARRO, S. CHEVES HERNANDEZ, A.D. MELIN, B.S. LIU, S. KIM, M. DUTRA FOGAÇA, M.A. HOLMES, C.E. TERHUNE, M.F. LAIRD.
- 7 **Chemical niche divergence in sympatric lemurs: understanding species' food selection.** C.N. GHERARDI, J. RAHARISON, B. RAMORASATA, V. RAHALINARIVO, J. RANAIVOARISOA, J. RANDRIANASY, J.M. ROTHMAN, K.E. SAMONDS, M.T. IRWIN.
- 8 **Differential tooth wear among extant primate dietary categories.** R. LUTHER, R.C. O'NEILL.
- 9 **Effects of Diet on Brain Size Across Primates.** M.L. ROMANO, K.Q. MAYNARD, S.A. POINDEXTER.
- 10 **Dry matter digestibility and stable carbon and nitrogen isotope analysis of captive northern galagos (*Otolemur garnettii*) fed experimental "frugivorous" and "invertebrate" diets.** Z.R. SHEPARD, J.E. LOUDON, K.B. SMITH, M.E. HOWELLS, A.M. GOMEZ, O.C. PAINE, M. SPONHEIMER.
- 11 **Mandible size and anterior tooth reduction in extant primates.** R.J. WILKINS.
- 12 **Seasonality in activity budgets and cathemerality across the 24-hour cycle in two Malagasy lemurs, and the impact of methodological choices on interspecific comparisons.** M.T. IRWIN, V. RAHALINARIVO, H.F. RAKOTOMANANA, J. RANDRIANASY, J. RANAIVOARISOA, B. RAMORASATA, J.F. RAHARISON, K.E. SAMONDS.
- 13 **Age- and Sex-based patterns of chimpanzee suspensory behavior and substrate use.** S. NAMAGANDA, L.A. SARRINGHAUS, L.M. MACLATCHY.
- 14 **Interannual assessment of fruit availability in gibbon habitat in Northwestern Thailand.** D.I. STOKES-MALAVE, M. SOBASZEK, S. POINDEXTER, L.E. LIGHT.

## FRIDAY, APRIL 21, ALL DAY SESSIONS

- 15 Patterns of dental macrowear in living and fossil cercopithecoid primates. I.E. SMAIL.
- 16 The effect of artificial light on a nocturnal primate. S. GURSKY, N.B. GROW.
- 17 Investigating the ecological underpinnings of ethanol metabolism in wild primates. J.G. CASORSO, S. ROMERO MORALES, A.N. DEPASQUALE, S. CHEVES HERNANDEZ, R. LOPEZ NAVARRO, K.J. HOCKINGS, M.A. CARRIGAN, A.D. MELIN.
- 18 Comparison of field methods to estimate number of howler monkey (*Alouatta palliata*) groups at La Selva Research Station, Costa Rica. C.E. JOHNSON, A.L. SCHREIER, I. PACHECO, O. VARGAS, M.D. WASSERMAN.

### Session 22

#### Primateology: Ontogeny and phylogeny

##### Contributed Poster Presentations

Chair: *Halszka Glowacka*

Tuscany D, E, F

- 1 Does hair length or number explain variation in primate hair microbiome diversity? C.E. KITRINOS, R.B. BELL, S. MAGESH, B.J. BRADLEY, J.M. KAMILAR.
- 2 Dental remains of Pliocene-Pleistocene Cercopithecidae from Romania. C. STAN, V. DRĂGUȘIN, Ș. VASILE, M. VENCZEL.
- 3 Genetic analyses confirm the presence of *Cebuella niveiventris* in Bolivia. L.M. PORTER, S. DE LA TORRE, P. PÉREZ-PEÑA, L. CORTÉS-ORTIZ.
- 4 Small, Odd, and Old: Sulawesi mountain tarsiers (*Tarsius pumilus*) represent an ancient lineage. L. HAGEMANN, N. GROW, Y. BOHR, D. PERWITASARI-FARAJALLAH, Y. DUMA, S. GURSKY, S. MERKER.
- 5 The ontogeny of sexual size monomorphism in Verreaux's sifaka (*Propithecus verreauxi*). G.L. BUENO, R.J. LEWIS.
- 6 Calibrating primate body mass growth spurts. S.R. LEIGH, J.M. THOMAS.
- 7 Strepsirrhine Ontogeny: Evidence for an Ancestral Male Body Mass Growth Spurt in Lemuriformes. J.M. THOMAS, M.L. SAUTHER, S.R. LEIGH.
- 8 The Ontogeny of Nocturnal Primate Auditory Anatomy. K.P. FRANKLIN, T.D. SMITH, V.B. DELEON.
- 9 Exploring the Evolution of Vocal Range in Non-Human Primates. K.M. MCCOLLUM, K.Q. MAYNARD, S.A. POINDEXTER.

Session 23

**Primateology: Anatomy and physiology**

**Contributed Poster Presentations**

*Chair: Faye Harwell*

Tuscany D, E, F

- 1 **Facial asymmetry, inbreeding, and stress in Cross River gorillas (*Gorilla gorilla diehli*).** A.J. SPIES, H. GLOWACKA, A. ERIKSEN, J.S. MASSEY, M. ARLEGI, Y. HEUZÉ, M.W. TOCHERI, K. MCGRATH.
- 2 **Malar/Fe-malar: Sexual dimorphism of the zygomatic bone among apes.** A. PETTIT.
- 3 **Effects of daily step counts and rest bouts on bone material and structural properties in the femur of three West African primates.** J.N. TRAFF, D.J. DAEGLING, W. MCGRAW.
- 4 **Sex-based differences in the nasal morphology of *Lemur catta*.** J.G. D'ORAZIO, S.A. POINDEXTER.
- 5 **The relationship between dental wear and dental topographic measures in platyrrhine primates.** J.O. AZE, C.E. TERHUNE, C.A. KIRCHHOFF, S.B. COOKE.
- 6 **Dental wear in wild chimpanzees (*Pan troglodytes*): Using *in vivo* photographs to assess molar enamel.** A.J. LAW, B.J. FINKEL, M.A. MALONE.
- 7 **Investigating covariation between hyoid shape and wishboning resistance in an ontogenetic sample of tufted and untufted 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.
- 8 **The Influence of Tail Use and Vertebral Level on Prezygapophyseal Morphology in the Galagid Tail.** L.C. MYERS.
- 9 **Gait kinematics in response to substrate diameter and orientation in wild cercopithecoids.** L.J. SHAPIRO, L.C. MYERS, J. JANISCH, N.M. SCHAPKER, I. BARRY, T. PHELPS, T. HIERONYMUS, J.W. YOUNG.
- 10 **Factors influencing locomotion and mechanical energetics in growing wild sifakas (*Propithecus verreauxi*).** R.E. WUNDERLICH, N. HESLEP, N.A. RAHARINORO, G. NICULESCU, R.R. LAWLER.
- 11 **The energetics of seasonality in captive Coquerel's sifaka (*Propithecus coquereli*) from non-invasive thyroid hormone measurement.** C.M. FARMER, S. HAAS, A. CROWLEY, S. LO, L.R. GESQUIERE, M.T. IRWIN, E.E. GUEVARA. **WITHDRAWN**
- 12 **Cellular immune activity is both costly and energetically constrained during development in an East African monkey.** L. FREEDBERG, E. VOGEL, J. HIGHAM, M. HEISTERMANN, M. CORDS, N. THOMPSON GONZALEZ.
- 13 **Variation in the flexor sheath ridge morphology of primates.** S.N. JOHNSON, J. HAWKS.
- 14 **Sources of Variation in the Semi-Circular canals in Old World Primates.** C. CACCAVARI, B.A. KEELING, R. QUAM.
- 15 **Influence of substrate variation on limb joint kinematics in wild primates.** J. JANISCH, A. MCNAMARA, N.T. DUNHAM, T. PHELPS, L.C. MYERS, N. SCHAPKER, T. WILLARD, L.J. SHAPIRO, J.W. YOUNG.

## FRIDAY, APRIL 21, ALL DAY SESSIONS

- 16 Preliminary study of endocranial variation among gibbons using an open access dataset. Z. COFRAN, J.M. ZICHELO, R. VALENZUELA, C. MENGDEN, D. GARCIA.
- 17 Hormonal and morphological changes during the flanging process in male orangutans. F.S. HARWELL, C.D. KNOTT.
- 18 Hair cortisol levels and gut microbiome alpha diversity in infant rhesus macaques (*Macaca Mulatta*): an exploratory analysis. K. DAIY, K. WILEY, J. ALLEN, M.T. BAILEY, A. DETTMER.

# FRIDAY, APRIL 21, MORNING SESSIONS

## Session 24

### **AAAG/AABA Joint Symposium: Born Which Way?: Biological and Genetic Engagement in Sex, Gender, and Sexuality Research**

#### **Invited Podium Symposium**

*Chair: Christopher A. Schmitt. Co-organizer: L. Zachary DuBois*

Tuscany A-B

The contemporary social and political landscape in the US is fraught for LGBTQIA+ people. While gains have been made in recent decades – small steps towards systemic recognition of sex, gender and sexual diversity including increased access to gender-affirming care, marriage equality, and the striking down of so-called “sodomy laws” restricting same-sex sexual behaviors, to name just a few – have been met with significant backlash. For example, Supreme Court judges seeking to curtail these hard-earned rights, the revival of tropes associating gender and sexuality minorities with pedophilia, and trans-exclusionary radical “feminism” threaten these gains. At the core of many of the rights won, but also of beliefs undergirding prejudice, is biological or genetic essentialism related to traits associated with the bodies and identities of sexual and gender minority (SGM) people. Biologically-focused investigations of traits assumed to be associated with SGM people are often conducted without consulting constituent communities or acknowledging their diversity, and rely on essentialist ideas of how traits develop, influence identity, and play out in one’s life course. As biological anthropologists, we are uniquely placed to investigate these issues using tools from both the biological and social sciences. These traits and their many associated social identities may present very different challenges, but increased reliance on and engagement with essentialist tropes in how our bodies and identities navigate society, medical care, and politics unite us in a shared need to challenge nuanced the (mis)use of essentialist/reductionist biological, genetic, and evolutionary ideas. This symposium brings to the fore this concern, highlighting the limits of essentialist arguments with respect to the biology implicated in our identities, and points to ways forward toward new pathways integrating the biological in research inclusive of SGM people.

- 8:00 am **The mosaic framework of sex/gender.** D. JOEL.
- 8:15 am **Genetic complexities of sex chromosome evolution.** M.A. WILSON.
- 8:30 am **‘Genetic architecture’ differences between sexes can be confounded by gendered effects.** M. MIYAGI, S.S. RICHARDSON.
- 8:45 am **The Role of Genetic Essentialism and Behavioral Genetic Data in Sexual Identity Construction.** A. BORSA.
- 9:00 am **Did I Shave My Legs for This? Ecologies of Settler Sex and Kinship on the Texas Blackland Prairies.** R.W. SMITH, R.G. NELSON, A.W. REYNOLDS.
- 9:15 am **Sexual Configurations Theory and Biology Beyond Biologisms.** S.M. VAN ANDERS.
- 9:30 am **Discussant: Sari M. van Anders.**

## Session 25

**A century of Sir Arthur Keith's stages of hominoid evolution****Invited Podium Symposium***Chair: Scott A. Williams. Co-organizer: Thomas Cody Prang***Tuscany A-B**

100 years ago, Sir Arthur Keith (1923) published a highly influential paper on posture, locomotion, and human origins called "Man's posture: Its evolution and disorders." It consists of the transcripts of six lectures presented at the Royal College of Surgeons that are printed non-concurrently in a single issue of *The British Medical Journal*. Keith covers human posture and anatomy in a comparative evolutionary framework of extant primates. In the near absence of a hominin fossil record (the Taung child was not discovered until 1924), Keith formulated stages of hominoid evolution based on the morphology and positional behavior of living hominoids. Building on his previous work correlating primate morphology and positional behavior, Keith proposed that "orthograde" apes evolved from earlier, "pronograde" forms similar to living monkeys. He proposed three main stages of hominoid evolution: a small-bodied "hylobatian" stage (named for gibbons), a large-bodied "trogloidytiar" stage (named for chimpanzees), and a terrestrial "plantigrade" stage (named for humans and their fossil ancestors). In this symposium, we revisit Keith's model in light of the burgeoning fossil record of hominins and Miocene apes and modern approaches of studying phenotypic evolution. Additionally, we offer insights into the historical circumstances that motivated Keith and influenced his perspectives on human evolution. Today, many researchers dismiss Keith's model as one based on a limited knowledge of living apes, thus devoid of key information provided by fossils. While that is certainly true to some degree, little evidence has been offered that directly counters Keith's model. With an abundance of behavioral, genetic, physiological, and morphological data to bear, the extant apes remain a rich source of information about our origins and that of our closest relatives. This symposium is not a tribute or memorial to Keith; rather, it is a critical evaluation of his influential hypotheses in light of current knowledge.

