

**Program of the seventy-ninth Annual Meeting of the
American Association of Physical Anthropologists**

To be held at the

Albuquerque, New Mexico, April 14-17, 2010

AAPA Scientific Program Committee:

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Dear attendees of the AAPA and concurrent conferences: I am pleased to welcome you to the 2010 meetings of the American Association of Physical Anthropology. I thank you for your patience during the abstract submission process, which was not smooth. Our system malfunctioned and many people were left wondering if their abstract was received. I apologize for these problems.

Producing this year's program was a challenge because of limited space availability. Indeed, some of the sessions will take place in small rooms, but we simply did not have any other option. At the same time, we were able to go back to scheduling our usual four concurrent podium sessions, instead of the five I had last year. My latest count on the number of papers at the 2010 meetings is 915, slightly down from last year's record of 970 presentations.

Our meetings begin with our usual Wednesday night reception and finish with the Saturday evening student prize reception. I invite you to participate in the receptions, luncheon, and other events, which make our conference so special. The AAPA luncheon will take place on Friday 12:00 pm-2:00 pm, and it is titled "A temporary paradise for collaboration and training: our experience with EVAN, the European Virtual Anthropology Network". It will be delivered by Dr. Gerhard W. Weber, Dept. of Anthropology, University of Vienna. Our plenary session this year is titled "Why did YOU become an anthropologist?", and it will feature colleagues at different stages in their careers, from recent PhD's to retired members of the association, who will be sharing with us a personal evaluation of their career choices, including regrets and triumphs.

As we did last year, poster presentations will be up for the entire day. However, we are asking authors to be present at their posters once in the morning and once in the afternoon, to increase the time in which interested individuals can talk to the authors. In addition, we were able to separate the invited poster symposia from the other posters so that the poster symposia organizers can have a time and a place in which discussion with all participants can ensue. I encourage you to attend the discussion time of these symposia.

This year we are continuing with last year's schedule, in which the plenary session and the Wiley-Blackwell reception take place on Thursday night, and the AAPA business meeting and the meetings of interest groups take place on Friday night. Please also note the Career development session on teaching, and the open meeting of the Ad Hoc AAPA Committee on the status of underrepresented groups, both on Saturday at lunch time.

As usual, we are meeting with sister organizations such as the Human Biology Association and the Paleopathology Association. It has been a pleasure to work with them, and coordinate so smoothly our events. We have two organized sessions co-sponsored with allied organizations, namely: Pathogens and Evolution of Humans and Non-human Primates, co-sponsored by the HBA and the AAPA on Friday morning; and Anthropological Genetics in the Genomic Era: Challenges, Opportunities, & Directions, co-sponsored by the AAAG and the AAPA.

I want to acknowledge Ed Hagen's continued support during the abstract submission rush, and thank my excellent program assistants, Ms. Michelle Raxter and Mr. Charles Dionne. I also wish to thank my program committee, who suffered computer failures, the flu and even theft of computer equipment but yet managed to review an exceedingly large number of abstracts.

For next year, please keep in mind that the "Call for papers" is posted on the AAPA's website sometime in May. Although we send it by e-mail to all members, we cannot be responsible for computer systems filtering our message. It has been a pleasure to serve as the AAPA's vice president. I thank you for this opportunity.

Lorena

Madrigal

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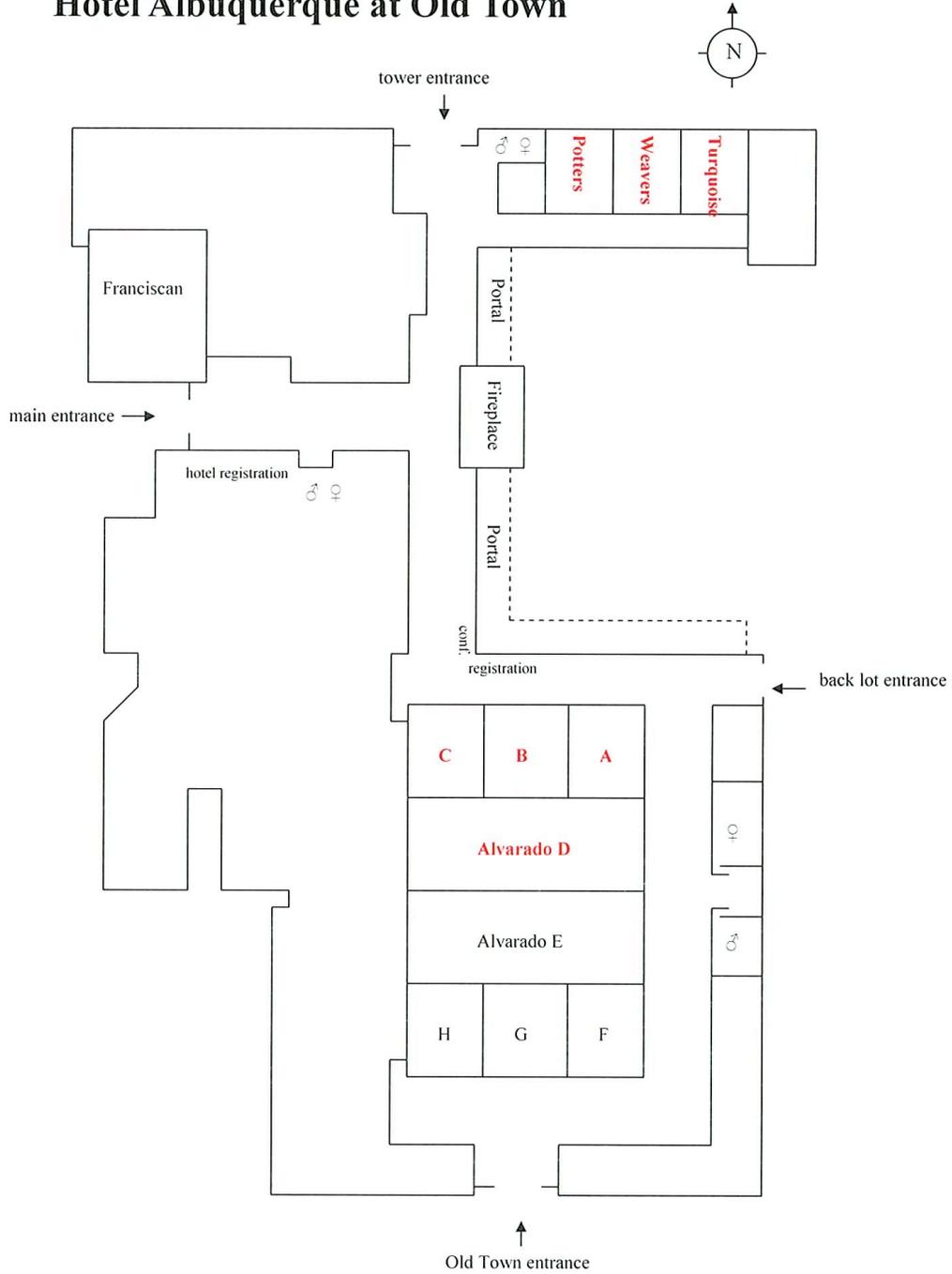
AAPA Vice President and
Program Committee Chair

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Supplement 44 was mailed the week of	

Floor plan.

