



91st Annual Meeting
of the American Association of
Biological Anthropologists
Denver, Colorado
Online

Live: March 23-26, 2022
Online: March 28 - April 1, 2022
Online Content Available through May 31, 2022

CONFERENCE PROGRAM



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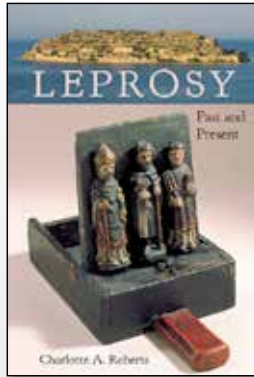


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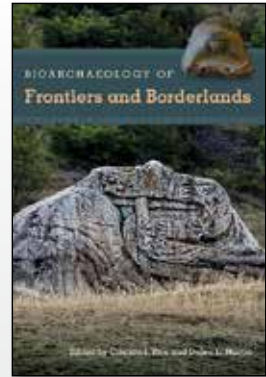
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PROGRAM OF THE
**91ST ANNUAL MEETING
OF THE AMERICAN
ASSOCIATION OF BIOLOGICAL
ANTHROPOLOGISTS**
MARCH 23 – APRIL 1, 2022

To be held at
Denver, Colorado and Online

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KEY TO ACRONYMS

- AAAG** – American Association of Anthropological Genetics
- AABA** – American Association of Biological Anthropologists
- AJHB** – *American Journal of Human Biology*
- AJPA** – *American Journal of Physical Anthropology*
- COD** – AABA’s Committee on Diversity
- DAA** – Dental Anthropology Association
- HBA** – Human Biology Association
- JHE** – *Journal of Human Evolution*
- PAS** – Paleoanthropology Society
- PAWMN** – AABA Physical Anthropology Women’s Mentoring Network
- PPA** – Paleopathology Association

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BRONZE



MESSAGE FROM THE AABA PRESIDENT

Welcome to the 1st Annual Meeting of our newly-named American Association of Biological Anthropologists in Denver, Colorado! While this is our first meeting as the AABA, it is the 91st for our Association, a remarkable achievement reflecting the dedication of our members to our discipline and, over nearly a century, their efforts to meet to exchange new findings and ideas.

We are meeting in-person for the first time since the 89th meeting in Cleveland, Ohio in 2019. There is no question that the last two years, marked by the untimely and unexpected cancellation of our 2020 conference and our engaging and successful 2021 virtual event, have been difficult for everyone. We can't wait to see each other in person, and enjoy the opportunities to engage in the topics that we're dedicated to exploring and understanding. We've missed the shared passion that we all have for our discipline as a whole, not to mention our varied and specific interests.

The loss of our direct interactions in the last two years has had significant costs. To help recover personally and professionally, I would like to suggest a theme of renewal around this year's conference. Thus, I hope that we can use our time in Denver (and our virtual conference) to renew the relationships that make us a collegial, inclusive, open, closely bonded, and in my view, a special and distinguished discipline. We can talk about old times, seeing friends. We can make new friends and colleagues. We can, as a community, help advance the careers of our students and junior colleagues, while seeing our mid-career colleagues emerge into leadership roles. Importantly, this year, we can collegially celebrate the accomplishments of our senior colleagues. Beyond renewing relationships, these meetings will give us opportunities to renew our scholarship in ways that we haven't had for a long time. We can develop future plans for our research, talk with students about graduate opportunities, and see early and first-hand where our junior colleagues are taking our field. I can't wait to see everyone, and hope that everyone is able to renew personally and professionally in ways that are free of many of the constraints we've had to endure.

I need to express my sincere thanks to Vice President and Program Chair and this year's Gabriel W. Lasker Service Award Winner, Leslea Hlusko. Professor Hlusko, in organizing last year's virtual conference de novo, has followed that tremendous accomplishment by planning two meetings for this year, including at our Denver venue and a virtual event to follow the Denver meeting. She is continuing to innovate how we conduct our professional activities, including conceptualizing and executing the AABA webinar series over the last two years. Please join me in celebrating and appreciating her accomplishments, including the Lasker Award.

MESSAGE FROM THE AABA PRESIDENT

In addition to this year's Lasker Award, we are conferring our Charles R. Darwin Lifetime Achievement Award to Professor Emeritus John Mitani (University of Michigan). Dr. Mitani has significantly advanced our understanding of chimpanzees, along with many other ape species. Professor Katie Hinde (Arizona State University) is this year's recipient of the AABA and Leakey Foundation Communication and Outreach Award in honor of Camilla Smith. Dr. Hinde has a record of remarkable accomplishments in science communication, bringing our field to a wide range of audiences. Please join me in congratulating these accomplished colleagues as the meetings unfold.

This year, we will also be seeing Past-President Anne Grauer complete her presidential term. Her first term on the Executive Committee was in 2003-2006, with continuous service to the Association since her Secretary-Treasurer position began in 2012. We will miss Professor Grauer's steady and visionary leadership, and must appreciate her major efforts to support our members in all of her AABA roles. Her efforts to lead our members through the process of our Association name change will have lasting benefits for our field, and again, reflect her dedication to us as colleagues. Please join me in celebrating and congratulating Professor Grauer for her service to the Association.

Vice President and Program Chair Leslea Hlusko's welcome message provides a synopsis of the exciting program that she and our Program Committee have composed. The program offers a rich array of sessions, events, and workshops that will provide ample opportunities for renewal and engagement. An especially important event will be the Presidential Plenary Panel on Ethical Study of Human Remains, featuring our Task Force on Ethical Study of Human Remains. The Task Force was formed to address both immediate and long-term questions that have arisen in our discipline about how we conduct professional activities with human materials. The Panel, under the leadership of Task Force co-chairs Professors Ben Auerbach and Fatimah Jackson, will review the Task Force's work over the last year, and present initial results from a member survey distributed in February. The Panel will offer visions for the future and provide attendees with opportunities for dialog with the Task Force. Dialog with the Task Force will aid in setting future directions in this area. In addition to the Presidential Plenary Panel, a number of workshops and scientific sessions will address issues in this area, so please review our program for event details.

This year's meetings will emphasize health and safety along multiple dimensions. Obviously, we face risks of COVID-19, and have taken many steps to minimize these risks. We ask that attendees be especially mindful of 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 is also 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 conference participants, 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. We also maintain several resources to help address these issues. If you find yourself in a dangerous situation, call 911. We maintain a confidential reporting website, NAVEX, available 24/7. Our business partners at Burk and Associates have a staffed e-mail address: codeofconduct@burkinc.com for confidential reporting. For support in other instances, call 703-592-9946, a number that reaches Burk and Associates staff who are present at the conference. Furthermore, we will maintain a Safe Space behind the registration desk. Reports of harassment may be subjected to review by the AABA Harassment Committee for Awareness, Response, and Equity (HCARE).

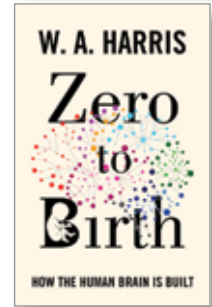
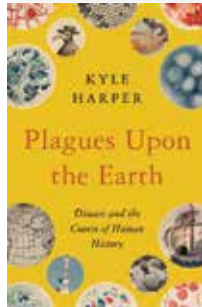
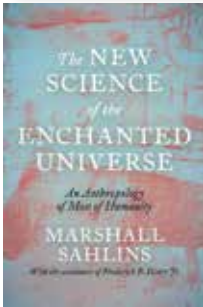
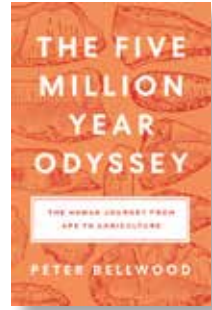
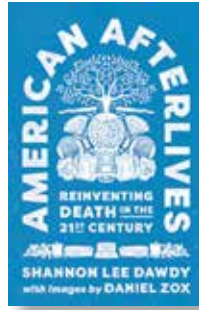
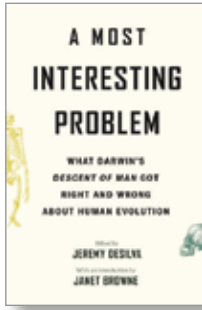
Finally, please be sure to review some of the lessons we teach our students about high altitude acclimatization. The elevation at our venue is 5,280 feet (1609.34m). You'll benefit from ample hydration and may want to limit strenuous activities unless you anticipate visiting for several days around the meetings.

In closing, I once again hope that we can all find many productive opportunities for renewal. In many ways, our venue, with its beautiful views, superb breweries and restaurants, city parks, mountain trails and parks, and mountain resorts provides great recreational opportunities to support renewal. I hope that everyone enjoys the conference!

Steven R. Leigh

President

American Association of Biological Anthropologists



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WILEY



MESSAGE FROM THE VP & PROGRAM CHAIR

Welcome to Denver!

It is my great pleasure to welcome you to the 2022 meeting of the American Association of Biological Anthropologists. This year's meeting is the 91st gathering of our community. For the first time, we will convene in two different venues: in-person in Denver, Colorado from March 23-26, and also online via the Pathable platform from March 24-April 1. However you participate, we hope you find the gathering rejuvenating and inspirational!

The full AABA 2022 program includes 770 peer-reviewed scientific papers by authors from all over the world including Africa, Asia, Australia, Europe, Latin America, Middle East, North America, and South America. This Program focuses on the activities planned for the Denver (March 23-26) portion of our annual meeting. The program for the online activities (March 24-April 1) is available on AABA's annual meeting website, through the Pathable platform, and, starting on Saturday March 28th, in the meeting app.

For the in-person program, the main conference hotel is the Sheraton Denver Downtown. Many thanks to our Denver Local Arrangements Committee, Caley Orr, Michala Stock, and Anna Warrener for helping AABA articulate with the local community.

Given the current Covid-19 pandemic, much planning has gone into how we can convene in-person safely but still create the spark that comes from attendance at our annual meeting. We hope that you find the balance comfortable, and thereby can relax and enjoy the wonderful science and shared physical space with other members of our fantastic community.

Vaccination Requirement

Vaccines are required for attendance at AABA 2022, with very few allowable exceptions. Vaccinated attendees are also strongly encouraged to get booster shots prior to attending. Anyone granted an exception must submit a negative test taken within 72 hours of the first day of the conference.

Attendees of the in-person conference are required to register their proof of vaccination (with a USA FDA or WHO approved vaccine) or approved exception accompanied by a negative COVID test in order to enter the conference. Vaccine/test registration will occur through a third-party company, 42Chat, to protect the privacy of registrants. All registrants should have received a text or email from 42Chat on February 23, 2022, inviting them to submit their proof of vaccination or apply for an exception.

MESSAGE FROM THE VP & PROGRAM CHAIR

Masking Policy

Indoor masking is required for all attendees (vaccinated or unvaccinated) at the AABA 2022 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:

- 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. Attendees eating or drinking in common spaces should maintain at least six feet from other attendees while unmasked. We encourage attendees to eat and drink outdoors when possible.

AABA is grateful to the members who helped shape this policy by sharing their concerns during the December 2021 town-hall webinar.

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: 703-910-3442. 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 Denver Program

We are pleased to be joined in Denver by our partner organizations, the Paleopathology Association (PPA), the Human Biology Association (HBA), the American Association for Anthropological Genetics (AAAG), the Dental Anthropology Association (DAA), and the Paleoanthropology Society (PAS). Please see communications from these organizations for their specific programming.

MESSAGE FROM THE VP & PROGRAM CHAIR

AABA 2022 programming officially begins on Wednesday, March 23 with the 12th annual Committee on Diversity Undergraduate Research Symposium (open to everyone from 5:30-8:00 pm) and the Opening Reception (8:00-10:00 pm). On Thursday, March 24, 2022, the 49 scientific sessions scheduled for Denver begin. This portion of the program includes six invited podium symposia, five invited poster symposia, and 36 contributed sessions (18 poster and 18 podium sessions). In addition, there are 6 innovative and exciting workshop sessions (two on Wednesday, two on Thursday, and two on Friday).

All six of the invited podium symposia, the Business Meeting, and the President's Panel will be live-streamed on the Pathable 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 1:30pm or later, and end by 5:15pm. 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. Please note that all Invited Podium Symposia will be held in Plaza Ballroom A/B and live-streamed onto the Pathable platform.

Contributed poster sessions will all be held in the Plaza Foyer, a large open space where we can spread out for public health. Poster set-up will begin at 8:00 am, with sessions opening at 9:00 am. Posters should be taken down at 6:30pm. On Thursday and Friday, even-numbered poster presenters will stand by their posters from 4:30-5:30pm, with odd-numbered presenters attending from 5:30-6:30pm. On Saturday, odd-numbered posters will have presenters in attendance at 4:00-5:00 pm, while presenters will be present at even-numbered posters from 5:00-6:00pm. Invited podium symposia are held in smaller rooms and are assigned to a morning or afternoon time. Be sure to check the Program for details.

Plenary and joint sessions

On Thursday morning, we open the 2022 scientific program with the joint AABA/PPA symposium *Ethics in the Curation and Use of Human Skeletal Remains*, organized by Carlina de la Cova, Siân E. Halcrow, and Gwen Robbins Schug. We continue this theme on Saturday at noon with the 2022 Presidential Plenary Panel on AABA Presidential Plenary Panel: *Towards an Understanding of Community Engagement in the Study of Human Remains* led by the Task Force on Ethical Study of Human Remains co-chaired by Professors Ben Auerbach and Fatimah Jackson.

MESSAGE FROM THE VP & PROGRAM CHAIR

On Thursday afternoon, we will host the symposium *Disrupting Genomics: Bringing Critical and Theoretical Approaches into Practice*, organized by Rick W. A. Smith and Graciela Cabana. On Friday afternoon we will host the joint AABA/HBA symposium titled *Biocultural Approaches to Pandemic Studies: Implications for Pandemic Preparedness*, organized by Amanda Wissler.

Special Events

On Thursday evening, be sure to join in for the very fun annual Auction! The auction starts with the “silent” phase when people write down their bids on paper (10:00 am-7:00 pm) and ends with the always entertaining live auction (7:00- 8:30 pm). Each year, the auction raises thousands of dollars to support Pollitzer Student Travel Awards. Please participate through donations and by bidding on our array of tempting auction items (please contact co-organizers Madelynne Dudas, Shara Bailey, or Jon Bethard if you are interested in donating or learning more).

On Friday, following the conclusion of the scientific sessions, we will hold the annual Business Meeting and Awards Presentation (6:30-8:30 pm). This meeting is the heart and soul of our organization, where you can have a say about our future. We strongly encourage attendance by all members and those interested in applying for membership. The Business Meeting has it all – intrigue, boredom, tears, laughter, and applause. For example, you will hear reports from the President, Treasurer, Vice President, Membership, Student Programs, etc. We will take time to remember colleagues who passed away over the last year. And we counter the somber with the celebratory by recognizing this year’s IDEAS Scholars, Early Career Grants, and Pollitzer and COD Undergraduate Research travel awards, as well as the presentations of the Charles R. Darwin Lifetime Achievement Award (awarded to Professor Emeritus John Mitani), the Gabriel W. Lasker Service Award (awarded to yours truly), and the AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith (awarded to Professor Katie Hinde). Please join us in celebrating this year’s outstanding winners!

Saturday brings our annual meeting to a close, with the Student Awards Ceremony and Closing Reception from 6:30-8:00 pm. Please join in for a last-chance to network in person, say goodbye to new and long-time colleagues, and to learn who won the 2022 Student Presentation Awards!

As we approach March 23, 2022, we will be publicizing additional information regarding special events. These will be listed in the final meetings program.

MESSAGE FROM THE VP & PROGRAM CHAIR

Acknowledgements and Appreciation

The 2022 annual meeting is another unprecedented conference format for AABA, combining an in-person and an online format for the first time. I am extremely grateful to the many people who worked tirelessly to keep our scientific community together via our annual meeting in this third year of the global Covid-19 pandemic.

First and foremost, we all need to extend a huge thank-you to our extraordinary business partners, Annual Meeting Executive Director Lori Strong and her team from Burk & Associates. Lori's leadership, wisdom, and unflappable calm is central to the success of our annual meeting.

I am immensely grateful to the 67 talented, generous, and dedicated members of our Program Committee who conducted and completed reviews thoughtfully, thoroughly, and expeditiously. Additional thanks go to the 32 members of the Program Committee who took on the task of organizing the contributed sessions for both the Denver and the Online programs in the first two weeks of January. Three factors made this an especially tough year for the Program Committee: because of the pandemic we delayed the abstract registration date to give authors more time to decide which venue they wanted to present in, the conference began a month earlier than it does most years, and we had to develop two separate programs (Denver and Online) for the first time. If you run into someone who served on the Program Committee, please be sure to say thank you!

I also want to express my deep gratitude to the nine members of the Advance Team who met in Denver to set up this part of the program. These colleagues stepped up when I was unable to travel to be there in person to lead the effort: Steve Leigh, Lori Strong, Anne Grauer, Heide Rohland, Anna Warrener, Caley Orr, Michala Stock, Gwen Robbins Schug, Kristi Lewton, and the student volunteers: Catherine Morgan, Alexandria Kennedy, Bridget McGann, Ellie Berg, and Jamie Ernewein.

Of course, none of the program organization would be possible without the immense effort of Ed Hagen, our website and abstract database developer. And without Cat Taylor's ever-present support as the Assistant to the Vice President, I might not have made it through to the end of these "exciting" two years of service intact.

Last but not least, I thank the officers and other members of the Executive Committee for their year-round hard work that makes our annual meeting possible. There are so many moving parts to these events, and to our association, far beyond what I ever imagined before I held this position. AABA leadership is a special group of people; I am honored to have worked with these incredible colleagues. Many thanks especially to AABA President Steve Leigh and AABA Past-President Anne Grauer for their leadership, wisdom, and commitment during yet another very challenging year.

Leslea J. Hlusko

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.

Speaker Ready/Press Room

Due to the size and complexity of our meetings and following similar associations, 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 (Plaza Court 1)**. The server will then “push” presentations to the appropriate meeting room and will be available for the session. Thank you in advance to all presenters for helping us make this change as painless as possible!

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 (Plaza Court 1) at the following times:

- Wednesday, March 23, 3:00 PM – 7:00 PM
- Thursday, March 24, 7:30 AM – 5:00 PM
- Friday, March 25, 7:30 AM – 5:00 PM
- Saturday, March 26, 7:30 AM – 11:00 AM

Catering and Coffee Breaks

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

- Thursday, Friday, Saturday: 9:15 AM – 10:15 AM
Note that session breaks are scheduled from 9:15 AM to 10:15 AM to dissipate crowding.
- Thursday, Friday: 5:30 PM – 6:30 PM; Saturday: 5:00 PM – 6:00 PM

Registration

The AABA Registration/Information area is located in Plaza Exhibit.

The Registration Desk will be open during the following hours:

- Wednesday, March 23, 3:00 PM – 7:00 PM
- Thursday, March 24, 7:00 AM – 5:00 PM
- Friday, March 25, 7:30 AM – 5:00 PM
- Saturday, March 26, 7:00 AM – 3:00 PM

GENERAL INFORMATION

AABA App

Be sure to download the AABA 2022 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.

Free Childcare

Camp AABA - An Adventure for Kids (our childcare during the meetings) is available FREE this year, due to a substantial subsidy from the AABA, and located in Director's Row H.

- Wednesday, March 23, 5:00 PM – 10:00 PM
- Thursday, March 24, 7:30 AM – 7:00 PM
- Friday, March 25, 7:30 AM – 5:00 PM
- Saturday, March 26, 7:30 AM – 5:00 PM

Family and Nursing Mothers Respite Room

The Family and Nursing Mothers Respite Room will be available in Director's Row J.

- Wednesday, March 23, 5:00 PM – 10:00 PM
- Thursday, March 24, 7:00 AM – 9:00 PM
- Friday, March 25, 7:00 AM – 7:00 PM
- Saturday, March 26, 7:00 AM – 7:00 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.

FUTURE MEETING DATES

| 2023 | 2024 | 2025 |
|-------------------|--------------------|--------------------|
| Reno, April 19-22 | Los Angeles | Baltimore |
| Peppermill | JW Marriot LA Live | Baltimore Marriott |
| Resort Hotel | | Waterfront |

SOCIAL EVENTS/ MEETING HIGHLIGHTS

All events take place at the Sheraton Denver Downtown unless otherwise noted.

Wednesday, March 23

AABA COD Undergraduate Research Symposium and Reception

6:00 PM – 8:00 PM, Plaza Exhibit

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

Opening Reception, 8:00 PM – 10:00 PM, Plaza Ballroom

Enjoy live music, good food, and a cash bar.

Thursday, March 24

AABA/PPA symposium Ethics in the Curation and Use of Human Skeletal Remains

8:00 AM – 11:15 AM, Plaza Ballroom A/B

AABA Live Auction, 7:00 PM – 8:30 PM, Plaza AB

Enjoy the excitement of the Live Auction, benefitting our student travel awards.

Friday, March 25

AABA Business Meeting and Awards Presentation, 6:30 PM – 8:30 PM, Plaza A/B

Become involved in your association and celebrate the 2022 recipients of AABA's most prestigious awards: John Mitani (Charles R. Darwin Lifetime Achievement Award), Leslea Hlusko (Gabriel W. Lasker Service Award), and Katie Hinde (AABA and Leakey Foundation Communication & Outreach Award in Honor of Camilla Smith).

Saturday, March 26

AABA Presidential Plenary Panel: Towards an Understanding of Community Engagement in the Study of Human Remains, 12:00 PM – 1:30 PM, Plaza A/B

AABA Student Awards and Closing Reception, 6:30 PM – 8:00 PM, Plaza A/B

Celebrate the recipients of our student presentation and other awards, enjoy good food and a cash bar, and close the AABA 91st Annual Meeting in grand style.

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 Sheraton Denver Downtown unless otherwise noted.

Wednesday, March 23

Asking Anthropological Questions with Big Data: An introduction to IPUMS data repository analysis using R

8:00 AM – 12:00 PM, Governor's Square 12

Organizers: Daniel E Ehrlich (University of Minnesota), Anna Tremblay (Clemson University)

Learn about IPUMS, an online repository for individual-level census and survey data from 100+ countries integrated across time and space for teaching and research.

Tree Time: Phylogenetic Comparative Methods in R

1:00 PM – 5:00 PM, Governor's Square 12

Organizers: Mark Grabowski (Liverpool John Moores University), Thomas Cody Prang (Texas A&M)

Learn why accounting for interspecific relationships in analyses is necessary and how to apply common and cutting-edge phylogenetic comparative methods in R.

Mentoring for Mental Health Workshop, presented by COD-Women's Initiative

2:00 PM – 4:00 PM, Governor's Square 11

In this workshop, we will discuss strategies for mental health awareness and mentoring. The workshop will be open for AABA women at all career stages. Facilitators include Nicole Banks, a mental health outreach and suicide prevention expert. We will also hear from panelists with lived experience with mental health challenges in academic settings.

WORKSHOPS AND PANELS

Thursday, March 24

A listening session with funders on the ethical treatment of human remains

11:30 PM – 1:30 PM, Plaza F

Organizers: Robin Bernstein (National Science Foundation).

Co-Sponsored by: The Leakey Foundation, the National Geographic Society, the National Science Foundation, and the Wenner-Gren Foundation for Anthropological Research.

We invite all AABA members to attend this listening session, where you will have a chance to share your ideas on how funders can promote the ethical treatment of human remains with representatives from several funding agencies for biological anthropology. Funders have a role to play in advancing change in this area, and we are eager to hear your input.

Using evidence-based practices to enhance your skills at engaging the public in informal learning environments

4:00 PM – 6:00 PM, Governor's Square 11

Organizers: Briana Pobiner (Smithsonian Institution, National Museum of Natural History)

This workshop will include activities designed to increase participants' abilities to effectively engage public audiences in informal learning environments.

WORKSHOPS AND PANELS

Friday, March 25

The First-Generation Student: Navigating Academia and Tips for Educators

11:30 AM – 1:30 PM, Governor's Square 12

Organizers: Jeanelle Uy (California State University, Long Beach), Natalie Laudicina (Grand Valley State University)

A panel of five will discuss the challenges experienced by first-generation students and provide practical strategies for students and educators succeeding in academia.

AABA Professional Development Committee: Writing Winning Grant Proposals Workshop

12:00 PM – 1:30 PM, Plaza F

Organizers: Shara Bailey (AABA Professional Development Committee)

How do you put your best foot forward? What are reviewers looking for? Join us for an insightful panel discussion and Q&A with representatives from the Wenner Grenn Foundation, National Science Foundation and the Leakey Foundation.

Primate Interest Group Workshop

12:00 PM – 1:30 PM, Plaza E

Organizers: Lydia E.O. Light (UNC Charlotte), Michelle A. Rodrigues (Marquette University), Andrew R. Halloran (Save the Chimps)

The Primate Interest Group Workshop will bring together anthropological primatologists to discuss increasing accessibility in primatological fieldwork and the future direction of the interest group.

Saturday, March 26

Workshop: Grant Writing for the Wenner-Gren Foundation: Tips for Primatologists

12:00 PM – 1:30 PM, Plaza E

Organizers: Chris Robinson (Wenner Gren Foundation)

Come join in a conversation about how to craft successful grant applications to The Wenner Gren Foundation for primatological research.

EVENTS

All events take place at the Sheraton Denver Downtown unless otherwise noted.