10:00 am **Arthur Keith's changing views about early hominins.** B.A. WOOD, P. MADISON.

10:15 am **Additional ape postcranial material from Napudet (Middle Miocene, Kenya) and its bearing on hominoid locomotor evolution.** G.A. RUSSO, T.C. PRANG, F. MCGECHIE, S. KUO, C.V. WARD.

10:30 am **Whole-bone shape variation of the manual third proximal phalanx in anthropoid primates.** D.M. GOLDSTEIN, C.M. HARPER, B.A. PATEL.

10:45 am **Testing Keith's stages of hominoid locomotor evolution using Miocene ape post-crania.** S.A. WILLIAMS, X. WANG, M.V. AVILEZ, M.V. GIRALDO, J.K. SPEAR, J. EYRE, T.C. PRANG.

11:00 am **Contingency, adaptation, and the evolution of heel strike plantigrady.** T.C. PRANG.

11:15 am **Life among the trees? Sir Arthur Keith's 'plantigrade stage' in the *Homo habilis* hand (OH 7) and foot (OH 8) remains.** T.L. KIVELL, Z.J. TSEGAI, E.E. BIRD, C.J. DUNMORE, S.M. SYEDA, M.M. SKINNER.

# FRIDAY, APRIL 21, MORNING SESSIONS

- 11:30 am How has Keith's multi-stage model performed in light of experimental data on locomotor mechanics in monkeys and apes? D. SCHMITT, R.E. WUNDERLICH, K.G. HATALA, A. ZEININGER.
- 11:45 am From "Brachiationist" to "Extended Limb Clambering." Extant and extinct positional behavior and the origin of hominin bipedalism. D.R. BEGUN, M. BÖHME.

## Session 26

### Functional Anatomy: Skeletal biology and development

#### Contributed Podium Presentations

Chair: Valerie DeLeon

Tuscany 1

- 9:00 am Rethinking cranial base angle in light of primate ontogeny. V.B. DELEON, K.P. FRANKLIN, E.R. BRYSON, A.S. CUNNINGHAM, S.A. SUMMERS, T.D. SMITH.
- 9:15 am Correlations of cortical and trabecular bone across ontogeny in *Pan troglodytes*. M.N. COSMAN, M.J. DEVLIN, L.M. MACLATCHY.
- 9:30 am Mammalian trabecular bone patterns in relation to environmental variables. A.J. RAGNI.
- 9:45 am Assessment of Local Variation in Age-Related Cortical Expansion of Human Long Bones. G.J. WEHRMAN, A. GOODING, A. SYLVESTER, D. STEADMAN, B. AUERBACH.
- 10:00 am Space invaders: a reassessment and detailed histology of hyperostosis frontalis interna. R.T. HOGG, T.D. SMITH.
- 10:15 am Genetic basis of evolutionary constraints: heritability and genotypic covariation in the macaque vertebral column. C.I. VILLAMIL, E.R. MIDDLETON.
- 10:30 am Integration in the limbs of suspensory primates. J.K. SPEAR.
- 10:45 am Evolvability and Morphological Integration Among the Human Basicranium, Limb Girdles, and Limb Segments. E.R. AGOSTO, K.R. SAVELL, B.M. AUERBACH.
- 11:00 am Modularity in the cranium of *Macaca fascicularis*. T.M. COLE III.

# FRIDAY, APRIL 21, MORNING SESSIONS

## Session 27

### **Bioarchaeology: Demography, identity, and risk**

#### **Contributed Podium Presentations**

*Chair: Lauren Meckel*

Tuscany 3

- 8:00 am Improving the method for non-adult sex estimation using the auricular surface of the ilium in Medieval individuals from Sardinia (Italy). A. SANTOS, C. ROGGIO, C. ARANDA, Á. MONGE CALLEJA, M. MILANESE, L. LUNA.
- 8:15 am Differential adult mortality risk from late medieval to early modern Berlin: Health consequences at the intersection of urban growth and climate change. E.J. BRENNAN.
- 8:30 am Differentials in Morbidity and Mortality in Medieval Ireland. A.C. HAM.
- 8:45 am New Tricks, Old Bones: Reassessing Assigned Sex at Birth Estimations of the Erie County Poorhouse Cemetery using MorphoPASSE. J.F. BYRNES, S.E. MIRABAL TORRES, L.J. JOHNSON, S.L. HORSLEY, T.M. FLAHERTY, D. LOPEZ.
- 9:00 am Age differentiation in the mortuary rites of early Saxon Great Chesterford. S.R. ZAKRZEWSKI, A. SCHMIDT.
- 9:15 am Hidden in Plain Text: Using history to uncover heterogeneity in frailty. M. CLARK, D. GUATELLI-STEINBERG, M. HUBBE.
- 9:30 am Living at the Intersections at Lisht. A.C. CAINE.
- 9:45 am BREAK.
- 10:00 am An intersectional Bayesian analysis of respiratory mortality in industrializing England. D.A. BOYD.
- 10:15 am Fisher-forager mortuary complexity during the African Humid Period: the view from Lothagam Lokam, Kenya. E. SAWCHUK, S. GOLDSTEIN, K. CHRITZ, L. HARRINGTON, D. CALDWELL, E. BETZ, C. CHEPKORIR, E.P. WILSON, A. JANZEN, E. NDIEMA, K. GRILLO, E. HILDEBRAND.
- 10:30 am Health and inequality during the Hellenistic Period in central Anatolia. C.P. ANDERSON.
- 10:45 am Unclaimed Identities: Bioarchaeological analyses on a commingled assemblage from a Second World War context in Berlin, Germany. E.D. PETITI, S.P. POLLOCK, J.D. GRESKY.
- 11:00 am Postmarital residence in medieval Stręgorzyce, Poland. V. SWENSON, M. PILLOUD, A. SPINEK, K. TUNIA.
- 11:15 am Examining the effect of thermal alteration on histological structures: Implications for histotaphonomic interpretation of skeletal remains. L.A. MECKEL, S.R. MAVROUDAS, J.Z. GOLDSTEIN, S.L. GARZA, T.P. GOCHA.
- 11:30 am Residential Origin and Status at the Inka Site of Saqsaywaman. B.L. TURNER.
- 11:45 am Dearly De-Parted: Using Stable Isotopic Data to Assess the Role of Maya Ancestors in Making Place. A.J. LOCKER.

# FRIDAY, APRIL 21, MORNING SESSIONS

## Session 28

### **Primateology: Investigating environmental impacts on diet, behavior, and conservation**

#### **Contributed Podium Presentations**

*Chair: Allegra DePasquale*

Tuscany 9

- 8:00 am **Death in the forest: Quantifying predator density in a fragmented rainforest in Costa Rica.** L.M. BOLT, L.S. BRANDT, A.L. SCHREIER.
- 8:15 am **Orangutan gut microbiomes across temporal changes in their dietary landscape.** R.S. BRITTAI, E.C. HARRIS, M.A. VAN NOORDWIJK, S. UTAMI ATMOKO, T. MITRA SETIA, A. ZULFA, P. LADY, H. SUN, M. DOMINGUEZ-BELLO, D.J. NAUMENKO, E.R. VOGEL.
- 8:30 am **Picking pithy plants: Criteria for pith selection by a wild frugivorous primate (*Cebus imitator*).** A.N. DEPASQUALE, A. POIRIER, C. VILLALOBOS-SUAREZ, M.A. MAH, A. GUADAMUZ, S. CHEVES-HERNANDEZ, R. LOPEZ-NAVARRO, J.M. ROTHMAN, O. NEVO, A.D. MELIN.
- 8:45 am **A comparison of ethanol concentrations in chimpanzee consumed fruits at lowland and mid-altitude sites.** A.E. MARO, A. SANDEL, R. WITTIG, A.B. BI ZAH, J. MITANI, R. DUDLEY.
- 9:00 am **Daytime Foraging Behavior of Semi-Free Ranging *Lemur catta* at the Lemur Conservation Foundation in Myakka City, Florida.** E. GULLEDGE, L.E. LIGHT, E. PATEL, T. BRANSFORD, T. FISHER.
- 9:15 am **Weathering the storm: long-term implications of red ruffed lemur (*Varecia rubra*) feeding ecology following a tropical cyclone.** L.A. PAIGE, L. SANTINI, D.C. RASAMISOA, M. ANDRIAMAHAIHAVANA, D. GIBSON, J. RAZAFINDRAMANANA, N. VASEY, G. DONATI, T.M. EPPLEY.
- 9:30 am **Investigating the costs and benefits of gregarious foraging.** M. EKANAYAKE-WEBER, N. MATHEW, D. CUNHA, N. PAYEN, V. GRIMM, A. KOENIG.
- 9:45 am **BREAK.**
- 10:00 am **Ecological influences on terrestrial behavior across the primate order.** G.R. ESTRADA.
- 10:15 am **Offspring sex ratios in two Bornean rainforest primate populations.** A.J. MARSHALL.
- 10:30 am **Living in the same space: how two similar congeneric lemurs occupy the same landscape.** T.S. STEFFENS, M.S. RAMSAY, B. ANDRIATSITOHAINA, A.E. COSBY, S.M. LEHMAN, R. RAKOTONDRAVONY, M. RAZAFITSALAMA, H. TEIXEIRA, U. RADESPIEL.
- 10:45 am **Differentiation of ecological niche patterns between sympatric *Eulemurs* spp. in NW Madagascar: Implications for their conservation.** F. MERCADO MALABET, J. RAZAFIMAMPIANDRA, F.T. RANDIMBIARISON, C. CHELL, M.S. RAMSAY, B. ANDRIATSITOHAINA, M. RAZAFITSALAMA, T.S. STEFFENS, S.M. LEHMAN.
- 11:00 am **Spatial patterns of relatedness and dispersal within a fragmented landscape in two species of mouse lemur.** M.S. RAMSAY, B. ANDRIATSITOHAINA, F. KIENE, R. RAKOTONDRAVONY, S.M. LEHMAN, U. RADESPIEL.

# FRIDAY, APRIL 21, MORNING SESSIONS

11:15 am **Aggressive monkeys? Green monkey behaviors inconsistent with human perceptions in Saint Kitts.** S.T. SAIYED, K.M. DORE, L.T. GETTLER.

11:30 am **Culture as an added value metric for chimpanzee conservation.** A.K. KALAN.

11:45 am **Laws of the Land: How cultural and environmental prohibitions affect wild animal harvests in Western Madagascar.** M.M. WACHNUIK, K.E. THOMPSON, C. BORGERSON, P.C. WRIGHT, J.M. RANDRIAMANETSY, Y.M. ANDRIANANTENAINA, M.N. ANDRIAMAVOSOLOARISOA, T.A. RAZAFINDRAHASY, R.S. ROTHMAN, C. SURKIS, R.J. BANKOFF, K.C. TWISS.

## Session 29

### Human Evolutionary Biomechanics: Past, Present, and Future

#### Invited Poster Symposium

*Chair: Steven G. Lautzenheiser. Co-organizer: Michael A. Berthaume*  
Tuscany 8

Over several decades, the synthesis of anthropology and engineering has produced many advancements in both the private sector and in academia. This multidisciplinary work led to the creation of the anthroengineering field. Within biological anthropology, anthroengineers apply this transdisciplinary approach to investigate questions regarding human and non-human primate evolution and adaptation. The application of anthroengineering techniques has already enhanced our understanding of primate locomotion and diet, yet anthroengineering is still in its infancy. We are just starting to realize the full potential of addressing questions within anthropology utilizing the anthroengineering approach. This symposium serves two purposes: to highlight what is an anthroengineering approach when addressing evolutionary questions and spotlight how anthroengineering can be utilized to investigate questions that fall outside of traditional musculoskeletal biomechanics. Additionally, we seek to continue to expand on the foundational biomechanical work within biological anthropology by discussing how to move into the future and challenge the traditional approaches to evolutionary questions.

- 1 **Influences of turning on muscle forces of the foot and ankle.** S.G. LAUTZENHEISER, A.D. SYLVESTER, P.A. KRAMER.
- 2 **Implications of variability in triceps surae muscle volume on joint reaction forces at the knee and ankle.** C.M. HARPER, A.D. SYLVESTER, P.A. KRAMER.
- 3 **Dynamic simulation of macaque jaw mechanics during a complete power stroke of mastication.** O. PANAGIOTOPOULOU, D. ROBINSON, J. IRIARTE-DIAZ, A.B. TAYLOR, C. ROSS.
- 4 **The effect of longitudinal femoral and tibial curvature on the kinematics of locomotion in steep terrain.** M. MACKINNON, T. CARSWELL, J.W. GILES, A. MURRAY.
- 5 **Turn of the Tidemark: Transitional Properties at Tendon Attachment Sites.** H.D. BHRAMDAT, D.J. DAEGLING.
- 6 **Hip width and metabolic energy expenditure of abductor muscles.** P.A. KRAMER, A.D. SYLVESTER.