Hotel Albuquerque at Old Town



The Conference at a Glance (Monday-Tuesday)

Room	Monday	Tuesday am	Tuesday pm	Tuesday evening
Sun Terrace	PPA Registration, 8 am – 5 pm			
North Atrium		PPA Registration, 8 am – 5 pm		HBA Registration 5-7pm
Alvarado C		PPA Workshop 9am-12pm	PPA Podium Session	PPA Reception/ dinner/business meeting, 6 – 10pm
Alvarado AB		PPA Symposium 9am-12pm		PPA Reception/ dinner/business meeting, 6 – 10pm
Alvarado D				
Weavers				HBA Executive Committee Dinner, 6 – 10 pm

Key to acronyms:

AAAG American Association of Anthropological Genetics	DAA Dental Anthropology Association
AAPA American Association of Physical Anthropologists	HBA Human Biology Association
ADA American Dermatoglyphics Association	JHE <i>Journal of Human Evolution</i>
AJHB <i>American Journal of Human Biology</i>	PPA Paleopathology Association
AJPA <i>American Journal of Physical Anthropology</i>	

The Conference at a Glance (Wednesday)

Room	Wednesday am	Wednesday pm	Wednesday evening
North Atrium	AAPA Registration, 8 am – 7:30 pm PPA Registration 8am-12pm HBA Registration 8:00am-5:00pm		
Alvarado AB		Plenary Session/HBA Podium Session 1:00-6pm	AAPA Reception, 8 – 11 pm
Alvarado C			AAPA Reception, 8 – 11 pm
Alvarado D	PPA Podium Session	PPA Podium Session 2pm-5pm	AAPA Reception, 8 – 11 pm
Alvarado EFGH (poster area)	HBA Poster Session (1-76) 8:00am-12:00pm PPA Poster Session (77-137) 8:00am-12:00pm	PPA Poster Session	PPA Student awards (6:30 pm)
Turquoise			
Fireplace	Dental Anthropology Association workshop	Dental Anthropology Association workshop	
Weavers	AJHB Editorial Board breakfast, 7:30 – 9 am	AJPA Editorial Board Meeting, 12 – 2 pm	HBA reception 6-9pm
Potters	Speaker Ready / Computer Room Press/Job Interview	Speaker Ready / Computer Room Press/Job Interview	
Franciscan	Exhibitors	Exhibitors	
Club Level Lounge	AAPA Executive Committee Meeting, 7 am – 6 pm		

The Conference at a Glance (Thursday)

Room	Thursday am	Thursday pm	Thursday Evening
North Atrium	AAPA Registration, 8:00 am – 5:00 pm HBA registration, 8:00am-12:00p		
Alvarado AB	Session 1. New developments in the origins and evolution of native American populations. The Wiley-Blackwell symposium.	Session 13. Bioarchaeological signatures of violence and aggression.	Student Committee auction 8:00-10:00pm
Alvarado C	Session 2. Paleoanthropology: From ergaster to neandertal.	Session 14. Human biology: investment decisions. dietary trade-offs. parasites and people	AAPA Plenary Session: Why did YOU become an anthropologist? 6:15 – 7:45 pm (Alvarado C)
Alvarado D			Wiley-Blackwell reception, 8:00-10:00 pm. (Alvarado D)
Turquoise	Session 3. It takes two to tango: male-female interactions in primates.	Session 15. Non-hominin primate evolution	
Fireplace	Session 4. Primate Dental Ecology: How Teeth Respond to the Environment.	Session 16. Primatology. Theory and Practice: Food, Ecological Variables and Conservation.	
Weavers	HBA Registration, 8 am – 12 pm HBA Podium Session, 8:30 – 12:00	HBA Podium Session, 1:30-5:00pm	HBA Business Meeting, 5:00 – 6:00 pm HBA Student reception, 7:00 – 9:30
Alvarado EFG (poster area)	Session 5. Forensic anthropology: methods for determining biological profiles. Session 6. Forensic anthropology: New techniques in forensic anthropology and bioarchaeology. Perimortem & postmortem alteration of skeletal material Session 7: Macrowear, microwear, & microfracturing. Dental health & stress patterns Session 8. Bioarchaeology. Session 9. Paleopathology. Session 10. Skeletal biology: Population History.		
Alvarado H (poster area)	Session 11. Session in honor of Elizabeth Harmon. Session 12. The bioarchaeology of the Southeastern United States		
Potters	Speaker Ready / Computer Room. Press/Job Interview. 8:00-11:00am	HBA luncheon 12:00-1:30pm Speaker Ready / Computer Room. Press/Job Interview. 2:30-5:00pm	
Franciscan	Exhibitors		

The Conference at a Glance (Friday)

Room	Friday am	Friday pm. Podium sessions begin at 2 pm.	Friday evening
North Atrium	AAPA Registration, 8 am –5 pm		
Alvarado A	Session 17. Pathogens and evolution of human and non-human primates. Co-sponsored by the HBA and the AAPA.	Session 28. Anthropological genetics: Human Genetic Variation.	Biocultural Interests group 7:00-8:00 pm
Alvarado B	Session 18. Juvenile primates: it's about time.	Session 29. Human and Non-Human Skeletal Biomechanical Analyses. Isotopic studies.	DAA Business Meeting, 7:00 – 8:00 pm
Alvarado C	Session 19. Bone tissue adaptation in human and non-human primates. Functional anatomy and kinematics of locomotion.	Session 30. Bioarchaeology of Teeth.	ADA Business Meeting, 7:00 – 8:00 pm
Alvarado D		AAPA Luncheon 12:00 pm-2:00 pm	AAPA Business Meeting 8-11 pm
Turquoise	Session 20. Early hominins	Session 31. Human Biology: Patterns of adaptation.	AAAG Business Meeting, 7:00 – 8:00 pm
Weaver			Primate Biology/Behavior Interest Group 7:00 – 8:00pm
Alvarado EFG (poster area)	Session 21. The Australopithecus genus. On the move: Bipedalism & locomotion. Late hominin ecology and evolution. Methods. Session 22. Pleistocene <i>Homo</i> . Session 23. Non-hominin primate evolution. Session 24. Life History, Reproductive Strategies and Demography. Epidemiology. Nutrition and Diet. Session 25. Growth and Development. Human Variation and Adaptation.		
Alvarado H (poster area)	Session 26. Hard Object Feeding in Primates: Biomechanics, Behavior and the Fossil Record. Session 27. The Macro and the Micro: Analytical Scale in Southwestern Bioarchaeology.		
Potters	Speaker Ready / Computer Room. Press/Job Interview (closes at 4 pm)		JHE Editorial Board Dinner 5:30-8:30 pm
Franciscan	Exhibitors		