Tuesday, March 22

HBA

Human Biology Association Executive Committee Meeting

6:00 PM – 8:00 PM

Offsite

PAS

Paleoanthropology Society Registration

7:30 AM – 5:00 PM

Plaza D Foyer

Paleoanthropology Society Podium Presentations

8:00 AM – 6:00 PM

Plaza D

Paleoanthropology Society Poster Presentations

4:00 PM – 6:00 PM

Plaza Exhibit

PPA

Paleopathology Association Registration

7:45 AM – 5:00 PM

Plaza A Foyer

Paleopathology Association Student Action Committee Raffle

7:45 AM – 5:00 PM

Paleopathology Association Podium Presentations

8:00 AM – 5:00 PM

Plaza A

Paleopathology Association Student Action Committee

5:30 PM – 6:30 PM

Plaza A

Wednesday, March 23

AABA

Workshop: Asking Anthropological Questions with Big Data:

An introduction to IPUMS data repository analysis using R

8:00 AM – 12:00 PM

Governor's Square 12

AABA Executive Committee Meeting

8:00 AM – 5:00 PM

Governors Square 16

EVENTS

AJBA Editorial Board Lunch

12:00 PM – 1:30 PM

Plaza Court 2

Workshop: Tree Time: Phylogenetic Comparative Methods in R

1:00 PM – 5:00 PM

Governor's Square 12

Workshop: COD-WIN Discussion Panel on Mental Health

2:00 PM – 4:00 PM

Governor's Square 11

AABA Registration

3:00 PM – 7:00 PM

Plaza Exhibit

Speaker Ready and Press Room

3:00 PM – 7:00 PM

Plaza Court 1

Student Committee Meeting

4:00 PM – 5:00 PM

Governors Square 16

Student Volunteer Training

4:30 PM – 5:00 PM

Governors Square 11

Student/Early Career Mixer

5:00 PM – 6:00 PM

Governor's Square 15

Camp AABA - An Adventure for Kids

5:00 PM – 10:00 PM

Director's Row H

Family and Nursing Mothers Respite Room

5:00 PM – 10:00 PM

Director's Row J

12th Annual AABA COD Undergraduate Research Symposium and Reception

6:00 PM – 8:00 PM

Plaza Exhibit

Opening Reception

8:00 PM – 10:00 PM

Plaza Ballroom

HBA

AJHB Editorial Board Meeting

7:30 AM – 9:00 AM

Plaza Court 2

Human Biology Association Registration

8:00 AM – 5:00 PM

Governor's Square 14 Foyer

Human Biology Association Poster Session

9:00 AM – 11:00 AM

Plaza Exhibit

Human Biology Association Plenary Session

1:00 PM – 4:45 PM

Governor's Square 14

EVENTS

Human Biology Association, Pearl Memorial Lecture

5:00 PM – 6:00 PM

Governor's Square 14

Human Biology Association Reception and Awards Ceremony

6:30 PM – 9:30 PM

Plaza F

PAS

Paleoanthropology Society Registration

7:00 AM – 5:00 PM

Plaza D Foyer

Paleoanthropology Society Podium Presentations

8:30 AM – 5:00 PM

Plaza D

PPA

Paleopathology Association Registration

8:00 AM – 5:00 PM

Plaza A Foyer

Paleopathology Association Podium Presentations

8:00 AM – 5:00 PM

Plaza A

Paleopathology Association Poster Presentations

9:00 AM – 4:00 PM

Plaza Exhibit

Paleopathology Association Lunch & Business Meeting

12:00 PM – 2:30 PM

Plaza A

AAAG

AAAG Members Speed Networking Event

2:30 PM – 4:00 PM

Directors Row E

DAA

Dental Anthropology Association Workshop

2:00 PM – 4:00 PM

Governors Square 10

EVENTS

Thursday, March 24

AABA

AABA Past President's Breakfast

7:00 AM – 9:00 AM

Plaza Court 2

COD IDEAS Subcommittee Meeting (by invitation)

7:00 AM – 9:00 AM

Plaza Court 3

AABA Registration

7:00 AM – 5:00 PM

Plaza Exhibit

Family and Nursing Mothers Respite Room

7:00 AM – 9:00 PM

Director's Row J

Speaker Ready and Press Room

7:30 AM – 5:00 PM

Plaza Court 1

Camp AABA - An Adventure for Kids

7:30 AM – 7:00 PM

Director's Row H

Symposium (AABA/PPA): Ethics in the Curation and Use of Human Skeletal Remains

8:00 AM – 11:15 AM

Plaza Ballroom A/B

Topics in Biological Anthropology

8:00 AM – 11:15 AM

Governor's Square 12

Human Biology: Human Environmental Adaptation and Energetics

8:00 AM – 11:15 AM

Plaza Ballroom F

Paleoanthropology: Ecology, Physiology, Behavior

8:00 AM – 12:00 PM

Governor's Square 15

Primateology: Flexibility in the Face of Social and Ecological Changes

8:00 AM – 12:00 PM

Plaza Ballroom E

Exhibits

9:00 AM – 6:30 PM

Plaza Exhibits

AABA Silent Auction

10:00 AM – 7:00 PM

Governor's Square Foyer

Workshop: A listening session with funders on the ethical treatment of human remains

11:30 AM – 1:30 PM

Plaza F

EVENTS

Yearbook of Biological Anthropology Editorial Board Meeting

12:00 PM – 2:00 PM

Plaza Court 2

Workshop: Using evidence-based practices to enhance your skills at engaging the public in informal learning environments

4:00 PM – 6:00 PM

Governor's Square 11

Black in Biological Anthropology (BiBA) meeting

5:30 PM – 6:30 PM

Plaza D

BAWMN Happy Hour

6:00 PM – 7:30 PM

Offsite, West of Surrender

AABA COD International and IDEAS Mixer (open)

6:30 PM – 7:30 PM

Governor's Square 16

AABA Live Auction

7:00 PM – 8:30 PM

Plaza A/B

AAAG

American Association of Anthropological Genetics Business Meeting

7:30 PM – 8:30 PM

Governor's Square 15

American Association of Anthropological Genetics Cocktail Hour

8:30 PM – 9:30 PM

Governor's Square 16

HBA

Human Biology Association Registration

7:30 AM – 8:30 AM

Governor's Square 14 Foyer

Human Biology Association Podium Sessions

8:30 AM – 4:30 PM

Governor's Square 14

Human Biology Association Business Meeting

5:00 PM – 6:00 PM

Governor's Square 14

Human Biology Association Student Reception

7:00 PM – 9:30 PM

Governor's Square 11

Other

Journal of Human Evolution Editorial Board Meeting

5:30 PM – 8:00 PM

Plaza Court 4

EVENTS

Friday, March 25

AABA

Education Committee Meeting

7:00 AM – 8:00 AM

Plaza Court 2

Family and Nursing Mothers Respite Room

7:00 AM – 7:00 PM

Director's Row J

Speaker Ready and Press Room

7:30 AM – 5:00 PM

Plaza Court 1

AABA Registration

7:30 AM – 5:00 PM

Plaza Exhibit

Camp AABA - An Adventure for Kids

7:30 AM – 5:00 PM

Director's Row H

Exhibits

9:00 AM – 6:30 PM

Plaza Exhibits

Workshop: The First-Generation Student: Navigating Academia and Tips for Educators

11:30 AM – 1:30 PM

Governor's Square 12

AABA COD LBTQQIAA Meeting

12:00 PM – 1:00 PM

Governor's Square 12

AABA Science Policy Committee Meeting

12:00 PM – 1:30 PM

Plaza Court 2

AABA Ethics Committee Meeting

12:00 PM – 1:30 PM

Plaza Court 3

AABA COD IDEAS Alum Luncheon Meeting

12:00 PM – 2:00 PM

Director's Row E

Workshop: Primate Interest Group

12:00 PM – 1:30 PM

Plaza Ballroom E

Workshop: Writing Winning Grant Proposals

12:00 PM – 1:30 PM

Plaza F

EVENTS

AABA Business Meeting and Awards Presentation

6:30 PM – 8:30 PM

Plaza A/B

HBA

Human Biology Association Session

8:30 AM – 11:30 AM

Plaza Court 6

DAA

Dental Anthropology Association Networking Event

4:15 PM – 5:00 PM

Offsite

Dental Anthropology Happy Hour

5:00 PM – 6:30 PM

Offsite

Dental Anthropology Association Business Meeting

8:30 PM – 9:30 PM

Plaza F

Saturday, March 26

AABA

AABA COD Steering Committee Breakfast

7:00 AM – 8:00 AM

Plaza Court 6

AABA Registration

7:00 AM – 3:00 PM

Plaza Exhibit

Family and Nursing Mothers Respite Room

7:00 AM – 7:00 PM

Director's Row J

Speaker Ready and Press Room

7:30 AM – 11:00 AM

Plaza Court 1

Camp AABA - An Adventure for Kids

7:30 AM – 5:00 PM

Director's Row H

From Old Monkeys to New Morphometrics: A Symposium Honoring the Scientific Contributions of Eric Delson

8:00 AM – 11:15 AM

Governor's Square 14

Exhibits

9:00 AM – 6:30 PM

Plaza Exhibits

EVENTS

AABA COD International Scholars Committee Meeting

12:00 PM – 1:30 PM

Plaza Court 6

**AABA Presidential Plenary Panel: Towards an Understanding of Community
Engagement in the Study of Human Remains**

12:00 PM – 1:30 PM

Plaza A/B

Workshop: Grant Writing for the Wenner-Gren Foundation: Tips for Primatologists

12:00 PM – 1:30 PM

Plaza E

AABA Student Awards Committee Meeting

4:00 PM – 6:00 PM

Plaza Court 6

AABA Student Awards and Closing Reception

6:30 PM – 8:00 PM

Plaza A/B

EXHIBITOR FLOOR PLAN



View the latest floorplan and company profiles on your phone or tablet.

Scan the QR Code or visit aaba2022.expofp.com

EXHIBIT HOURS: Plaza Exhibit

| | |
|------------------------------|-------------------|
| Thursday, March 24 | 9:00 AM – 6:30 PM |
| Friday, March 25 | 9:00 AM – 6:30 PM |
| Saturday, March 26 | 9:00 AM – 6:30 PM |

EXHIBITOR LISTING

The Anatomical Record

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Salt Lake City, UT 84108
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www.wileyonlinelibrary.com/ar

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The journal publishes new discoveries in the morphological aspects of molecular, cellular, systems, and evolutionary biology. It is an official publication of the American Association for Anatomy. The journal recognizes the importance of descriptive studies in contemporary research, particularly when framed in the context of experimental models or questions.

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Booth: 1

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National Science Foundation

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703-292-7850
www.nsf.gov

Booth: 3

NSF is an independent U.S. government agency responsible for promoting science and engineering through research programs and education projects. NSF is the funding source for approximately 24 percent of all federally supported basic research conducted by America's colleges and universities.

EXHIBITOR LISTING

Primate Conservation Inc.

Booth: 9

1411 Shannock Rd
Charlestown, RI 02813
401-364-7140
www.primate.org

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University Press of Florida

Booth: 5

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Gainesville, FL 32609
352-392-1351
upress.ufl.edu

The University Press of Florida and UF Press publish award-winning titles in anthropology, archaeology, bioarchaeology, forensic anthropology, paleopathology, and zooarchaeology. UF Press publishes the Bioarchaeological Interpretations of the Human Past: Local, Regional, and Global Perspectives book series, edited by Clark Larsen, and the journals Bioarchaeology International and Forensic Anthropology.

W. W. Norton & Company

Booth: 8

500 5th Avenue
New York, NY 10110
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books.wwnorton.com

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EXHIBITOR LISTING

Wenner-Gren Foundation for Anthropological Research

Booth: 4

655 Third Avenue, 23rd Floor
New York, NY 10017
212-683-5000
www.wennergren.org

The Wenner-Gren Foundation is a private operating foundation dedicated to playing a leadership role in supporting anthropology and anthropologists worldwide. It provides research grants, fellowships, conference and workshop grants, and support for initiatives designed to build capacity in the field. It also hosts symposia, seminars, and public forums, and, in collaboration with the University of Chicago Press, publishes *Current Anthropology*, a flagship international journal, and *SAPIENS*, an award-winning digital magazine. The Foundation supports all branches of anthropology and closely related disciplines. We welcome proposals from members of AABA!

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Booth: 7

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SCIENTIFIC PROGRAM

All events take place at the Sheraton Denver Downtown unless otherwise noted.

| Session Title | Room | Time | # | Type |
|--|----------------------|--------------------|----|--------|
| Thursday, All Day | | | | |
| American Association of Biological Anthropologists | | | | |
| Dental Anthropology: Bridging the Gap | Plaza Foyer | 8:00 AM – 6:30 PM | 1 | Poster |
| Functional Anatomy: Advancements in Data Capture Technologies | Plaza Foyer | 8:00 AM – 6:30 PM | 2 | Poster |
| Genetics & Genomics: Evolution and Populations | Plaza Foyer | 8:00 AM – 6:30 PM | 3 | Poster |
| Human Biology & Behavior: Understanding Variation | Plaza Foyer | 8:00 AM – 6:30 PM | 4 | Poster |
| Primatology: Assessing Behavior and Ecology across Space and Time | Plaza Foyer | 8:00 AM – 6:30 PM | 5 | Poster |
| Primatology: Exploring Morphological Variation Related to Diet, Locomotion, and Size | Plaza Foyer | 8:00 AM – 6:30 PM | 6 | Poster |
| Thursday, Morning | | | | |
| American Association of Biological Anthropologists | | | | |
| Symposium (AABA/PPA): Ethics in the Curation and Use of Human Skeletal Remains | Plaza Ballroom A/B | 8:00 AM – 11:15 AM | 7 | Podium |
| Topics in Biological Anthropology | Governor's Square 12 | 8:00 AM – 11:15 AM | 8 | Podium |
| Paleoanthropology: Ecology, Physiology, Behavior | Governor's Square 15 | 8:00 AM – 12:00 PM | 9 | Podium |
| Primatology: Flexibility in the Face of Social and Ecological Changes | Plaza Ballroom E | 8:00 AM – 12:00 PM | 10 | Podium |
| Human Biology: Human Environmental Adaptation and Energetics | Plaza Ballroom F | 8:00 AM – 11:15 AM | 11 | Podium |
| Thursday, Afternoon | | | | |
| American Association of Biological Anthropologists | | | | |
| Symposium: Disrupting Genomics: Bringing Critical and Theoretical Approaches into Practice | Plaza Ballroom A/B | 1:30 PM – 5:15 PM | 12 | Podium |
| Paleoanthropology: Isotope Insights | Governor's Square 15 | 1:30 PM – 3:00 PM | 13 | Podium |
| Human Behavior: Social Networks in Subsistence and Health | Governor's Square 15 | 3:15 PM – 5:00 PM | 14 | Podium |

SCIENTIFIC PROGRAM

| | | | | |
|--|----------------------|--------------------|----|--------|
| Dental Anthropology: Contemporary Perspectives | Plaza Ballroom E | 1:30 PM – 4:30 PM | 15 | Podium |
| Functional Anatomy: Craniofacial Function and Development | Plaza Ballroom F | 1:30 PM – 4:30 PM | 16 | Podium |
| Symposium: Anatomical and Bioarchaeological Skeletal Collections that Represent Marginalized Communities: current work and future developments | Plaza Ballroom D | 2:30 PM – 5:00 PM | 17 | Poster |
| Friday, All Day | | | | |
| American Association of Biological Anthropologists | | | | |
| Education in Biological Anthropology: Games, Committees and Effective Learning | Plaza Foyer | 8:00 AM – 6:30 PM | 18 | Poster |
| Functional Anatomy: Structural Ontogeny | Plaza Foyer | 8:00 AM – 6:30 PM | 19 | Poster |
| Functional Anatomy: Structural Correlates of Locomotion, Part I | Plaza Foyer | 8:00 AM – 6:30 PM | 20 | Poster |
| Functional Anatomy: Craniofacial Variation and Diet | Plaza Foyer | 8:00 AM – 6:30 PM | 21 | Poster |
| Health and Disease in Humans and Non-human Primates | Plaza Foyer | 8:00 AM – 6:30 PM | 22 | Poster |
| Paleoanthropology: Primate Evolution | Plaza Foyer | 8:00 AM – 6:30 PM | 23 | Poster |
| Human Biology: Stress, Reproduction, and Developmental Plasticity | Plaza Foyer | 8:00 AM – 6:30 PM | 24 | Poster |
| Friday, Morning | | | | |
| American Association of Biological Anthropologists | | | | |
| Symposium: Current and Multidisciplinary Perspectives on Hominin Diets and Trophic Level During the Pleistocene | Plaza Ballroom A/B | 8:00 AM – 11:00 AM | 25 | Podium |
| Human Biology: Human Health and Development | Governor's Square 15 | 8:00 AM – 11:15 AM | 26 | Podium |
| Primatology: Variation in Anatomy, Physiology, and Behavior | Plaza Ballroom E | 8:00 AM – 12:00 PM | 27 | Podium |
| Bioarchaeological Approaches to Health and Disease, Part 1 | Plaza Ballroom F | 8:00 AM – 11:15 AM | 28 | Podium |
| Symposium: Physical activity and limb bone structure: New approaches to reconstructing behavior in the past | Plaza D | 8:00 AM – 11:30 AM | 29 | Poster |

SCIENTIFIC PROGRAM

| Friday, Afternoon | | | | |
|---|----------------------|--------------------|----|--------|
| American Association of Biological Anthropologists | | | | |
| Symposium (AABA/HBA): Biocultural Approaches to Pandemic Studies: Implications for Pandemic Preparedness | Plaza Ballroom A/B | 1:30 PM – 5:15 PM | 30 | Podium |
| Forensic Anthropology: Insights from Databases and Experimental Studies | Governor's Square 14 | 1:30 PM – 3:30 PM | 31 | Podium |
| Paleoanthropology: Evolution and Function | Plaza Ballroom E | 1:30 PM – 4:30 PM | 32 | Podium |
| Education in Biological Anthropology: Developing Accessible Pedagogy | Plaza Ballroom F | 1:30 PM – 2:45 PM | 33 | Podium |
| Symposium: What They Do in the Shadows: New Perspectives on Africa's Nocturnal Bushbabies | Plaza Ballroom D | 1:30 PM – 4:30 PM | 34 | Poster |
| Saturday, All Day | | | | |
| American Association of Biological Anthropologists | | | | |
| Bioarchaeological Advances in Demography and Diet | Plaza Foyer | 8:00 AM – 6:30 PM | 35 | Poster |
| Bioarchaeological Approaches to Health and Disease, Part 2 | Plaza Foyer | 8:00 AM – 6:30 PM | 36 | Poster |
| Bioarchaeological Advances in Migration and Mobility | Plaza Foyer | 8:00 AM – 6:30 PM | 37 | Poster |
| Forensic Anthropology: New perspectives on Identification and Preservation | Plaza Foyer | 8:00 AM – 6:30 PM | 38 | Poster |
| Paleoanthropology: Hominin Evolution | Plaza Foyer | 8:00 AM – 6:30 PM | 39 | Poster |
| Saturday, Morning | | | | |
| American Association of Biological Anthropologists | | | | |
| Symposium: Advances and Challenges in the Identification of Sex and Gender in Human Osteological Contexts | Plaza Ballroom A/B | 8:30 AM – 11:30 AM | 40 | Podium |
| Functional Anatomy: Structural Correlates of Locomotion, Part 2 | Governor's Square 15 | 8:15 AM – 11:30 AM | 41 | Podium |
| Primatology: Through the Primate Lifespan: Ontogeny, Reproduction, and Life History | Plaza Ballroom E | 8:00 AM – 12:00 PM | 42 | Podium |
| Symposium: Cartilage and Craniofacial Growth | Plaza Ballroom D | 8:00 AM – 12:00 PM | 43 | Poster |

SCIENTIFIC PROGRAM

| Saturday, Afternoon | | | | |
|--|----------------------|-------------------|----|--------|
| American Association of Biological Anthropologists | | | | |
| Symposium: Biocultural Taphonomies: Teasing Apart Taphonomic Filters in Bioarchaeology | Plaza Ballroom A/B | 1:30 PM – 4:00 PM | 44 | Podium |
| Bioarchaeological Advances in Demography, Diet and Mobility | Governor’s Square 15 | 1:30 PM – 4:30 PM | 45 | Podium |
| Genetics & Genomics: Anthropological Genomics - From Humans, Primates, to Gut Microbiome | Plaza Ballroom E | 1:30 PM – 4:30 PM | 46 | Podium |
| Symposium: The Weight of the Evidence: A Session to Honor the Legacy of Chris Ruff | Plaza Ballroom D | 1:30 PM – 4:30 PM | 47 | Poster |

THURSDAY, ALL DAY SESSIONS

Session 1

Dental Anthropology: Bridging the Gap

Contributed Poster Presentations

Chair: Dori Kenessey

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

- 1 An accessory to developmental stress: the relationship between Linear Enamel Hypoplasia (LEH) and molar cusp expression. E.C. BLANKENSHIP-SEFCZEK, A.H. GOODMAN, M. HUBBE, J.P. HUNTER, D. GUATELLI-STEINBERG
- 2 Time-resolved trace element variations in dental enamel of contemporary children with known dietary history through Laser-Based Mass Spectrometry (LA-ICPMS): implications for ancient dietary reconstructions. A. NAVA, F. LUGLI, P. MAHONEY, G. MCFARLANE, L. BONDIOLI, S. BENAZZI, C.M. DEAN, W. MÜLLER.
- 3 Dental health and self-reported childhood socioeconomic status in the William M. Bass Donated Skeletal Collection. L.G. BLIZZARD, H. HORBALY.
- 4 Examining Heavy Metal Exposure in Two Historic San Francisco Cemeteries. D. MALARCHIK, J.W. EERKENS, M.A. RUSSELL, T. OSTRANDER.
- 5 The contribution of Focus Variation microscopy to the analysis of surface incremental lines and enamel defects on archaeological teeth. L. CRÉTÉ, L.T. HUMPHREY, A. SCOTT-MURRAY, S.M. BELLO.
- 6 Stress-related enamel defect prevalence and severity in *Papio ursinus* and *P. anubis*. J. ERKENS, J.K. SALAYMEH, E. BEAMISH, S. CHOWDHURY, L. SWEDDELL, D. GUATELLI-STEINBERG, W. MCGRAW, K. MCGRATH.
- 7 A detailed histological study of chacma baboon developmental enamel defects. J.K. SALAYMEH, J. ERKENS, E. BEAMISH, W. MCGRAW, D. GUATELLI-STEINBERG, K. MCGRATH.
- 8 Tooth morphology and population affinity: testing rASUDAS2 on modern African and European-derived samples. G. SCOTT, D. NAVEGA, J. COELHO, T. VLEMINCQ-MENDIETA, D. KENESSEY, M.A. PILLOUD.
- 9 Assessment of inter- and intraobserver variability in dental measurements. S.S. COTRONA, B. FISHER, B.E. HEMPHILL.
- 10 Pictures?! Comparing observer error for dental morphology from direct observations and photographs using ASUDAS. T.N. LOEWEN, G. SCOTT.
- 11 A comparison of enamel daily sections rates in deciduous molars from modern-day children living in Aotearoa New Zealand, Britain, Canada, France, and Sweden. G. MCFARLANE, C. LOCH, D. GUATELLI-STEINBERG, P. BAYLE, M. LE LUYER, N. SABEL, A. NAVA, B. FLOYD, M. SKINNER, S. WHITE, R. PITFIELD, P. MAHONEY.

THURSDAY ALL DAY SESSIONS

- 12 Dental topography and diet of non-cercopithecoid catarrhines from the early Miocene of Kenya. E.M. LOCKE.
- 13 ~~Biological distance in east Yorkshire, England: a preliminary analysis.~~ M.J. ANCTIL, J.D. IRISH. WITHDRAWN
- 14 Exploring Maya population history of Central Belize by means of dental morphological analyses. A. CUCINA, G. WROBEL.
- 15 A Tooth Size Apportionment Investigation of Bodo Origins. B.A. FISHER, B.E. HEMPHILL.
- 16 ~~Social organisation and biological distance: a comparison of Iron Age populations from northeast and southwest England.~~ K.E. FAILLAGE, M.J. ANCTIL. WITHDRAWN
- 17 Dental morphology identifies significant admixture among 13th century Ancestral Puebloan communities in east-central Arizona. A.J. YOUNG, J.T. WATSON.
- 18 A Dental Metric Biodistance Analysis of the Rong and the A'chik. M.A. STOUGH.
- 19 Modern human upper premolar shape does not reflect their geographical origin. P.G. ŠIMKOVÁ, L. WURM, C. FORNAI, G.W. WEBER.
- 20 Identifying candidate SNPs shaping dental morphological trait expression. D.E. KENESSEY, L. AUCHTER, M.A. PILLOUD.
- 21 Assessing Facets of Error in μ CT Scans of Enamel to Facilitate Scan Sharing. K.N. GURIAN, M.C. O'HARA, J. RYCHEL, G.T. SCHWARTZ, W.S. MCGRAW, D. GUATELLI-STEINBERG.

Session 2

Functional Anatomy: Advancements in Data Capture Technologies

Contributed Poster Presentations

Chair: Mary Cole

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 23 Employing Spherical Harmonics in Assessing the Variation and Covariation of Sphenoidal Sinus Shape in *H. sapiens*. K.G. RYAN, B. AUERBACH.
- 24 Using weighted spherical harmonics to detect functional locomotor signals at the distal femoral articulation. Z.R. SIMS, C.J. LLERA MARTÍN.
- 25 Humeral morphology and locomotion: Discerning functional signals using weighted spherical harmonics. C.J. LLERA MARTÍN, Z.R. SIMS.