## FRIDAY, APRIL 21, MORNING SESSIONS

- 7 **Achieving kinematic identity across morphological diversity in musculoskeletal modeling.**  
A.D. SYLVESTER, P.A. KRAMER.
- 8 **Modeling mechanical advantage from fossils: What are we missing?** M.A. HOLMES, A.B. TAYLOR.
- 9 **Anthroengineering and the human nose: Investigating climatic adaptation using 3D morphometrics and computational fluid dynamics.** L.A. WARD, H.A. PATABENDIGE, V.C. NAIR, R. MITCHELL, E.O. CHO, T.R. YOKLEY, B.H. DENNIS, S.D. MADDUX.
- 10 **The primate feeding system does not optimize energetic expenditure.** M.F. LAIRD, M.C. GRANATOSKY, C. KANNO, C.E. WALL, J. DE OLIVEIRA, C.F. ROSS.
- 11 **Examining the complex interaction of the human gluteus maximus and hamstrings during hip extension using biomechanical parameters: an investigation into climbing as a possible selective pressure for hominins.** R. DIAS, A. MURRAY, J.W. GILES, H. KURKI.
- 12 **Investigating the intersection between bone signaling, exercise, and biomechanics post injury.** K.N. RABEY, S. WU, S. DUIA, E. MOORE, M.W. CURRAN, K. CHAN, C.A. WEBBER.
- 13 **A theoretical framework for tracking evolutionary changes in optimal dental function.**  
M.A. BERTHAUME.
- 14 **How reliable are musculoskeletal models from fossil remains with badly-preserved femora?: An assessment using artificially damaged subject-specific MSk models.**  
A.A. MURRAY, N. KARMEL, P. SILVESTROS, J.W. GILES.

# FRIDAY, APRIL 21, AFTERNOON SESSIONS

## Session 30

### **Toward a holistic approach - Investigating the genetic underpinnings of phenotypic variation**

#### **Invited Podium Symposium**

*Chair: Dori E. Kenessey. Co-organizer: Kamar Afra*

**Tuscany A-B**

Technological advancements in genetic sequencing have allowed researchers to tackle comprehensive investigations of the genetic underpinnings of human phenotypic variation. Genotype-phenotype mapping is an emerging avenue of research in the field of biological anthropology that aims to identify genetic variants that shape the diverse anthropological phenotypes used to capture human variation. This approach is an interdisciplinary endeavor that integrates molecular methods, anthropological theory, and phenotypic variation to achieve a holistic understanding of the traits routinely utilized by anthropologists to address various research questions. Due to the diversity of phenotypes being investigated and the novelty of this research avenue in the context of biological anthropology, there has yet to be a formal platform where researchers can come together, engage in dialogues, demonstrate unique methodological approaches, and share findings. The goal of this symposium is to provide a forum where researchers specializing in genotype-phenotype mapping can review current efforts in this realm and outline future directions. The panel of authors invited to participate in this symposium study a range of traits to better understand different facets of human variation, including skeletal phenotypes, biocultural constructs, environmental adaptations, and disease manifestations. The Session will also highlight how various social, cultural, and environmental factors may affect the genotype-phenotype relationship and explore methodological and theoretical foundations underlying genotype-phenotype mapping. The incorporation of a biocultural approach into this research endeavor is crucial to guarantee the delivery of a comprehensive synthesis of genetic and phenotypic variation that biological anthropologists examine ubiquitously.

- 2:30 pm** **A cost-effective way to conduct genotype-phenotype studies.** K. AFRA.
- 2:45 pm** **Considering the impact of somatic mutations on cranial structures.** B.T. NEW, K.E. STULL.
- 3:00 pm** **Understanding the genetic relationships between height and skeletal endophenotypes in UK Biobank South Asian participants.** C.C. CATALDO-RAMIREZ, M. LIN, T.D. WEAVER, B.M. HENN.
- 3:15 pm** **Effects of culture, environment and ancestry on stature in Early Neolithic Europe.** S.L. COX, N. NICKLISCH, K.W. ALT, W. HAAK, E. ROSENSTOCK, I. MATHIESON.
- 3:30 pm** **Exploring complexities in human pigmentation genotype-phenotype relationships.** H.L. NORTON.
- 3:45 pm** **Rethinking genotype-phenotype mapping: hair as a case study.** T. LASISI, A. ZAIDI, N.G. JABLONSKI, M.D. SHRIVER.
- 4:00 pm** **The genetic architecture of modern human dental and face morphology: new insights from admixed Latin American.** M. FUENTES-GUAJARDO, B. BONFANTE, Q. LI, G. YANG, Y. CHEN, D. BENÍTEZ, H. LUO, C. ZANOLLI, P. FAUX, K. ADHIKARI, M. DELGADO, A. RUIZ-LINARES.

## FRIDAY, APRIL 21, AFTERNOON SESSIONS

- 4:15 pm **Pleiotropy: What tooth morphology may reveal about the human immune system.** L.J. HLUSKO, D.E. KENESSEY, M.G. MCNELIS, G. SCOTT.
- 4:30 pm **The pernicious anemia cohort study: identifying differences in a heterogenous presenting disease.** B. MORRIS, K.R. AHMADI, A.W. REYNOLDS.
- 4:45 pm **Investigating genetic factors associated with preeclampsia among pregnant families in the Peruvian Andes.** M.A. NIEVES-COLÓN, K.M. BADILLO RIVERA, K. SANDOVAL MENDOZA, V. VILLANUEVA DÁVALOS, L.E. ENRIQUEZ LENCINAS, J. MENDOZA-REVILLA, K. ADHIKARI, R. GONZÁLEZ-BUENFIL, J.W. CHEN, E.T. ZHANG, A. SOCKELL, P. ORTIZ-TELLO, G.M. HURTADO, R. CONDORI SALAS, R. CEBRECOS, J.C. MANZANEDA CHOQUE, F.P. MANZANEDA CHOQUE, G.P. YÁBAR PILCO, E. RAWLS, S. HUNTSMAN, E. GONZÁLEZ BURCHARD, A. RUIZ-LINARES, R. GONZÁLEZ-JOSÉ, G. POLETTI, C. GALLO, C.D. BUSTAMANTE, J.C. BAKER, C.R. GIGNOUX, G.L. WOJCIC, A. MORENO-ESTRADA.
- 5:00 pm **Leveraging genomic signals of natural selection to identify genotype-phenotype associations in Andean highlanders.** K.C. JORGENSEN, M. KIYAMU, G. ELÍAS, J. ISHERWOOD, O.A. GARCIA, K. EVANS, M. INCLAN, F.S. LEE, M. RIVERA-CHIRA, F. LEON-VELARDE, M. SHRIVER, L. PEARSON, T.D. BRUTSAERT, A.W. BIGHAM.
- 5:15 pm **Genetic ancestry testing within an Afro-Puerto Rican community: Expressions of cultural identity, race, and resistance.** J. BENN TORRES, G. TORRES COLÓN.
- 5:30 pm **Testing for divergent selection on complex traits in humans: challenges and opportunities.** A.A. ZAIDI, J. HUANG, M. SHRIVER.
- 5:45 pm **Discussant: Charles C. Roseman.**

### Session 31

#### HBA/AABA Joint Session: Human Biology: Adaptation across contexts

##### Contributed Podium Presentations

*Chair: Delaney Glass*

Tuscany 1

- 2:15 pm **Stages? don't forget ages: Modeling cortisol-testosterone coupling across early to mid-pubertal ages among Indigenous Qom girls.** D.J. GLASS, M.K. CORLEY, J. GODWIN, E. BEZ, E. BRINDLE, C.R. VALEGGIA, M.A. MARTIN.
- 2:30 pm **The costs of women's work: maternal foraging energetics in an acorn subsistence economy.** A.M. GREENWALD, A. NICLOU, G.R. BURNS, H. KIEVMAN, A. BAKA, A. BAIDE, C. COBOCK.
- 2:45 pm **The metabolic allostatic response to stress (MARS) hypothesis: patterns from studies of human and non-human primate metabolic adaptation to cold stress and other stressors.** S.B. LEVY.
- 3:00 pm **Oxygen transport phenotypes and the adaptive modes of Andean versus Tibetan highland native populations.** T.S. HARMAN, P.K. HOLMSTRÖM, K.C. JORGENSEN, A. KALKER, M. KIYAMU, K.T. ZHU, T.A. DAY, A.W. BIGHAM, T.D. BRUTSAERT.
- 3:15 pm **Comparative analysis of dietary intake and body composition among two ethnically distinct tribal populations from India.** S. GHOSH.

## FRIDAY, APRIL 21, AFTERNOON SESSIONS

- 3:30 pm Diet shift and plant toxins in hominid evolution: evidence from cytochrome P450 and *Tas2r* genes. R. SULLIVAN, E. HAGEN.
- 3:45 pm Companion dogs as a model for the impact of social relationships on stress and fitness. K.C. SMITH.

### Session 32

#### Bioarchaeology: Tales from the teeth

##### Contributed Podium Presentations

*Chair: Albert Zink*

Tuscany 1

- 4:15 pm The lived experiences of juveniles at Early Bronze Age Karataş-Semayük as identified through dental stress markers. C.M. TRENT, D.M. ADAMS, A. BÜYÜKKARAKAYA.
- 4:30 pm Oral Disease at Al-Qinifab, Sudan: Reassessing the Saso and Kondo (2019) Method. J.R. STAMER, B.J. BAKER.
- 4:45 pm Better Defining the Uluzzian: Proteomics and Radiocarbon Dating on a Middle- to Upper-Paleolithic Faunal Assemblage from Grotta del Cavallo, Apulia, Italy. M. MCCARTY, F. BOSCHIN, A. MORONI, A. OERTLE, D. CHIVALL, L. SPINDLER, P. DITCHFIELD, K. DOUKA, T. HIGHAM.
- 5:00 pm Biomolecular approaches to the ancestry, ecology and relatedness of the cannibalised human remains from Gough's Cave (UK). W.A. MARSH, S.M. BELLO, S. BRACE, O.E. CRAIG, I. BARNES.
- 5:15 pm Quantifying the effects of urbanization on ancient Georgian populations with the oral microbiome. S. WRIGHT, L. WEYRICH, M. CHKADUA.
- 5:30 pm Oral Microbiome Indicators of Systemic Disease Associated Frailty In Ancient Britain: A Paleoepidemiological Approach. A.S. GANCZ, L.S. WEYRICH.
- 5:45 pm Ötzi, the Iceman - new insights into health, diet and disease of the 5300-year-old glacier mummy. A.R. ZINK.

### Session 33

#### Forensic Anthropology: Methods, perspectives, and future directions

##### Contributed Podium Presentations

*Chair: Teresa Wilson*

Tuscany 3

- 2:30 pm An Examination of NAGPRA within the Illinois Medicolegal System. A.Y. REICH, K.L. KRUPA.
- 2:45 pm Reliability of three-dimensional computed tomography (3DCT) in sex estimation by obtaining population-specific data from the skull of an African population. O.O. UJADDUGHE, O.I. OLATEJU, M.A. BIDMOS.

## FRIDAY, APRIL 21, AFTERNOON SESSIONS

- 3:00 pm Biocultural forensic anthropology: A bioarchaeological approach to understanding inequality and vulnerability in long-term unidentified persons. T.V. WILSON.
- 3:15 pm Exploring the effects of diabetes mellitus on isotopic ratios. J. BAIDE, N.P. HERRMANN.
- 3:30 pm Profile likelihood estimation of stature from humerus and radius length. L.W. KONIGSBERG, S.R. FRANKENBERG, C.B. RUFF.
- 3:45 pm Intersectional Forensic Anthropology: Moving Towards an Equitable Ethical Framework. S.M. ROSEN.
- 4:00 pm The impact of a non-binary sex estimation on accuracy of males and females. E. SIERRA-SERRANO, S. REID, J. ALBANESE.
- 4:15 pm Deep learning empowers fine-grained population affinity estimation with cranio-metric data. X. LIU, J. PANG.
- 4:30 pm Understanding childhood growth: A pilot study of facial soft tissue thicknesses and body mass relationships in children aged 13 – 17 years. T.T. HONA, C.N. STEPHAN.
- 4:45 pm Investigating identification disparities in forensic anthropology casework. C.E. HUGHES, A. YIM, C.A. JUAREZ, J. SERVELLO, R. THOMAS, N. PASSALACQUA, A. SOLER.
- 5:00 pm Analyzing interrater reliability using the Refined Classification system for Thermally Damaged Human Remains by Body segment. C. JUAREZ, E. POPE, A. GALLOWAY.
- 5:15 pm Keep Calm and Carrion: A Re-evaluation of Scavenging Patterns in the Western United States and Implications for Search Structure in Medicolegal Investigations. C.D. COLLINS.
- 5:30 pm A Preliminary Investigation into the Effects of *Lucilia sericata* (Meigen) Blow Fly Larval Feeding on Sharp Force Trauma (SFT) Wound Patterns in Decomposing Bones of *Sus scrofa domesticus*. E.L. KLAFEHN, A. CORTHALS, J. ROSATI.
- 5:45 pm The Postmortem Agency of Undocumented Migrants: Potential Risks with Applying a Structural Vulnerability Framework. D. LOPEZ, J.F. BYRNES.