The Conference at a Glance (Saturday)

Room	Saturday am	Saturday pm	Saturday evening
North Atrium	AAPA Registration, 8 am – 12:00 pm		
Alvarado A	Session 32. Primate Behavior: Bonobos, Humans and Chimpanzees, Oh My!: The Behavior of Our Closest Living Relatives and Ourselves.	Session 41. Hominin morphology, integration, growth.	AAPA Student Awards Reception, 6:00-7:30 pm MOVED to ALVARADO EFGH
Alvarado B	Session 33. Late <i>Homo</i> : variation, distribution, and climate.	Session 42. Computational methods for the automated analysis of virtual hominid endocasts.	
Alvarado C	Session 34. Anthropological Genetics in the Genomic Era: Challenges, Opportunities, & Directions.	Session 43. Trabecular Bone Structure and Function in Primates: Recent Advances and Future Directions.	
Alvarado D	Session 35. Anthropological Perspectives on Tooth Morphology: Genetics, Evolution, Variation.	Session 44 . Human and Non-Human Population and Phylogenetic Studies.	
Alvarado EFGH (poster area)	Session 36. Genetic variation and evolutionary history of human and non-human populations. Session 37. Primatology. Getting Around: Habitat Use, Ranging Patterns and Dispersal in Nonhuman Primates. Primate Feeding Strategies and Nutritional Ecology. Session 38. Primatology. The Evolution of Sociality. Primate Reproduction and Mating Strategies. Growing Up. Session 39. Primate Positional and Locomotor Behavior. Morphology. Session 40. Growing Up Primate: Human and Nonhuman Craniofacial Ontogeny and Biomechanics.		
Fireplace		Career development session. Teaching: The Forgotten Skill in Obtaining an Academic Job. 12:00-2:30.	Student Awards Com Meeting 5:00-6:00
Weaver	Teaching Outreach program: 8:00 am-2:00 pm.		New faculty happy hour
Potters	Speaker Ready / Computer Room. Press/Job Interview		
Franciscan	Exhibitors		

Conference Schedule.

For a schedule of individual AAPA poster and podium presentations, see page 14.

Tuesday April 13, 2010.

Paleopathology Association Functions

8:00am - 5:00pm	Registration. <i>North Atrium.</i>
9:00am -12:00pm	PPA Symposium <i>Fireplace.</i>
9:00am - 5:00pm	Workshop (Paleoepidemiology) and Podium Sessions. <i>Turquoise.</i>
6:00pm - 10:00pm	Association Reception, Dinner, Business Meeting. <i>Turquoise.</i>

Human Biology Association Functions

5:00pm - 7:00pm	Registration. <i>North Atrium.</i>
6:00pm - 10:00pm	Executive Committee Dinner. <i>Weavers.</i>

Wednesday April 14, 2010.

Paleopathology Association Functions

8:00am - 12:00pm	Registration. <i>North Atrium.</i>
9:00am - 5:00pm	Poster Sessions (77-157). <i>Alvarado EFG</i>
12:00pm-2:00pm	Let's do lunch. Church Café http://www.churchstreetcafe.com/
8:00am- 5:00pm	Podium Session. <i>Turquoise.</i>
6:30pm -	Student Awards Reception. <i>Turquoise.</i>

Human Biology Association Functions

7:30am-9:00am	AJHB Editorial Board meeting breakfast. <i>Weavers</i>
8:00am - 5:00pm	Registration. <i>North Atrium.</i>
9:00am - 12:00pm	Poster Session (1-76). <i>Alvarado EFG</i>
1:00pm - 6:00pm	Plenary/Podium Session. <i>Alvarado AB</i>
6:00pm - 9:00pm	Reception. <i>Weavers</i>

Dental Anthropology Association Functions.

8:00am - 5:00pm	Workshop. <i>Fireplace.</i>
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American Association of Physical Anthropologists Functions

8:00 am-7:30 pm.	Registration. <i>North Atrium.</i>
7:00 am.-6:00 pm.	Executive Committee Meeting. <i>Club level lounge.</i>
12:00pm-2:00 pm.	American Journal of Physical Anthropology Editorial Board Luncheon. <i>Weavers</i>
8:00-pm-11:00 pm.	Reception and Cash Bar. <i>Alvarado ABCD</i>

Thursday April 15, 2010.

Human Biology Association Functions

8:00am - 12:00pm	Registration.	<i>Weavers</i>
12:00pm-1:30pm	HBA luncheon.	<i>Potters</i>
8:30am - 5:00pm	Podium Sessions.	<i>Weavers</i>
5:00pm - 6:00pm	Business Meeting.	<i>Weavers</i>
7:00pm - 9:30pm	Student Reception.	<i>Weavers</i>

American Association of Physical Anthropologists Functions

8:00 am-5:00 pm	Registration. North Atrium.
8:00 am-5:00 pm	Exhibitors. <i>Franciscan</i>
8:00am - 12:00pm	Session 1. New developments in the origins and evolution of native American populations. The Wiley-Blackwell symposium. <i>Alvarado AB.</i>
8:00am - 12:00pm	Session 2. Paleoanthropology: From ergaster to neandertal. <i>Alvarado CD</i>
8:00am - 12:00pm	Session 3. It takes two to tango: male-female interactions in primates. <i>Turquoise.</i>
8:00am - 12:00pm	Session 4. Primate Dental Ecology: How Teeth Respond to the environment. <i>Fireplace</i>
8:00am - 6:30pm	Session 5. Forensic anthropology: methods for determining biological profiles. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 6. Forensic anthropology: New techniques in forensic anthropology and bioarchaeology. Perimortem & postmortem alteration of skeletal material. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 7: Macrowear, microwear, & microfracturing. Dental health & stress patterns. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 8. Bioarchaeology. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 9. Paleopathology. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 10. Skeletal biology: Population History. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 11. Session in honor of Elizabeth Harmon. <i>Alvarado H</i>
8:00am - 6:30pm	Session 12. The bioarchaeology of the Southeastern United States. <i>Alvarado H</i>
1:00pm-5:00pm	Session 13. Bioarchaeological signatures of violence and aggression. <i>Alvarado AB.</i>
1:00pm-5:00pm	Session 14. Human biology: investment decisions. dietary trade-offs. parasites and people. <i>Alvarado CD</i>
1:00pm-5:00pm	Session 15. Non-hominin primate evolution. <i>Turquoise.</i>
1:00pm-5:00pm	Session 16. Primatology. Theory and Practice: Food, Ecological Variables and Conservation. <i>Fireplace</i>
8:00-10:00pm	Student Committee Auction. <i>Alvarado AB.</i>
6:15-7:45pm	AAPA Plenary Session: Why did YOU become an anthropologist?. <i>Alvarado C.</i>
8:00-10:00pm	Wiley-Blackwell Reception. <i>Alvarado D.</i>

Friday April 16, 2010.