THURSDAY ALL DAY SESSIONS

- 26 Applications of a regularized deep network micro-CT image auto-segmentation approach to morphological data. S. KUO, L.J. DEMARS, A. YAZDANI, V. CHERUKURI, Y. SUN, A. COLOMBO, V. MONGA, T.M. RYAN.
- 27 "Differential tissue shrinkage in diceCT". K.P. FRANKLIN, T.D. SMITH, V.B. DELEON.
- 28 Comparing 3D Estimates of Neck Muscle Function in Primates. F.R. MCGECHIE, K.M. MIDDLETON, C.M. HOLLIDAY, T.K. NALLEY, E. FRICANO, N. GRIDER-POTTER, C.V. WARD.
- 29 A novel method for collecting primate orbital volume in 3DSlicer. E.R. BRYSON, V.B. DELEON, T.D. SMITH.
- 30 A new method for quantifying 3D anatomy of living subjects using low-dose stereo radiographs. A.B. LAWRENCE, M.E. BOEYER, K.M. MIDDLETON.
- 31 Cranial sex estimation with non-traditional linear measurement: A geometric morphometric approach. B.H. MOSS.
- 32 Automated morphological phenotyping using learned shape descriptors and functional maps: A novel approach to geometric morphometrics. O.O. THOMAS, H. SHEN, R.L. RAAUM, W.E. HARCOURT-SMITH, J.D. POLK, M.A. HASEGAWA-JOHNSON.
- 33 Differences in morphological integration of the hominoid postcranium due to landmarking protocol. M.A. CONAWAY, N. VON CRAMON-TAUBADEL.
- 34 Assessing intraskeletal and regional variation in pore type morphometry: A pilot of the Pore Extractor 2D ImageJ toolkit. M.E. COLE, S.D. STOUT, A.M. AGNEW.
- 36 A new method to quantify vertebral wedging using 3D models. S.A. WILLIAMS, I. ZENG, S. SHUKMAN, J.S. GUERRA, M.R. MEYER.

Session 3

Genetics & Genomics: Evolution and Populations

Contributed Poster Presentations

Chair: Anna Penna

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

37 Genetic insights into local adaptation of lipid metabolism in fishing-based populations in southern East Asia. Y. GAO, Z. XIA.

38 Genetic ancestry defies social organization in human populations of western Himalaya, India. A. SINGH, V. SAHAJPAL, S. KUMAR, M. THAKUR. WITHDRAWN

39 Genetic Evidence for Heat Adaptation in Mexican Mayans. V.M. BATTISTA, K.T. ZHU, O. GARCIA, K. EVANS, M. INCLÁN, M. KIYAMU, T. BRUTSAERT, M. SHRIVER, L. PEARSON, A. BIGHAM.

THURSDAY ALL DAY SESSIONS

- 40 **Tracing demographic histories through time using ancient DNA in Chilean Fuego-Patagonia.** C.M. BALENTINE, M. ALFONSO-DURRUTY, A.W. REYNOLDS, M. VILAR, F. MORELLO, M. SAN ROMÁN, L.C. SPRINGS, D.A. BOLNICK.
- 41 **Sharing of CYP450 genes between archaic hominins and modern Africans.** K.D. THILLOT, F.A. VILLANEA.
- 42 **Genetic Approaches to the Paternal Ancestry of Contemporary Afro-Puerto Rican Communities.** K. MCCORMACK, J. BENN-TORRES.
- 43 **Best Practices for Returning Genomics Research Results to Participants, with a Special Focus on Marginalized Populations.** G.V. MILLER, K.E. GROGAN.
- 44 **Identification of Male and Female DNA in Mixed Samples Using an *Amelogenin* qPCR Assay.** S.M. MCCRANE, MA, C.J. MULLIGAN, PHD.
- 45 **The Impacts of Mating System on Sperm Gene Evolution in Primates.** R.M. DECAMP, A.E. TRUJILLO, K.M. TILTON, M.E. BLAIR, L. POZZI, T.R. DISOTELL, A.J. TOSI, A.S. BURRELL, C.M. BERGEY.
- 46 **Ancient dog mitochondrial lineages indigenous to North America recovered from Jamestown Colony.** A.E. THOMAS, A. DE FLAMINGH, K.E. WITT, M.E. HILL, JR., R.S. MALHI, A. KITCHEN.
- 47 **How Human Admixture Impacts the Genomic Landscape.** A. FUNK, E. HUERTA-SÁNCHEZ.
- 48 **3D Genomic Strategies to Understand Complex Trait Genetic Architecture.** S.F. GRANT.
- 49 **The Human Pangenome Reference: Building a Global Resource to Map Genomic Diversity.** H.A. LAWSON, E.E. KENNY, K.H. MIGA, T. WANG.
- 50 **Predicting environmental and ecological drivers of human population structure.** E. PLESS, A. ECKBURG, B. HENN.
- 51 **Co-creating a genomics project benefit-sharing plan: Results from a case study in Madagascar.** R. RAKOTOARIVONY, S. LEBARON VON BAEYER, E.E. BURKE.
- 52 **Gene expression response comparison of macaques (*Macaca mulatta*) to two malaria species.** A.E. TRUJILLO, C.M. BERGEY.
- 53 **Disentangling phylogenetic, physiological, and ecological influences on the human gut microbiome using primatized gnotobiotic mice.** L.D. SCHELL, C.E. DIGGINS, R.N. CARMODY.
- 54 **Art, Orality, and Migration: The roles of *NF1*, mnemonics, and somatic adaptation in the hominin biocultural toolkit.** A.J. ALVESHHERE, L. KELLY, V.M. RICCARDI.
- 55 **Marginalizing Melanin: Historical Pigmentation-Based Prejudices Obscuring Research on the Microevolution of Skin Pigmentation.** Y. PRYOR, J. LINDO.
- 56 **The Genetic Landscape of Samegrelo, Western Georgia (Caucasus).** T.G. SCHURR, R. SHENGELIA, A. YARDUMIAN, I. MATHIESON, M. SHAMOON-POOR, D. CHITANAVA, S. LALIASHVILI, I. LALIASHVILI, R. KIBRET, Y. KUME-KANGOLO.
- 57 **Adaptive evolution of *Plasmodium*-associated genes in primates.** K.M. TILTON, A.E. TRUJILLO, R.M. DECAMP, M.E. BLAIR, L. POZZI, T.R. DISOTELL, A.J. TOSI, A.S. BURRELL, C.M. BERGEY.

THURSDAY ALL DAY SESSIONS

Session 4

Human Biology & Behavior: Understanding Variation

Contributed Poster Presentations

Chair: Cat Taylor

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 58 **A New 3D System for Categorizing Variation in Middle Meningeal Neurovascular Patterns As Determined from Endocranial Surfaces of 6-8.0 year olds.** J.M. CRONIN, E. DAS, A.T. DAVIS, G.A. SELECKY, R.S. JABBOUR, G.D. RICHARDS.
- 59 **Anatomical and Shape Variation of the Endocranial Cavity in 6.0–8.0 Year-Old Humans.** S.E. YAWITZ, J. TACHIBANA, M. LUI, C. PHELY-BOBIN, C. KAN, J.M. CRONIN, A.T. DAVIS, E. DAS, R.S. JABBOUR, G.D. RICHARDS.
- 60 **Effect of age-related changes on facial asymmetry of Czech adults: 3D landmarks-based method.** K. HARNÁDKOVÁ, K. KOČANDRLOVÁ, L. KOŽEJOVÁ JAKLOVÁ, J. VELEMÍNSKÁ.
- 61 **An *in silico* method for modeling the nasal cycle in 3D: Implications for assessing human nasal form and function.** B. TRAN, L.A. WARD, E. THAI, S.D. MADDUX.
- 62 **Allometric scaling of maxillary sinus volume in modern humans.** S. KIM, L.N. BUTARIC, S.D. MADDUX.
- 63 **Variation in growth and asymmetry of long bones in children of known ages.** C.E. TAYLOR.
- 64 **Preliminary Investigation of Relationships between Sex, Body Size, and Inorganic Content of Human Tibiae.** C.L. GOLDSMITH, A.L. HARDEN, M. AGNEW.
- 65 **Assessing the performance of Advanced Normalization Tools (ANTs) in automating skeletal phenotype extraction from large datasets of 2D images.** C.C. CATALDO-RAMIREZ, D. HADDAD, N. AMENTA, T.D. WEAVER.
- 66 **Trunk muscle endurance, strength and flexibility in rural subsistence farmers and urban industrialized adults in western Kenya.** B.E. SIBSON, V.A. TOBOLSKY, T.M. KISTNER, N.B. HOLOWKA, J. JEMUTAI, T.K. SIGEI, R. OJIAMBO, P. OKUTOYI, D.E. LIEBERMAN.
- 67 **The far reaching effects of disease on morphology.** H. DELPRETE.
- 68 **Nutritional status of school-aged Haitian children living in the Dominican Republic.** S.L. ARPS.
- 69 **The Effect of Food Insecurity on Oral Health.** P.S. WHYMS, A. NAQVI, D. TRUSKOSKI, A. VALVERDE ESTEPA, S. ALRAYYES, S. WILLIAMS, C. SILVER, S. AWADALLA, C. NICHOLAS.
- 70 **Rural Embodiment and Child Health (REACH) Study: Effects of resource access and macroparasite exposure on intestinal inflammation among children from rural Mississippi.** T.J. CEPON-ROBINS, E.K. MALLOTT, I.C. RECCA, T.E. GILDNER.

THURSDAY ALL DAY SESSIONS

- 71 Health impacts of intergenerational households and childcare on Bangladeshi immigrant UK grandmothers. S. SHREYER, L.L. SIEVERT, S. MUTTUKRISHNA, T. SHARMEEN, K. BEGUM, O. CHOWDHURY, G.R. BENTLEY.
- 72 Coping with Discrimination and Stress: Creative Activity and Health Among a Sample of Transgender and Gender Diverse people in the U.S. T. WALKER, K. KUEHN, A. DELOUIZE, J.A. PUCKETT, D. HOPE, R. JUSTER, R. MOCARSKI, L. DUBOIS.
- 73 Somatotype is a better indicator than body mass index to evaluate body composition. S. DATTA BANIK.
- 74 Ground reaction force and contact time improve energetic expenditure prediction. C.M. GILDEE, A.G. HAMMERBERG, P.A. KRAMER.

Session 5

Primateology: Assessing Behavior and Ecology across Space and Time

Contributed Poster Presentations

Chair: Katharine Jack, Irene Smail

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 76 Mixed-species and same-species siamang pairs exhibit similar activity and proximity patterns. F.V. KASER, G. REBARCHEK, A. MORESCO, A.L. SCHREIER.
- 77 Movement speed towards shared latrine sites by southern bamboo lemurs indicates cautionary behavior. K.Q. MAYNARD, S.A. POINDEXTER, T.M. EPPLEY.
- 78 Characterizing Heterospecific Encounters with the Ring-tailed Lemurs (*Lemur catta*) on St. Catherines Island, Georgia, USA. K.M. MCGUIRE, M.L. SAUTHER.
- 79 Dominance and paternity in male mantled howler monkeys (*Alouatta palliata*) at La Pacifica, Costa Rica. L.C. COREWYN, K. BROSSARD STOOS, M.A. KELAITA.
- 80 Same-sex sexual behavior in wild woolly monkeys (*Lagothrix lagotricha poeppigii*). L.A. ABONDANO, K.M. ELLIS, A. DI FIORE.
- 81 Testing adaptive explanations for same-sex sociosexual behavior in bonobos (*Pan pansiscus*). L.J. FORNOF, L. SAMUNI, M. SURBECK.
- 82 Intergroup competition and home range geometry. J. LIAO, S. CROMMELIN, M. BROWN.
- 83 Effects of climate and other habitat variables on African cercopithecoid community structure. I.E. SMAIL.
- 84 Life expectancy over time and death seasonality among captive former biomedical research chimpanzees. D.M. ARBOGAST, J.J. ELY, W. MCGRAW, D. CREW.

THURSDAY ALL DAY SESSIONS

- 85 Patterns of physical aging in *Propithecus coquereli*, a long-lived strepsirrhine primate. N.R. HESLEP, E.E. GUEVARA, R.E. WUNDERLICH.
- 86 Use of Thermal Imaging to Measure Behavioral Thermoregulation of Western Chimpanzees (*Pan troglodytes verus*) in a Savanna-Mosaic Woodland Environment. M.R. MILLER, J. PRUETZ.
- 87 Examination of a parallel laser apparatus to measure growth and flanges of wild Bornean orangutans (*Pongo pygmaeus wurmbii*). E.R. BROWN, T.G. LAMAN, E.E. KANE, F.S. HARWELL, T. SUSANTO, C.D. KNOTT.
- 88 Assessing the long-term impacts of covid-19 on primate field research. K.M. JACK, N.K. KULICK.
- 89 Ethnographic accounts of charcoal consumption in Philippine tarsiers: Comparison across islands. L.L. FIELDS, N.B. GROW.
- 90 Livestock grazing in lemur habitats: Using passive acoustic monitoring to characterize grazing intensity. N. FLOWERS, L.L. RANKIN, N. YAMASHITA, A.C. AXEL.
- 91 Associations between ecological attributes and the gut microbiome of mantled howler monkeys in Los Tuxtlas, Mexico. T.L. WHITNEY, K.R. AMATO, P. AMERICO DUARTE DIAS.
- 92 The activity budget of a mother aye-aye (*Daubentonia madagascariensis*) postpartum. L.M. PACIULLI, L. BOYD, A. ALVA, I. HORTON, C. STEPHENSON, D. WATTS.
- 93 Utilizing Empirical Behavioral Indicators to Create Individualized Care Plans for Special Needs Chimpanzees (*Pan troglodytes*) at a Sanctuary. A.R. HALLORAN.
- 94 Can language-training shape ape brains? Koko and Michael compared to other gorillas. N. BARGER, P. PATTERSON, C. NUNES, K. KEEL, C.D. STIMPSON, A.K. BEHEL, J.M. ERWIN, P.R. HOF, C.C. SHERWOOD.
- 95 Predicting the presence of the yellow-tailed woolly monkey (*Lagothrix flavicauda*) using habitat suitability models and newly confirmed localities in Junín, Peru. M.A. ZARATE, E. CHARPENTIER, S. SHANEE, C.A. SCHMITT.

THURSDAY ALL DAY SESSIONS

Session 6

Primateology: Exploring Morphological Variation Related to Diet, Locomotion, and Size

Contributed Poster Presentations

Chair: Bernadette Perchalski

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

- 96 Comparing primate body mass datasets: Cautionary implications for evaluating drivers of sexual size dimorphism in platyrrhines. S. RETTKE, A. DI FIORE, E. FERNANDEZ-DUQUE, L. SHAPIRO.
- 97 A macaque model for the effects of admixture on body size. L.T. BUCK, D.C. KATZ, R. ROGERS ACKERMANN, L.J. HLUSKO, S. KANTHASWAMY, T.D. WEAVER.
- 98 Fiber digestibility in wild Bornean orangutans: Age-sex class differences and implications for slow juvenile growth. V.R. ZDANOWICZ, E. KANE, T. SUSANTO, C.D. KNOTT.
- 99 Comparison of hind limb kinematics in *Lemur catta* climbing and descending a 45° oriented substrate. B.A. PERCHALSKI, A. ZEININGER, D. SCHMITT.
- 100 Differential use of arboreal substrates during leaping in free-ranging primates and squirrels. A.D. KEMP, H. HENDI, A. MCNAMARA, N.T. DUNHAM, T.L. HIERONYMUS, T. PHELPS, L.J. SHAPIRO, J.W. YOUNG.
- 101 Primate gait diversity: Comparing quadrupedal kinematics of lemurids in free-ranging and laboratory environments. L.C. MYERS, A. MCNAMARA, N.T. DUNHAM, T. PHELPS, J.W. YOUNG, T. HIERONYMUS, L.J. SHAPIRO.
- ~~102 How can calcaneal shape help us infer locomotor behavior in extinct primates? A 3D-geometric morphometric approach. G. MONCLÚS-GONZALO, D.M. ALBA, A. FABRE, J. MARIÓ. WITHDRAWN~~
- 104 Further associations between humeral head curvature and habitat use in cercopithecids. A. RAPOFF, T. HUMMER, N. DUNHAM, E.E. KANE, W. MCGRAW, D.J. DAEGLING.
- 105 Examination of degrees of modularity in the anthropoid axial skeleton. H. JUNG, N. VON CRAMON-TAUBADEL.
- 106 Greater variability in rhesus macaque (*Macaca mulatta*) endocranial volume among males. A.E. COLBY, A.R. DECASIEN, E.B. COOPER, J.P. HIGHAM.
- 107 Facial Widths in the Three Adult Morphs of Orangutans. F.S. HARWELL, Z.E. ALBERT, C.D. KNOTT.
- 108 Variation in the Platyrrhine Pterygoid Process using Linear and Angle Measurements. S. PALMER, C.E. TERHUNE, C.A. KIRCHHOFF, S.B. COOKE.

THURSDAY ALL DAY SESSIONS

- 109 Interspecific and ontogenetic differences of hyoid body shape in tufted vs. untufted capuchins. P.M. TAYLOR, J. CHALK-WILAYTO, M.D. FOGAÇA, M.A. HOLMES, M.F. LAIRD, C.E. TERHUNE.
- 110 Cranial fluctuating asymmetry and reproductive fitness in the Cayo Santiago Rhesus macaques. A.N. ROMERO, D.R. MITCHELL, C.E. TERHUNE.
- 111 Morphology of the cercopithecoid mandibular P3 and its correlation with sex and diet. S.E. COBB, C.A. KIRCHHOFF, C.E. TERHUNE, A.R. ELLER, S. COOKE.
- 112 Old questions, new methods: testing hypotheses for canine dimorphism in the evolution of anthropoid primates using phylogenetic analyses. L.A. BOWLAND, A.N. ROMERO, C.D. KELLY.
- 113 Severity measures of dental lesions. J.C. GOMEZ, C.A. KIRCHHOFF, S.B. COOKE, C.E. TERHUNE.
- 114 Sex-biased evolutionary constraints: how cross-sex genetic correlations and evolvability affect the evolution of canine size dimorphism. C.D. KELLY, C.C. ROSEMAN, K.S. PAUL, J. PLAVCAN, L.K. DELEZENE.
- 115 Examining the role of competition in *Cercopithecus mitis* and *Cercopithecus ascanius* dietary morphology. T. CİCAK.
- ~~116 Secular trends in the Cayo Santiago rhesus macaque population. G.N. FRANCIS, Q. WANG. WITHDRAWN~~
- 117 Don't bite off more than you can chew: A behavioral analysis of premolar use in capuchins during feeding. S.E. BAUMGARTEN, M.F. LAIRD, K.A. WRIGHT, B.W. WRIGHT, R.S. SCOTT, C.F. ROSS, A. VAN CASTEREN, M. DUTRA FOGAÇA, D.S. STRAIT.
- 118 Age and sex related variation in urinary neopterin in wild Bornean orangutans. C.A. O'CONNELL, D.J. NAUMENKO, M.A. VAN NOORDWIJK, R.S. BRITAIN, S. UTAMI ATMOKO, E.R. VOGEL.
- 119 Mechanical Properties and Enamel Chemistry in Primate Teeth. F.R. FOSTER, R.S. SCOTT.

THURSDAY, MORNING SESSIONS

Session 7

Symposium (AABA/PPA): Ethics in the Curation and Use of Human Skeletal Remains

Invited Podium Symposium

Chair: Carlina de la Cova, Siân E. Halcrow, Gwen Robbins Schug

Plaza Ballroom A/B

There is growing awareness of the lack of ethical standards in the collection, curation, and use of human skeletal remains for research and teaching. This is especially true in the US, where the absence of ethical guidelines has been strongly felt in recent years due to the increasing headway made by Anti-Racism movements, the acknowledgment of racial disparities in academia made even more visible with the COVID-19 pandemic, and the horrendous abuses revealed by the mishandling of the remains of Delisha and Tree Africa killed in the MOVE bombing perpetrated by the City of Philadelphia. At the same time there is a growing international movement to consider the ethics of collections and to repatriate human remains. Biological Anthropology has a painful history with the treatment of Black, Indigenous, and other People of Color, including their bodies and bodily remains. Biological Anthropology's role in building the race concept—leading to racism, eugenics, and genocide—underscores the urgency to decolonize our practice. Based on this troubled history, we have a responsibility to not just invite diverse voices to discuss our ethical obligations, but white anthropologists must start changing their approaches to uphold basic principles of human rights, consent and dignity for descendent communities. The Association of Black Anthropologists, the Society of Black Archaeologists, and the Black in Bioanthropology Collective have called for an African American Graves Protection and Repatriation Act. In acknowledgement of the need to further consider the ethics of working with human remains, the AABA recently established a special committee to provide guidance on professional activities on this topic. This symposium aims to contribute to this guidance. We bring together a diverse group of archaeologists, bioarchaeologists, molecular anthropologists, cultural anthropologists, forensic anthropologists, and museum professionals to unpack the ethical challenges for curating, and teaching and research using human remains.

- 8:00 The Legacy and Disposability of Brown Bodies: The Bioethics of Skeletal Anatomy Collections from India.** S.C. AGARWAL.
- 8:15 Interdisciplinary approaches provide insight into structural violence and acute bacterial infections in an individual from the Terry Collection.** R.M. AUSTIN, M.K. ZUCKERMAN, T.P. HONAP, H. LEE, G.K. WARD, C. WARINNER, K. SANKARANARAYANAN, C.A. HOFMAN.
- 8:30 When does a body become a thing? The transformation from person to object in the treatment of human remains.** C. BENNETT.
- 8:45 Ethical issues and considerations for ethically engaging with the Robert J. Terry, Hamann-Todd, and William Montague Cobb anatomical collections.** C.M. DE LA COVA.
- 9:00 "They're people too": Perspectives on the (dis)embodiment of teaching assemblages.** E.A. DIGANGI, A. GRUENTHAL-RANKIN, T. SOMOGYI.
- 9:15 History of the Vienna Protocol –Guidelines on How to Deal with Holocaust Era Human Remains.** S. HILDEBRANDT.

THURSDAY MORNING SESSIONS

- 9:30 Colonial Logics and Captive Bodies: Radical reckonings with question of ethics in the collection of human remains. D. JUSTINVIL.
- 9:45 Break.
- 10:00 Why ancestors haven't mattered: Received epistemic values in American Physical/Biological Anthropology impeding discipline-wide conversations around ethics. A.M. KAKALIOURAS.
- 10:15 The Smithsonian survey of human remains of African American individuals at the National Museum of Natural History: Confronting the past and changing the present. S.B. SHOLTS, A. LAWRENCE.
- 10:30 Communication, Collaboration, and Transparency: An Exploration of the Ethical Challenges Associated with the Analysis and Curation of Human Remains when Working with Multiple Stakeholders at the Capuchin Catacombs of Palermo, Sicily. K.E. SQUIRES, D. PIOMBINO-MASCALI.
- 10:45 Discussant 1: Watkins, Rachel.
- 11:00 Discussant 2: Blakey, Michael.

Session 8

Topics in Biological Anthropology

Contributed Podium Presentations

Chair: Kristian Carlson

Governor's Square 12

- 8:00 Effects of exercise on spatial variation in subchondral and trabecular bone properties. J.D. POLK, H. SONG, M.E. KERSH.
- 8:15 Relative limb strength in the 3.67 Ma hominin skeleton, StW 573 ("Little Foot"), and its implications for the role of arboreality in hominin evolution. K.J. CARLSON, T. JASHASHVILI, J.L. HEATON, T.R. PICKERING, M. BURGESS, L. SARRINGHAUS, A. BEAUDET, R.H. CROMPTON, D. STRATFORD, K. KUMAN, R.J. CLARKE, C.B. RUFF.
- 8:30 Variation in ontogenetic trajectories of limb dimensions is the result of multiple evolutionary forces. A. YIM, L. COWGILL, D.C. KATZ, C.C. ROSEMAN.
- 8:45 Differences in epigenetic aging of the prefrontal cortex and cerebellum in humans and chimpanzees. E.E. GUEVARA, W.D. HOPKINS, P.R. HOF, J.J. ELY, B.J. BRADLEY, C.C. SHERWOOD.
- 9:00 The Relationship Between Alzheimer's Disease Memory Symptoms and Caregiver Burden Differs in Mexico and the United States. E.E. GRIFFITH.
- 9:15 Indigeneity within datasets: DNA sequences, journeys and genomic representations about the Karitiana (Yjxa) people. C. BARRAGÁN, J.R. GRIESEMER. WITHDRAWN
- 9:30 Gut microbial plasticity in animal domestication and human industrialization. R.N. CARMODY, A.T. REESE.

THURSDAY MORNING SESSIONS

- 9:45 **Untangling Carbohydrate and Protein Source Contributions in the Diets of a Neotropical Foraging-to-Farming Population using Carbon Stable Isotope Analysis of Amino Acids.** N.C. NEFF, K.M. PRUFER, G. BUSQUETS-VASS, E.E. RAY, E. ELLIOTT SMITH, D.J. KENNETT, S.D. NEWSOME.
- 10:00 **Hidden Kin: The role of extramarital partners in the lives of Himba women.** B.A. SCELZA, S.P. PRALL.
- 10:15 **The causes and consequences of women's status in Himba pastoralists.** S.P. PRALL, B.A. SCELZA.
- 10:30 **Masculine voice is associated with better mucosal immune defense in adolescent and adult males.** C.R. HODGES-SIMEON, G. ALBERT, T. MCHALE, S.J. GAULIN, M. GURVEN, J.K. HLAY, S.A. ARNOCKY.
- 10:45 **A coupled humanitarian and biodiversity crisis: lemur hunting and consumption in Western Madagascar.** 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.
- 11:00 **Prevalence, Variation, and Transmission of Anti-Microbial Resistance Among Sympatric Wild Primates.** R. STUMPF, A. ASANGBA, C. IRUMBA, M. AINEBYONA, H. ONYUTH, M. NUTE.