### Session 34

#### **Paleoanthropology: Reconstructing environments and behavior**

##### **Contributed Podium Presentations**

*Chair: W. Andrew Barr*

Tuscany 9

- 2:30 pm Utility of African Herbivore Community Enamel Isotopes for Reconstructing Paleoenvironments: Challenges and Opportunities. A.L. NORWOOD, B. WANG, J.D. KINGSTON.
- 2:45 pm Problems with *Paranthropus*. M. SPONHEIMER.
- 3:00 pm Evolution of *Paranthropus robustus* upper fourth premolars from Swartkrans in association with aridification and a more mechanically challenging diet across time. M.C. O'HARA, S. CHAPPLE, M. HUBBE, P. MAHONEY, W.S. MCGRAW, G.T. SCHWARTZ, M.M. SKINNER, D. GUATELLI-STEINBERG.

## FRIDAY, APRIL 21, AFTERNOON SESSIONS

- 3:15 pm Oxygen isotopes in herbivore enamel reveal Terminal Pleistocene mesic grasslands in northern Malawi: implications for forager territoriality. A. BERTACCHI, S.H. AMBROSE, J.A. WOSTBROCK, J.C. THOMPSON, P. KALIBA.
- 3:30 pm A context for connectivity: Stable isotope insights to late Pleistocene and early Holocene habitat heterogeneity in eastern and southern Africa. J.R. ROBINSON.
- 3:45 pm Blinded by the rift? Exploring the limitations of hominin habitat reconstructions based on spatially restricted species occurrences. W. BARR.
- 4:00 pm Zambian large mammal stable isotopes show dietary flexibility at high trophic levels: implications for the Pleistocene hominin niche. A. VILLASEÑOR, L.K. DELEZENE, T.K. NALLEY, J.M. MUSEBA, A.L. RECTOR.
- 4:15 pm The Time Has Come: Revisiting the South African Plio-Pleistocene faunal record. M.G. MALHERBE, M. HAEUSLER, D. STYNDER, R. PICKERING.
- 4:30 pm Wild Baboon Early Life Diets: Insights from Trace Elements in Teeth. T.M. SMITH, M. ARORA, M. BHARATIYA, W. DIRKS, S. MCGRAW, C. AUSTIN.
- 4:45 pm Habitat acoustics and the evolution of human auditory sensitivity. N.J. DOMINY, S.M. KIVAI, H. TER HOFSTEDE.
- 5:00 pm A possible connection between Gravettian populations north and south of the Alps: the Venus from Willendorf. G.W. WEBER, A. LUKENEDER, M. HARZHAUSER, P. MITTEROECKER, L. WURM, L. HOLLAUS, S. KAINZ, F. HAACK, W. ANTL-WEISER, A. KERN.

### Session 35

#### **Un-presentations: Translating Biological Anthropology Research via Creative Expression**

##### **Invited Poster Symposium**

*Chair: Michelle Bezanson. Co-organizers: Jessica F. Brinkworth, Negin Valizadegan*  
Tuscany 8

Biological Anthropologists are implementing creative pedagogical methods including ungrading, the unessay, and other nontraditional assessment instruments. These tools allow flexibility with learning styles and are more engaging than the typical academic essay or term paper. We believe that professional biological anthropologists can effectively communicate their research at conferences following the unessay paradigm. In this Session, participants will present their work in various artistic forms with the aim of effectively communicating their research questions, methods, and findings with minimal use of traditional presentation techniques. For example, a researcher may opt to present their work via an entirely graphical poster (with separate script for e-reading), choreography, visual or fiber arts, photography, culinary arts or any other means of artistic expression. Presenters will provide a short "artist statement" with their work, explaining their research and pedagogical approach. The goal is to increase accessibility and presentation impact by sharing content creatively and in a nontraditional format.

# FRIDAY, APRIL 21, AFTERNOON SESSIONS

Discussant: Briana Pobiner.

- 1 **How (not!) to perpetuate biological race in paleoanthropology.** S. ATHREYA, R.R. ACKERMANN.
- 2 **Eat to Move, Move to Eat: A Graphic Non-Fiction Novel.** M. BEZANSON, A. MCNAMARA.
- 3 **Transmigrations: Fiber art modeling of neutrophil evolution in primates.** J.F. BRINKWORTH.
- 4 **Illustrating Allen and Bergmann's Rules: Challenges and Pitfalls.** L.W. COWGILL.
- 5 **The cultural landscape of *Homo naledi*.** A. FUENTES, J. HAWKS, L. BERGER.
- 6 **Ditch the Gravitas and Build the Communitas: Adaptive Approaches to Public Engagement.** K. HINDE.
- 7 **The Evolution of Technology: the evidence from "tools for other tools".** M. KISSEL, J. FRENCH.
- 8 **Photogrammetric Documentation of Sheep Eater Writings in the Frank Church River of No Return Wilderness visualized in Virtual Reality.** B. MALEY, J. HILL, W. BRUNETTE, B. ZUCKERMAN, M. ZEDALIS.
- 9 **Sniffing out the difference: intraspecific variation in nasal cavity morphology.** A.M. EMMONS, M. ROMANO, S.A. POINDEXTER.
- 10 **Exploring science with the preschool crowd: A mixed-media approach.** A.B. TAYLOR, M.A. HOLMES.
- 11 **To See, or Not to See: Photo-Haiga and Early Hominin Diets.** M.F. TEAFORD.
- 12 **Residents of the Blood Hotel can Affect Primates' Sensitivity to their Environment.** N. VALIZADEGAN, D. CERMAK, M. BEZANSON, C. LUTZ, J. POLLOCK, E.K. MALLOTT, J.F. BRINKWORTH.

# SATURDAY, APRIL 22, ALL DAY SESSIONS

## Session 36

### Paleoanthropology: Paleoecology and hominin behavior

#### Contributed Poster Presentations

Chair: Magdalena Palisson

Tuscany D, E, F

- 1 First Steps to Fossil Site Prediction in South Africa: Exploring Multispectral and Digital Elevation Data. M.J. FURTNER.
- 2 Faunal community composition across varied paleoenvironmental contexts. K.L. KOSKI, M. KELLY, S. MAVUSO, F. FORREST, D.R. BRAUN, E. NDIEMA.
- 3 Paleoenvironmental Reconstruction of the Okote, KBS and Upper Burgi Members of Koobi Fora Formation Via Ecomorphology of Bovid Distal Metapodials. M. PALISSON, M.G. MALHERBE, F. FORREST, F.I. MARTÍNEZ, D.R. BRAUN, E. NDIEMA.
- 4 Stable isotopes in fossil hominine dental enamel from Ravin de la Pluie and Çorakyerler suggest differences in diet and habitat. L.M. VAMOS, U.G. WORTMANN, H. LI, A. SEVIM EROL, G. KOUFOS, D.R. BEGUN.
- 5 Enamel stable oxygen isotopes reconstruct precipitation changes and depositional environment variation in the Turkana Basin. M. KELLY, K. KOSKI, S. MAVUSO, D.R. BRAUN, Z. ALEMSEGED.
- 6 Palaeoecological and climatic evaluations during the Middle-to-Upper Palaeolithic transition in the Italian Peninsula through stable isotopic analysis. M. ROMBONI, M.F. ROLFO, G. BOSCHIAN, D. MARCHI, S. TOFANELLI.
- 7 Triple oxygen isotopes in modern African ungulates: Implications for paleoecology. E.A. MCGUIRE, I. BINDEMAN, K.L. CHRITZ, S.A. BLUMENTHAL.
- 8 Dietary breadth, biogeography, and resource tracking in early hominins. Y. SEKHAVATI, D.S. STRAIT.
- 9 Cut marks at the BK II site, Olduvai, suggest broadening of extractive technologies during the early Pleistocene. M.J. ARMOUR-CHELU.
- 10 Evidence from refits shows displacement of *Homo naledi* materials in the Dinaledi Chamber, Rising Star Cave, South Africa. D.R. BOLTER, M.C. ELLIOTT, A. KRUGER, J. HAWKS, L.R. BERGER.
- 11 Possible Perimortem Bite Marks On A Neanderthal Cranium. B. PIERSON.
- 12 Big Brain Energy: The Metabolic Contributions of the Gut Microbiome and its Implications for Encephalization in Early *Homo*. H.C. JACOBSON.

# SATURDAY, APRIL 22, ALL DAY SESSIONS

## Session 37

### Education in Biological Anthropology: Approaches, ethics, and engagement

#### Contributed Poster Presentations

*Chair: Michael Rivera*

Tuscany D, E, F

- 1 Assessing the foetal position: Teaching and learning osteology using three-dimensional digital approaches. B.J. SMITH, S.J. WOODLEY, S.E. HALCROW.
- 2 "People with disabilities are left with another layer of complexity": Inclusive design and science communication in college paleobiology and paleoanthropology courses. T. LEPORE, J. LU, L. ARMSTRONG, L.J. HLUSKO.
- 3 Empty graves: Deciphering origins of human anatomical teaching specimens in U.S. institutions and calls for retirement and repatriation. E.J. ADAMS, L.M. DIBOYAN, J.R. GOLIATH.
- 4 Osteological specimens and the human bone trade: An anthropological responsibility. J. BEDARD.
- 5 Democratizing Science is Essential for Countering Emerging Diseases. R. STUMPF.
- 6 Status of African authorship among conservation research output from sub-Saharan Africa: an African perspective. M. TUYISENGE, M.K. O'MALLEY, T.S. STOINSKI, Y. VAN DER HOEK.
- 7 Using visual technologies to develop novel strategies for engaging with communities in paleogenetics. J. ZOLIK, L. POTT, J.L. SANTA CRUZ ALCALÁ, C. MAASS, S. PORTER, M. NIEVES-COLÓN.

## Session 38

### Functional Anatomy: Postcranial functional morphology

#### Contributed Poster Presentations

*Chair: Lumila Menéndez*

Tuscany D, E, F

- 1 Evaluating the effect of using enhanced-contrast microCT imaging to measure in situ cervical morphology: a tamarin case study. N. HOLDEN, T.K. NALLEY, E. FRICANO, N. GRIDER-POTTER.
- 2 Vertebral morphology in the primate post-transitional spine reflects locomotor pattern. A.L. MACHNICKI, P.L. RENO, A.D. SYLVESTER.
- 3 Clavicular length, growth, and dimorphism in hominin evolution. N.M. LAUDICINA, M. CARTMILL.
- 4 Trabecular response to variation in loading environments in the hominoid clavicle. R. SCHWARTZ, H.N. FARRELL, Z. ALEMSEGED.

## SATURDAY, APRIL 22, ALL DAY SESSIONS

- 5 A new three-dimensional musculoskeletal model of the chimpanzee upper body and forelimb. S.G. LARSON, A. SUNDARARAJAN, A. WILLIAMS, N. MAHMOOD, B.R. UMBERGER, M.C. O'NEILL.
- 6 Testing for shape convergence in the primate and carnivoran forearm. C. ORMSBY.
- 7 A 3D geometric morphometric study of the central longitudinal axis of the radius across primates. M.M. DUDAS.
- 8 Understanding the differences in functional capacity of intrinsic hand muscles in *Homo sapiens* and *Pan troglodytes*. N.G. STEER, M.G. FIELDS, E. MACKERETH, K.M. MIDDLETON, C.M. HOLLIDAY, S.P. SULLIVAN, F.R. MCGECHIE, A.B. LAWRENCE, C.V. WARD.
- 9 On the other hand: testing for bilateral asymmetry as a result of hand use in non-human primates. L.A. BOWLAND, L.H. EASON.
- 10 The mechanical contribution of trabecular bone in the MC3 head during knuckle-walking. G.V. CALHOUN, H.D. BHRAMDAT, A.J. RAGNI.
- 11 Morphological variation in strepsirrhine nails. G.K. CARD, S.A. MAIOLINO.
- 12 Ontogenetic biomechanical variation in diaphyseal morphology of the femur and humerus in anthropoid primates. B. ABUFAUR.
- 13 Once an outlier always an outlier? Limb joint articulations' relative distances from the morphological centroid. H. HORBALY, M. HUBBE.
- 14 Behavioral Locomotor Patterns in Relation to Acetabular Shape Variation of African Great Apes. A.L. GOODEN, H.E. MARSH.
- 15 Correlating leaping frequency with primate hip and knee morphology. S.W. IRVINE, A.L. ZHANG, E.J. SARGIS.
- 16 Scaling of femoral and tibial cross-sectional properties with body size in prosimian primates. C.A. KNITT, K.C. HSU, K.L. LEWTON.
- 17 Cortical bone strength properties in the hindlimb of saltatory primates, rodents, and marsupials. K.C. HSU, C.A. KNITT, K.L. LEWTON.
- 18 Assessing the Accuracy of Lower Limb Skeletal Measurements Using External Landmarks from CT Images. M. OCHOA, D.J. SIMON, P.A. KRAMER.
- 19 Phylogenetic signal in the *Pan* talus and medial cuneiform. S.E. FRIESEN, R.P. KNIGGE, L. SCHROEDER, M.W. TOCHERI.
- 20 Effect of exercise, selection, and genetic background on metatarsal cross-sectional geometry in mice. M.G. FIELDS, A.N. SMOLINSKY, C.V. WARD, K.M. MIDDLETON.
- 21 The effects of uneven surfaces on walking biomechanics when barefoot compared to shod. Z.M. APOLITO, N.B. HOLOWKA.
- 22 Comparative perspective on gaze during naturalistic locomotion in humans. A.D. KEMP, K.L. LEWTON.
- 23 An SPHARM Approach to Identifying Locomotor Signals in Middle Miocene Catarrhines from Maboko Island, Kenya. I. THOMPSON, I. ARNEY, B. PERCHALSKI, J. RATKOWSKI, B. BENEFIT, M. MCCROSSIN, L. GONZALES.