8:00 am-5:00 pm	Registration. North Atrium.
8:00 am-5:00 pm	Exhibitors. <i>Franciscan</i>
8:00am - 12:00pm	Session 17. Pathogens and evolution of human and non-human primates. Co-sponsored by the human biology association and the AAPA. <i>Alvarado A.</i>
8:00am - 12:00pm	Session 18. Juvenile primates: it's about time. <i>Alvarado B.</i>
8:00am - 12:00pm	Session 19. Bone tissue adaptation in human and non-human primates. Functional anatomy and kinematics of locomotion. <i>Alvarado C.</i>
8:00am - 12:00pm	Session 20. Early hominins. <i>Turquoise.</i>
8:00am - 6:30pm	Session 21. The Australopithecus genus. On the move: Bipedalism & locomotion. Late hominin ecology and evolution. Methods. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 22. Pleistocene <i>Homo</i> . <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 23. Non-hominin primate evolution. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 24. Life History, Reproductive Strategies and Demography. Epidemiology. Nutrition and Diet. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 25. Growth and Development. Human Variation and Adaptation. <i>Alvarado EFG</i>
8:00am - 6:30pm	Session 26. Hard Object Feeding in Primates: Biomechanics, Behavior and the Fossil Record. <i>Alvarado H.</i>
8:00am - 6:30pm	Session 27. The Macro and the Micro: Analytical Scale in Southwestern Bioarchaeology. <i>Alvarado H.</i>
12:00pm-2:00pm	The AAPA luncheon: A temporary paradise for collaboration and training: our experience with EVAN, the European Virtual Anthropology Network. Delivered by Dr. Gerhard W. Weber. Dept. of Anthropology, University of Vienna. <i>Alvarado D.</i>
2:00pm-5:00pm	Session 28. Anthropological genetics: Human Genetic Variation. <i>Alvarado A</i>
2:00pm-5:00pm	Session 29. Human and Non-Human Skeletal Biomechanical Analyses. Isotopic studies. <i>Alvarado B</i>
2:00pm-5:00pm	Session 30. Bioarchaeology of Teeth. <i>Alvarado C.</i>
2:00pm-5:00pm	Session 31. Human Biology: Patterns of adaptation. <i>Turquoise.</i>
7:00pm-8:00pm	Biocultural Interests group. <i>Alvarado A.</i>
7:00pm-8:00pm	DAA Business meeting. <i>Alvarado B.</i>
7:00pm-8:00pm	ADA Business meeting. <i>Alvarado C.</i>
8:00pm-11:00pm	AAPA Business meeting. <i>Alvarado D.</i>
7:00pm-8:00pm	AAAG Business meeting. <i>Turquoise</i>
7:00pm-8:00pm	Primate biology/behavior interest group. <i>Weaver</i>
5:30pm-8:30pm	JHE Editorial Board Dinner. <i>Potters</i>

Saturday April 17, 2010.	
8:00 am-12:00 pm	Registration. <i>North Atrium.</i>
8:00 am-5:00 pm	Exhibitors. <i>Franciscan</i>
8:00am - 12:00pm	Session 32. Primate Behavior: Bonobos, Humans and Chimpanzees, Oh My!: The Behavior of Our Closest Living Relatives and Ourselves. <i>Alvarado A.</i>
8:00am - 12:00pm	Session 33. Late <i>Homo</i> : variation, distribution, and climate. <i>Alvarado B.</i>
8:00am - 12:00pm	Session 34. Anthropological Genetics in the Genomic Era: Challenges, Opportunities, & Directions. <i>Alvarado C.</i>
8:00am - 12:00pm	Session 35. Anthropological Perspectives on Tooth Morphology: Genetics, Evolution, Variation. <i>Alvarado D.</i>
8:00 am-2:00 pm	Teaching Outreach Program. <i>Weaver.</i>
8:00am - 6:30pm	Session 36. Genetic variation and evolutionary history of human and non-human populations. <i>Alvarado EFGH</i>
8:00am - 6:30pm	Session 37. Primatology. Getting Around: Habitat Use, Ranging Patterns and Dispersal in Nonhuman Primates. Primate Feeding Strategies and Nutritional Ecology. <i>Alvarado EFGH</i>
8:00am - 6:30pm	Session 38. Primatology. The Evolution of Sociality. Primate Reproduction and Mating Strategies. Growing Up. <i>Alvarado EFGH</i>
8:00am - 6:30pm	Session 39. Primate Positional and Locomotor Behavior. Morphology. <i>Alvarado EFGH.</i>
8:00am - 6:30pm	Session 40. Growing Up Primate: Human and Nonhuman Craniofacial Ontogeny and Biomechanics. <i>Alvarado EFGH</i>
12:00pm-2:30pm	Career development session. Teaching: The Forgotten Skill in Obtaining an Academic Job. <i>Fireplace</i>
11:45am-2:00pm	Open Meeting of the Ad Hoc AAPA Committee on the Status of Underrepresented Groups. Lunch at <i>Cristobal's</i> (next to Cafe Plazuela. Lunch optional, \$12.95+tax)
1:00pm-5:00pm	Session 41. Hominin morphology, integration, growth. <i>Alvarado A.</i>
1:00pm-5:00pm	Session 42. Computational methods for the automated analysis of virtual hominid endocasts. <i>Alvarado B.</i>
1:00pm-5:00pm	Session 43. Trabecular Bone Structure and Function in Primates: Recent Advances and Future Directions. <i>Alvarado C.</i>
1:00pm-5:00pm	Session 44 . Human and Non-Human Population and Phylogenetic Studies. <i>Alvarado D.</i>
5:00pm-6:00pm	Student Awards Committee Meeting. <i>Fireplace.</i>
6:00pm-7:30pm	AAPA Student Awards Reception. <i>Alvarado A.</i>

AAPA Poster and Podium Presentation Schedule

For a schedule of all conference events, please see page 10.