Session 9

Paleoanthropology: Ecology, Physiology, Behavior

Contributed Podium Presentations

Chair: Kate McGrath

Governor's Square 15

- 8:00 **Can infraorbital depth of the maxilla be used to predict activity pattern in fossil primates?** B. RODWELL, E. KIRK.
- 8:15 **Quantification of nasal airway morphological variation in modern humans.** L. MARÉCHAL, J. DUMONCEL, W. ASTUDILLO ENCINA, A. EVTEEV, V. TORO-IBACACHE, R.G. VENTER, Y. HEUZÉ.
- 8:30 **Evolution of cognitive traits in the hominin clade: a paleoneurological approach.** F. MACCIARDI, A. BOATTINI, G. MODENINI, F. MARTINI.
- 8:45 **Linking mammalian herbivore diets and (paleo)environments: implications for hominin paleoecology.** J.R. ROBINSON, J. ROWAN, W. BARR, M. SPONHEIMER.
- 9:00 **Zooarchaeology and Taphonomy of Small Mammal Remains from Liang Bua.** E.G. VEATCH, T. SUTIKNA, M.W. TOCHERI.
- 9:15 **More severe stress markers in the teeth of *Australopithecus africanus* compared to *Paranthropus robustus*.** K. MCGRATH, I. PANSIN, D. GUATELLI-STEINBERG.
- 9:30 **Is *Paranthropus boisei* an environmental specialist compared to early *Homo*? Evaluating the faunal evidence from the Koobi Fora Formation, Kenya.** K. O'BRIEN, N. HEBDON, J. FAITH.

THURSDAY MORNING SESSIONS

- 9:45 **Inferring the diet of La Quina 5 using dental microwear texture analysis and plant microremains from dental calculus.** F.L. WILLIAMS, C.W. SCHMIDT, A.G. HENRY, J.L. DROKE, G. BECAM, M. DE LUMLEY.
- 10:00 **Break.**
- 10:15 **(Wo)man the hunter: The Physiological Evidence Ignored.** C. OCOBOCK, S. LACY.
- 10:30 **(Wo)man the hunter: The Archaeological Evidence Ignored.** S.A. LACY, C. OCOBOCK.
- 10:45 **Is there an energetic threshold during pregnancy?** G. CORDEY, N.M. WEBB, M. HAEUSLER.
WITHDRAWN
- 11:00 **Female pelvic dimensions at different ages in parous and nulliparous individuals.** C. VANSICKLE, P. GRONDEL.
- 11:15 **The external and internal morphology of a hominin vertebra from 'Ubeidiya, Israel and its implication to early homo evolution.** A. BARASH, M. BELMAKER, O. BARZILAI, E. BEEN.
- 11:30 **New body mass-at-death estimates for KNM-WT 15000 (*Homo erectus*).** R.C. MCCARTHY, D.L. CUNNINGHAM, D.J. WESCOTT.
- 11:45 **A non-destructive method for determining season of death in extant African Bovidae using dental microwear: Implications for seasonal variation in hominin resource availability and site occupation.** F.L. FORREST.

Session 10

Primateology: Flexibility in the Face of Social and Ecological Changes

Contributed Podium Presentations

Chair: Amanda Ellwanger

Plaza Ballroom E

- 8:00 **Social relationship quality predicts coalition formation among adult female chimpanzees at Kanyawara, Kibale National Park, Uganda.** S.A. FOX, D.K. ENIGK, Z.P. MACHANDA, M.N. MULLER, E. OTALI, N. THOMPSON GONZÁLEZ, R.W. WRANGHAM, M. EMERY THOMPSON.
- 8:15 **The impact of seasonal time constraints on grooming relationships and networks of female chacma baboons (*Papio hamadryas ursinus*) in a temperate South African habitat.** N.W. ELLWANGER, T.Q. BARTLETT.
- 8:30 **Intergroup encounters among woolly monkeys in Amazonian Ecuador.** K.M. ELLIS, L.A. ABONDANO, A. DI FIORE.
- 8:45 **Social strategies of male bonobos during intergroup encounters.** L. CHENG, L. SAMUNI, S. LUCCHESI, T. DESCHNER, M. SURBECK.
- 9:00 **Quantifying food resource availability: how to use consumer data to move beyond measuring abundance using examples from bonobo (*Pan paniscus*) feeding ecology.** E.G. WESSLING, L. SAMUNI, R. MUNDY, M. ADAN PASCUAL, S. LUCCHESI, B. KAMBALE, M. SURBECK.
- 9:15 **Meat Sharing in Savanna-Dwelling Chimpanzees at Fongoli, Sénégal.** A. ACHORN, S. LINDSHIELD, P. NDIAYE, J.D. PRUETZ.

THURSDAY MORNING SESSIONS

- 9:30 How closely does chimpanzee diet predict environmental fruit availability at Gombe National Park? S.L. ROIVAS, I.C. GILBY.
- 10:00 Seasonal variation in Verreux's Sifaka ranging patterns based on resource availability. B.M. HARSHBARGER, R.J. LEWIS, A. AXEL.
- 10:15 Climatic influence on dietary behavior: Isotopic evidence from pre and post hurricane Cayo Santiago macaques. E.H. MANN, A.R. DECASIEN, M.J. MONTAGUE, M.L. PLATT, S.C. ANTÓN, R.L. QUINN, J.P. HIGHAM.
- 10:30 Integrated behavioral and metabolically flexible responses of wild orangutans to variation in nutritional intake. E.R. VOGEL, S.E. ALAVI, D.J. NAUMENKO, M. WATFORD, S. UTAMI ATMOKO, B.E. CROWLEY, R.S. BRITTAİN, T.D. BRANSFORD, M. EMERY THOMPSON, A. ZULFA, W.D. AGUADO, M.A. VAN NOORDWIJK, J.M. ROTHMAN, D. RAUBENHEIMER.
- 10:45 Impacts of forest fires on orangutan nutrition and health: Insight into how global climate change will affect an endangered ape. A.L. DIGIORGIO, D.J. NAUMENKO, C.A. O'CONNELL, L. KIELY, D. SPRACKLEN, T. BRANSFORD, R.S. BRITTAİN, A. UGARTE, S.U. ATMOKO, E.R. VOGEL.
- 11:00 Primates in an urban world. A.L. ELLWANGER, L. MILLINGTON, J.E. LAMBERT.
- 11:15 The conservation value of anthropogenically-modified habitat for the endangered moor macaque (*Macaca maura*) in Sulawesi, Indonesia. E.P. RILEY, A. ALBANI, A.A. ZAK, L. GERMANI, J.M. ROTHMAN, M. CAROSI, P. NGAKAN.
- 11:30 Orangutan conservation on YouTube: The importance of storytelling in productive messaging. M.C. HYDE, C.A. FREUND, J.K. ADAMS, A.L. DIGIORGIO.
- 11:45 Portrayals of Wild Primates in Documentary Films: Reason for Concern? C.M. RILEY KOENIG, B.L. KOENIG, C.M. SANZ.

Session 11

Human Biology: Human Environmental Adaptation and Energetics

Contributed Podium Presentations

Chair: Grazyna Jasienska

Plaza Ballroom F

- 8:00 The impact of precipitation and humidity on East Asian skeletal variation. E.O. CHO, L.W. COWGILL, G.E. BLOMQUIST.
- 8:15 Nonshivering thermogenesis, body temperature, and bone mass in a model of cold-dwelling humans. A. STOKEL, A. RICHMAN, M. SCHULER, R. TUTINO, M.N. COSMAN, R. HURWITZ, I. HERMSMEYER, M.J. DEVLIN.
- 8:30 Andean populations adapted to high-altitude hypoxic environments use thoracic ventilation more than lowlanders to breathe while walking and running. W.É. CALLISON, M. KIYAMU, F.C. VILLAFUERTE, T.D. BRUTSAERT, D.E. LIEBERMAN.
- 8:45 When the cold gets under your skin: The effects and role of brown adipose tissue activity in Samoans. A. NICLOU, L. VESI, M. ARORAE, N. NASERI, K. FAASALELE SAVUSA, T. NASERI, J.P. DELANY, S.T. MCGARVEY, A.C. RIVARA, N.L. HAWLEY, C. OCOBOCK.

THURSDAY MORNING SESSIONS

- 9:00 **Total daily energy expenditure and water turnover in a small-scale agro-pastoralist society from northern Kenya.** A. MCGROSKY, Z.S. SWANSON, R. NZUNZA, R. RIMBACH, H. BETHANCOURT, E. NDIEMA, D.R. BRAUN, A.Y. ROSINGER, H. PONTZER.
- 9:15 **Break.**
- 10:00 **Grip strength and mating success in US adults.** C.B. SMITH, E.H. HAGEN.
- 10:15 **Age related changes of pelvic shape in adulthood.** L. WALTENBERGER, K. REBAY-SALISBURY, P. MITTEROECKER.
- 10:30 **Fermentation does not replicate the energetic benefits of cooking in a starch-rich tuber.** E.M. VENABLE, E.E. PUTNAM, B.E. WOLFE, K.L. BRYANT, E.E. HECHT, R.N. CARMODY.
- 10:45 **The Core Human Fecal Metabolome.** J.J. HAFFNER, M. KATEMAUSWA, T.S. KAGONE, E. HOSSAIN, D. JACOBSON, K. FLORES, A.R. PARAB, A.J. OBREGON-TITO, R.Y. TITO, L. MARIN REYES, L. TRONCOSO-CORZO, E. GUIJA-POMA, N. MEDA, H. CARABIN, T.P. HONAP, K. SANKARANARAYANAN, C.M. LEWIS, JR, L. MCCALL.
- ~~11:00 **'Social metabolism' and biocultural anthropology: A concept at the intersection of adaptability and political-economic analyses.** J.M. BRAGG. WITHDRAWN~~

THURSDAY, AFTERNOON SESSIONS

Session 12

Symposium: Disrupting Genomics: Bringing Critical and Theoretical Approaches into Practice

Invited Podium Symposium

Chair: Rick W.A. Smith, Graciela Cabana

Plaza Ballroom A/B

Genomics has become a powerful but often controversial tool for generating knowledge about people and our biological relations to one another. While research in genomics has provided many insights into human evolutionary history, variation, and disease, decades of sustained critical engagements have also demonstrated how genome science has operated within, and perpetuated histories of, colonial and other modes of scientific objectification. Thus, while genomics offers important new insights, it can also reify social categories as biological, calcify hierarchies of what constitutes legitimate knowledge and power, and deepen a nature/culture divide. The history of genomics has also been fraught with problems of overhype and over-promising the field's potential. Almost two decades after the conclusion of the human genome project and its guarantee of a "genomic revolution" in health, the promise of precision medicine is left largely unfulfilled. The genomic commodification of individual ancestry, identity, and belonging has been called another "false promise" of genome science - one that often offers to displace people's lived relations with biocitizenship. Taken together, these now well worn critiques challenge anthropological engagements with genomics and urge us to critically evaluate and reframe our work. However, bringing these critical and theoretical approaches to bear on the actual practice of genome science is only beginning to gain traction in biological anthropology and elsewhere. In this panel, we draw on the insights of critical scholars of genomics as well as those who work to productively merge genomics with frameworks including bioethics, theories of embodiment, critical biocultural anthropology, science studies, Black studies, Indigenous studies, and feminist and queer theory, among others. Our goal is to demonstrate how researchers are drawing critical frameworks into the genome lab and other material practices of genome science - moving beyond critique alone to unsettle, disrupt, and transform knowledge production in genomics for the better.

- 1:30 **Disrupting Genomics: Introduction to the Symposium.** R.W. SMITH, G.S. CABANA.
- 1:45 **Paleogenomics, pathogens and critical perspectives on infectious disease.** E.A. NELSON, K.S. TSOSIE, R.W. SMITH.
- 2:00 **Biological affordances: A framework for acknowledging the non-deterministic possibilities of biology.** M.K. HOKE.
- 2:15 **Disrupting genomics as disrupting scientism.** G.S. CABANA, L.A. SMITH, F. DI FABIO ROCCA, B. MAZZA, M.M. MENDOZA.
- 2:30 **Anti-racist genomics: responding to scientific racism in the 21st century.** K.A. BIRD.
- 2:45 **Discussant;** R.W. Smith.
- 3:00 **Inclusion ≠ Equity: Empowering Indigenous Genomic Data Sovereignty and Justice.** K.S. TSOSIE.

THURSDAY AFTERNOON SESSIONS

- 3:15 Using ancient DNA to revisit the historical record of Latin America and the Caribbean. M.A. NIEVES-COLÓN.
- 3:30 Sharing circles: Native American Young Adult Perspectives on Genomics and Identity. J. LUND.
- 3:45 Discussant; Katrina Claw.
- 4:00 Genetic Ancestry Testing and the Politics of Blackness in Afro-Caribbean Communities. J. BENN TORRES.
- 4:15 The historic legacy of race-corrections in medicine: medical harm of slavery-era assumptions about "inferior Black lungs" for recovering COVID-19 patients. A.L. NON, M.A. ANDERSON, S. FLORES.
- 4:30 Critical Translation and Transparency in Community Centered Ancient DNA Research: Insights from the Anson Street African Burial Ground Project. R.E. FLESKES.
- 4:45 Theorizing the Genomic Archive as Method for an Abolitionist Science. S.M. ARCHER.
- 5:00 Discussant; Fatimah Jackson.

Session 13

Paleoanthropology: Isotope Insights

Contributed Podium Presentations

Chair: Monya Anderson

Governor's Square 15

- 1:30 Carbon and strontium isotope ratios shed new light on the paleobiology and collapse of *Theropithecus*, a primate experiment in graminivory. L.D. FANNIN, J.D. YEAKEL, V.V. VENKATARAMAN, C. SEYOUUM, D. GERAADS, P.J. FASHING, N. NGUYEN, K. FOX-DOBBS, N.J. DOMINY.
- 1:45 Preferential routing of C4 dietary carbon reflected in chimpanzee and baboon $\delta^{13}C$ values. R.S. NOCKERTS, D.L. FOX, R. O'MALLEY, D. MJUNGU, D. COLLINS, M.L. WILSON.
- 2:00 First enamel nitrogen isotope data of early hominins: Early Pleistocene *Australopithecus* (Sterkfontein Member 4, South Africa) did not consume significant amounts of animal resources. T. LÜDECKE, J.N. LEICHLITER, N.N. DUPREY, D. STRATFORD, H.B. VONHOF, M.K. BAMFORD, G.H. HAUG, A. MARTÍNEZ-GARCÍA.
- 2:15 Fine-scaled oxygen isotope variation in tooth enamel: milk does not trump seasonality. T.M. SMITH, J.N. ÁVILA, D.R. GREEN, I.S. WILLIAMS.
- 2:30 Nitrogen isotope analysis of 125,000-year-old tooth enamel from the Middle Palaeolithic Neanderthal site of Neumark-Nord 2, Germany. J.N. LEICHLITER, T. LÜDECKE, A.D. FOREMAN, L. KINDLER, T. TÜTKEN, T. TACAIL, A. MARTÍNEZ-GARCÍA.
- 2:45 Prehistoric socio-territoriality in Malawi: multi-isotopic perspectives on the behavioral ecology of Late Pleistocene foragers. A. BERTACCHI, S.H. AMBROSE, J.I. GIBLIN, A.M. ZIPKIN, J.C. THOMPSON, P. KALIBA.

THURSDAY AFTERNOON SESSIONS

Session 14

Human Behavior: Social Networks in Subsistence and Health

Contributed Podium Presentations

Chair: Leela McKinnon

Governor's Square 15

- 3:15 The evolution of early hominin food production and sharing. I. ALGER, S. DRIDI, J. STIEGLITZ, M.L. WILSON.
- 3:30 The Emergent Structure of Subsistence Risk-Management Networks. J. JONES, E. READY.
- 3:45 When studying human sociality, we need to distinguish intergroup relationships from long-distance relationships. A.C. PISOR, C.T. ROSS.
- 4:00 ~~Simulating the effects of a highly pathogenic virus across rural, peri-urban, and urban Bangladesh poultry worker's social networks. I. HARRYMAN, A. HAZEL, J.H. JONES.~~
WITHDRAWN
- 4:15 Sleep quality, social support, stress, and personality traits in a sample of Canadian university students during the 2020-2021 online academic year. L. MCKINNON, E. KILIUS, M. LI.
- 4:30 COVID-19 and Food Insecurity Among Resource Insecure University Students: An Applied Life History Perspective. M.C. KOPELS, C.J. ROULETTE.
- 4:45 Early life adversity during the post-apartheid transition and COVID-19 stress independently predict adult post-traumatic stress disorder risk in urban South Africa. A.W. KIM.

Session 15

Dental Anthropology: Contemporary Perspectives

Contributed Podium Presentations

Chair: Erin Blankenship-Sefczek

Plaza Ballroom E

- 1:30 Testing Data Imputation and Machine Learning Techniques on a Global Odontometric Reference Sample. C.E. SKIPPER, M.A. PILLOUD.
- 1:45 The biomechanics of tooth strength: Testing the efficacy of simple models for predicting fracture in geometrically complex teeth. R.S. SENDER, D.S. STRAIT.
- 2:00 Dental microwear texture analysis at the Gobero site complex (Middle-Late Holocene), Niger. C.W. SCHMIDT, P.C. SERENO, G.F. HOLMES.
- 2:15 The phylogenetic signal of the enamel-dentine junction of primate molars. C. ZANOLLI, A. URCIUOLI, M. DELGADO, T.W. DAVIES, F. BOUCHET, J. FORTUNY, A. BEAUDET, D.M. ALBA, O. KULLMER, M.M. SKINNER.
- 2:30 Features of catarrhine molars associated with durophagy. M.C. O'HARA, S. CHAPPLE, M. HUBBE, P. MAHONEY, W. MCGRAW, G.T. SCHWARTZ, M.M. SKINNER, D. GUATELLI-STEINBERG.

THURSDAY AFTERNOON SESSIONS

- 2:45 ~~Amara West: A dental insight into Egyptian-Nubian interactions in the New Kingdom.~~
E.L. PHILLIPS, J.D. IRISH, D. ANTOINE. WITHDRAWN
- 3:00 The Holocene population history of the Florida region: an assessment of dental nonmetric traits. D. BENITEZ, A.A. ELGART, M.E. DELGADO.
- 3:15 ~~Is atypical tooth wear described in fossil hominins caused by grit mastication? Potential evidence from a living primate population.~~ I. TOWLE, A.J. MACINTOSH, M. BERTHAUME, C. LOCH. WITHDRAWN
- 3:30 Simulating amelogenesis and resulting perikymata distribution using continuum models. P.W. MILLER, M.C. O'HARA.
- 3:45 ~~The effect of demographic variation on correlations between developing teeth in humans.~~ V. SGHEIZA. WITHDRAWN
- 4:00 Lemuroid Teeth vs. Lorisoid Teeth: Different Ways to go for Gums. A.M. BURROWS, S. LÓPEZ-TORRES, K.R. SELIG, M.T. SILCOX.
- 4:15 Boosting the signal: using paired dental microwear textures to augment osteobiographies. K.L. KRUEGER, J.C. WILLMAN, J.R. SCOTT.

Session 16

Functional Anatomy: Craniofacial Function and Development

Contributed Podium Presentations

Chair: Claire Terhune

Plaza Ballroom F

- 1:30 The potential role of phenotypic plasticity in the adaptation of nasal turbinates to cold environment. L. MAGNE, L. MARÉCHAL, M.J. DEVLIN, Y. HEUZÉ.
- 1:45 Ontogenetic changes in jaw leverage in tufted and untufted capuchins. M.A. HOLMES, P.M. TAYLOR, R. RAMIREZ, M. DUTRA FOGAÇA, J. CHALK-WILAYTO, C.E. TERHUNE, M.F. LAIRD.
- 2:00 Dietary and body mass correlates of primate tooth root surface area. A.R. DEUTSCH, V.A. WHICHARD, G.R. LAGOMARSINO, E. DICKINSON, A. HARTSTONE-ROSE.
- 2:15 Twist and chew: three dimensional tongue kinematics during chewing in macaque primates. K.L. FEILICH, J. LAURENCE-CHASEN, C. ORSBON, N.J. GIDMARK, C.F. ROSS.
- 2:30 Three-dimensional functional correlates of digitally dissected strepsirrhine masticatory muscle fiber architecture visualized through DiceCT. A. HARTSTONE-ROSE, E. DICKINSON, C.E. DAVIS, M.A. MANZO, A.S. CARTER, S. KOLLI, A. SCHWENK, C. LIU, N.L. VASIPALLI.
- 2:45 Accounting for evolutionary relatedness in biomechanical data. M.A. BERTHAUME, S. ELTON.
- 3:00 Does the capuchin temporalis maintain functional equivalence during chewing? M.F. LAIRD, J. IRIARTE-DIAZ, C.D. BYRON, M.C. GRANATOSKY, A.B. TAYLOR, C.F. ROSS.
- 3:15 Neural, Dural, and Osseous Interactions and Their Impact on Cranial Shape. A.T. DAVIS, G.A. SELECKY, C. PHELY-BOBIN, M. LUI, S. YAWITZ, J. TACHIBANA, J.M. CRONIN, C. KAN, K. LI, R.S. JABBOUR, G.D. RICHARDS.

THURSDAY AFTERNOON SESSIONS

- 3:30 The number of daily load cycles positively influences Haversian remodeling in jaws of New Zealand white rabbits (*Oryctolagus cuniculus*). S.E. LAD, H. KOWALKOWSKI, D.F. LIGGIO, H. DING, M.J. RAVOSA.

Session 17

Symposium: Anatomical and Bioarchaeological Skeletal Collections that Represent Marginalized Communities: current work and future developments

Invited Poster Symposium

Chair: Lara Noldner

Plaza Ballroom D

This invited poster symposium aims to continue important dialogues surrounding cadaveric collections of human remains that largely represent the marginalized, impoverished, and unclaimed. These dialogues include but are not limited to: confronting the structural inequalities and violence that created these collections, promoting a climate of responsibility and ethics for their care that includes collaboration with descendant communities and other stakeholders, and constructing accurate contextual narratives for individuals' lives and lived experiences. Participants represent scholars and students well-versed in these topics and more, who have made significant contributions to our knowledge of cadaveric collections and the historically underrepresented communities they include through a diversity of bioarchaeological research avenues. Posters accompanied by authors' presentations will highlight this research as well as associated collaborative efforts that have enriched knowledge and understanding of these collections and past lives.

- 1 **Sex estimation of os coxae using DSP2 and MorphoPASSE software: A validation study of an American sample.** E.A. BEWS.
- 2 **Highlighting the invisible: Marginalization in 19th and 20th century anatomical and medical anatomical skeletal collections.** C.M. DEGAGLIA, A. RESEARCH PARTICIPANT, M.K. ZUCKERMAN, K.E. MARKLEIN.
- 3 **The Stockman, the Nurse, and the Engineer: Using historical documents to interpret osteobiographies.** J.E. MACK, W. VANOSDALL.
- 4 **The University of Iowa Stanford Collection: past, present, and future.** L. NOLDNER.
- 5 **Colonized Bodies and Descendant Voices: Collaborative Narratives and Learning to Decolonize the Past Through Bioarchaeological Work in Belen, New Mexico.** C.E. RALSTON, P.K. STONE, D.L. MARTIN.
- 6 **A bioarchaeological analysis of the intersections of structural violence and healthcare provisioning at the Oneida State Custodial Asylum.** L.A. TREMBLAY, A. SCHRENK.
- 7 **Archived bodies: Death, dissection, and inequality in Depression-Era California (1930-1939).** W.A. VANOSDALL.
- 8 **Taphonomic and sharp-force trauma analysis of a non-identified anatomical teaching skeletal assemblage from Reykjavík, Iceland.** A. ZIMMER.

FRIDAY, ALL DAY SESSIONS

Session 18

Education in Biological Anthropology: Games, Committees and Effective Learning

Contributed Poster Presentations

Chair: Katrina Yezzi-Woodley

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

- 1 **Learning through movement: tactile methods for interpreting muscle movement in osteology.** A.R. GROSSO, S.A. TOTH, A.J. LIEURANCE.
- 2 **Analyzing the effects of a Master Online Course on DFW rates in an online environment.** J.C. REDMOND, A.L. ELLWANGER, B.L. TURNER, J.E. BURNET.
- 3 **EvoHom: Developing an Edugame for High School Teachers to Increase Literacy in Human Evolution.** R. LEACH, J. RIOS, F. MUINDI.
- 4 **The AABA Education Committee: Where it has been, where it is going, how we hope to get there.** K.E. YEZZI-WOODLEY, R.C. O'MALLEY, C. SCHREIN, K. MCGRATH, N. LOPERGOLO, A.C. OWINGS, B. POBINER.
- 5 **Using a short primatological field school as a high-impact experiential learning opportunity.** C.C. LAM, H. DINKINS, L.E. LIGHT.
- 6 **The Powerhouse Project: Encouraging Community Stewardship in Anthropology Students.** N.C. NEFF, H.M. BROOKSHIER, D.M. MULHERN, L. SHUPE-DIGGS.
- 7 **Curricular Adaptation in Evolutionary Medicine Courses: A Covid-19 Selective Sweep.** B.M. USHER.
- 8 **Educational, but Ethical? The Tension within Historic Skeletal Collections.** J.A. BARRON.
- 9 **Primates on the move: a comparison of student physical activity during an ethnoprimate field school and traditional classroom setting.** J.E. LOUDON, M.E. HOWELLS, T.B. APRIL, K.L. WOOLARD.