Session 39

**Dental Anthropology: Population variation and applications**

**Contributed Poster Presentations**

*Chair: Rebecca George*

Tuscany D, E, F

- 1 Population-specific vs. pooled dental samples: an argument for more generalizable age estimation methods. L.E. CIRILLO.
- 2 Odontometric sexual dimorphism in a U.S. subadult sample. K.A. BROEHL, L.K. CORRON, E.Y. CHU, M.A. PILLOUD, K.E. STULL.
- 3 Central chimpanzees and bonobos exhibit more stress-related dental defects than eastern chimpanzees. J.N. CLARKE, J. ERKENS, S. MACCARON, M. WILLIAMS, E. GILISSEN, K. MCGRATH.
- 4 Canine crown sexual dimorphism in a sample of the modern Croatian population. J. DUMANCIC, G. SCOTT, S. ANIC MILOSEVIC, N. MEDANCIC, H. BRKIC.
- 5 Applicability of Malocclusion Scoring Within the John A. Williams Human Skeletal Collection. S.J. GALLAGHER, R.L. GEORGE.
- 6 Reassessment of accentuated striae counts in deciduous tooth enamel in two Ohio populations of disparate socioeconomic status. K.N. GURIAN, D. CREWS, S. HOLT, M. HUBBE, P. MAHONEY, G. MCFARLANE, A. NAVA, D. GUATELLI-STEINBERG.
- 7 Dental and genomic data in recent global population samples yield corresponding evidence for the Late Pleistocene population diffusion out of Africa. J.D. IRISH, A. MOREZ, L. GIRDLAND FLINK, G. SCOTT.
- 8 3D Analysis of Stress-Related Dental Defects in Neolithic Humans from Liguria, Italy. S. MACCARON, J. CLARKE, E. ORELLANA-GONZÁLEZ, I. DORI, V. SPARACELLO, K. MCGRATH.
- 9 Artificial neural networks to reconstruct missing perikymata in worn teeth. M. MODESTO-MATA, L. DE LA FUENTE VALENTÍN, L. HLUSKO, M. MARTÍNEZ DE PINILLOS, I. TOWLE, C. GARCÍA-CAMPOS, M. MARTINÓN-TORRES, J. BERMÚDEZ DE CASTRO.
- 10 Seasonality in the relationships between fluctuating asymmetry in deciduous teeth and environmental temperature during gestation. E. MOES, H. EDGAR.
- 11 Examining longitudinal patterns of facial size and shape in children with obesity. C.L. NICHOLAS, J. HEDGER, J. CAPLIN, M. GALANG-BOQUIREN, S. ALRAYYES, C. RATZ.
- 12 Global Variation in Fused Premolar and Molar Roots. A.J. PASTORE, G.R. SCOTT.
- 13 Investigating a novel location for assessing dental function and dietary signals at the dental root. Z.R. SIMS.
- 14 Sex estimation from dental crown and cervical metrics in modern global sample. E. SMITH, D. KENESSEY, T. VLEMINCQ-MENDIETA, M. PILLOUD.

# SATURDAY, APRIL 22, ALL DAY SESSIONS

## Session 40

### Human Biology: Demography, health, and disease

#### Contributed Poster Presentations

*Chair: Alexandra Tuggle*

Tuscany D, E, F

- 1 **Impact of high temperatures on leptin enzyme-linked immunoassay (ELISA) results.** V. HARRIES, M. CORLEY, G. ARONSEN, R.G. BRIBIESCAS.
- 2 **Sleep In the Time of COVID-19: College Students Internal and Social Times are Better Aligned under Stay-at-Home Mandates.** A.D. RICE, O. SATHER, K.P. WRIGHT JR, C. VETTER, M.A. MARTIN, H.O. DE LA IGLESIA.
- 3 **Endocranial Shape Change in Culturally Deformed Children's Crania: Impacts on Brain Structures and Vascular Competence.** A.H. SORENSON, Y.S. SHEKEL, M.G. HARNOY, J.K. SANCHEZ, V. HONG, J. PILI, M.K. KLACZYNSKA, E. KLEIN, R.S. JABBOUR, G.D. RICHARDS.
- 4 **Infectious Disease Distribution Across an early 20<sup>th</sup> Century Rural and Urban Divide.** P. PLATTNER, B. COE SCHWEIGER, S.K. SOUTH, A. MAGPIONG, R.G. NELSON, R.W. SMITH, A.W. REYNOLDS.
- 5 **The impacts of state-sanctioned marriage on morbidities and mortalities in the blackland prairies of post-emancipation Texas.** S.K. SOUTH, A. MAGPIONG, P. PLATTNER, B.M. COE SCHWEIGER, R. NELSON, A. REYNOLDS, R.W. SMITH.
- 6 **Climate exposures in utero associate to epigenetic age acceleration in a global climate change hot spot.** X. QIAO, D. NGO, C.E. HILTON, C. OLUNGAH, A. NAUGLE, C. LALANCETTE, B.L. NEEDHAM, B. STRAIGHT.
- 7 **Japan's COVID 19 Infection Rate: How demographic factors affect infection rates.** L.M. KOERNER, L. MADRIGAL.
- 8 **Rural Embodiment and Community Health (REACH) study: Testing associations between environmental exposures and intestinal health in low-resource U.S. communities.** T.E. GILDNER, E.K. MALLOTT, A. ZHANG, S. WAIMON, J.B. THOMAS, K.L. NEMETH, A. SHING, T.J. CEPON-ROBINS.
- 9 **Investigating relationships between immune activity, bone density, and bone turnover: a preliminary biomarker analysis among Indigenous Amazonian Shuar youth.** F.C. MADIMENOS, S.S. URLACHER, G.N. EICK, M.A. LIEBERT, L.S. SUGIYAMA, J. SNODGRASS.
- 10 **Factors Underlying Bony Lesions in a Central California Prehistoric Population: Causative or Reactive Responses to Inflammation and Immune System Activation.** G.A. SELECKY, J.M. CRONIN, S.E. YAWITZ, A.H. SORENSON, R.S. JABBOUR, G.D. RICHARDS.
- 11 **The embodiment of farmwork in disease risk and immune function.** J. SHAW, D. MENDOZA, S. BOLAÑOS-ROBINETTE, D. ROMAN, J. ROMERO, G. ROSAS, K. MALDONADO, E. MOODIE, C. THOMPSON, J. BRINKWORTH.
- 12 **Chronic disease and allostatic load among the Comcáac: An indigenous Mexican population in transition.** A.C. TUGGLE, D.E. CREWS.
- 13 **Demographic and Socioeconomic Trends in U.S. Home-to-Hospital Transfer Integration.** M. AULDS, M. CHEYNEY, M. BOVBJERG, A. VEILE.
- 14 **The ecological and social context of women's hunting in small-scale societies.** J. HOFFMAN, K. FARQUHARSON, V. VENKATARAMAN

# SATURDAY, APRIL 22, ALL DAY SESSIONS

## Session 41

### **Paleoanthropology: Paleobiology beyond hominids**

#### **Contributed Poster Presentations**

*Chair: Nandini Singh*

Tuscany D, E, F

- 1 New and most complete fossil assemblage of early primate *Omomys* from early Bridgerian. J.E. STONE, D.M. BOYER.
- 2 Enamel thickness in the stem hylobatid *Kapi ramnagarensis*. B.A. PATEL, A. DI, K.D. PUGH, A.S. HAMMOND, A. ORTIZ, C.C. GILBERT, C.J. CAMPISANO, R. PATNAIK.
- 3 Paleomagnetic-based age estimates of primates and associated vertebrate fauna from the middle Miocene locality of Ramnagar (Jammu and Kashmir, India). D. CHOUDHARY, C.J. CAMPISANO, C.C. GILBERT, M. ARIF, S.P. SINGH, B.A. PATEL, R. KUMAR, W.A. WAZIR, P. KUMAR, B. PHARTIYAL, R. PATNAIK.
- 4 Preliminary Estimates of Maxillary Canine Sexual Dimorphism in Early Miocene Catarrhines using the Coefficient of Variation (CV) Method. E. MATTHEWS.
- 5 The evolution of primate gestation. C. KUFELDT, M. GRABOWSKI.
- 6 A reassessment of "*Colobus*" *freedmani*. J.L. ARENSON.
- 7 Patterns of Morphological Variation Among Cercopithecoid Fossil Femora. L.H. EASON, L.K. DELEZENE, T.K. NALLEY, A.L. RECTOR, D. GETAHUN, J.M. PLAVCAN.
- 8 Dietary estimation of Plio-Pleistocene cercopithecids using dental functional morphology. H.G. REDA, S.W. SIMPSON, Y. HAILE-SELASSIE, S.R. FROST.
- 9 Domesticated Rats: A Look at Craniofacial Neoteny. N. SINGH, M. SMITH.
- 10 Reconstructing rodent locomotor behaviours using semicircular canal morphology. L. HOU, O.C. BERTRAND, H. MUDANNAYAKE, C. ROLIAN, S. COTE.
- 11 An open-source photogrammetry pipeline for acquiring 3D biological models. C. ZHANG, S. MATHER, A. MAGA.

## Session 42

### **Forensic Anthropology: Perspectives in forensic anthropology**

#### **Contributed Poster Presentations**

*Chair: Allysha Winburn*

Tuscany D, E, F

- 1 Use of Laser-Induced Breakdown Spectrometry (LIBS) in sorting commingled human remains. K. ZEJDLIK, K. LIVINGSTON, G. MEYERS, J.D. BETHARD, M. BAUDELET.
- 2 Standardizing Sample Preparation for Tooth Enamel Carbonate Isotope Analysis. C. STANTIS, K. VEROSTICK, F. SPENCER, L. CHESSON, G. BERG, G.J. BOWEN.