Thursday April 15, 2010. Morning sessions

Session 1. Invited podium symposium. New Developments in the Origins and Evolution of Native American Populations. The Wiley-Blackwell Symposium. *Alvarado AB*

Organizers: Jeffrey C. Long and Maria Cátira Bortolini.

The genetic history and origins of the earliest Americans has been a central topic in anthropology since the beginning. For the past two decades, mtDNA and debate surrounding the three-wave migration theory have been dominant themes, but new data and methods are expanding the scope of our questions and our ability to find answers. Several new research topics are emerging; (1) the growth of pre-Native American populations while in Beringia, (2) signals of genetic history from ancient DNA, (3) the roles of geography and climate in forming Native American genetic diversity, and (4) finding the shared evolutionary patterns in morphology and genes. New large scale data sets including expanded population sets for short tandem repeat DNA polymorphisms and whole genome mtDNA sequences are providing unparalleled opportunity to test hypotheses and draw firm conclusions. The speakers in this symposium address these new developments. We delight in dedicating this symposium to Professor Francisco Salzano who has led the study of genetics and evolution of Native American for the past five decades.

8:00-8:15	Looking for natural selection in the American continent. M. C. BORTOLINI, T. HÜNEMEIER, V. ACUÑA-ALONZO, A. RUIZ-LINARES, L. MACIEL, V. RODRIGUES PAIXÃO-CORTES, P. ASHTON-PROLLA, S. CANIZALES-QUINTEROS, F. MAURO SALZANO.
8:15-8:30	A synthetic view of morphological and genetic diversity in the Americas. R. GONZÁLEZ-JOSÉ, M.C. BORTOLINI, F.R. SANTOS, S.L. BONATTO.
8:30-8:45	Genes and language in the Americas. K. HUNLEY.
8:45-9:00	Ancestry informative SNPs and haplotypes in Native American populations. K.K. KIDD, J.R. KIDD, F. FRIEDLAENDER, A.J. PAKSTIS.
9:00-9:15	Three stages in the evolution of Native American genetic diversity. C.J. MULLIGAN, A. KITCHEN.
9:15-9:30	Ancient DNA insights into American colonization. D.H. O'ROURKE, J. TACKNEY, J. RAFF.
9:30-9:45	Continental axes of orientation influence patterns of human gene flow. S. RAMACHANDRAN, N. ROSENBERG.
9:45-10:00	The Y chromosome history of Native Americans. F.R. SANTOS, D.R. LACERDA, M.S.A. JOTA, M. SCLAR, E. TARAZONA-SANTOS, V. RODRIGUES PAIXÃO-CORTES, S.L. BONATTO, M. CATIRA BORTOLINI.
10:00-10:15	Geographic structure of genetic variation in North America: population fissions and European admixture. K.B. SCHROEDER, R. MALHI, B. KEMP, A. GONZÁLEZ-OLIVER, D.G. SMITH.
10:15-10:30	Break
10:30-10:45	The current status of the three-wave migration model. T.G. SCHURR
10:45-11:00	New insights into Native American origin from nuclear DNA sequences. S.L. BONATTO, N. J.R. FAGUNDES, and F. M. SALZANO.
11:00-11:15	Discussant. F. SALZANO.

Session 2. Paleoanthropology: From ergaster to neandertal. Contributed papers. *Alvarado CD*

Chair : Karen R. Rosenberg.

8:00-8:15	Temperate Migrations: Climatically-mediated movements north (and south again?). J. KAPPELMAN, B.A. NACHMAN.
8:15-8:30	The age of the 20 meter Solo River Terrace, Ngandong (Java, Indonesia) reconsidered. E. INDRIATI, C.C. SWISHER III, C. LEPRE, R.L. QUINN, R.A. SURIYANTO, A.T. HASCARYO, C.S. FEIBEL, B.L. POBINER, S.C. ANTÓN.
8:30-8:45	Dmanisi hominin dentognathic variation: phylogeny, pathology or in-vivo compensatory mechanisms? A. MARGVELASHVILI, M.S. PONCE DE LEÓN, T. PELTOMÄKI, D. LORDKIPANIDZE, C.P.E. ZOLLIKOFER.
8:45-9:00	New estimates of stature and body mass for KNM-WT 15000. R.R. GRAVES, R.C. MCCARTHY, A.C. LUPO, D.J. WESCOTT, D.L. CUNNINGHAM.
9:00-9:15	Paper withdrawn.
9:15-9:30	Reassessing Neandertal locomotor efficiency on a non-plain terrain. R. HIGGINS.
9:30-9:45	Neurobiological rewards and the evolution of the runner's high in humans and cursorial mammals. D.A. RAICHLEN, A. GIUFFRIDA, G.L. GERDEMAN, A.D. FOSTER.
9:45-10:00	The evolution of rotational birth: inferences from a three-dimensional virtual reconstruction of the pelvic girdle of Jinniushan. K.R. ROSENBERG, M. PONCE DE

LEÓN, L. ZUNÉ, C. ZOLLIKOFER.

- 10:00-10:15 **Reconsidering Neanderthal birth: Tabun mom, Kebara dad, Mezmaiskaya baby, and the consequences.** C.P.E. ZOLLIKOFER, M.S. PONCE DE LEÓN.
- 10:15-10:30 **Break**
- 10:30-10:45 **The reconstruction of Neanderthal hyoid position – a new approach using three-dimensional geometric morphometrics.** S.A. MARTELLI, J. STEELE.
- 10:45-11:00 **Reassessment of the late Neandertals from Spy (Belgium).** H. ROUGIER, I. CREVECOEUR, A. BALZEAU, G. BERILLON, A. HAMBÜCKEN, B. MAUREILLE, A. MAZURIER, V. VOLPATO, P. SEMAL.
- 11:00-11:15 **Teeth as tools? Anterior dental microwear textures of the Krapina Neandertals.** K.L. KRUEGER, P.S. UNGAR, D.W. FRAYER.
- 11:15-11:30 **Behavioral differences between Neandertals and Upper Paleolithic modern humans: dietary evidence through occlusal dental microwear texture analysis.** S. EL ZAATARI, J. HUBLIN.
- 11:30-11:45 **Comparative morphology of incisor and molar roots in Neandertals, Middle Pleistocene *Homo* and *Homo sapiens*.** K. KUPCZIK, A. LE CABEC, J. HUBLIN.
- 11:45-12:00 **Discussion**

Session 3. Primatology: It Takes Two to Tango: Male-female interactions in primates. Contributed papers.