FRIDAY ALL DAY SESSIONS

Session 19

Functional Anatomy: Structural Ontogeny

Contributed Poster Presentations

Chair: Libby Cowgill

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 10 Trabecular bone microarchitecture of the radial and femoral distal metaphyses during the period of locomotor behavior development. A. COLOMBO, S. KUO, G. MARCHIORI, M. MAGLIO, L. MARTINI, M. FINI, M. BETTUZZI, M. MORIGI, A. IRELAND, T.M. RYAN, M. BELCASTRO.
- 11 Why do large apes trot? The ontogeny of trotting gaits in gorillas and its implications for understanding hominoid locomotion. D. SCHMITT, B. PERCHALSKI, R.E. WUNERLICH, A. ZEININGER.
- 12 Ontogenetic variability in collagen fiber orientation at the midshaft femur of Virunga mountain gorillas (*Gorilla beringei beringei*). K.M. BATSCHE, S.C. MCFARLIN, K. ARBENZ-SMITH, K. GILARDI, T. MUHIRE, T.S. STOINSKI, A. MUDAKIKWA, R. MUVUNYI, B. HU, T.G. BROMAGE.
- 13 Intralimb patterns of diaphyseal cross-sectional properties of the femur and calcaneus in vertical clinger and leapers. M.P. SOLÍS, K.L. LEWTON.
- 14 Developmental milestones of body systems in the leaping primate *Galago moholi*. B.R. MCGOVERN-LIND, K.A. PROFFITT, S.E. KING, V.B. DELEON, T.D. SMITH.
- 15 Investigating the impact of childhood vitamin D deficiency on cross-sectional area and cortical bone porosity at the femoral midsection. K.R. SWAN, L.T. HUMPHREY, R. IVES.
- 16 Righting tibial retroversion: A functional and ontogenetic analysis. C.L. HOLZHAUSER, L.W. COWGILL.
- 17 Growth of the eyes and nasal airways in *Aotus nancymae*. S.E. KING, V.B. DELEON, T.D. SMITH.
- 18 Modeling ontogenetic changes in bite force and gape potential in *Microcebus murinus* through the use of multibody dynamics analysis. S. KOLLI, E. DICKINSON, A. HARTSTONE-ROSE.
- 20 Selection for Obstetric Sufficiency Affects Integration of the True Pelvis Among Females in Anthropoid Primates. E.A. MOFFETT.
- 21 The impact of walking posture on skeletal structure in the femoral epiphyses of *Rattus norvegicus*. A.M. CAMPILLO, S. KUO, A.D. FOSTER, T.M. RYAN.

FRIDAY ALL DAY SESSIONS

Session 20

Functional Anatomy: Structural Correlates of Locomotion, Part I

Contributed Poster Presentations

Chair: Anna Ragni

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

22 Center of Pressure Location on the Foot During Bipedal Walking. M. OCHOA, S.G. LAUTZENHEISER, P.A. KRAMER.

23 Parsing out functional signals: The influence of phylogeny on the primate first metatarsal. I.D. ARNEY, J.S. MASSEY, Z.R. SIMS.

24 Positional behavior adaptations in the mammalian cervical spine. A.C. NISHIMURA, M.C. WINKELER, G.A. RUSSO.

25 Relative hindlimb length and hindlimb segmental proportions as indicators of locomotor category in primates, rodents, and tree shrews. G.S. YAPUNCICH, E. HEGARTY, M. BRADLEY-CRONKWRIGHT, G. BOULINGUEZ-AMBROISE, N.T. DUNHAM, A. ZEININGER, D. SCHMITT, J.W. YOUNG, D.M. BOYER.

26 Use of small mammal tarsals in paleoenvironmental reconstruction. S.M. MILLS.

27 Musculoskeletal markers: A comparison of the influence of three biological factors on robusticity. M.M. GREENE.

28 Trends of the Carrying Angle of the Elbow in a Modern Human Population. K.D. LAURIA, L. COWGILL.

29 Morphological variance of human joint articular surfaces. H. HORBALY, M. HUBBE, A.D. SYLVESTER, B.M. AUERBACH.

30 Quantitative genetic analysis of the hominin midfoot: from *Ardipithecus* to *Homo*. K. KOMZA, B. VIOLA, L. SCHROEDER.

31 An analysis of morphological evolution in the catarrhine appendicular skeleton using methods from quantitative genetics. M.J. COOPER, M.A. CONAWAY, N. VON CRAMON-TAUBADEL.

32 Pressure generated by the modern human hand during vertical climbing. V.A. LOCKWOOD, S. LU, S. WINTER, T.L. KIVELL.

33 Three-dimensional functional capacity of the intrinsic hand musculature in humans and chimpanzees. M.G. FIELDS, E.M. MACKERETH, S.P. SULLIVAN, K.M. MIDDLETON, C.M. HOLLIDAY, F.R. MCGECHIE, C.V. WARD.

34 The head remains stable when locomoting on unstable suprastrates in *Hylobates lar*. N. GRIDER-POTTER, R. GOTO, T. SHITARA, K. OKA, Y. NAKANO.

FRIDAY ALL DAY SESSIONS

Session 21

Functional Anatomy: Craniofacial Variation and Diet

Contributed Poster Presentations

Chair: Adam Hartstone-Rose

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 35 **Functional Analysis of Anterior Tooth Root Surface Area in Tree-Gouging Primates.** V.A. WHICHARD, A.R. DEUTSCH, A. HARTSTONE-ROSE.
- 36 **Permanent and deciduous canine size in tufted vs. untufted capuchins.** C.E. TERHUNE, P.M. TAYLOR, J. CHALK-WILAYTO, M. DUTRA FOGAÇA, M.A. HOLMES, M.F. LAIRD.
- 37 **Food mechanical properties are correlated with relative premolar and incisor size but not relative molar size among anthropoid primates.** J.E. SCOTT.
- 38 **The relationship between zygomatic arch morphology and diet in closely-related primates.** M. BHARATIYA, H.M. EDMONDS, G.A. RUSSO.
- 39 **Variation in jaw and tongue kinematics with dietary grit in tufted capuchins.** K. GONZALEZ, M.C. GRANATOSKY, J. IRIARTE-DIAZ, C.F. ROSS, M.F. LAIRD.
- 40 **The influence of food geometry and material properties on feeding posture in bearded capuchin monkeys (*Sapajus libidinosus*).** K.A. WRIGHT, Z. PUNJANI, R.R. OSHAY, B.W. WRIGHT, M. DUTRA FOGAÇA, A. VAN CASTEREN, P. IZAR, E. VISALBERGHI, D. FRAGASZY, D.S. STRAIT, C.F. ROSS, M.F. LAIRD.
- 41 **Frequencies and patterns of hybrid fibers in the superficial masseter and superficial anterior temporalis in anthropoid primates.** A.B. TAYLOR, M.A. HOLMES.
- 42 **A survey of the inferior alveolar nerve and its corresponding bony canal and foramina in primates.** C.B. YOAKUM, C.E. TERHUNE.
- 43 **Potential association between pterion suture pattern and incidence of craniodental lesions in platyrrhines.** L.B. HALENAR-PRICE, C.A. KIRCHHOFF, C.E. TERHUNE, S.B. COOKE.
- 44 **We are what we chew: Diet-induced morphological changes in the mandible.** L.E. BRUEMMER, M. SESELJ.
- 45 **We are what we chew: diet-induced morphological changes in the mandible.** L.E. BRUEMMER, M. ŠEŠELJ.
- 46 **Modeling dietary adaptation in the paraconid cusp using power law parameters.** E.L. FULWOOD, T. HARPER, M. BRADLEY-CRONKWRIGHT, A. ANAYA, B. DICKSON, D.M. BOYER.

FRIDAY ALL DAY SESSIONS

Session 22

Health and Disease in Humans and Non-human Primates

Contributed Poster Presentations

Chair: Erin Vogel

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:30 Odd number presenters stand by their posters (1 hour).

5:30 Even number presenters stand by their posters (1 hour).

6:30 Poster removal.

- 47 Investigating the changes in oral microbial ecologies of ancestral Maya individuals from Belize accompanying shifts in subsistence patterns. S.J. JOHNSON, T.P. HONAP, P.A. LYNCH, D.J. KENNETT, K.M. PRUFER, C.M. LEWIS, JR.
- 48 "The evolutionary history of infectious disease in the ancient Americas and the pathogenic consequences of European contact". S.K. JOSEPH, J. LINDO.
- 49 Evolution and lifestyle effects on sex differences in the human immune system. A.M. ARNER, B. MUHOYA, C. WAIGWA, F. LOTUKOI, J. PENG, V. ABHYANKAR, J. KAMAU, C.J. METCALF, J.F. AYROLES, A.J. LEA.
- 50 Uncovering the Holocene roots of contemporary disease-scapes: bringing archaeology into One Health. K.M. RAYFIELD, A.M. MYCHAJLIW, R.R. SINGLETON, S.B. SHOLTS, C.A. HOFMAN.
- 51 Strengthening comparisons of ancient and modern human oral microbiomes: Accounting for variations in sample type. A.C. BADER, L.S. WEYRICH, J. MITCHELL, B. PETZELT, R.S. MALHI.
- ~~52 Characterization of DNA methylation change with age in the hippocampus of rhesus macaque. T.J. ANDERSON, E.A. GOLDMAN, M. SMITH, S. WARD, B.A. DAVIS, N. SNYDER-MACKLER, S. KOHAMA, L. CARBONE, K.N. STERNER. WITHDRAWN~~
- 53 Dietary Influences on Oral Microbial Composition in Murine Models: Implications for Human Health and Evolution. G.B. BOWLAND, L.S. WEYRICH.
- 54 Mitochondrial dysfunction: key to rates of gout in Polynesia? R.R. DICKERSON, A. SHAUKAT, M. BIXLEY, M. CADZOW, T. MAJOR, A. PHIPPS-GREEN, R. TOPLESS, N. DALBETH, L. STAMP, G. CONSORTIUM, A. GOSLING, T. MERRIMAN.
- 55 Evaluating the effects of a high fat, low fiber diet on the composition and biodiversity of gut microbiota in wild olive baboons. M.R. MOY, L. DIAKIWI, K.R. AMATO.
- 56 Gut microbial diversity predicts brain immune gene regulation in a model nonhuman primate. M.C. JANIAC, A.R. DECASIEN, K.L. CHIOU, C.I. VILLAMIL, M.K. STOCK, A.E. TRUJILLO, A.N. DEPASQUALE, J.D. ORKIN, A.V. RUIZ-LAMBIDES, J.E. NEGRÓN-DEL VALLE, C. TESTARD, S.E. BAUMAN SURRATT, O. GONZALEZ, C. BIOBANK RESEARCH UNIT, M.I. MARTÍNEZ, C.S. WALKER, J. SALLET, M. DOMINGUEZ-BELLO, M.J. MONTAGUE, S.C. ANTÓN, A.D. MELIN, L.J. BRENT, M.L. PLATT, N. SNYDER-MACKLER, J.P. HIGHAM.

FRIDAY ALL DAY SESSIONS

- 57 **Molecular signatures of aging in the rhesus macaque liver.** E.A. GOLDMAN, K.L. VAUGHAN, M. SMITH, S. WARD, K.A. NEVONEN, B.A. DAVIS, N. SNYDER-MACKLER, J.A. MATTISON, S.G. KOHAMA, L. CARBONE, K.N. STERNER.
- 58 **Socioeconomic conditions, and not genetics alone, explain progression of nonalcoholic fatty liver disease.** M.C. RIEMAN-KLINGLER, J. JUNG, K.N. TESFAI, R. LOOMBA, A.L. NON.
- 59 **Linking human sex chromosome evolution to patterns of gene co-expression and sex differences in disease.** A. DECASIEN, K. TSAI, S. LIU, A. THOMAS, A. RAZNAHAN.

Session 23

Paleoanthropology: Primate Evolution

Contributed Poster Presentations

Chair: Marian Hamilton

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- 60 **Assessing the extent of covariation between the shapes of the mandibular corpus and second molar.** J. STRAIN, C. ROBINSON.
- 61 **Bulk Isotopic Paleodietary Reconstructions of the Mammalian Communities of the Ngorora Formation (Tugen Hills Succession, Baringo Basin, Kenya).** E. GREINER, J. KINGSTON, W.J. SANDERS.
- 62 **Can hominid mandibles and partial mandibles be accurately identified to taxon?** C.A. ROBINSON.
- 63 **Ankle Joint Functional Morphology in the *Paracolobus mutiwa* Specimen KNM-WT 16827.** M. ANDERSON, T. PRANG.
- 64 **A virtual repository of Lower Siwalik Miocene fossils from Ramnagar (Udhampur District, Jammu & Kashmir), India.** B.A. PATEL, C.C. GILBERT, R.K. SEHGAL, N.P. SINGH, A. DI, D. CHOUDHARY, W.A. WAZIR, C.J. CAMPISANO, R. PATNAIK.
- 65 **A virtual reconstruction of the cranium of *Pierolapithecus catalaunicus*.** K.D. PUGH, J. FORTUNY, B.M. SHEARER, A.S. HAMMOND, S. MOYÀ-SOLÀ, D.M. ALBA, S. ALMÉCIJA.
- 66 **The inhibitory cascade model predicts postcanine tooth size in fossil catarrhines from the early Miocene.** R. LUTHER, F. SOCKI, A.S. HALL, K.P. MCNULTY.
- 67 **New cercopithecoid fossils from Hadar.** J.L. ARENSEN, I.E. SMAIL, S.R. FROST, C.C. GILBERT.
- 68 **A new small hominoid from the early late Miocene of Bavaria (Germany).** D.R. BEGUN, A.C. HOLMES, A. TRÖSCHER, G. FERREIRA, J. PRIETO, T. LECHNER, M. BÖHME.
- 69 **How inter-species variation in strontium-calcium ratios of leaves and fruit informs dietary reconstructions.** M.I. HAMILTON, B.L. DRAKE, A. GALLOWAY, E. DZHINENKO, S.V. NELSON.

FRIDAY ALL DAY SESSIONS

- 70 A new ekgmowechashalid primate (Adapiformes) from the Naduo Formation (late Eocene) of Guangxi Zhuang Autonomous Region, China. K.L. RUST, X. NI, K. BEARD.
- 71 Semicircular canal morphology of the Miocene small-bodied catarrhine *Pliobates cataloniae*: Phylogenetic implications. A. URCIUOLI, C. ZANOLLI, F. BOUCHET, S. ALMÉCIJA, S. MOYÀ-SOLÀ, D.M. ALBA.
- 72 Dating and site formation of the Late Villafranchian mammals from Senèze, France. E. DELSON, K.L. BAAB, T.D. CAPELLINI, S. COOKE, S. FREIDLINE, S. FROST, E.C. GARRETT, W.E. HARCOURT-SMITH, R. HOGG, K. MCNULTY, T. PEBURN, M. SINGLETON, K. ST. JOHN, M. STEIPER, J.A. VAN COUVERING.
- 73 Hundreds of *Colobus* fossils from the Late Pleistocene of the Afar Rift, Ethiopia. M.F. BRASIL, T.A. MONSON, C.E. TAYLOR, R.M. YOHLER, L.J. HLUŠKO.
- 74 To boldly go where no primatomorph has gone before: Dental topography and enamel thickness illuminate the dietary adaptations of paromomyid plesiadapiforms from Ellesmere Island, Arctic Canada. K.E. MILLER, K. BEARD.
- 75 Assessment of endocranial differences between *Pan troglodytes* and *Pan paniscus*. P. SCHOENEMANN, R.L. HOLLOWAY.
- 76 Diverse monsoon seasonality in eastern Africa recorded by papionin tooth enamel $\delta^{18}O$. D.R. GREEN, J.N. ÁVILA, W. DIRKS, I.S. WILLIAMS, T.M. SMITH.
- 77 Earliest fossil evidence of *Theropithecus oswaldi* lineage from Galili Formation. H.G. REDA, S.R. FROST, E.A. SIMONS, J. QUADE, H. SAID, S.W. SIMPSON.

Session 24

Human Biology: Stress, Reproduction, and Developmental Plasticity

Contributed Poster Presentations

Chair: Cara Ocobock

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:30 Odd number presenters stand by their posters (1 hour).
- 5:30 Even number presenters stand by their posters (1 hour).
- 6:30 Poster removal.
- ~~78 Human immune variation and the future of sepsis management: Proposal of a non-infectious autoimmune sepsis phenotype. M.L. COX, J. SHAW. WITHDRAWN~~
- 79 Frail Males on the American Frontier: The Role of Environmental Harshness on Sex Ratios at Birth across a Period of Rapid Industrialization. R. SCHACHT.
- 80 Reducing Preterm Birth and Racial Disparities: A Model of Stress-Induced Developmental Plasticity. G.B. MAYNE, A. BUCKLEY, L. GHIDEI.
- 81 Intrapartum and Postpartum Home-to-Hospital Transfers in the United States. M.N. AULDS, A.J. VEILE, M.J. CHEYNEY, M. BOVBJERG.

FRIDAY ALL DAY SESSIONS

- 82 Polycystic Ovarian Syndrome (PCOS) as an Evolutionary Mismatch Disorder: Preliminary evidence that PCOS may reduce fracture risk among female CrossFit athletes. C. MANTHEY-PIERCE, T. CEPON-ROBINS.
- 83 Survey of exercise behavior and pregnancy outcomes in highly active women. S. SADHIR, H. PONTZER.
- 84 DNA methylation as a mediator of the association between maternal exposure to climate extremes and child growth outcomes. B. STRAIGHT, X. QIAO, D. NGO, C.E. HILTON, O. OWUOR CHARLES, A. NAUGLE, S. MORGAN HAFT, C. SISINA KELEMPU, S. LESEELA, D.L. LESEELA, C. JESKA, C. LALANCETTE, B.L. NEEDHAM.
- 85 Quantifying Curves: a geometric morphometric approach to analyze ovarian hormones. D.E. EHRLICH, M.P. ROGERS-LAVANNE, K.M. LEE, V. SGHEIZA, M.A. WILSON, K.B. CLANCY.
- 86 Analytical validation of an enzyme immunoassay protocol to quantify hair cortisol concentrations in human hair. P.S. CONTRERAS, S. SEN, T. LOSCH, J. BEEHNER.
- 87 ~~Does parent-offspring conflict across mammals result in differing offspring growth by placental morphology?~~ M. SZAFRANIEC, T. PAN, A.M. BODDY. WITHDRAWN
- 88 Pelvic variance: Testing for evidence of stabilizing obstetric selection. S.M. ZALESKI, L. HARRELL.
- 89 Physiological response to multimedia engagement and domestic fires. L.E. CLARK, A.M. SENTS, L.A. LANDGRAF, M. PAPPALARDO, C.D. LYNN.
- 90 A Quantification of the Effect of Regional Climate Change on the Prehistoric Foraging-Farming Transition in Midwestern North America. M.G. TORQUATO, E.R. OTÁROLA-CASTILLO.
- 91 Asymmetry in context: Examining heterogeneity in femoral cross-sectional geometry at Medieval Pieve di Pava (Tuscany, Italy). K.M. KINKOPF, S.C. AGARWAL, G. RICCOMI, S. MINOZZI, S. CAMPANA, D. CARAMELLA, V. GIUFFRA.
- 92 Adipose development in hunter-gatherer children. Implications for diet and adaptive growth. K.L. KRAMER, B.C. CAMPBELL, J.V. HACKMAN.
- 93 Imaging soft biological structures using micro computed microtomography (uCT). T. JASHASHVILI, T. SKORKA, P.S. CONTI.

FRIDAY, MORNING SESSIONS

Session 25

Symposium: Current and Multidisciplinary Perspectives on Hominin Diets and Trophic Level During the Pleistocene

Invited Podium Symposium

Chair: Miki Ben-Dor, Herman Pontzer

Plaza Ballroom A/B

Hypotheses regarding hominin trophic levels during the Pleistocene serve, explicitly or tacitly, as the basis of many explanations for human evolution, behavior, and culture. Archaeological food remains and the ethnographic record can attest to the diversity of ancestral human diets. However, due to an uneven preservation potential of plants and animal remains, multidisciplinary approaches have been adopted in several dietary and trophic level reconstruction attempts. Apart from archaeology, scientific areas such as physiology, anatomy, genetics, paleontology, pathology, microbiome, and animal behavior have increasingly been used to generate supporting evidence for competing views of hominin diets and trophic levels. This symposium will highlight current multidisciplinary evidence for ancestral diets and other indications of human trophic levels during the Pleistocene.

- 8:00** **What do Living and Recent Hunter-Gatherers Tell Us about Ancestral Diet and the Human Trophic Level?** H. PONTZER, B.M. WOOD.
- 8:15** **Prey size economics, ethnography, and the human trophic level.** M. BEN-DOR.
- 8:30** **Dental evidence for early hominin diets.** M.F. TEAFORD, P.S. UNGAR.
- 8:45** **Nutrient balancing in wild primates provides insights into potential diets of Pleistocene hominins.** J.M. ROTHMAN.
- 9:00** **The use of actualistic studies to model an early hominin scavenging niche.** B. POBINER.
- 9:15** **BREAK.**
- 9:30** **HARVEST: A multidisciplinary approach to understanding ancient hominin use of plants.** A.G. HENRY, S. GALLOIS, B. BARTHOLDY, E.J. DEVEREUX.
- 9:45** **The metabolic demands of the human brain: and how we got it wrong.** B.T. BIKMAN.
- 10:00** **Three transitions in Pleistocene human diets: a zooarchaeological perspective.** M.C. STINER.
- 10:15** **Ancient DNA-based insights into the diet-related evolutionary ecology of Pleistocene hominins.** G. PERRY.
- 10:30** **Tough at the top: competition in the East African large carnivore guild, Pliocene-present.** L. WERDELIN, P.J. HOPLEY.
- 10:45** **Putrid Meat in the African Paleolithic: It Wasn't Just for Eskimos.** J.D. SPETH, E. MORIN.