## SATURDAY, APRIL 22, ALL DAY SESSIONS

- 3 Y-chromosome DNA extraction from post-cranial skeletal elements. M.D. WARD.
- 4 Crowd-sourcing resources and solutions to aid forensic anthropologists in identification of transgender and gender-expansive decedents. S.H. BLATT, M.I. ISA, A.R. MICHAEL, T. FLAHERTY.
- 5 How does heat affect cut-marks? An Experimental study of cooked and uncooked bones for taphonomic signatures. P.E. KADALIDA.
- 6 Sex estimation of human skeletal remains: combinations of small, irregular bones produce high probabilities of accuracy. A.S. PANAGEAS, B.J. LEEPER, A.M. BURROWS.
- 7 The Accuracy and Bias of Transition Analysis Age Estimation Priors in Historical and Modern Populations. S.S. RAMCHARAN, A.M. SIMON, L. CABO.
- 8 Exploring the Accessibility and Usability of 3D Reconstruction in Anthropological Contexts. E.L. WIEDENMEYER, P. BANKS.
- 9 The role of posteroanterior left knee radiographs and osteoarthritis in positive identification. T.A. CHOAT, S.D. TALLMAN.
- 10 Comparing computational methodologies for adult skeletal age-estimation: DRNN and the MCP. J. GALIMANY, K.E. STULL, D. NAVEGA.
- 11 Transgender Identification: Gender and Sex Estimation in Forensic Casework. B.J. MARTIN, S.D. TALLMAN.
- 12 Modeling Embodied Social Inequity from Skeletal and Dental Tissues: Presenting the Structural Vulnerability Profile (SVP) and Trait List. K.A. MILLER WOLF, A.P. WINBURN, M.G. MARTEN, E. ROMDENNE, A. SCHWARTZ, C. KIRK.
- 13 Structural Issues in the Criminal Justice System and their impact on Forensic Anthropology. J.A. MITCHELL, C.D. FELLMANN.
- 14 Using FORDISC 3.1 to Estimate Ancestry in a Modern Greek Sample. K. STILES.
- 15 Age-at-death estimation: Accuracy and reliability of common age reporting strategies in forensic anthropology. C. BAILEY, G. VIDOLI.
- 16 Assessing Accuracy of Three Pelvic Age-at-Death Methods. K.E. BENNETT.
- 17 Adapting laboratory techniques developed for the extraction and analyses of ancient DNA for use in the identification of burned forensic remains. C.E. PARKER, E. RAWLS, K.L. BOLHOFNER, L. FULGINITI, R. OLDT, S. WININGEAR, S. KANTHAWAMY, S. GAFOOR, G. VIDOLI, J. DEVLIN, A.C. STONE.
- 18 The effect of cancer on pubic symphysis aging techniques using computed tomography scans. M.N. ALIBRIO, S.D. TALLMAN.
- 19 Osteological analysis and ethical considerations of teaching skeletons in West Virginia. J. BOW, K. HENSON, A. PETTRY.
- 20 A Web Application for Biological Identification from Radiographic Proximal Femur in A Thai Population. P. RATTANACHET, W. PANYARAK, K. WANTANAJITTIKUL, P. CHAROENKWAN, W. SUTTAPAK, P. MAHAKKANUKRAUH.
- 21 Accuracy and Observer Agreement in the Determination of Trauma Timing in Human Ribs. C.M. GODEN, E.T. BRZEZINSKI, A.M. AGNEW, A.L. HARDEN.
- 22 Identifying handsaws from cut marks on bone: A microscopic trait analysis. S.E. PATTERSON, S.S. PUTT.

# SATURDAY, APRIL 22, MORNING SESSIONS

## Session 43

### Human Biology: Growth, development, and bone health

#### Contributed Podium Presentations

*Chair: Benjamin Moss*

Tuscany 1

- 8:00 am Basicranial Sexual Dimorphism Using a Landmark-Based Geometric Morphometric Approach. B.H. MOSS.
- 8:15 am Quantifying Multivariate Human Growth: Using a Gaussian Copula to explore the dependency structure of human growth traits. C.A. WOLFE, K.E. STULL.
- 8:30 am Nonlinear modeling of long bone ontogeny to investigate final adult size. E.Y. CHU, K.E. STULL.
- 8:45 am Investigating bone length and intralimb proportion inheritance in healthy, growing twins from England. M.E. CAMERON, S. DECRAUSAZ, C. WALL-SCHEFFLER, H. KURKI, J.T. STOCK, J.E. WILLIAMS, M.S. FEWTRELL, J.C. WELLS.
- 9:00 am Withdrawn.
- 9:15 am The origin of hip fracture in modern humans: An evolutionary perspective. H. MAY, H.L. AVNI, N. SHVALB, A. POKHOJAEV, J. HUBLIN, F. RÜHLI.
- 9:30 am Changes in Brain Anatomy as a Consequence of Normal Endocranial Shape Variation in Modern Children. S.E. YAWITZ, J.M. CRONIN, C. PHELY-BOBIN, A.H. SORENSON, G.A. SELECKY, E. DAS, H. NAIRN, R.S. JABBOUR, G.D. RICHARDS.

## Session 44

### Human Biology: Stress, disease, and health

#### Contributed Podium Presentations

*Chair: Melanie Martin*

Tuscany 1

- 10:15 am How are Childhood Experiences Associated Variation in Inflammation among Sexual and Gender Minority Young Adults. J.K. GIBB, B. MUSTANSKI, J.M. SCHROCK, T.W. MCDADE.
- 10:30 am Maternal and infant SARS-CoV-2 antibody responses following maternal COVID-19 infection. M.A. MARTIN, M. KEITH, R.M. PACE, J.E. WILLIAMS, S.H. LEY, C. BARBOSA-LEIKER, B. CAFFÉ, C.B. SMITH, A. KUNKLE, K.A. LACKEY, A.D. NAVARRETE, C.D. PACE, A.C. GOGEL, D.T. EISENBERG, B.D. FEHRENKAMP, M.A. MCGUIRE, M.K. MCGUIRE, C.L. MEEHAN, E. BRINDLE.
- 10:45 am Religion/Spirituality has differential effects on CVD risk for Black people over the life course. E.E. GRIFFITH, K.L. BENTLEY-EDWARDS.
- 11:00 am An examination of changes in nationwide preterm birth rates during the early COVID-19 pandemic. Z.P. LEAL, S. LIM, A.L. NON.

## SATURDAY, APRIL 22, MORNING SESSIONS

- 11:15 am Psychological Distress and Dietary Outcomes among Resource Insecure University Students. M.C. KOPELS, C.J. ROULETTE, E.C. SHATTUCK.
- 11:30 am Social transmission of *Blastocystis* spp. in rural Madagascar: disentangling the effect of household, friendship, and close contact networks. T.M. BARRETT, G.C. TITCOMB, M. PENDER, J. RABEZARA, V. SOARIMALALA, R.A. KRAMER, H.S. YOUNG, C.L. NUNN.
- 11:45 am Kin availability and mortality among older adults in nineteenth and early twentieth century Utah and North Orkney, Scotland. J.A. JENNINGS, K.R. SMITH.

### Session 45

#### **Paleoanthropology: Comparative morphology and experimental analyses**

##### **Contributed Podium Presentations**

*Chair: Hannah Farrell*

Tuscany 3

- 8:00 am Ontogenetic shape changes in the hominoid clavicle and the morphology of the *Australopithecus afarensis* juvenile DIK-1-1. H.N. FARRELL, Z. ALEMSEGED.
- 8:15 am Hominoid shoulder ancestral states and evolutionary rates estimated from chronophylomorphospace reconstruction. N.M. YOUNG.
- 8:30 am Assessing morphological correlates of knuckle-walking behavior in hominid taxa based on carpals. L.E. HUNTER, P.A. STAMOS, Z. ALEMSEGED.
- 8:45 am Morphological differentiation of the hands and feet in primates: implications of hind limb dominance. A. ANAYA, R. RAVIER, S. ALMÉCIJA, D.M. BOYER.
- 9:00 am Signals of early hominin postural and locomotor diversity in the structural arrangement of the femoral neck. M. CAZENAVE, T.L. KIVELL, C.J. DUNMORE, M.M. SKINNER.
- 9:15 am Could 'Lucy' stand on an erect limb? Estimations of muscular parameters of the *Australopithecus afarensis* pelvis and lower limb with implications for functional inferences. A.L. WISEMAN, J. CHARLES, J.R. HUTCHINSON.
- 9:30 am BREAK.
- 10:00 am The effects of substrate on human walking footprint trails. D. WEBB, L. ZACHARIAS, K. TRIPP.
- 10:15 am Muscle activity during walking at three degrees of crouch: Implications for approach hunting. M. HORA, M. STRUŠKA, Z. MATĚJOVSKÁ, P. KUBOVÝ, V. SLÁDEK.
- 10:30 am Prenatal growth rates and the evolution of encephalization in hominids. T.A. MONSON, A.P. WEITZ, M.F. BRASIL, L.J. HLUSKO.
- 10:45 am Form and Function in the Neandertal Mandible. B.A. KEELING, R. QUAM.
- 11:00 am The role of stabilizing selection on the evolution of *Homo* cranial morphology. M. HUBBE, K. HARVATI.
- 11:15 am What morphological and genetic data can tell us about hybridization in Late Pleistocene Eurasia. K. HARVATI, R.R. ACKERMANN.

# SATURDAY, APRIL 22, MORNING SESSIONS

- 11:30 am Intraspecific variation and sexual dimorphism in the face of *Australopithecus afarensis*: an allometric perspective. W.H. REDA, P. GUNZ, Z. ALEMSEGED.
- 11:45 am Re-evaluating the behavioral implications of sexual dimorphism in hominins using paternity and group size data in primates. J. PLAVCAN.

## Session 46

### Genetics and Genomics: Ancient biomolecules

#### Contributed Podium Presentations

Chair: Fernando Villanea and Carter Clinton

Tuscany 9

- 8:00 am The dental enamel proteome of *Paranthropus robustus*. P.P. MADUPE, P.L. RÜTHER, C. KOENIG, I. PATRAMANIS, N. HLAZO, M. MACKIE, A. TAUROZZI, M. TAWANE, F. WELKER, L. SCHROEDER, C. ZANOLLI, F. RACIMO, J.V. OLSEN, R.R. ACKERMANN, E. CAPPELLINI.
- 8:15 am The *MUC19* gene in Denisovans, Neanderthals, and Modern Humans: an evolutionary history of recurrent introgression and natural selection. F.A. VILLANEA, D. PEEDE, K.E. WITT, A. FUNK, J.E. SCOTT, V. VILLA-ISLAS, M.C. AVILA-ARCOS, E. HUERTA-SÁNCHEZ.
- 8:30 am The occupational history of Denisova Cave. E.I. ZAVALA, Z. JACOBS, B. VERNOT, M.V. SHUNKOV, M.B. KOZLIKIN, A.P. DEREVIANKO, E. ESSEL, C. DE FILLIPO, S. NAGEL, J. RICHTER, F. ROMAGNE, A. SCHMIDT, B. LI, K. O'GORMAN, V. SLON, J. KELSO, S. PAABO, R.G. ROBERTS, M. MEYER.
- 8:45 am The Evolution of microRNA-regulated Gene Expression Networks in Ancient and Modern Humans. N.H. LENTS, H.R. JOHNSON, J.A. GALVÁN.
- 9:00 am Investigating human migrations and genetic diversity in Northeast India over the last ~4,000 years using ancient genomics. E. BANDYOPADHYAY, C.D. FUENTE, D. WITONSKY, T. JAMIR, D. TETSO, N. RAI, M. RAGHAVAN.
- 9:15 am Paleogenomic insights of ancient Mexico: Genetic origin and sex determination of human remains from the archaeological zone of Cañada de la Virgen. D. OROZCO-PEREZ, V. VILLA-ISLAS, M. NIEVES-COLÓN, M. ÁVILA-ARCOS, R. MONTIEL, G. ZEPEDA GARCÍA MORENO, A. MORENO-ESTRADA, K. SANDOVAL.
- 9:30 am A world between frontiers: evaluating genetic shifts and continuity in past populations from Southern Chile. C.P. DE LA FUENTE, M. ORELLANA, R. CAMPBELL, P. ANDRADE, M. MORAGA, M. RAGHAVAN.
- 9:45 am BREAK.
- 10:00 am Metabolome Analyses of Ancient Bison Dental Calculus. J.J. HAFFNER, S.J. JOHNSON, L. BEMENT, B. BETHKE, C. MIDDLETON, L. MCCALL, C.M. LEWIS.
- 10:15 am Oral microbiomes of ancestral Native American individuals reveal bacterial diversity in the pre-Colonial era. S.J. JOHNSON, C. MONROE, T.P. HONAP, A. LEVENTHAL, M.V. ARELLANO, C.M. LEWIS.
- 10:30 am 16S rRNA Analysis of 17<sup>th</sup> and 18<sup>th</sup> Century New York African Burial Ground soil samples. C. CLINTON, C. ROBINSON, F. JACKSON.

## SATURDAY, APRIL 22, MORNING SESSIONS

- 10:45 am **Oral metagenomes of ancestral Maya individuals from Belize reveal insights into strain diversity and evolutionary histories of oral microbes.** T.P. HONAP, S.J. JOHNSON, P.A. LYNCH, D.J. KENNETT, K.M. PRUFER, C.M. LEWIS, JR.
- 11:00 am **Reconstructing the genetic history of the Late Iron Age “Celtic” groups from north and south of the Alps (4<sup>th</sup> -1<sup>st</sup> century BCE) (CELT.U.D.ALPS).** S. ZINGALE, Z. LAFFRANCHI, A. PALADIN, L. MEISELEDER, S. LÖSCH, G. ARENZ, L. SALZANI, I. DORI, F. MÜLLER, V. HAUSSENER, M. KAESER, G. DELLEY, R. CARDANI VERGANI, L. MOSETTI, V. COIA, M. MILELLA, A. ZINK.
- 11:15 am **Genomic profiling of the Priory Orchard site in Godalming (Surrey, UK, 800-1125 AD).** F. DE ANGELIS, E.A. NELSON, N. BROOMANDKHOSHBAKHT, S. LEGGETT, R. POULTON, T.C. RAE, L. FEHREN-SCHMITZ, L. BETTI, C. G. AMORIM.
- 11:30 am **Genetic variation affecting immune responses to *Y. pestis* during the Black Death.** T.P. VILGALYS, J. KLUNK, C.E. DEMEURE, J. PIZARRO-CERDÁ, H.N. POINAR, L.B. BARREIRO.
- 11:45 am **Humans as reservoirs: Historical microbiomes uncover hidden zoonotic pathways.** K.M. RAYFIELD, K.S. HUGHES, S.B. SHOLTS, C.A. HOFMAN.