Turquoise .Chair: Linda Vigilant.

- 8:00-8:15 **Male-female friendships in chimpanzees and the effect of sex-biased dispersal.** Z. MACHANDA, I. GILBY, R. WRANGHAM.
- 8:15-8:30 **Male-female social relationships and reproductive success in wild chimpanzees.** K. LANGERGRABER, J. MITANI, D. WATTS, L. VIGILANT.
- 8:30-8:45 **Social interactions of male and female Sichuan snub-nosed monkeys (*Rhinopithecus roxellana*).** C. YAN, P. GARBER, B. LI.
- 8:45-9:00 **Monogamous and non-monogamous mating behavior in white-faced saki monkeys (*Pithecia pithecia*).** C.L. THOMPSON.
- 9:00-9:15 **Opposites attract: MHC and mate choice in mandrills.** J.M. SETCHELL, M.J.E. CHARPENTIER, K.M. ABBOTT, E.J. WICKINGS, L.A. KNAPP.
- 9:15-9:30 **Sight vs. sound: visual stimuli elicit stronger behavioral responses than vocalizations from wild white-faced sakis in Suriname.** M. NORCONK, S. POLING, C. THOMPSON.
- 9:30-9:45 **Behavioral observations of Kinda baboons (*Papio cynocephalus kindae*) in Zambia.** A.H. WEYHER.
- 9:45-10:00 **Territories and reproductive opportunities: do male Phayre's leaf monkeys benefit from cooperation?** A. KOENIG, K.M. CARL, C. BORRIES.
- 10:00-10:15 **Cortisol reactivity of female brown capuchins: Effects of troop size in a risky, low-energy environment.** E. EHMKE, S. BOINSKI.
- 10:15-10:30 **Break**
- 10:30-10:45 **Timing of estrus in brown mouse lemur females from Ranomafana National Park, southeastern Madagascar: implications for reproductive strategies.** M.B. BLANCO, L.R. GODFREY, P.C. WRIGHT.
- 10:45-11:00 **Do loud calls reflect energy status in male simakobu monkeys (*Simias concolor*)?** W.M. ERB, T. ZIEGLER, K. HAMMERSCHMIDT.
- 11:00-11:15 **Sex-specific responses to naturally-occurring and simulated intergroup encounters.** M. BROWN.
- 11:15-11:30 **Sex differences in the mother-infant relationship in wild baboons (*Papio cynocephalus*): social, experiential, and hormonal correlates.** N. NGUYEN, L. GESQUIRE, S.C. ALBERTS, J. ALTMANN.
- 11:30-11:45 **Duet type description and matching in the Bolivian gray titi monkey, *Callicebus donacophilus*.** K.A. DINGESS.
- 11:45-12:00 **Wimpy males and formidable females: Testosterone levels in *Propithecus edwardsi*.** S. TECOT, S. ZOHDY, S.J. KING, J. JERNVALL, P.C. WRIGHT.

Session 4: Invited podium symposium. Primate Dental Ecology: How Teeth Respond to the Environment. Fireplace. Organizers: Frank P. Cuzzo, Peter S. Ungar, and Michelle L. Sauter.

Recent years have witnessed a rapid growth in the use of teeth to understand a broad range of topics in living and fossil primate biology, including early hominin paleoecology. In part, this rapid expansion reflects new techniques for assessing ways in which teeth respond to an organism's environment, both during growth and development, and throughout the life of the individual. Long term studies of wild primate populations, integrating analyses of their dental health and tooth wear, have also provided a new context for understanding primate interactions

with their environments. These new techniques and long-term studies have allowed the development of a new perspective -- dental ecology. We define dental ecology as the broad study of how teeth respond to the environment. This includes identifying patterns of dental pathology (i.e., abscessed teeth, tooth loss, dental damage) and tooth use-wear, as they reflect feeding ecology, behavior, and habitat variation, including the exploitation of areas impacted by anthropogenic disturbance (i.e., forest fragmentation and/or areas with introduced plants), and how dental development can reflect environmental change and/or stress. The dental ecology approach, a synthetic perspective built on collaboration between dental experts and primate ecologists, holds the potential to provide an important theoretical and practical framework for interpreting ecology and behavior among fossil forms, for assessing environmental change in living populations, and for understanding ways in which habitat impacts primate growth and development. This symposium, bringing together experts on dental morphology, growth and development, tooth wear and health, and primate ecology, will explore the broad application of "dental ecology" to questions of how living and fossil primates interact with their environments.

8:00-8:15	What is dental ecology? F.P. CUOZZO, M.L. SAUTHER.
8:15-8:30	Extracting ecological information from the mechanical properties and structure of primate teeth. P.J. CONSTANTINO, J.J.-W. LEE, D.J. MORRIS, A. HARTSTONE-ROSE, T.M. SMITH, B.R. LAWN, P.W. LUCAS.
8:30-8:45	Interactions among tooth wear, plant fracture mechanics and tooth function. G. SANSON.
8:45-9:00	Linear enamel hypoplasia as an indicator of physiological stress in great apes: reviewing the evidence in light of species differences in enamel growth. D. GUATELLI-STEINBERG, R. FERRELL, J. SPENCE.
9:00-9:15	Strong lemurs, tough foods: Interpreting feeding ecology through food mechanical properties. N. YAMASHITA, F.P. CUOZZO, M.L. SAUTHER.
9:15-9:30	Dental complexity, topographic relief, and dietary reconstruction in subfossil lemurs. L.R. GODFREY, S.J. KING, K.M. MULDOON, M.B. BLANCO.
9:30-9:45	Paper withdrawn.
9:45-10:00	Dental isotope ecology in primate paleobiology. M. SPONHEIMER.
10:00-10:15	How tooth wear informs the paleoecology of extinct hominins. F.E. GRINE, P.S. UNGAR, M.F. TEAFORD.
10:15-10:30	Break
10:30-10:45	Lemur habitat and dental senescence at Ranomafana National Park, Madagascar. S.J. KING, D.M. BOYER, S. TECOT, S.G. STRAIT, P.C. WRIGHT, J. JERNVALL.
10:45-11:00	The impact of dental impairment on food processing in ring-tailed lemurs. J.B. MILLETTE, M.L. SAUTHER, F.P. CUOZZO.
11:00-11:15	Ecomorphological relationships among the ingestive and digestive systems of Southeast Asian leaf monkeys. M.S. WILLIS, B.W. WRIGHT.
11:15-11:30	Dental topographic analysis of chimpanzees. Z. KLUKKERT, P. UNGAR, M. TEAFORD.
11:30-11:45	Dental microwear as indicator of diet in recent human populations. A case study from an early Neolithic site in the Czech Republic. P. NYSTROM.
11:45-12:00	Discussants. F. CUOZZO, P. UNGAR, M. SAUTHER.