FRIDAY MORNING SESSIONS

Session 26

Human Biology: Human Health and Development

Contributed Podium Presentations

Chair: Claire Gold

Governor's Square 15

- 8:00 Examining the Influence of Psychosocial Stress on Telomere Length in NCAA Collegiate Swimmers. A. NANDA, R.L. TENNYSON.
- 8:15 Causal pathways between social determinants of maternal health, biomarkers of allostatic load, and hypertensive disorders of pregnancy vary among US racial/ethnic groups. M.H. KEITH, M.A. MARTIN.
- 8:30 The impacts of exercise routine disruptions on postpartum depression risk during the COVID-19 pandemic among individuals living in the United States. T.E. GILDNER, Z.M. THAYER.
- 8:45 Breastfeeding frequency is associated with differential abundance of bacteria in human milk. E.A. HOLDSWORTH, J.E. WILLIAMS, R.M. PACE, E.H. HAGEN, A.A. LANE, M. GARTSTEIN, M.A. MCGUIRE, M.K. MCGUIRE, C.L. MEEHAN.
- 9:00 Seasonal Variation for Parasitic Infection among Yucatec Maya Children. L. CHRISTOPHER, A. VEILE, K. KRAMER.
- 9:15 DHEAS and nutritional status among Sidama, Ngandu, and Aka children. C. HELFRECHT, C.L. MEEHAN, H. WANG, S.J. DIRA.
- 9:30 Life history tradeoffs between growth and immune defense: risk for infectious disease among children in Kilimanjaro, Tanzania. K. WANDER, B.N. KITALI, F. SHIRIMA, N. NG'UNDA, Z. MASSAWE, B. KAVISHE, R. URONU, E. MURO, T. ASSENGA, N. SAWE, I. HAULE, A.A. URONU, A. MASOKOTO, E. SAMKY, E. NGOMU, H. URONU, I. MUSHI, J. FERUZI, S. SEMVUA, I. SWAI, R. PHILEMON, I. KIWELU, B. MMBAGA.
- 9:45 Variation in market integration and health affect early childhood growth in Daasanach pastoralists living in northern Kenya. Z.S. SWANSON, R. NZUNZA, H.J. BETHANCOURT, E. NDIEMA, D.R. BRAUN, A.Y. ROSINGER, H. PONTZER.
- 10:00 Break.
- 10:15 Geospatial distribution in age at menarche. C.L. GOLD, C. KITRINOS, L.L. SIEVERT, J. KAMILAR.
- 10:30 Screen time and poor cardiometabolic health: the potential role of circadian disruption. J.M. WAGNILD, T.M. POLLARD.
- 10:45 Sleeping less is related to higher levels of estradiol in women of reproductive age. G. JASIENSKA, M. MIJAS, A. GALBARCZYK, M. KLIMEK, K. MIŁKOWSKA, K. SŁOJEWSKA, A. TUBEK.
- ~~11:00 Association between age and cognition in modern Hadza foragers. M. SAYRE, G.E. ALEXANDER, E. CASHDAN, H. PONTZER, L. VASHRO, B.M. WOOD, D.A. RAICHLEN.~~
WITHDRAWN

FRIDAY MORNING SESSIONS

Session 27

Primateology: Variation in Anatomy, Physiology, and Behavior

Contributed Podium Presentations

Chair: Timothy Sefczek

Plaza Ballroom E

- 8:00 Paternity, group size, sexual selection, and sexual dimorphism in primates. J. PLAVCAN.
- 8:15 Vascularization may underlie sex differences in chest skin coloration in geladas (*Theropithecus gelada*). P.M. DELACEY, A. LU, T.J. BERGMAN, J.C. BEEHNER, N. SNYDER-MACKLER.
- ~~8:30 Sex differences in aggression and status competition in Kanyawara chimpanzees. M.N. MULLER, M. EMERY THOMPSON, D.K. ENIGK, Z.P. MACHANDA, E. OTALI, K.H. SABBI, R.W. WRANGHAM. WITHDRAWN~~
- 8:45 Substrate-related variation in limb joint kinematics in wild primates. J. JANISCH, A. MCNAMARA, N.T. DUNHAM, T. PHELPS, L.J. SHAPIRO, J.W. YOUNG.
- 9:00 Catching their Strides: A comparative analysis of wild platyrrhine walking kinematics on naturally variable substrates. A. MCNAMARA, N.T. DUNHAM, W. STANTON, J.W. YOUNG, L.J. SHAPIRO.
- 9:15 Relative leg-to-arm strength proportions in Bornean and Sumatran orangutans. A.E. KRALICK, M.W. TOCHERI.
- 9:30 Break.
- 9:45 Postural repertoire of free-ranging aye-ayes (*Daubentonia madagascariensis*) at Torotorofotsy, Madagascar. T.M. SEFCZEK, E.E. LOUIS, JR., W. MCGRAW.
- 10:00 Bipedality in chimpanzee: insights into the contextual origins. L. SARRINGHAUS, L. MACLATCHY.
- 10:15 Differential effects of climate on the ranges of five primate species along an elevational gradient. A.B. BERNARD, Z. YU, A.J. MARSHALL.
- 10:30 Forest fire smoke exposure increases oxidative stress and inflammation in a wild great ape. D.J. NAUMENKO, C.A. O'CONNELL, L. KIELY, D.V. SPRACKLEN, R.S. BRITTAIN, S. UTAMI ATMOKO, E.R. VOGEL.
- 10:45 Cooperation in the face of conflict: the effect of between-group competition on cooperation and oxytocin in capuchin monkeys. M.E. BENÍTEZ, S.R. MAYERHOFF, S.F. BROSNAN.
- 11:00 Two Measures of Fecal Glucocorticoids and their Relationship to Social Group Size and Composition in Bonobos. A.J. HICKMOTT, K.J. BOOSE, M.L. WAKEFIELD, C.M. BRAND, F.J. WHITE, J. SNODGRASS.
- 11:15 Central and peripheral oxytocin and vasopressin concentrations do not differ between two baboon species with divergent social systems (*Papio hamadryas* and *Papio anubis*). D.J. COPPETO, E. RINGEN, P. MORALES, V. PALMIERI, G. WHITE, R. WOLF, L.J. YOUNG, A.V. JAEGGI.

FRIDAY MORNING SESSIONS

11:30 The impact of physical contact during fur-rubbing behavior on urinary oxytocin in tufted capuchin monkeys. M.J. SOSNOWSKI, M.E. BENÍTEZ, O.B. REILLY, S.F. BROSANAN.

Session 28

Bioarchaeological Approaches to Health and Disease, Part 1

Contributed Podium Presentations

Chair: Emma Lagan

Plaza Ballroom F

- 8:00 Ethical challenges of institutional bioarchaeology: A case study of a 19th century asylum context. J.M. BERGER, PH.D., RPA.
- 8:15 The Osteological Paradox beyond osteology: Lessons from hair cortisol concentration analysis. K.E. EAST, M.B. BRICKLEY, S. VAN UUM, L. WILLIAMS, T. PROWSE.
- 8:30 Living on the Edge: Osteobiographies of Five Children in the Roman Borderland. E.C. FLEMING, K.L. REINBERGER, A. RABINOWITZ.
- 8:45 Strength in frailty: Interpreting skeletal frailty and resilience in catastrophic and attritional burial contexts from Roman period Oymaağaç, Turkey. K.E. MARKLEIN, E. BEWS, D.E. CREWS.
- 9:00 Relating Status to Access to Healthcare in Pre-Contact Peru During the Middle and Late Horizon Periods. S.M. MURPHY.
- 9:15 Investigations of Cultural Identity during the Hellenistic Period: A Bioarchaeological Analysis of the Human Skeletal Remains from Kaman-Kalehöyük. C.P. ANDERSON.
- 9:30 Comparisons in mortality risk between cause of death categories in a subsample of the Terry Collection. C.M. CHEVERKO.
- 9:45 Break.
- 10:00 The Intersections of Sex and Inequality in a Mixed-Status Industrial London Sample. A.L. GREEN, C.P. ANDERSON.
- 10:15 The Bioarchaeology of Violence during the Yayoi Period in Western Japan. B.D. PADGETT, N. SEGUCHI.
- 10:30 The Demography of Violence: Patterns of Interpersonal Violence in a Middle Bronze-Age Population from Northeastern Serbia. K.M. POMPEANI. WITHDRAWN
- 10:45 External auditory exostoses as an aquatic activity marker in South Africa: were Later Stone Age coastal foragers diving for resources? V. GIBBON, T. HARRIS, B. DAVIES, E. DINKELE, J. SEALY. WITHDRAWN
- 11:00 Subadult dental variation and biological structure at precolonial Tlatelolco. K.S. PAUL, K.E. BLEVINS, J. MANSILLA LORY, J.E. BUIKSTRA.

**Symposium: Physical activity and limb bone structure:
New approaches to reconstructing behavior in the past**

Invited Poster Symposium

Chair: Brigitte Holt

Co-organizers: Alison Murray

Plaza D

Since the publication of Chris Ruff's 1983 seminal papers about long bone structure patterns in the Pecos Pueblo across the transition to agriculture, applications of the biomechanical approach to the study of cortical bone structural variation and behavioral patterns in past populations have flourished. Pivoting on the central concept that cortical bone adapts to mechanical demands, this work established the use of beam theory to quantify long bone diaphyseal structure. While several important papers explored these issues, any casual search through the AJPA contents will show that the number of papers using cross-sectional geometry increased many folds after 1983. The approach elegantly articulated by Ruff has since been applied to issues such as mobility, aging, sexual division of labor, climate, boat use, climbing, and technology changes (weapons, weaving, grinding implements, net fishing, among many others) in both paleoanthropological and bioarchaeological contexts. As with any successful scientific approach, cross-sectional geometry has generated critics who have raised valuable arguments, resulting in a wave of experimental research involving living subjects (eg. athletes). Although this research has firmly established the links between bone functional adaptation and limb bone structure, it has also unveiled, not surprisingly, layers of complexity. Factors such as genetics, development and puberty, and both the amount and neuromuscular control of lean mass mediate the relationships between behavior (physical activity) and bone strength. Other questions have arisen about the relationships between cortical and trabecular bone in accommodating mechanical loading across the lifespan. Our purpose is to showcase an array of recent *in vivo* and experimental approaches that aim to address some of these unanswered questions and clarify and reinforce the link between diaphyseal structure and behavior that traditional bioarchaeological models have articulated.

- 1 **Trabecular bone morphology in Holocene and late Pleistocene modern humans.** H. CHIRCHIR, C. CARTWRIGHT, A. RAGNI, J. HUBLIN.
- 2 **Cortical and trabecular bone covariation in the human tibia.** L.J. DEMARS, S. KUO, J.P. SAERS, T. JASHASHVILI, M.R. DOWDESWELL, K.J. CARLSON, A.D. GORDON, J.T. STOCK, T.M. RYAN.
- 3 **Ontogenetic patterns of limb bone robusticity in a Medieval sample.** T. DORSHORST, H. REIS, B. HOLT.
- 4 **A Longitudinal Study of Bone Accrual in Recreational Gymnasts from 4-16 years of age.** M.C. ERLANDSON, M.S. CHAPELSKI, B. ERNST, A.D. BAXTER-JONES.
- 5 **Characterizing gene regulation responses to mechanical stress using in vitro skeletal cell culture models at population- and evolutionary-scales.** G. HOUSMAN, A. HUNG, Y. GILAD.

FRIDAY MORNING SESSIONS

- 6 **Pinpointing the timing of impact loading in young adult females: Insights from pQCT-derived tibial cortical and trabecular structure and density.** A.A. MURRAY, M.C. ERLANDSON.
- 7 **How much power can athletes produce? Taking a closer look at kinetic movement, muscle force, and lower limb morphology.** K.N. RABEY, A.A. MURRAY, J.T. STOCK.
- 8 **Trabecular bone growth is linked to brain development, locomotor ontogeny, and body size.** J.P. SAERS, A.D. GORDON, T.M. RYAN, J.T. STOCK.
- 9 **Locomotor variability in Sterkfontein Member 4: Analysis of the external shape and internal bone structure of the StW 562 and StW 595 first metatarsals.** Z.J. TSEGAI, P. GARDNER, B. CHAMBERLAIN, J.M. DESILVA, B. ZIPFEL, T.L. KIVELL, M.M. SKINNER.
- 10 **Effects of an energy balance transition on skeletal health among indigenous peoples of the southwestern United States.** I.J. WALLACE, C. TOYA, M. PEÑA MUÑOZ, A. MARTINEZ, J. MEYER, J. MARTINEZ, M. MILLER-MOORE, T. BUSBY, A.R. HARRIS, A.Z. REYNOLDS, C.B. RUFF.

FRIDAY, AFTERNOON SESSIONS

Session 30

Symposium (AABA/HBA): Biocultural Approaches to Pandemic Studies: Implications for Pandemic Preparedness

Invited Podium Symposium

Chair: Amanda Wissler

Co-organizers: Taylor van Doren

Plaza Ballroom A/B

The COVID-19 pandemic has exposed myriad ways in which society was unprepared for a new infectious respiratory threat despite experiences of the past from which to draw. The COVID-19 pandemic has shown how differential susceptibility and variation in morbidity and mortality is strongly influenced by aspects of culture rather than shaped solely by biology. Anthropologists have long understood the importance of studying health and disease using a biocultural approach, which investigates the fundamentally integrated nature of human biology and culture in evolution. Prior anthropological research on infectious disease and pandemics has revealed much about human-pathogen interaction in the past as well as how aspects of culture can be a risk factor for, or buffer against, increased morbidity and mortality. Despite widespread recognition that the disease experience is shaped not just by biology, but culture, anthropologists have struggled to have their contributions accepted by other academic communities, for example, epidemiology and public health. Little research or policy is informed by an anthropological perspective on epidemics and pandemics despite their direct and/or indirect anthropogenic nature. This symposium brings together anthropologists with a range of expertise of different pandemics, infectious diseases, theoretical approaches, and methodologies to identify ways in which anthropology can contribute to our knowledge of how human behavior drives and shapes pandemics and how anthropological approaches inform pandemic preparedness.

- 1:30 **Age filtration in paleoepidemiological research: a cautionary tale and ways forward.** S. KELMELIS, M.H. PRICE.
- 1:45 **Migrant health before, during, and after the 14th-century Black Death in London.** S.N. DEWITTE, J. BEAUMONT, J. MONTGOMERY, R. REDFERN, H. SIBON.
- 2:00 **Sex-based survival differences during the 1918 influenza pandemic.** A. WISSLER.
- 2:15 **Respiratory survivorship before, during, and after the 1918 influenza pandemic in Newfoundland: Implications for populations in transition.** T.P. VAN DOREN, S. KELMELIS.
- 2:30 **Safe at The College?: 1918 Influenza in the Student Army Training Corps (SATC) at the University of Missouri.** C.M. ORBANN, E. WALTON.
- 2:45 **Pandemics in Institutions: A Case Study of Tuberculosis Mortality in the Mississippi State Asylum, AD 1912-1932.** T.A. EMERY, M.K. ZUCKERMAN.
- 3:00 **Biocultural perspectives on bioarchaeological and paleopathological evidence of past pandemics.** M.K. ZUCKERMAN, A.G. TRIBBLE, R.M. AUSTIN, T.A. EMERY, C. DEGAGLIA.

FRIDAY AFTERNOON SESSIONS

- 3:15 The impact of demographic and socioeconomic factors on rural vs. urban experiences during the 1918 influenza and COVID-19 pandemics. L. SATTENSPIEL, C.M. ORBANN, H.K. RAMIREZ, S. PIRRONE, J.A. MCELROY, A. BOGAN, C.K. WIKLE, G. GUIDOBONI, X. WAN.
- 3:30 PanDynamics: Disability as a risk factor for and consequence of infectious disease. J.L. DIMKA.
- 3:45 Pandemic perceptions: a mixed-methods study of young adults during COVID-19. M. MANT, A. ASLEMAND, A. PRINE, A. HOLLAND.
- 4:00 Paleosyndemics and biosocial reconstruction of past epidemics. F. CRESPO, C.S. LARSEN.
- 4:15 Impact of the COVID-19 on the Health and Wellbeing of 2SLGBTQ+ Peoples Living in Toronto: A Biocultural Analysis. J.K. GIBB, S. WILLIAMS, K. MIKELSTIENS, L. MCKINNON, L. BEACH, J. CHARLES, Z. TASNIM, P. TSUI, L. MCKERRACHER, J. FIELDS.
- 4:30 Embodied Resilience: Biocultural Approaches to Understand Experiences of Trans & Gender Diverse People During the COVID-Pandemic in the U.S. L. DUBOIS, J.A. PUCKETT, C. STURTZSREETHARAN, D.A. HOPE, R. MOCARSKI, A. JAGIELSKI, T. DUNN, J. ROHRABAUGH, T. ANDERSON, R. JUSTER.
- 4:45 DISCUSSANT 1: Wissler, Amanda.
- 5:00 DISCUSSANT 2: van Doren, Taylor.

Session 31

Forensic Anthropology: Insights from Databases and Experimental Studies

Contributed Podium Presentations

Chair: Nicholas Passalacqua

Governor's Square 14

- 1:30 Utilization of the New Mexico Decedent Image Database. S. DANESHVARI BERRY, H.J. EDGAR.
- 1:45 The current status of methods usage in forensic anthropology casework using the Forensic Anthropology Database for Assessing Methods Accuracy (FADAMA). C.A. JUAREZ, C.E. HUGHES, A. YIM.
- 2:00 Untangling Louisiana's unmissed: How forensic anthropologists can use population demographics to aid in identifications. L.J. JOHNSON, T.V. WILSON, G.A. LISTI.
- 2:15 The effect of clothing on decomposition and scavenging in Cape Town, South Africa. M.J. SPIES, D.A. FINAUGHTY, L.J. FRIEDLING, V.E. GIBBON.
- 2:30 Advances in Subadult Age Estimation: The Mixed Cumulative Probit (MCP) and the Subadult Virtual Anthropology Database (SVAD). K.E. STULL, E.Y. CHU, L.K. CORRON, C.A. WOLFE, M.H. PRICE.
- 2:45 Advances in Subadult Age Estimation: Evaluating the Performance of the Mixed Cumulative Probit (MCP) on Contemporary Subadults. E.Y. CHU, C.A. WOLFE, L.K. CORRON, M.H. PRICE, K.E. STULL.

FRIDAY AFTERNOON SESSIONS

- 3:00 **Advances in Subadult Age Estimation: Using Information Theory to explore the relationship between growth indicators and age.** C.A. WOLFE, E.Y. CHU, L.K. CORRON, M.H. PRICE, K.E. STULL.
- 3:15 **Implications of Univariate Subadult Craniometric Growth Patterns in Biological Anthropology.** B.T. NEW, C.A. WOLFE, L.K. CORRON, K. SPRADLEY, K.E. STULL.

Session 32

Paleoanthropology: Evolution and Function

Contributed Podium Presentations

Chair: Ingrid Lundeen

Plaza Ballroom E

- 1:30 **New Uintan primates from the Uinta Basin of Utah and the Tornillo Basin of Texas.** E. KIRK, R.H. DUNN, B. RODWELL, K. TOWNSEND.
- 1:45 **Molar sharpness maintained with wear in the early anthropoids *Apidium* and *Aegyptopithecus*.** P.E. MORSE, J.D. PAMPUSH, R.F. KAY.
- 2:00 **Adapiform internal nasal anatomy and implications for crown Primates.** I.K. LUNDEEN.
- 2:15 **Calcar femorale variation in extant and fossil hominids and its relationship with bipedalism.** M. CAZENAVE, T.L. KIVELL, M. PINA, D.R. BEGUN, M.M. SKINNER.
- 2:30 **Locomotor signal in the forelimb of *Sahelanthropus* and OH 36 is unlike known hominins.** M.R. MEYER, J.P. JUNG, J.K. SPEAR, I.F. ARAIZA, S.A. WILLIAMS.
- 2:45 **Arched footprints reveal bipedal kinematics, not arched foot anatomy, of fossil hominins.** K.G. HATALA, P.L. FALKINGHAM, S.M. GATESY.
- 3:00 **Comparing two episodes of divergence in hominins: Between Neandertals and humans and between *Paranthropus* and early *Homo*.** T.D. WEAVER, S.E. FREIDLINE, P. GUNZ.
- 3:15 **Comparative morphology of two Late Pleistocene human femora from Trinil, Indonesia.** C.B. RUFF, A.D. SYLVESTER, N.T. RAHMAWATI, R.A. SURIYANTO, P. STORM, M. AUBERT, E. POP, J. BATTENBURG, S.B. COBAN, S. NOERWIDI, F. HUFFMAN, W. RENEMA, S. ADHITYATAMA, J.C. JOORDENS.
- 3:30 **Biomechanical advantage of the early *Homo erectus* shoulder for stone tool-making: a musculoskeletal modeling approach.** A. BLASI-TOCCACCELLI, G. DAVER, M. BRENET, S. PRAT, L. HUGUEVILLE, S. HARMAND, J. LEWIS, M. DOMALAIN.
- 3:45 **Dmanisi, Malapa, and the Evolution of Broca's Language Area.** S.D. HURST, R.L. HOLLOWAY, A. PEARSON, G. BOCKO, H.M. GARVIN, L.R. BERGER, J. HAWKS.
- 4:00 **Facial growth and development in subadult hominoids and fossil hominins.** A.C. JAEGER, J. LAWRENCE, G.T. SCHWARTZ.
- 4:15 ~~**Human origins in Southern Africa: Reflections on the influence of scientific narratives on society.** S. BASINYI, R.R. ACKERMANN. WITHDRAWN~~

FRIDAY AFTERNOON SESSIONS

Session 33

Education in Biological Anthropology: Developing Accessible Pedagogy

Contributed Podium Presentations

Chair: Adam Van Arsdale

Plaza Ballroom F

- 1:30 Faculty preferences for fieldwork experience in graduate program applications. M. BROWN, C. SCHMITT, L.C. LOYOLA, L.R. DOUGLAS, M.E. BLAIR.
- 1:45 Nationwide anthropology engagement: Utilizing the 4-H Youth Development program for community outreach. S.A. TOTH, A.R. GROSSO.
- 2:00 The Population Problem: A primary unit with no definition. A.P. VAN ARSDALE, R.G. NELSON.
- 2:15 The Visible Ape Project: a free, comprehensive, web-based anatomical atlas for scientists and veterinarians designed to raise public awareness about apes. R. DIOGO, N. BARGER, J.S. MARTIN, M. RICHMOND, E.K. BOYLE.
- 2:30 The readability of bioanthropological abstracts and the implications for science communication. D.M. ADAMS, K.C. MCGEHEE, C.E. RALSTON.

Session 34

Symposium: What They Do in the Shadows: New Perspectives on Africa's Nocturnal Bushbabies

Invited Poster Symposium

Chair: John K. Dalton

Co-organizers: Michelle Sauter, Frank Cuozzo, Luca Pozzi

Plaza Ballroom D

Among continental Africa's endemic primates, bushbabies/galagos (Family: Galagidae) are the most successful radiation of strepsirrhine primates in terms of species diversity and geographic range. Compared to the relative abundance of published research on Malagasy strepsirrhines as well as lorises and pottos, most longitudinal behavioral and ecological research on galagids dates to the 1970s and 1980s, with recent work focusing on their phylogeny and/or phylogeography. This is also true when this family is compared with the volumes of work on haplorrhine primates (e.g., apes and baboons). While nocturnal primates are very challenging to study, new technological and methodological advancements are now being applied to expand our understanding of their behavior, ecology, genetics and overall biology. Here we present recent data from leading researchers to better characterize and update the state of research on this enigmatic and relatively lesser-understood group of nocturnal primates. In doing so, we will review current research in the field and set a course for future collaborative research into Africa's cryptic galagid primates.

FRIDAY AFTERNOON SESSIONS

- 1 The dental ecology and oral biology of a population of wild *Otolemur crassicaudatus* from the Lajuma Research Centre, South Africa. F. CUOZZO, J.K. DALTON, M.L. SAUTHER, A.S. TORDIFFE, I. VAN WYK.
- 2 Cognitive foraging patterns in two sympatric species of South African galago. J.K. DALTON, M.L. SAUTHER, F.P. CUOZZO.
- 3 A moonlit dinner: Comparative gum feeding ecology of two sympatric galagos (*Otolemur crassicaudatus* and the *Galago moholi*) living in an afromontane temperate environment. R.W. JAYNE, M.L. SAUTHER, J.B. MILLETTE, B. SCHOLZ, F.P. CUOZZO.
- 4 Patterns of postcranial sexual size dimorphism in non-captive thick-tailed bushbabies (*Otolemur crassicaudatus*) from northern South Africa. S.R. LEIGH, M.L. SAUTHER, F.P. CUOZZO, A.S. TORDIFFE.
- 5 The Power of the Senses: Using Ecological Niche Modeling to Evaluate the Role of Sensory Drive in the Divergence of Dwarf Galagos (*Paragalago* spp.). E. MILLER, A. LUHRS, M. BLAIR, L. POZZI.
- 6 A new distribution area of bushbabies, *Galagoides demidovii* (*Galagidae*, Primates) in Kinshasa, D.R. Congo. J.B. NKENKU, J.M. MALEKANI.
- 7 Title: Evolutionary déjà-vus: Why did size reduction evolve multiple times within primates? A. PENNA, J.P. HERRERA, L. POZZI.
- 8 What behavioral and biological traits are constraining social state evolution across Lorisiformes? S.A. POINDEXTER, K.Q. MAYNARD, V. NIJMAN, K. NEKARIS.
- 9 Unlocking the past: museomics of African galagids. L. POZZI, K. PRINGLE, A. PENNA, K.M. EVERSON, D.W. WEISROCK, M.E. BLAIR.
- 10 Distribution, population density and behavior of Taita Dwarf Galago. H. ROSTI, J. HEISKANEN, S. BEARDER, P. PELLIKKA, J. RIKKINEN.
- 11 Diet quality in elusive species: Using near-infrared spectroscopy to predict diet quality in *Otolemur crassicaudatus*. C.M. RYDER, M.L. SAUTHER, F.P. CUOZZO, R. JAYNE, M. SPONHEIMER.
- 12 The effect of body size on the behavioral ecology of two sympatric bushbabies in an Afromontane habitat. M.L. SAUTHER, J.B. MILLETTE, F.P. CUOZZO, C. LONG, V. MSIMANGO.
- 13 A review of the general ecology and physiology of the lesser African bushbaby (*Galago moholi*): new information, changing paradigms and future research opportunities. J. SCHEUN.

SATURDAY, ALL DAY SESSIONS

Session 35

Bioarchaeological Advances in Demography and Diet

Contributed Poster Presentations

Chair: William Duncan

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:00 Odd number presenters stand by their posters (1 hour).

5:00 Even number presenters stand by their posters (1 hour).

6:00 Poster removal.

- 1 A noble childhood? Exploring the diet and health of high status individuals from medieval Stirling Castle, Scotland, through isotope analysis of incremental dentine. J. BUCKBERRY, J. LEE-THORP, H. KOON, C. LANDON, C. BATT, J. BEAUMONT.
- 2 Age and Inclusivity in Umm an-Nar Communal Tombs from Southeastern Arabia. L.A. GREGORICKA, J.M. ULLINGER, C. BERENDS, A. BOLSTER, B. CLARK, H. JEANLOUIS, U. KAUL, R. ORKIN.
- 3 Understanding the dietary behavior of a 7th–9th century Avar community from Jagodnjak, Croatia using stable isotope of bone collagen. M. KOGI, D.T. PAVIČIĆ, A. DUGONJIĆ, M. NOVAK, J.M. TOYNE. WITHDRAWN
- 4 A comparative isotopic approach to early Colonial Indigenous diet – El Japón, Xochimilco, Mexico. E. ALARCÓN TINAJERO, L.J. REITSEMA, J.A. GÓMEZ-VALDÉS, L. MÁRQUEZ MORFÍN.
- 5 Diachronic analysis of the Lake St. Agnes Mound (16AV26) site: Evidence for dietary inequality among Late Woodland period burials. K.G. TREMBLAY, R. SAUNDERS.
- 6 Sex Estimation for Commingled Sub-adults: Comparison of morphological and proteomic methods. C. CHISDOCK, M. LANDER, S. GUISE SHERIDAN.
- 7 The Effects of Physiological Stress on the Accuracy of Age Estimation Through Transition Analysis in the Hamann-Todd Collection. A.M. SIMON, M. HUBBE.
- 8 Wisdom from Teeth: Developing a new method of MNI estimation. N.A. WILCOX, L. CUTSHALL, C. O'BRIEN, M. ANDERSON, A. HARRISON, N. WILSON, A. ANZELLINI, N. ZSOLT, A. GONCIAR.
- 9 Looking at violence: Assessing the ability of imaging technology to interpret violence from trauma caused by projectile points along skeletal remains. A.F. BELANGER.
- 10 Traumatic Injury at an Epiclassic Period Central Mexican Shrine Site. M.L. SCHULZ, S. PACHECO-FORÉS.
- 11 Experimental Assessment of $\delta^{15}\text{N}$ Shifts in Prey Meat and Bone in Response to Ambient Temperature Curing and Storage—Implications for Paleodietary Reconstruction. K.K. FOECKE, A.S. BROOKS. WITHDRAWN
- 12 Curating the history of museum collections: Using metadata in research design. A.R. ELLER, R.M. AUSTIN, S.L. CANINGTON, C.A. HOFMAN, S.B. SHOLTS.