### Session 47

#### **Forensic Anthropology as Practiced in the United States: Qualifications, Standards, and Ethical Practice**

##### **Invited Poster Symposium**

*Chair: Marin A. Pilloud. Co-organizers: Nicholas V. Passalacqua,  
Eric J. Bartelink, Melanie Beasley*

##### **Tuscany 8**

The goal of this symposium is to highlight the disciplinary knowledge and expertise required to practice forensic anthropology in the United States through the need for certification, accreditation, and standards. This symposium will bring together experts within these realms in addition to placing at the forefront the need for proper qualifications and ethical practice. Forensic anthropology is an applied discipline of anthropology that is highly specialized and requires training beyond graduate school education. In addition to knowledge of the skeletal system, human variation, and taphonomy, practitioners require advanced training in various technical aspects such as evidence handling, expert witness testimony, legal procedures, field and laboratory documentation, accreditation, bias, and report writing. These qualifications can be demonstrated through certification (e.g., the ABFA, FASE, ALAF) in a process similar to many other professional disciplines in the forensic sciences (e.g., forensic pathologists, forensic odontologists) as well as other disciplines (e.g., chemistry, engineering, medicine). Forensic anthropology practitioners must also be familiar with laboratory procedures, including quality assurance, peer review, traceability, transparency, implementation of standard operating procedures, and confidentiality. Laboratories should strive towards accreditation to ensure proper protocols are followed and enforced, and that the work products of a laboratory meet appropriate standards for quality. There are several organizations creating and implementing standards and best practice documents to provide a baseline for minimum requirements and guidelines to perform forensic

## SATURDAY, APRIL 22, MORNING SESSIONS

anthropology tasks. These include the American Academy of Forensic Sciences Standards Board (an accredited Standards Development Organization) and the Organization of Scientific Area Committees overseen by the Forensic Science Standards Board under NIST. Finally, practitioners should adhere to a preventative ethical code that ensures adequate care of human remains, respect for decedents and next-of-kin, and recognize the inequities inherent in the criminal justice system and academia.

**Panel discussion: Eric Bartelink, Melanie Beasley, Nicholas Passalacqua, & Marin Pilloud.**

- 1 **Evaluating expertise and the importance of credentials within forensic anthropology.** N.V. PASSALACQUA, N. LANGLEY, M.A. PILLOUD, M. TERSIGNI-TARRANT.
- 2 **Consequences of Lack of Qualifications and Unethical Behavior: The Need for Better Science Communication in Forensic Anthropology.** M.M. BEASLEY.
- 3 **Ethics and the American Board of Forensic Anthropology.** M.A. PILLOUD, N.V. PASSALACQUA.
- 4 **Core competencies, certification, and licensure: the future of forensic anthropology practice and education.** N.R. LANGLEY, M.A. TERSIGNI-TARRANT, N.V. PASSALACQUA, C.M. CROWDER, H.M. GARVIN, W. MCQUADE, M. SOTO MARTINEZ, M.A. PILLOUD.
- 5 **Forensic Anthropology within the Federal Bureau of Investigation.** R. THOMAS.
- 6 ***Daubert*: Advancing or constraining forensic anthropology research?** K.M. LESCIOTTO, A.M. CHRISTENSEN.
- 7 **Applied Expertise in Human Osteology: Legal Considerations in the United States.** M.L. CARTER, MD, PHD, R.M. SEIDEMANN, JD, PHD, J.L. NEWMAN, BS, JD, E.A. REEDY, PHD, MD.
- 8 **Medicolegal Death Investigation: Medical Examiners/Coroners, Forensic Pathology, and Collaboration with Forensic Anthropology.** L.D. KNIGHT, M.A. PILLOUD.
- 9 **Theory-laden forensic science: Forensic anthropology's objectivity problem (and what we can do about it).** A.P. WINBURN, C.M. CLEMMONS, S. HARTLEY.
- 10 **Best Practices for the Ethical use of Human Remains for Research and Teaching.** E.J. BARTELINK, N. PASSALACQUA, W. MCQUADE, D. STEADMAN, D. BOYD, K. SPRADLEY, K. SAUERWEIN, R. HO.
- 11 **Building a Forensic Anthropology Program and Postdoctoral Fellowship at WMed: Towards Filling a Critical Gap in Training and Professional Development for the Discipline.** C.M. PINK, J.B. CORNELISON, J.K. JUAREZ, S. PLETKA.
- 12 **Forensic Anthropology Standards: Development, Relevance, and Implementation.** J. FLEISCHMAN, W.E. MCQUADE, E. BARTELINK, J. WIERSEMA.
- 13 **Quality Assurance Practices as a Baseline for Forensic Anthropological Casework.** J.M. WIERSEMA, J.M. FLEISCHMAN, M.E. SOTO MARTINEZ. **WITHDRAWN**
- 14 **Structural and systemic barriers to entry in forensic anthropology: our history and our future.** J.R. GOLIATH, E.B. WAXENBAUM, I. DWYER, T.S. BORGELT.
- 15 **Serving the Dead is Serving the Living: Practices of Community Care for the 1921 Tulsa Race Massacre Victims.** P.R. STUBBLEFIELD, I. DWYER, S. MCCRANE.
- 16 **The Cost of Being Qualified: Current Barriers Faced by Students in Forensic Anthropology.** T.A. DELGADO, R.M. MELORO, R.M. DEPP, K.M. LANE, J.D. HAUG.

## SATURDAY, APRIL 22, MORNING SESSIONS

- 17 Is DEI Doing Enough for Forensic Anthropology? E. TURNER-BYFIELD.
- 18 Beyond the Border: Standards and Methods Towards the Forensic Identification of Undocumented Persons. I.S. DWYER, E. BRYSON, S.A. SUMMERS, A.N. FRIEND.
- 19 Rendering Theory to Practice: Actionable Approaches to Ethics in Digital Human Osteology. A.M. PLEMONS, M.C. SPIROS.
- 20 Looking Forward in Forensic Anthropology: Working to Address Systemic Public Health and Mortality Disparities Across Forensic Contexts and Improve the Human Condition. D.C. BOYD.
- 21 Colonized Knowledge and the WEIRD in Forensic Anthropology and Beyond. N. YUKYI.

# SATURDAY, APRIL 22, AFTERNOON SESSIONS

12:30 PM - 2:15 PM

## **AABA Committee on Diversity, Committee on Community Partnership, & Presidential Panel: Community Engagement in Biological Anthropology**

Tuscany A-B

Biological Anthropology, like most western science, has a long history of taking for granted that 'scientific good' and the 'scientist' are and should be the main factors in determining which projects are conducted, how the work is structured and undertaken, and by whom. We have in the process done both harm and good. Increasingly, community engaged science recognizes both the responsibilities of ethical engagement with communities and the robust possibilities that fostering collaboration and trust with communities offers our discipline. The AABA recognizes the critical importance of engagement with communities in the work conducted by our members as well as the need for shared visions and practices to best facilitate this collaboration. All areas of biological anthropology can benefit from this work with critical areas of engagement including work with aDNA and genomics, primate conservation and primatology, bioarchaeology, forensic anthropology, and paleoanthropology, and human biology, among others. Biological anthropology can present a range of opportunities and benefits for communities, including training opportunities at all educational levels. And community participants can present a range of insights for Biological Anthropology, including the co-creation of aims and outcomes. Community engaged science recognizes that diverse groups (including members of very different perspectives) do better science. This AABA COD, CCP, and Presidential Panel provides an opportunity for panelists and attendees to discuss their experiences, challenges, and successes in community engaged research, while sharing advice and best-practices across a range of scholarly endeavors. We encourage broad-based interaction, sharing, and discussion of community engagement with the panel.

### Session 48

#### **Primateology: Exploring bodily correlates of behavior**

##### **Contributed Podium Presentations**

*Chair: Lauren Sarringhaus*

Tuscany 1

- 2:15 pm **The ups and downs of vertical climbing in *Pan troglodytes*.** L. SARRINGHAUS, B. MURRAY, M. SRIKANTH, L. MACLATCHY.
- 2:30 pm **Effects of height in the canopy on gait mechanics in wild lemurs.** N.M. SCHAPKER, A. HOTTENSMITH, J. JANISCH, L.C. MYERS, T. PHELPS, I. BARRY, L.J. SHAPIRO, J.W. YOUNG.
- 2:45 pm **Variation in External and Internal Morphology of the Knee among *Pan*, *Papio*, and *Pongo*.** A.R. OTERO, A. CAMPILLO, L.J. DEMARS, S. SUKHDEO, T.M. RYAN, A.D. GORDON.

## SATURDAY, APRIL 22, AFTERNOON SESSIONS

- 3:00 pm Associations between baseline central and peripheral oxytocin and vasopressin concentrations and individual social behaviors in baboon species (*Papio hamadryas* and *Papio anubis*). D.J. COPPETO, J.S. MARTIN, P. MORALES, V. PALMIERI, G. WHITE, R. WOLF, L.J. YOUNG, A.V. JAEGLI.
- 3:15 pm Withdrawn.
- 3:30 pm Revisiting the “challenge hypothesis”: Muscle mass, not aggression, mediates an association between testosterone and dominance rank in wild male chimpanzees. J.D. NEGREY, T. DESCHNER, K.E. LANGERGRABER.
- 3:45 pm Within and between community correlates of urinary testosterone in adult male chimpanzees (*Pan troglodytes*). B.J. FINKEL, S. NAMAGANDA, M. EMERY THOMPSON, J.C. MITANI.

### Session 49

#### Primateology: Evolutionary mechanisms of sex, stress, and signals

##### Contributed Podium Presentations

Chair: Rachel Petersen

##### Tuscany 1

- 4:00 pm On the origin of species complexes. M. SHEKELLE, A. TEMPLETON, C. CANNON.
- 4:15 pm Questioning Darwin: How woolly monkey sexuality challenges longstanding ideas based on the theory of sexual selection. L.A. ABONDANO, K.M. ELLIS, A. DI FIORE.
- 4:30 pm Female copulation calls of chimpanzees (*Pan troglodytes*) at Gombe National Park, Tanzania: advertisement and partner diversification. A.P. MASSARO, E.E. BOEHM, E.V. LONSDORF, C.M. MURRAY, M.A. STANTON, M.L. WILSON.
- 4:45 pm Postcopulatory mate choice in the female olive baboon (*Papio anubis*). R.M. PETERSEN, J. ANDERSON, E. NONNAMAKER, C. ROOS, C.M. BERGEY, A.D. MELIN, J.P. HIGHAM.
- 5:00 pm More flex, more stress: Female stress responses to male social instability in wild *Colobus vellerosus*. A.G. KING, R. BOONSTRA, S. COTE, P.D. EDWARDS, R. PALME, L. SANDE, P. SICOTTE.
- 5:15 pm The coevolution of ventral infant carrying with primate vision and vocal signaling. D.M. SCHRUTH.
- 5:30 pm Adolescence is a distinct life history stage: insights from chimpanzee growth and social behavior. A.A. SANDEL, R.B. REDDY, J.D. NEGREY.

# SATURDAY, APRIL 22, AFTERNOON SESSIONS

## Session 50

### **Bioarchaeology: Embodying health and wealth**

#### **Contributed Podium Presentations**

*Chair: Molly Zuckerman*

Tuscany 3

- 2:15 pm Take a load off: Skeletal implications of sedentism in the feet of modern body donors. M.E. ALBEE.
- 2:30 pm The basket carriers from Kheny: activity related spinal deformations in two adult skeletons from the New Kingdom site of Gebel el-Silsila, Egypt. B. VESELKA, J. WARD, M. NILSSON.
- 2:45 pm Are cribrous lesions a reflection of growth? An investigation of cranial and postcranial cribrous lesions in a British study sample. J.L. AUSTEN, M.E. LEWIS.
- 3:00 pm The Prevalence of Childhood Metabolic Bone Disease and Growth Stunting in the Great Depression. L. BAILEY.
- 3:15 pm Compromised growth: An examination of growth, stress, and health among a Late Antique infant and child cemetery in Roman Italy. S.W. MALIS, M.K. ZUCKERMAN, J.A. WILSON, A.J. OSTERHOLTZ, J. PAIGE, D. SOREN.
- 3:30 pm Climate change impact on maxillary sinusitis prevalence in medieval Ireland. I. ROSHEM, J. DITTMAR, D. DRAIN, R. CROZIER, M. OXENHAM, E. MURPHY.
- 3:45 pm Associations between human host characteristics, health over the life course, and vulnerability to persistent late stage syphilis infection. M.K. ZUCKERMAN, C.M. DEGAGLIA, K. WIDRICK, F. CRESPO, S.N. DEWITTE, L. NICHOLS, M. UMAR, A. WISSLER, A. REYNOLDS.
- 4:00 pm The Bioarchaeology of Experience: A Theoretical Approach to Interpretations of Skeletal Trauma. B.D. PADGETT.
- 4:15 pm "All have had to be moved": Paleopathology and memory at the Old Burial Ground, Heuvelton, New York. M. MANT, M.C. PITRE, T. ABEL, L. JOHNSON WOOD.
- 4:30 pm Bioarchaeology of Care in Individuals from a San Francisco Bay Area Muwekma Ohlone Ancestral Site. B.E. HILL, L. ENGBRING, D. GRANT, D. DIGIUSEPPE, M.V. ARELLANO, A. LEVENTHAL, B.F. BYRD, B. MABIE.
- 4:45 pm Ancient Metagenomics, Stable Isotope Analysis, and Archaeological Contexts Provide Interdisciplinary Insights into Classic Period Maya Inequality in Southern Belize. H.M. PALACIOS, N.C. NEFF, E.E. RAY, T.P. HONAP, D.J. KENNETT, K.M. PRUFER, C.M. LEWIS.
- 5:00 pm Structured Violence in Northern Egypt during the Hyksos Period. J. GRESKY, M. BIETAK, E. PETITI.
- 5:15 pm Structural and Physical Violence in Archaic Greece: The Bioarchaeology of the "Distinctly Different" in the Phaleron Cemetery. A.A. CORMIER, J.E. BUIKSTRA, H. LIEDL.