Thursday April 14, 2010. Poster sessions

Session 5. Forensic Anthropology – Methods for Determining Biological Profiles: Age, Sex, Ancestry, and Stature. Contributed posters. *Alvarado EFG*. Chair: Daniel Wescott.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

- Paper withdrawn.**
- Evaluating ancestry based on craniometrics. A comparative study between Fordisc 3.0 and CRANID6 using crania from St. Leonard's Church, Hythe.** H. BUTTERFIELD, M.L. JØRKOV.
- Estimation of a Person's Height Based on Fragments of Long Limb Bones and Foot Length in a Central European Population.** M. DOBISIKOVA, J. ZOCOVA, J. URBAN, M. BERAN, P. VELEMINSKY.
- Evaluation of features of the innominate for sex estimation.** A.M. CASADO, P.W. SCIULLI.
- Sexual dimorphism in auricular medial projection and post-auricular sulcus morphology.** J.L. DREW, D.J. WESCOTT.
- Variation in osteon circularity and its impact on estimating age at death.** J. GOLIATH, S. STOUT.
- The effects of sex and ancestry on pubic symphysis morphology.** E. GUTHRIE.
- Paper withdrawn.**
- Morphology to Metric: Establishing a Quantifiable Sexing Technique from the Rogers Method for the Humerus.** C. KIEFFER, A. RAUTMAN.
- New data on the biological age estimation of children using bone measurements.** K. KONDOR, S. EVINGER, T. HAJDU, Z. BERNERT.
- Sexual dimorphism in the elbow using Zobeck measurements.** A.K. KUTYLA, R.J. WILSON, H. MAIJANEN.

12. **A well evaluated preauricular groove on the coxal bone is a very reliable sexual trait but not an indicator of parity: test in the Simon collection of identified skeletons (Switzerland).** G. PERREARD LOPRENO, J. BRUZEK.
13. **Geometric morphometric analysis of the human sacrum and its utility in sex estimation.** N.V. PASSALACQUA, J.M. VOLLNER, C.W. RAINWATER.
14. **Accuracy of the mandibular ramus as a sexual indicator.** R. ORTEGA.
15. **Paper moved to session 30 at 3:45**
16. **Metric and morphological sex differences in the ulna. Discriminant function for Mexican population.** M. PIMIENTA, A. GALLARDO.
17. **Histological estimation of age at death in lower-limb amputees.** A. MICHAEL, W. LACKEY, N. SAUER.
18. **Histological age at death estimation from the second metacarpal.** E. RAGUIN, M.A. STREETER, R. LAZENBY, M.S.M. DRAPEAU.
19. **Sex scoring using area and volume measurements of the supraorbital region – a pilot study based on digital 3D models of human crania.** B.M. SHEARER, S.B. SHOLTS, M. GLASSOW, S.K.T.S. WÄRMLÄNDER.
20. **Frequency of Hyperostosis Frontalis Interna in a modern population from Rhode Island.** D. SEMERARO, L. CABO-PÉREZ.
21. **The reality of aging virtually: a test of transition analysis on pelvic laser scans.** N.R. SHIRLEY, B. ALGEE-HEWITT, R.J. WILSON.
22. **Paper withdrawn**
23. **Geometric morphometric approach for sex determination using the great sciatic notch of the Maxwell identified adult skeletons (University of New Mexico, Albuquerque).** J. VELEMINSKA, L. NEHASILOVA, J. PELIKAN, P. VELEMINSKY, A. SEFCAKOVA, J. BRUZEK.
24. **Cross-sectional variability of the femoral osteon population using stereological methods.** C. VILLA, N. LYNNERUP.
25. **Analyzing human midfacial outlines with conventional and elliptic Fourier transforms: a case study comparing two mathematical techniques.** S.K.T.S. WARMLANDER, S.B. SHOLTS.
26. **The influence of lower facial projection on the mandibular curve of Spee in extant humans.** M.F. LAIRD, N.E. HOLTON, J. E. SCOTT, R. G. FRANCISCUS, S. D. MARSHALL, and T. E. SOUTHARD.
27. **A quantitative evaluation of the Miles Aging Method.** M. NICHOLS, A. CLEMENT

Session 6. Forensic anthropology: New Technologies in Forensic Anthropology and Bioarchaeology. Perimortem and Postmortem Alteration of Skeletal Material. Contributed posters. *Alvarado EFG*. Chair: Nicholas Herrmann.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

28. **Are all measures created equal?: Comparison of direct, photographic, and radiographic measurements of pelvic bones.** K.A. S. BLAKE.
29. **Spinous process morphology and positive identifications: a validation study.** A. BUTLER, H. WALSH-HANEY, N. WEBB, K. SHEPHERD, C. HERRICK.
30. **Quantifying variation at the occipito-cervical articular surfaces using 3D scanning technology.** E. CASTILLO, C. DUDAR.
31. **Extensions for the NamUs Databases: Geocoding and Spatial Search Tools for Forensic Anthropologists.** R. DE GREGORY, B.A. RALSTON, L. YIN, N.P. HERRMANN.
32. **Setting the record straight: Improving the quality of early museum records.** M. CLEGG, H. BONNEY.
33. **The preservation of non-adult skeletal remains from British samples.** B. MANIFOLD.
34. **The curation of the Clyde C. Snow Forensic Anthropology Collection.** C.L. MORGAN.
35. **Skeletal evidence of stress in Sonora, Mexico: A case study for how Aleš Hrdlička's collection techniques confound the osteological paradox.** H. BAUER-CLAPP, V. PÉREZ.
36. **William Hewson and the Craven Street anatomy school.** T. KAUSMALLY.
37. **Setting up a Temporary Mortuary in Copenhagen. A multidisciplinary investigation of the 18th-20th Century Urban Cemetery of Assistens.** M.L. JØRKOV, N. LYNNERUP.
38. **A comparative study of the analysis of osteological remains: computed tomography versus physical examination.** C. DARDENNE.
39. **Anatomical placement of the human eyeball in the orbit – new metric data and guidelines proposal for facial identification.** P. GUYOMARCH, H. COQUEUGNIOT, B. DUTAILLY, C. COUTURE.
40. **A new approach to facial reconstruction based on 3D morphometrics.** A. KUSTAR, I. KOVARI, I. KALINA, M. FRIESS.
41. **Three-dimensional scanning of the biceps brachii attachment site, advances and challenges of a new method.** M.L.S. NOLTE, C. WILCZAK.
42. **Trochanteric geometry as a subadult activity marker.** T. TICHNELL.
43. **Paper withdrawn**
44. **'Putting Flesh Back Onto The Bones?' Can we predict soft tissue properties from skeletal and fossil remains?** C. SHAW.
45. **Forensic anthropological and chemical contributions to the determination of cause of death: a case study.** W.E. POTTER.
46. **The particulate size of cremated remains.** K. BOLHOFNER.
47. **Forensic evidence of "kill and overkill" in Colombia.** D.A. CASALLAS.
48. **Putting pieces together again: statistical formula for os coxae and femora.** M. MILLER.
49. **Towards a new methodology for the documentation of cremated remains.** T. G. NUGENT.
50. **The postmortem interval: a systematic study of pig decomposition in west central Montana.** H. PARSONS.
51. **Let's talk about sex: using metric and non-metric features of the subadult ilium to identify males and females at Early Bronze Age Bab edh-Dhra', Jordan.** S.M. ZALESKI, R.J. SMITH, J.M. ULLINGER, S.G. SHERIDAN.