SATURDAY ALL DAY SESSIONS

Session 36

Bioarchaeological Approaches to Health and Disease, Part 2

Contributed Poster Presentations

Chair: Heather Edgar

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:00 Odd number presenters stand by their posters (1 hour).
- 5:00 Even number presenters stand by their posters (1 hour).
- 6:00 Poster removal.
- 13 Dying of Pestilence: Gender, Stature and Mortality Risk during a Plague Epidemic in 13th Century Kyrgyzstan. D.W. HANSEN, S. DEWITTE, P. SLAVIN.
- 14 Tales in teeth – dental analyses of childhood health, mortality, and status from the Early and Late Classic Maya Belize (250-900 CE). C.C. MCMANUS, K.J. WILDE, J.A. HOGGARTH, S. KELMELIS.
- 15 Urban-rural homogeneity in morbidity and mortality throughout the life course in the southeastern United States. B.A. CONE, J.E. STEWART, M.A. PERRY.
- 16 ~~A Systematic Review of Sinusitis in Palaeopathology: Preliminary Results—Methodology—~~ M.J. LEE, T.J. SIEK, J.L. AUSTEN, C.S. HIRST. WITHDRAWN
- 17 Comparing Diaphyseal Length to Dental Calcification Age of Subadults from Elmbank Cemetery. S. WILSON, J. DUDAR.
- 18 Uncovering biocultural histories of marginalized individuals through osteobiography: A case study of the environmental and political-economic causes of linear enamel hypoplasia in early 20th century Mississippi. S.W. MALIS, M.K. ZUCKERMAN, L. DANIELS-HILL, A.J. OSTERHOLTZ, J.R. GOLIATH, N.P. HERRMANN, W. TRASK, G. HARLEY, D. BADON.
- 19 Biocultural interpretations of skeletal and archival indicators of health in enslavement in Barbados. A.S. CUNNINGHAM, K.A. SHULER.
- 20 A case of a large pedunculated-type osteochondroma on the lower leg of an adult female from late medieval Ilok, eastern Croatia. M. NOVAK, I. ERJAVEC, S. SEIWERTH, I. JANKOVIC, M. CARIC, A. RIMPF, S. KRZMAR, I. SAVIC PAVICIN, M. VODANOVIC, H. BRKIC, M. CAVKA.
- 21 NMDID explorations: Expanding diagnostic criteria for structural scoliosis. J.K. DEWEY.
- 22 Repetitive Kneeling in a Byzantine Monastic Community. B.A. BRYAN, S.G. SHERIDAN, C.D. LYNN.
- 23 ~~Entheseal changes and joint degeneration of upper limb bones in males and females in medieval Giecz, Poland.~~ E.T. BRZEZINSKI, A.M. AGNEW. WITHDRAWN
- 24 ~~Cross-sectional Study of Long Bone Growth in Medieval England.~~ S.D. WHITE, S.L. NEWMAN, C. PRIMEAU, P. MAHONEY, C.A. DETER. WITHDRAWN

SATURDAY ALL DAY SESSIONS

- 25 Association between age-related bone loss and vitamin D receptor polymorphisms in past populations living in north-central Poland from the Neolithic to early modern times. E. ZADZINSKA, P. BOROWKA, D. STRAPAGIEL, J. MIETLINSKA, J. KARKUS, E. SEWERYNEK, M. STUSS, D. PLAZUK, W. LORKIEWICZ.
- 26 The health of enslaved Africans through the lens of bioarchaeology. K.B. ISABLE.
- 27 Osteoarthritis of thoracic vertebrae among modern humans with respect to sex and age K. Lauren Bagwell and Frank L'Engle Williams. K. BAGWELL, F. WILLIAMS.
- 28 Comparative Morphology of the Hominid Inner Ear Otolith System. C.M. SMITH, A.S. HAMMOND, S. ALMÉCIJA, J.T. LAITMAN.
- 29 Bone Cross Sectional Geometry, Haversian Remodeling, and Age Estimation at Death in a Sample of Homo sapiens of Known Age, Sex, and Population of Origin. R.A. WALKER.
- 30 Scurvy and its presence in an Early/Middle Transition (500-200 B.C.) California Shell Mound Cemetery. A.C. CAINE, C. CANZONIERI, D. SHOUP.
- 31 Weaning at Altitude: An Investigation Into the Relationship Between Age at Weaning and the Altitude of Ethnographic Populations. M.C. MARTINEZ.
- 32 Unusual Lives, Unusual Deaths: Integrating Osteology and Orientation in the Study of Early Medieval Deviant Burials. L. HOSEK, A. MASON.

Session 37

Bioarchaeological Advances in Migration and Mobility

Contributed Poster Presentations

Chair: An-Di Yim

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:00 Odd number presenters stand by their posters (1 hour).
- 5:00 Even number presenters stand by their posters (1 hour).
- 6:00 Poster removal.
- 33 The efficacy of a priori grouping in cold adaptation studies. E.F. PINKSTON, M.J. COOPER, N. VON CRAMON-TAUBADEL.
- 34 Sicilia al centro: Ancient DNA analysis of key sites from medieval Sicily. I.T. NOBLE, A. MONNEREAU, N. WALES, M. CARVER.
- 35 Isotopic investigations of mobility and their implications for mortuary ritual in Middle and Late Woodland period Florida. K.A. WILLIAMSON, G.D. KAMENOV, N.J. WALLIS, J. KRIGBAUM.
- 36 ~~Tracing human mobility in Late Prehistoric Eastern Sudan (V-II millennium BCE).~~ G. CAPASSO, F. LUGLI, A. SPERDUTI, A. MANZO. WITHDRAWN

SATURDAY ALL DAY SESSIONS

- 37 Inferring geographic origins and migration among Middle Formative individuals from the Central Highlands of Mesoamerica using strontium and oxygen isotopes. P.A. LYNCH, H.H. EDGAR, V.J. POLYAK, G. CANTO AGUILAR, A. ARUGUELLES, C. RAGSDALE, Y. ASMEROM, K.M. PRUFER.
- 38 Ritual Violence among the Postclassic Maya: Isotopic inference of mobility at the sites of Zacpetén and Ixlú, El Petén, Guatemala. W.N. DUNCAN, A.E. SHARPE, G.D. KAMENOV, P.M. RICE, J. KRIGBAUM.
- ~~39 Exploring Interrelationships at the Qinifab School Site, Sudan. K. GODDE, B.J. BAKER, J. ULLINGER. WITHDRAWN~~
- 40 Biological affinities of human skeletal material in the non-Native American collections of the American Museum of Natural History. H.J. EDGAR, I. DWYER, A.S. HAMMOND, N. MURPHY.
- 41 Early humans in South America: First direct radiocarbon dating and morphometric study of "Zuzu" (Serra da Capivara, Brazil). L.P. MENÉNDEZ, M. LÓPEZ-SOSA, S. MONTEIRO DA SILVA, G. MARTIN, A. PESSIS, N. GUIDON, A. SOLARI.
- 42 The inclusion of biocultural and biohistorical data of a modern american population in population affinity research. A.E. HOUKES.

Session 38

Forensic Anthropology: New perspectives on Identification and Preservation

Contributed Poster Presentations

Chair: Chelsey Juarez

Plaza Foyer

8:00 Poster setup.

9:00 Poster session opens.

4:00 Odd number presenters stand by their posters (1 hour).

5:00 Even number presenters stand by their posters (1 hour).

6:00 Poster removal.

43 A Review of Anatomical Terminology for the Hip Bone. E. DEEM, N.V. PASSALACQUA, D. MESSER, K. ZEJDLIK, A. KLALES.

44 Variation of the Pubis Across Populations: A Geometric Morphometric Analysis. F. BOUDERDABEN, M. ROSELIUS, K. SPRADLEY.

45 Age Estimation with Bone Histomorphometry from the Human Ilium. A. BILLINGS, A.C. SMITH.

46 Validation of a Method for Determining Age At Death Using the Acetabulum. Z.G. SHAW, D. MULHERN.

47 The potential Impact of a sacralized fifth lumbar vertebra on auricular surface aging. K.E. BENNETT.

SATURDAY ALL DAY SESSIONS

- 48 **Estimating Sex from the Diameter of the Femoral Neck.** H.M. DECKER. WITHDRAWN
- 49 **The correlation between sex and ancestry in Greek Cypriots and Cretans using the humerus.** S.A. COHEN, X. KYRIAKOU, J. GOMEZ, E.F. KRANIOTI.
- 50 **MorphoPASSE Skull Sexing Observer Error.** D. SANTAMARIA VARGAS, M.E. ST. JOHN, J.R. GARCIA-BERNABE, E.A. DIGANGI.
- 51 **Geometric Morphometric Approach to Sexual Dimorphism in the Zygomatic Bone.** M.E. ST JOHN, J.R. GARCIA-BERNABE.
- 52 **Sex-based differences in absolute and scaled frontal sinus volumes among humans.** L.N. BUTARIC, C.T. AMUNDSON.
- 53 **Frontal sinus morphology as a forensic identification method: a comparison of intra-observer scores between scout radiographs and 3D skull images.** P.R. AVENT, J.L. CAMPBELL, H.M. GARVIN, L.N. BUTARIC.
- 54 **A review of techniques and landmarks used in geometric morphometric studies of human crania.** T.B. OLSEN, J. HANSEN, M.S. JØRKOV, D. GARCÍA MARTÍNEZ, C. VILLA. WITHDRAWN
- 55 **Protocols and observer error rates for odontometric data collection on 3D virtual subadult crania.** K.A. BROEHL, L.K. CORRON, E.Y. CHU, M.A. PILLOUD, K.E. STULL.
- 56 **Evaluating dental morphology on computed tomography (CT) scans from a contemporary U.S. sample.** T. VLEMINCQ-MENDIETA, L.K. CORRON, G. SCOTT, K.E. STULL.
- 57 **Quantifying Variation in Palate Shape among Three Modern Populations using Elliptical Fourier Analysis.** C.M. GODEN, A.F. GOODING. WITHDRAWN
- 58 **Misidentification of Hispanic individuals during death investigations: the impact of identification errors on research questions in anthropology and public health.** N.S. APPEL, H.H. EDGAR, K. HUNLEY, S. DANESHVARI BERRY.
- 59 **Limitations of Current Data and Methods for the Forensic Identification of Black Undocumented Immigrants.** I. DWYER.
- 60 **Isotopic Analysis of modern human tooth enamel.** L.M. GEORGIEVSKI, A.N. FRIEND, G.D. KAMENOV, G.I. ALTSCHULER, J.S. KRIGBAUM.
- 61 **Use of Thermogravimetric Analysis to Estimate Collagen and Hydroxyapatite Contents in Archaeological Bone.** N. JIMENEZ, R. DURGA, S. RAMANTHAN, P. SURANENI, W.J. PESTLE.
- 62 **The effects of treatment methods on human teeth dissolved in HCL: Indications for forensic anthropological studies on acid disposal.** C.A. JONES, T. BRACEWELL.
- 63 **Cleaning is the hardest part: best practices for chemically defleshing fixed, irregular human bones.** A.S. PANAGEAS, B. LEEPER, P. MARSHALL, L. LUDVICO, M. JENSEN-SEAMAN, A. BURROWS.
- 64 **Survivability versus rate of recovery for skeletal remains in forensic anthropology.** S. SCOTT, R.L. JANTZ.
- 65 **DNA Survival in Water Immersion for Forensic Identification Applications.** A.L. GOODENHERMAN, H.E. MARSH.
- 66 **Differential Patterns in Burned Remains.** E.B. GUTIERREZ, D. WESCOTT.
- 67 **Combating frailty: Application of a modified skeletal frailty index to forensic anthropology contexts.** E.M. FRAZIER, D.E. CREWS, K.E. MARKLEIN.

SATURDAY ALL DAY SESSIONS

Session 39

Paleoanthropology: Hominin Evolution

Contributed Poster Presentations

Chair: Chris Robinson

Plaza Foyer

- 8:00 Poster setup.
- 9:00 Poster session opens.
- 4:00 Odd number presenters stand by their posters (1 hour).
- 5:00 Even number presenters stand by their posters (1 hour).
- 6:00 Poster removal.
- 68 Comparative analysis of the Early Pleistocene *Homo* fossils from Gona, Ethiopia. K.L. BAAB, M. ROGERS, E. BRUNER, S. SEMAW.
- 69 Taxonomic and Phylogenetic Assessment of KNM-ER 5431. B. HEISLER.
- 70 Cross-sectional geometry and bilateral asymmetry of Omo I humeri. O.M. PEARSON, I.J. WALLACE, T. JASHASHVILI, K.J. CARLSON, S.J. WARDEN, J.G. FLEAGLE.
- 71 Morphological distance among *Homo erectus* paleodemes: Implications for population dynamics. R.A. KUZMA, D.S. STRAIT, K.L. BAAB.
- 72 Reassessment of the Human Mandible from Bañolas (Girona, Spain). B.A. KEELING.
- 73 An analysis of the five young *Homo naledi* juveniles recovered from the Rising Star Cave System, South Africa. J.K. BROPHY, D.R. BOLTER, J. HAWKS, L.R. BERGER.
- 74 Neanderthal infant growth reconstructed from virtual histology of deciduous teeth. P. MAHONEY, G. MCFARLANE, B.H. SMITH, J.J. MISZKIEWICZ, P. CERRITO, H. LIVERSIDGE, L. MANCINI, D. DREOSSI, A. VENEZIANO, F. BERNARDINI, E. CRISTIANI, A. BEHIE, A. COPPA, L. BONDIOLI, D.W. FRAYER, D. RADOVČIĆ, A. NAVA.
- 75 Signal conflict in hominin phylogenetic reconstruction. J.R. GAUTNEY.
- 76 Hypotheses of dental integration and their impact on hominin cladistic analysis. J.M. GARNETT, D.S. STRAIT.
- 77 Femoral cortical bone distribution in *Sahelanthropus tchadensis*. N.J. ST. HILLAIRE, C. MONGLE, C.M. SMITH, A.C. IDSO, W.E. HARCOURT-SMITH, A.S. HAMMOND.
- 78 Femoral cross-sectional geometry of *Paranthropus boisei*. A. VECINO GAZABÓN, C.S. MONGLE, N. ST. HILLAIRE, J. ARAMENDI, M. DOMÍNGUEZ-RODRIGO, A.S. HAMMOND.
- 79 Capitate morphometrics and evolutionary modeling with implications for the knuckle-walking hypothesis. T.C. PRANG.
- 80 What is a paleodeme? Theoretical considerations and applications using the East Asian hominin fossil record. C.E. MCLEAN, D.S. STRAIT.
- 81 Sacroiliac Joint Variation in Humans and Non-Human Primates: A Comparative Analysis of Sacroiliac Joint Size Using CT Imagery. E. NOBLE, J. HAWKS.
- 82 Scaling of articular surface areas in the hominid tarsals. A.C. IDSO, W.E. HARCOURT-SMITH.

SATURDAY ALL DAY SESSIONS

- 83 Taxonomic assignments based on worn crown outlines are not affected by observer error. J. GALWAY-WITHAM, S.E. BAILEY.
- 85 Calcaneal ecomorphology of Bovidae from the Upper Laetolil Beds, Tanzania. S.C. CURRAN, R. THORNBURG, C. MUSIBA.
- 86 Developing a quantitative means of assessing the biological integrity of fossil enamel for dietary and paleoecological reconstructions of early hominins. G. OPPENHEIM, J. KINGSTON.
- 87 The evolution of cumulative culture in the hominin lineage. J. PAIGE, C. PERREAULT.
- 88 Variation of bony labyrinth morphology in late Middle Pleistocene Neanderthals from Abri Suard, France. D. LÓPEZ-ONAINDIA, I. CREVECOEUR, A. THIBEAULT, A. URCIUOLI, M. LUCAS-ARAGAY, M. PRUVOST, C. ZANOLLI, N. SALA, A. BALZEAU, C. COUTURE-VESCHAMBRE, A. GÓMEZ-OLIVENCIA.
- 89 Comparing Close-Range Photogrammetry to microCT Scanning Using Hominin Molars: Regional and Sensitivity Analyses. M.J. FURTNER, J.K. BROPHY.
- 90 Geometric morphometric and predictive modeling of the adult human pubic symphysis for implementation in fossil reconstruction. M.T. ADEGBOYEGA, S. JHANJAR, T.D. WEAVER.
- 91 New Upper Paleolithic human remains from Ksar Akil (Lebanon). S.E. BAILEY, A. ORTIZ, C.A. TRYON.
- 92 Dental Microwear Texture Analysis on the Lower Magdalenian “Red Lady” from El Mirón Cave (Ramales de la Victoria, Cantabria, Spain). A. ESTALRRICH, A.B. MARIN-ARROYO, L.G. STRAUS, M.R. GONZÁLEZ MORALES.
- 93 Rate heterogeneity among craniodental characters in hominins. Y. SEKHAVATI, D.S. STRAIT.
- 94 The modernity that wasn't: The archaic state of contemporary human origins. M.M. GLANTZ, S. ATHREYA, A. VAN ARSDALE.
- 95 Oral pathologies of late Holocene populations from Volta Grande do Rio Xingu, Amazonia, Brazil (2,240 – 248 years BP). L.M. MÜLLER, H.P. SILVA, R. KIPNIS.
- 96 Group size, dispersal sex, coalition sex, and female aggression influence the evolution of maxillary canine sexual monomorphism in primates. E.M. MATTHEWS, T.C. RAE.
- 97 ~~When did the C677T mutation reach its high frequencies in Europe? A pilot study using ancient DNA samples.~~ J. ZOLIK, X. LIU, L. MADRIGAL. WITHDRAWN

SATURDAY, MORNING SESSIONS

Session 40

Symposium: Advances and Challenges in the Identification of Sex and Gender in Human Osteological Contexts

Invited Podium Symposium

Chair: Ashley C. Smith

Co-organizers: Jenna Schall

Plaza Ballroom A/B

One of the first steps in the creation of a biological or biocultural profile of skeletal remains is the identification of the sex of the remains. Difficulties, however, have always existed with regards to this part of the profile, particularly with regards to the identification of juvenile and fragmentary remains. Recently, more complications have arisen with the identification of sex in the skeleton, particularly given the rise in recognition of trans*, non-binary, and gender non-conforming individuals in society. Given this recognition, it is essential that biological anthropologists adapt their identification methods to accurately incorporate all lived experiences- past, present, and future. This symposium is about the advances in the identification of sex and gender in human osteological surveys, incorporating perspectives from forensic anthropology, bioarchaeology, queer theory, and human biology, as well as lived experience. Papers included in this session present novel methods and modalities in sex assessment, illuminate gaps in the current research, and provide theoretical frameworks, as well as practical solutions, to address these challenges. This session brings together biological anthropologists whose work transcends traditional approaches to science (i.e., trans-exclusionary, heteronormative), with the goal of challenging these narratives to produce innovative and diverse research. Furthermore, this session aims to identify how we can work toward making biological anthropology a more inclusive space for the diversity of human experience. It is divided into two main categories: those focusing on advances in identification of sex, particularly with regards to juvenile and fragmentary remains, and papers focusing on challenging and over-coming the sexual binary and the identification of trans* inclusive individuals. This symposium aims to be a mix of both theory and practice to achieve a better understanding on the advances and challenges facing the identification of sex and gender in biological anthropology.

- 8:30 **A New Application of 3D Modelling to Comparative Sex Estimation.** E. CHURCH, C. RANDO.
- 8:45 **'What big teeth you have!': Cervicometric Approaches to Sex Estimation of Juveniles.** M.K. GRIFFITH.
- 9:00 **Deconstructing biological sex by fuzzifying osteological sex: Implications for theoretically-informed practice.** K.M. LANE, D.M. ADAMS.
- 9:15 **Binary Gender and Sexuality Assumptions in Biological Anthropology.** M. WILSON.
- 9:30 **Considerations of Sex and Gender in Forensic Anthropology and Archaeology.** A.F. KUYKENDALL.
- 9:45 **Break.**
- 10:00 **Are we all equal in death? Current barriers to equity and inclusivity in deathcare practices.** R.M. MELORO.

SATURDAY MORNING SESSIONS

- 10:15 **Beauty is not only skin deep: using biocultural methods to support transgender identification in forensic anthropology.** J.L. SCHALL, T.L. ROGERS, J.C. DESCHAMPS-BRALY.
- 10:30 **Bye-bye binary: collaborative, gender-expansive strategies for identification of Trans Does.** S.H. BLATT, A.R. MICHAEL, M.I. ISA, A. REDGRAVE.
- 10:45 **Public Engagement with a Localized Unidentified and Missing Persons Repository: Community Collaboration as a Contributing Component to the Identification of Trans, Non-binary, and Intersex Individuals.** S.I. RECK, T.V. WILSON, E.F. MICHON, G.A. LISTI.
- 11:00 Discussion.

Session 41

Functional Anatomy: Structural Correlates of Locomotion, Part 2

Contributed Podium Presentations

Chair: Habiba Chirchir

Governor's Square 15

- 8:15 **Mammalian trabecular bone patterns through ontogeny in relation to life history traits.** A.J. RAGNI.
- 8:30 **Variation in lateral meniscal insertion anatomy in the human knee.** C. RUSSELL.
- 8:45 **Phylogeny and association with locomotory context of posterolateral knee sesamoids in primates.** N.A. FRAGOSO, S. ELTON, M.A. BERTHAUME.
- 9:00 **Does the foot respond to load based on foot types?** S.G. LAUTZENHEISER, P.A. KRAMER.
- 9:15 **Forest terrains influence walking kinematics among indigenous Tsimane of the Bolivian Amazon.** N.B. HOLOWKA, T.S. KRAFT, I.J. WALLACE, M.D. GURVEN, V.V. VENKATARAMAN.
- 9:30 **Body mass and trabecular structure in the human talus.** A.D. SYLVESTER, D.J. WESCOTT, D.L. CUNNINGHAM, D.S. GLEIBER.
- 9:45 **Break.**
- 10:00 **Calcaneal trabecular variation among gorilla taxa.** C.M. HARPER, B.A. PATEL, A.D. SYLVESTER.
- 10:15 **Differences in thumb mobility across primate taxa are associated with differences in joint anatomy and loading.** T. VAN LEEUWEN, M. VANHOOF, M. VANNESTE, E.E. VEREECKE. **WITHDRAWN**
- 10:30 **Linking wrist mobility with ulnar styloid reduction across different primate taxa.** M.J. VANHOOF, I. DE GROOTE, E.E. VEREECKE.
- 10:45 **Variation in retroflexion and cortical geometry along the primate humerus and their consequences for inferring biomechanical performance.** B.V. DICKSON, A. ZEININGER, D. SCHMITT, K.D. HUNT.
- 11:00 **The internal architecture of the hominoid clavicle and its implications for assessing locomotor behavior.** H.N. FARRELL, C.F. ROSS, Z. ALEMSEGED.
- 11:15 **The evolution of the ape trunk bauplan is not explained by small back muscles.** N.E. THOMPSON, B. FAERBER, J. NEUFUSS.

SATURDAY MORNING SESSIONS

Session 42

Primateology: Through the Primate Lifespan: Ontogeny, Reproduction, and Life History

Contributed Podium Presentations

Chair: Nicholas Grebe

Plaza Ballroom E

- 8:00 **Viral infection and life history trade-offs in wild chimpanzees.** J.D. NEGREY, M. EMERY THOMPSON, K.E. LANGERGRABER, Z.P. MACHANDA, J.C. MITANI, M.N. MULLER, E. OTALI, R.B. REDDY, R.W. WRANGHAM, T.L. GOLDBERG.
- 8:15 **Effects of a novel food on female reproductive parameters in wild olive baboons (*P. anubis*).** C.A. MOST, M.L. WAKEFIELD, D. MUIRURI, S.C. STRUM.
- 8:30 **Social precursors and fitness outcomes of group fission in geladas.** J.A. FEDER, J.C. BEEHNER, N. SNYDER-MACKLER, A. LU, T.J. BERGMAN.
- 8:45 **Low Reproductive Skew among Flanged Male Orangutans in Gunung Palung National Park, Borneo, Indonesia.** A.M. SCOTT, G.L. BANES, W. SETIADI, J.R. SARAGIH, T. SUSANTO, T. MITRA SETIA, C.D. KNOTT.
- 9:00 **Within-group sperm competition influences testes size in Verreaux's Sifaka (*Propithecus verreauxi*).** G.L. BUENO, R.J. LEWIS.
- 9:15 **Infant baboons reduce costly social behaviors but grunt more during challenging times.** S.K. PATTERSON, S.C. STRUM, J.B. SILK.
- 9:30 **Break.**
- 9:45 **Infant black and white colobus gut microbiome associations with age and social contact.** D.M. CHRISTIE, E.C. WIKBERG, P. SICOTTE, N. TING.
- 10:00 **Presence of former leader males improves infant survival in geladas.** S. SEN, A. LU, N. SNYDER-MACKLER, T.J. BERGMAN, J.C. BEEHNER.
- 10:15 **Female geladas accelerate weaning in larger groups – possibly to reduce infanticide risk.** S.C. CARRERA, A. BANIEL, J. FEDER, N. SNYDER-MACKLER, T. BERGMAN, J. BEEHNER, A. LU.
- 10:30 **Consequences of parental loss and unstable social environments on offspring survival, feeding and playing in gelada monkeys (*Theropithecus gelada*) at Guassa, Ethiopia.** C.M. MILLER, N. NGUYEN, P.J. FASHING, M.L. WILSON.
- 10:45 ***Lemur catta* growth and development: Evidence for a male juvenile growth spurt in captive populations.** J.M. THOMAS, M.L. SAUTHER, S.R. LEIGH.
- 11:00 **Bonobo mothers intervene less than chimpanzee mothers in their offspring's conflicts.** R.B. REDDY, L. SAMUNI, M. SURBECK.
- 11:15 **Inclusive fitness, age differences, and the dynamics of sibling relationships in mountain gorillas.** N.M. GREBE, J. HIRWA, T.S. STOINSKI, S. ROSENBAUM.