# SATURDAY, APRIL 22, AFTERNOON SESSIONS

## Session 51

### Genetics and Genomics: Anthropological genetics

#### Contributed Podium Presentations

Chair: Genevieve Housman and Kelsey Witt

Tuscany 9

- 2:15 pm **Reconstructing the history of archaic introgression in modern humans: Insights from whole genome sequences of worldwide populations.** L. SKOV, E. MARIE PAULETTE KERDONCUFF, P. MOORJANI.
- 2:30 pm **Archaic variation is structured by ancestry in living admixed individuals.** K.E. WITT, A. FUNK, L. LOPEZ, E. HUERTA-SANCHEZ.
- 2:45 pm **Sex differences in immune function and disease risk are not easily explained by an evolutionary mismatch.** A.M. ARNER, V. ABHYANKAR, L.J. BRENT, J.P. HIGHAM, J. KAMAU, F. LOTUKOI, D. MARTINS, M.J. MONTAGUE, B. MUHOYA, J. PENG, M. SANCHEZ ROZADO, M. WATOWICH, N. SNYDER-MACKLER, J.F. AYROLES, A.J. LEA.
- 3:00 pm **The effect of admixture on heritability underlying complex traits.** J. HUANG, M.D. SHRIVER, A.A. ZAIDI.
- 3:15 pm **Withdrawn.**
- 3:30 pm **Reconstructing demographic and admixture history of the Batwa and Bakiga in East-Central Africa.** B. CHAK, G. PERRY, M. RAGHAVAN, L. BARREIRO.
- 3:45 pm **Natural selection of immune and metabolic genes associated with health in two lowland Bolivian populations.** A.J. LEA, A. GARCIA, J. AREVALO, J.F. AYROLES, K. BUETOW, S.W. COLE, D. EID RODRIGUEZ, M. GUTIERREZ, H.M. HIGHLAND, P.L. HOOPER, A. JUSTICE, T.S. KRAFT, K.E. NORTH, J. STIEGLITZ, H. KAPLAN, B.C. TRUMBLE, M.D. GURVEN.
- 4:00 pm **Association of Māori and Pacific-specific Genetic Variants with Gout.** S. MURARKA, N. SUMPTER, R. TAKEI, N. DALBETH, L. STAMP, J.D. ZOYSA, R. MURPHY, A. EMDE, S. CASTEL, K. WASIK, K. FOX, T. MERRIMAN, M. LEASK.
- 4:15 pm **Evidence for positive selection in relation to tuberculosis in Ecuadorian high-altitude populations before European contact.** S.K. JOSEPH, A. ACHILLI, N. RAMBALDI MIGLIORE, A. OLIVIERI, A. TORRONI, A. OWINGS, M. DEGIORGIO, W. GALARZA ORDÓÑEZ, J. ORTIZ AGUILÚ, F. GONZÁLEZ-ANDRADE, J. LINDO.
- 4:30 pm **Individual and population-level variation in 3D genome folding among bonobos (*Pan paniscus*) and chimpanzees (*Pan troglodytes*).** C.M. BRAND, S. KUANG, E.N. GILBERTSON, E. MCARTHUR, K.S. POLLARD, T.H. WEBSTER, J.A. CAPRA.
- 4:45 pm **Epigenetics, gene expression, and stress in mothers and offspring in the Democratic Republic of Congo: Biocultural investigation of the intergenerational effects of stress.** C.J. MULLIGAN, E. QUINN, C.J. HSIAO, F. MASANGA MAISHA.
- 5:00 pm **Conserved and distinct signatures of transcriptional aging across tissues in rhesus macaques.** L.E. NEWMAN, M.M. WATOWICH, M.R. SANCHEZ ROSADO, A.R. DECASIEN, K.L. CHIOU, M.I. MARTINEZ, C. RESEARCH UNIT, M.J. MONTAGUE, M.L. PLATT, L.J. BRENT, J.P. HIGHAM, N. SNYDER-MACKLER.

## SATURDAY, APRIL 22, AFTERNOON SESSIONS

- 5:15 pm Epigenetic correlates of language training in chimpanzee brains. E.E. GUEVARA, W.D. HOPKINS, P.R. HOF, J.J. ELY, B.J. BRADLEY, C.C. SHERWOOD.
- 5:30 pm A comparative primate organoid system for examining evolutionarily divergent patterns of gene expression during chondrogenesis. G. HOUSMAN, E. MOHSIN, Y. GILAD.

### Session 52

#### **Coming to the Caribbean - Celebrating 85 Years of Rhesus macaques at Cayo Santiago; New Endeavors of Non-Human Primate Research**

##### **Invited Poster Symposium**

*Chair: Qian Wang*

Tuscany 8

The Cayo Santiago rhesus macaque population represents one of the most important non-human primate resources since their introduction to the Caribbean area in 1938. The success of this introduced monkey colony has inspired or Contributed to the establishment of many other primate research centers within and outside of the U.S.A, providing tremendous opportunities for morphological, behavioral, physiological, biomechanical, genetic, pathological, and pharmaceutical studies toward the betterment of the understanding of non-human primates and human conditions alike. This symposium not only celebrates eighty-five years of unique and continuing contributions of Cayo Santiago to the scientific community, but also offers a stage for researchers from various fields from around the world to present recent and ongoing studies on Old and New World Monkeys. The studies will [1] display new findings in growth, function, pathology, immunology, behavior, psychology, genetics, adaptation, resilience, and paleontology in Rhesus monkeys and their relatives, and [2] demonstrates more exciting and innovative research projects moving forward.

Discussants: Trudy Turner & Susan Antón.

- 1 **Coming to the Caribbean - Eighty-five years of Rhesus macaques (*Macaca mulatta*) at Cayo Santiago: A long-term model for the studies of adaptation, diseases, natural disasters and resilience.** Q. WANG.
- 2 **Periodontal and systemic disease in the Cayo Santiago Rhesus macaques.** G. FRANCIS, Q. WANG.
- 3 **Skeletally mature individuals that experienced hurricane Hugo exhibit increased craniofacial fluctuating asymmetry.** A.N. ROMERO, C.E. TERHUNE.

## SATURDAY, APRIL 22, AFTERNOON SESSIONS

- 4 **Revisiting linear enamel hypoplasia in Cayo Santiago rhesus monkeys (*Macaca mulatta*): Is there a matriline effect?** D. GUATELLI-STEINBERG, T. GUERRIERI, L. SAMUEL, T. KENSLER, L. KOHN, M. ZHAO, G. FRANCIS, Q. WANG.
- 5 **Dental Dimensions As Indicators of Genetic and Environmental Factors Influencing Cayo Santiago Rhesus Macaques.** L.P. KOHN, K. BAKER, T.B. KENSLER, D. GUATELLI-STEINBERG, M.Q. ZHAO, G. FRANCIS, Q. WANG.
- 6 **Reproduction of Cayo Santiago Rhesus Colony based on the Patrilineal Family Trees: The Missing Patterns.** Q.Q. ZHAO, T.B. KENSLER, D. GUATELLI-STEINBERG, L.P. KOHN, G. FRANCIS, Q. WANG.
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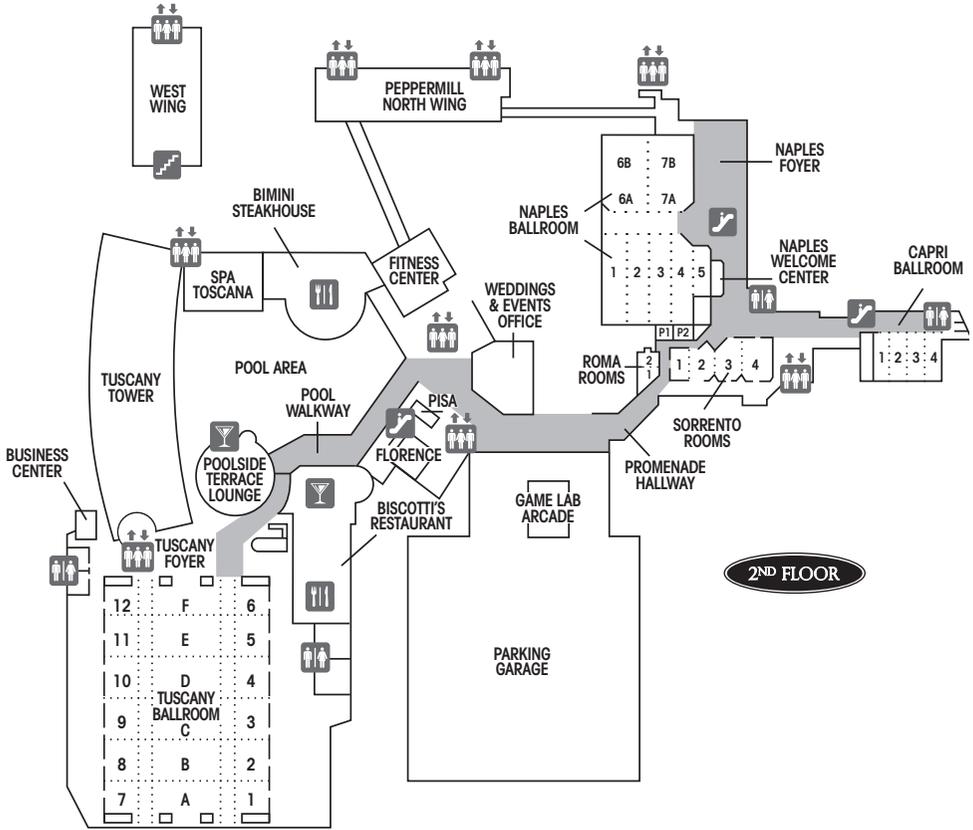
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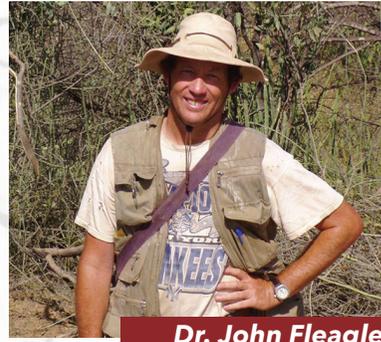
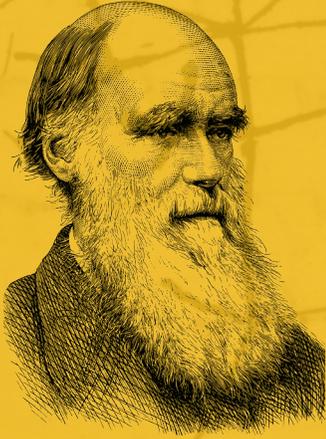
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# PEPPERMILL RENO FLOOR PLANS

## MEETING LEVEL





**Dr. John Fleagle**



**Dr. John Mitani**

The Leakey Foundation congratulates 2023 and 2022 AABA Charles Darwin Lifetime Achievement Award recipients Dr. John Fleagle and Dr. John Mitani.

In addition to their outstanding scholarly and scientific contributions, we thank Dr. Fleagle and Dr. Mitani for advancing the field of biological anthropology through decades of volunteer service with The Leakey Foundation's Scientific Executive Committee.

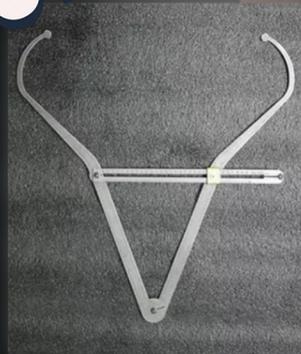
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