SATURDAY MORNING SESSIONS

- 11:30 **Playing with purpose: sex differences in social play among wild adult chimpanzees (*Pan troglodytes schweinfurthii*).** K.H. SABBI, M.F. COLE, S.E. KURILLA, A. MENANTE, I.G. MONROE, M. EMERY THOMPSON, M.N. MULLER, E. OTALI, R.W. WRANGHAM, Z.P. MACHANDA.
- 11:45 **Foraging proficiency decreases with age in old male chimpanzees at Ngogo, Kibale National Park, Uganda.** B.J. FINKEL, S. NAMAGANDA, M. CLAUSS, M. EMERY THOMPSON, J.C. MITANI, A.J. MARSHALL..

Session 43

Symposium: Cartilage and Craniofacial Growth

Invited Poster Symposium

Chair: Tim D. Smith

Co-organizers: Valerie B. DeLeon

Plaza Ballroom D

Cartilage forms the template for much of the skull, acting as a precursor for most bones of the cranial base, the ethmoid bone, and ear ossicles. It is also the template of the otic and nasal capsules, which house special sensory organs for hearing/balance and olfaction, respectively. In this symposium, we discuss the ways in which cartilage as a tissue type orchestrates many aspects of vertebrate craniofacial development, from chondrogenesis to its varied postnatal fate as cartilage, endochondral bone, or replacement by other bones. Using animal models, we begin with a discussion of cartilage as a tissue type from phylogenetic and biomechanical perspectives. We discuss mechanisms by which cartilage contributes to growth and ossification of the skull, such as interstitial growth, endochondral ossification, transdifferentiation of chondroblasts to osteoblasts, and appositional bone expansion from the perichondrium. We discuss how cartilage growth contributes to cranial and facial diversity in primates and other mammals. Finally, we revisit the well-studied role of specific cartilaginous structures, such as cranial synchondroses and the nasal septal cartilage as active “drivers” of craniofacial growth.

11:45 Discussion: Sue Herring.

- 1 Mechanobiology of sesamoid formation as a model for endochondral ossification in the skull.** H.D. BHRAMDAT, D.J. DAEGLING.
- 2 Ectochondral bone: the role of membranes in shaping endochondral bones of the skull.** V.B. DELEON, K.P. FRANKLIN, L.K. HAYNES, C.J. VINYARD, T.D. SMITH.
- 3 How the external environment shapes cartilage development, fate and evolution: insights from teleosts.** T.A. FRANZ-ODENDAAL.
- 4 Cartilage development and the structure of craniofacial variation.** B. HALLGRIMSSON, J.D. APONTE, M. VIDAL GARCIA, D.M. ROTH, D.C. KATZ, D. GRAF, R.S. MARCUCIO.
- 5 Cartilage of the nasal septum: growth, mechanics or both?** S.W. HERRING, A.A. AL DAYEH, M.C. BALDWIN, K.L. RAFFERTY.
- 6 The role of cartilage in endochondral ossification: a metaplastic paradigm.** R. MARCUCIO.

SATURDAY MORNING SESSIONS

- 7 **Come together over me: The role of the chondrocranium in dermal bone formation of the skull.** M. PITIRRI, S.M. MOTCH PERRINE, H. ZHENG, D.Z. CHEN, K. KAWASAKI, J.T. RICHTSMEIER.
- 8 **Coloring inside the invisible lines: A novel method for reconstructing the endocast for an incompletely ossified skull.** K.A. PROFFITT, B.R. MCGOVERN-LIND, S. EVANS, V.B. DELEON, T.D. SMITH.
- 9 **The role of Meckel's cartilage in mandibular development.** S.M. MOTCH PERRINE, K. KAWASAKI, E.L. DURHAM, H. ZHENG, D.Z. CHEN, E. WANG JABS, M. WU, J.T. RICHTSMEIER.
- 10 **The remains of the cartilage: ontogenetic transformation of the nasal capsule in rodents.** I. RUF.
- 11 **Mitosis and chondral modeling in the nasal capsule of perinatal primates.** T.D. SMITH, J.J. CRAY, V.B. DELEON.
- 12 **Long and short of craniofacial development – how cranial base chondrocytes shape the face.** H.L. SZABO-ROGERS.

Symposium

From Old Monkeys to New Morphometrics: A Symposium Honoring the Scientific Contributions of Eric Delson

Invited Poster Symposium

Governor's Square 14

- 1 **Rodent stable isotopes provide new data on Miocene ape environments in the Siwaliks and the Vallegrove-Penedegrove's Basin.** I. CASANOVAS-VILAR, Y. KIMURA, L.J. FLYNN, D. PILBEAM, S. MOYÁ-SOLÀ, D.M. ALBA
- 2 **Eulemur Nasal Cavity Variation across Latitude and Forest Type.** C.A. VEGA.
- 3 **New skeletons of *Cercopithecus dryas* and their implications for locomotor evolution and taxonomy within the guenon radiation.** C.C. GILBERT, J.L. ARENSON, J.A. HART, T.B. HART, K.M. DETWILER, E.J. SARGIS.
- 4 **Re-evaluation of the affinities of the *Dryopithecus wuduensis mandible*.** K.D. PUGH, M.K. PITIRRI, J.L. ARENSON, B.M. SHEARER, C.C. GILBERT, E. DELSON.
- 5 **Another look at the funny bone: Humerus shape in extant Apes and fossil hominins.** M. FRIESS, M. SBANCHI.
- 6 **Contributions of high dimensional shape analysis to paleoanthropology.** K.L. BAAB, S.E. FREIDLINE, K. HARVATI.
- 7 **Old World monkeys, apes, and others.** J.G. FLEAGLE, B. BENEFIT, E. MILLER.
- 8 **The Contributions of Eric Delson before NYCEP.** M.E STRASSER.
- 9 **Craniodental correlates of feeding within *Papio* and the interpretation of hominin behavior.** L. SWEDELL, S. CHOWDHURY, L.D. FANNIN, D.J. DAEGLING, W.S. MCGRAW
- 10 **African Land Mammal Ages: Definition and inclusion of primate range data.** J.V. COVERING.
- 11 **Dating and site formation of the Late Villafranchian mammals from Senéze, France.** E. DELSON, K.L. BAAB, T.D. CAPELLINI, S. COOKE, S. FREIDLINE, S. FROST, E.C. GARRETT, W.E.H. HARCOURT-SMITH, R. HOGG, K. MCNULTY, T. PEBURN, M. SINGLETON, K. ST. JOHN, M. STEIPER, J.A. VAN COVERING

SATURDAY, AFTERNOON SESSIONS

Session 44

Symposium: Biocultural Taphonomies: Teasing Apart Taphonomic Filters in Bioarchaeology

Invited Podium Symposium

Chair: Trent M. Trombley

Co-organizers: Sabrina C. Agarwal

Plaza Ballroom A/B

As anthropologists who work with human skeletal remains in archaeological contexts, taphonomic factors are part of every excavation and project. Despite their ubiquity, taphonomic factors are often relegated to presence/absence checklists or part of routine reporting rather than worthwhile avenues of anthropological inquiry. Paleontologists, zooarchaeologists, and forensic anthropologists have made tremendous strides in furthering the importance and scope of taphonomic filters in affecting skeletal materials, while bioarchaeologists have been comparatively slow in embracing such avenues. In this session, we seek highlight some of the exciting and important contributions bioarchaeologists have made to investigating taphonomy in anthropological and biocultural frameworks. We focus here on three primary themes: funerary taphonomy, post-excavation 'taphonomies,' and recent analytical techniques. The relationships between funerary customs and taphonomy present a prime example of how human remains are bioculturally modified, and their preservation is often influenced by geographic, climatic, and sedimentary factors. Conversely, preservation is often discussed in relation to the interval between burial and discovery, not post-excavation. We inquire how reference collections may be intertwined with taphonomic filters and interrogate whether such filters continue to play a role in the preservation of human skeletal remains even after burial and excavation. Looting, curation procedures, destructive sampling, and community-driven engagements with human remains are 'extra-taphonomic factors that affect human remains, and we seek to inquire whether these factors can be considered as intertwined with taphonomic ones, either directly or indirectly. Finally, recent analytical techniques ranging from analyses of chemical integrity in isotopic studies to histotaphonomy can also illuminate complicated taphonomic trajectories. By embracing a biocultural lens, we believe that taphonomies relating to skeletal remains can transcend cultural vs. natural dichotomies, and underscore the myriad of ways in which taphonomic filters become intertwined with local and situated human biologies, environments, ecologies, funerary customs, and even political economies.

- 1:30 Taphonomy and care of subadults from the Neo-punic Tophet at Zita, Tunisia.** J.I. CERESO-ROMAN, B. KAUFMAN, G. MCGOWAN, A. DRINE, T.R. FENN, H. BARNARD, R. KHEDHER, S.B. TAHAR, S. EDINGTON, E. JERRYAY.
- 1:45 The Taphonomy of Status: Medieval church burial at Đurđevac-Sošice (Croatia), the creation of group identity, and inequality.** A.J. OSTERHOLTZ.
- 2:00 Understanding taphonomic processes of collective burials using photogrammetry: a case study from the Maya area.** M. DE TOMASSI.
- 2:15 Taphonomic trajectories: Funerary taphonomy and preservation in a medieval, multi-faith Portuguese cemetery.** T.M. TROMBLEY, S.C. AGARWAL, A. MATIAS.

SATURDAY AFTERNOON SESSIONS

- 2:30 Confronting taphonomic challenges from excavation through curation of human remains. B.J. BAKER.
- 2:45 Visiting the dead: Patterns of grave re-entry in ancient Nubia. C.L. MIHAL, B.J. BAKER, S.G. REMPEL.
- 3:00 Ancient Skeletons *In Situ*: Evaluating Diagenesis at a Covered Open-Air Excavation Display and Community Museum in Central Thailand. G. PALEFSKY, T. LERTCHARNRIT, R.B. TRAYLER, S.L. KIM.
- 3:15 Intentional burial or natural deposition? A taphonomic approach to the interpretation of isolated human skulls. S.M. BELLO, L. CRÉTÉ, S.A. PARFITT.
- 3:30 Transitioning from biosphere to geosphere: Assessing diagenesis of bone stable isotope values to understand taphonomic trajectories. M.M. BEASLEY.
- 3:45 Towards a bioarchaeology of cremation. T.J. THOMPSON.
- 4:00 Discussant: Robb, John.

Session 45

Bioarchaeological Advances in Demography, Diet and Mobility

Contributed Podium Presentations

Chair: Maja Šešelj

Governor's Square 15

- 1:30 Gastropolitics in Early Fort Ancient: Dietary analysis as a means of examining social status during a period of emerging complexity. E.M. LAGAN, M. HUBBBE, C.W. SCHMIDT, L. FIORENZA, D. GUATELLI-STEINBERG, R.A. COOK.
- 1:45 Exploring medical care through dental calculus analysis: St Leonard's medieval leprosy hospital, Peterborough, England. E. FIORIN, R. LAYFIELD, C. SNOECK, M. ASTOLFI, C. LEE, C. ROBERTS, E. CRISTIANI.
- 2:00 An overlooked island in the Irish Sea: palaeodietary reconstruction at a medieval Viking Abbey (AD1134-1540), Isle of Man. M.C. WEALE, D. DAVEY, D. TOMLINSON, A. FOX.
- 2:15 Health and dietary drivers of human oral microbiome composition in ancient Britain. A.S. GANCZ, A.G. FARRER, K. DOBNEY, S.L. WRIGHT, L.S. WEYRICH.
- 2:30 Dining in Tuva: social correlates of diet and mobility in a nomadic community from Southern Siberia (2nd-4th c. CE). M. MILELLA, G. CASPARI, Z. LAFFRANCHI, G. ARENZ, T. SADYKOV, J. BLOCHIN, M. KELLER, Y. KAPINUS, S. LÖSCH.
- 2:45 "Celts" up and down the Alps. A multi-isotopic exploration of mobility among the pre-Roman population of Verona (NE Italy, 3rd -1st c. BCE). Z. LAFFRANCHI, A. GRANADOS-TORRES, S. LÖSCH, A. ZINK, I. DORI, A. DELGADO-HUERTAS, M. MILELLA.
- 3:00 Multiregional Lead Isotopic Linear Patterns and Evaluating Lead Contamination in Ancient Human Tooth Enamel. J.R. SAMUELSEN, A. POTRA.
- 3:15 Reassessing Clustering Parameters of Biological Affinities: Utilization of k-means to Understand Eurasian Population Variation. M.K. GREEN, D. FIDALGO, M. HUBBE.

SATURDAY AFTERNOON SESSIONS

- 3:30 Estimation of the age-at-death of subadults (0-5 years) based on craniofacial dimensions. A.A. EVTEEV, T.A. SYUTKINA, N.E. STAROVEROV.
- 3:45 Age Estimation: It isn't easy, but it sure is hard enough. M. CLARK, C.M. CHEVERKO, A. SIMON, E.M. LAGAN, M. HUBBE.
- 4:00 The accuracy of photogrammetry for the recording of antemortem cranial depression fractures using low-cost and open-source software. K. PORTER.
- 4:15 A test of the Coimbra method of recording enthesal changes as applied to the foot skeleton. M.E. ALBEE.

Session 46

Genetics & Genomics: Anthropological Genomics - From Humans, Primates, to Gut Microbiome

Contributed Podium Presentations

Chair: Nathan Lents

Plaza Ballroom E

- 1:30 Oral microbial ecologies reconstructed from pre-colonial era Wichita ancestors from North America provide insights into the global "silent epidemic" of oral disease. T.P. HONAP, C.R. MONROE, S.J. JOHNSON, K. SANKARANARAYANAN, M. LEVINE, C.M. LEWIS.
- 1:45 Host-Pathogen Coevolution through the Lens of Ancient Genomics: A Case Study of the Cariogenic Pathobiont, *Streptococcus mutans*. M. MICHEL, A. ANDRADES VALTUEÑA, R. BARQUERA, T. FERRAZ DA SILVA, E. GUEVARA, A. MITTNIK, K. NÄGELE, E.A. NELSON, G. NEUMANN, M. SPYROU, V. VILLALBA, K. BOS, W. HAAK, C. POSTH, P. STOCKHAMMER, A. HERBIG, J. KRAUSE.
- ~~2:00 The feasibility of palaeoproteomics for studying ancient hominins from South Africa. P. MADUPE, N. HLAZO, P.L. RÜTHER, M. MACKIE, F. WELKER, J. RAMOS MADRIGAL, I. PATRAMANIS, F. RACIMO, L. SCHROEDER, J.V. OLSEN, R.R. ACKERMANN, E. CAPPELLINI. WITHDRAWN~~
- 2:15 The Developmental Impacts of Natural Selection on Human Pelvic Morphology. T.D. CAPELLINI, M. YOUNG, D. RICHARD, M. GRABOWSKI, B. AUERBACH, B. DE BAKKER, J. HAGOORT, P. MUTHURULAN, H. KURKI, L. BETTI, K. LEWTON.
- 2:30 Shared super-archaic ancestry between *Homo sapiens* and Neanderthals. F.A. VILLANEA, K.E. WITT.
- 2:45 Pharmacogenetic variation in archaic and modern humans. K.E. WITT, T.H. WROBLEWSKI, S. LEE, R.S. MALHI, E. HUERTA-SANCHEZ, F. VILLANEA, K.G. CLAW.
- 3:00 A comprehensive single-cell atlas of the adult rhesus macaque brain. T.M. ZINTEL, K.L. CHIOU, C.H. SPURRELL, A.A. GOGATE, D.R. O'DAY, G. DUGAN, L.M. STARITA, H.A. PLINER, S.E. BAUMAN, N.R. COMPO, M.I. MARTINEZ, L.J. BRENT, C.S. WALKER, O. GONZALEZ, J. STYLLI, A.R. DECASIEN, M.O. BOHLEN, J.P. HIGHAM, M.J. MONTAGUE, M.L. PLATT, J. SHENDURE, N. SNYDER-MACKLER.
- 3:15 Increased homozygosity due to endogamy results in fitness consequences in a human population. N.A. SWINFORD, S.P. PRALL, B.A. SCELZA, B.M. HENN.

SATURDAY AFTERNOON SESSIONS

- 3:30 **Unraveling demographic history and complex trait architecture from 6,000 Mexican genomes.** M. SOHAIL, A.Y. CHONG, M.J. PALMA, C.D. QUINTO-CORTES, A. RAGSDALE, S.G. MEDINA, G. DELGADO-SÁNCHEZ, L.P. CRUZ-HERVERT, L. FERREYRA-REYES, H. MORENO-MACÍAS, C.A. AGUILAR-SALINAS, A. CORTES, S.L. FERNANDEZ-VALVERDE, V. ACUÑA-ALONZO, G. WOJCIK, C.R. GIGNOUX, C.D. BUSTAMANTE, A. HILL, M.T. TUSIE, A.J. MENTZER, J. NOVEMBRE, L. GARCÍA-GARCÍA, A. MORENO-ESTRADA.
- 3:45 **A Global Examination of microRNA Genes in Modern and Ancient Human Genomes.** H.R. JOHNSON, J.A. GALVÁN, W.J. HIGGINS, S. GADI, N.H. LENTS.
- 4:00 **The Mitochondrial Genome and Epigenome of the Golden Lion Tamarin from Fecal DNA using Nanopore Adaptive Sequencing.** N.M. WANNER, P.A. LARSEN, A. MCLAIN, C. FAULK.
- 4:15 **Whole genome capture of oral pathogenic bacteria from Great Ape dental calculus.** A.T. OZGA, T. HONAP, C.M. LEWIS JR., A.C. STONE.

Session 47

Symposium: The Weight of the Evidence: A Session to Honor the Legacy of Chris Ruff

Invited Poster Symposium

Chair: Benjamin M. Auerbach

Plaza Ballroom D

This symposium honors the many contributions and legacy of Christopher Ruff to our understanding of human and nonhuman primate morphological variation, biomechanics, and evolution. Throughout his academic career, Chris has made significant, foundational contributions to a variety of topics within these broad areas. This list includes but is not limited to: the implementation of beam theory and engineering in modeling bone mechanical loading; methods for estimating body size in primates from monkeys to ancestral hominids; reconstructions of body shape of ancestral hominids, from Gona to East Turkana; the thermoregulatory imperative model of human morphological variation with respect to climate; and a major international effort to document changes in European human body form over the course of the Holocene. His work reflects a curiosity about primate variation, adaptation, and the ways in which the environment impacts morphology. In more than 200 publications over forty-two years, along with his service as *Yearbook* Editor from 1998 to 2002 and *AJPA* Editor-in-Chief from 2007 to 2013, Chris has had extensive impact on the discipline. Chris has been a generous and wide-reaching collaborator, working with colleagues from engineering, radiography, archaeology, paleontology, and anatomy, in addition to biological anthropology. In addition to his own research, Chris has had impacts on the field through his training of master's and doctoral students (18 committees chaired or co-chaired), as well as shaping the studies of countless other scholars both directly and indirectly. The talks presented in this symposium reflect but a sliver of his influence and interconnectedness with many disciplines. As we celebrate his retirement (but not from research), we honor the ongoing legacy of his ideas on the field of biological anthropology, as well as the interplay he has had in shaping the careers of students, colleagues, and collaborators from across these many disciplines. 4:00PM Discussant: Brigitte Holt.

SATURDAY AFTERNOON SESSIONS

4:15PM Discussant: Mark Teaford.

- 1 **The thermoregulatory imperative and recent human evolution: climate, selection, and population history.** B.M. AUERBACH, K.R. SAVELL, E.R. AGOSTO.
- 2 **Revisiting the thermoregulatory imperative in living humans.** L. COWGILL, S.D. MADDUX, C. OCOBOCK.
- 3 **A test of subadult stature estimation equations on modern samples.** H.M. GARVIN, T. PULSIPHER.
- 4 **Encephalization in fossil *Homo*.** T.W. HOLLIDAY.
- 5 **Without a net: comparing mouse locomotor modes to study arboreality and its impact on musculoskeletal functional morphology.** J.M. ORGAN, C.D. BYRON.
- 6 **Mechanical properties of embryonic mouse cartilage and bone.** J.A. GIFFORD-MAHANY, S.N. KIEMLE, M. KAWASAKI, T.B. TIGHE, K. KAWASAKI, J.T. RICHTSMEIER.
- 7 **Locomotor and taxonomic diversity in Pleistocene hominins from Koobi Fora, Kenya.** C.V. WARD, A.S. HAMMOND, C.S. MONGLE, F.E. GRINE, J. LAWRENCE, W.H. KIMBEL.

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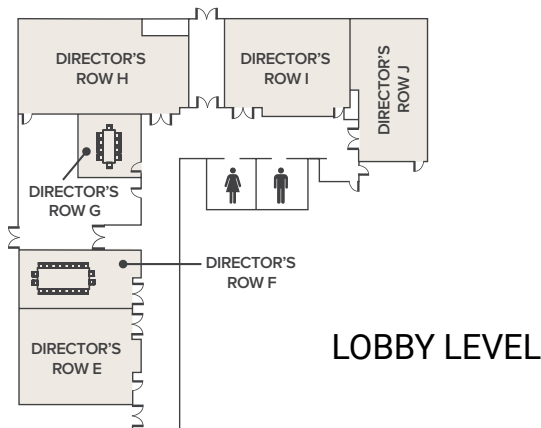
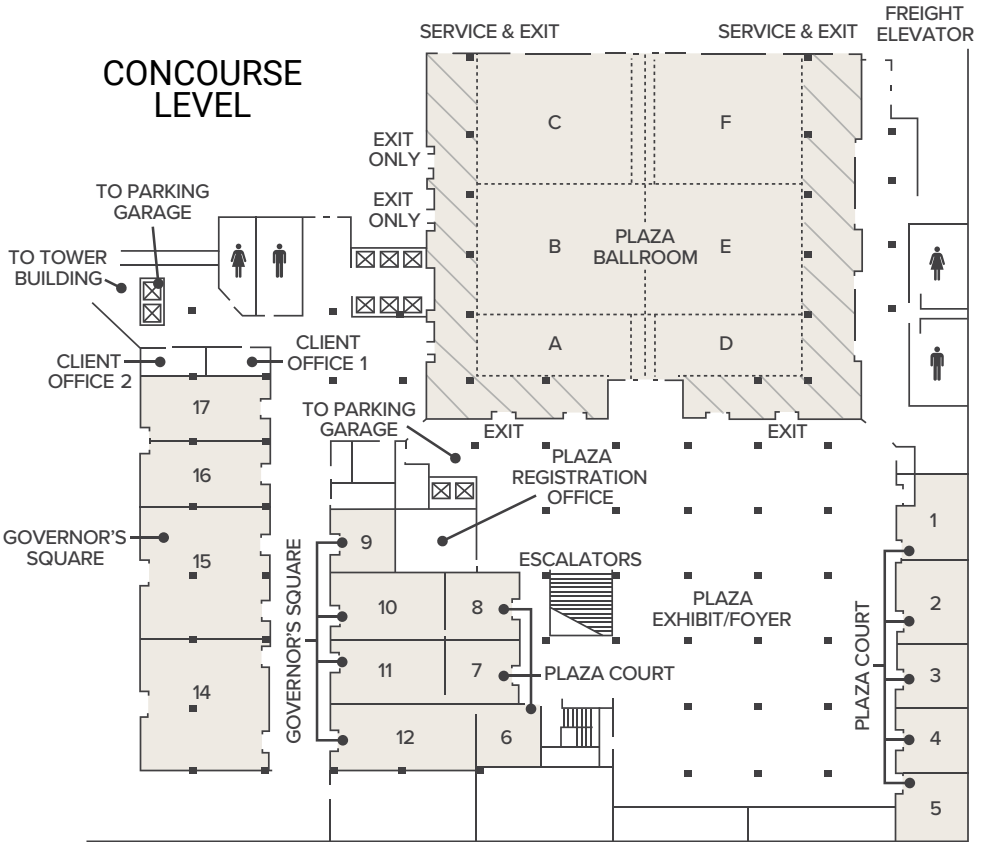
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