52. **Sex related differences in human ear ossicle dimensions.** S. FLOHR, J. LECKELT, U. KIERDORF.
 53. **Sex determination using discriminant function analysis of lower limb measurements from a Late Horizon Andean population.** E. SALTER-PEDERSEN.
 54. **Stature estimation from cranial measurements in archaeological and modern populations of Switzerland.** C. STUDER, F. SIEGMUND, G. D' EYRAMES, V. ROTH, A. WENK, C. PAPAGEORGOPOULOU.
 55. **Do musculoskeletal stress markers correlate with diaphyseal cross-sectional dimensions?** A. RIGA, B. HOLT
 56. Poster to be used by organizers

Session 7: Dental Anthropology: Macrowear, Microwear, and Microfracturing. Dental Health and Population Stress Patterns. Contributed posters. *Alvarado EFG.* Chair: Claire Barrett.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

57. **Masticatory mechanics and the production of dental microwear.** C. BARRETT, P. MAHONEY.
 58. **Dental Chipping: Contrasting Patterns of Microtrauma in Eskimo and European populations.** J.R. WINN, G.R. SCOTT.
 59. **Correlation between first molar occlusal and approximal wear.** C.A. DETER, P. MAHONEY.
 60. **Quantifying the impact of mesh decimation and smoothing on the accuracy of three-dimensional enamel-dentine junction topographic models.** A.J. OLEJNICZAK, A. GÓMEZ-ROBLES, L. PRADO-SIMÓN, J.M. BERMÚDEZ DE CASTRO, M. MARTINÓN-TORRES.
 61. **A histological study of crown formation in human deciduous teeth.** F. CHEN, S. SIMPSON.
 62. **Molar crown formation times in ethnic groups from Cameroon: preliminary findings.** P. MAHONEY, M. AGBOR, D. ZEITLYN.
 63. **Atlas of tooth development and eruption.** S.J. ALQAHTANI, H.M. LIVERSIDGE, M.P. HECTOR.
 64. **Bone and dental responses to masticatory loading: a shared regulatory mechanism?** K. ZINK, A. SIDERS, D. LIEBERMAN.
 65. **Two-rooted lower canines: a defining characteristic of the Eurodont dentition.** G.R. SCOTT, L. DORIO.
 66. **Connated permanent dentition and the implications for interpreting mortuary practice at the site of Ancón, Peru.** C.M. PINK.
 67. **Correspondence between crown and cervical dental measurements from Late Bronze Age Greece.** N.K. HARPER.
 68. **Recording dimensions at the cervix of the tooth: Critique and modification of an existing method.** B. AUBRY.
 69. **Dental variation in Holocene humans from Kenya, East Africa.** A. COPPA, F. CANDILIO, M. LUCCI, R. VARGIU, A. CUCINA.
 70. **Localized hypoplasias of the primary canines from the Early and Middle Holocene Gobero Site.** C. CARVER, C. STOJANOWSKI.
 71. **Growth and health status of Holocene occupants of Gobero, Central Sahara Desert: an analysis of linear enamel hypoplasias.** J.E. SPENCE, D. GUATELLI-STEINBERG, G.T. SCHWARTZ, C.M. STOJANOWSKI.
 72. **Appendicular morphology and ecogeographic adaptations of the early Holocene skeletons from Gobero, Niger.** O.M. PEARSON, C.M. STOJANOWSKI.
 73. **Variation in tooth wear patterns amongst the Chumash of the Santa Barbara Channel area.** A. CLEMENT, S. HILLSON, I. DE LA TORRE.
 74. **Buccal dental-microwear analysis among Pygmy hunter-gatherers from Western Central Africa.** A. ROMERO, F.V. RAMIREZ-ROZZI, A. FROMENT, J. DE JUAN, A. PÉREZ-PÉREZ.
 75. **Investigation of dietary texture at the Carrier Mills Archaeological District, Illinois (10,000 B.P. to 950 B.P.) using microwear analysis.** L.A. FORSYTHE, T.L. PROWSE.
 76. **Dental health of a 19th century skeletal sample from the Mid-Hudson Valley.** V. NICHOLS, K.C. NYSTROM.
 77. **Three-Dimensional Microtomographic Analysis of Sexual Dimorphism in Human Molar-Crown Tissues.** R. N.M. FEENEY, A. J. OLEJNICZAK, J.-J. HUBLIN.
 78. **Dental fluctuating asymmetry as a measure of developmental stability in the Shiloh Methodist community.** M.W. MORAMARCO.
 79. **Comparative methodology for examining enamel hypoplasias at the Gold Mine site (16RI13).** K. ALSUP.
 80. **Stress, dental health, and demographic transition in medieval France.** E. TYLER.
 81. **The relationship between oral health and general health: associations between periodontitis and non-oral skeletal pathologies.** S.N. DEWITTE.
 82. **A preliminary biocultural analysis of hereditary tooth decay among isolate populations in the northeastern Missouri Ozarks.** D.C. STRICKLIN, R.S. CORRUCINI, S.M. FORD.
 83. **Tooth use and loss at San Pedro de Atacama: the impact of Tiwanaku influence in northern Chile, AD 400-900.** P. DA-GLORIA, M. HUBBE, W. NEVES, M.A. COSTA.
 84. **Assessment of dental health and stress patterns of juveniles in an African-American population from Newburgh, New York.** M.J. BRASOR, K. NYSTROM.
 85. **Paper withdrawn. Poster to be used by organizers**
 86. **Growth and development in the children's skeletons and dentitions from the Neolithic site of Catalhoyuk in Turkey.** S. HILLSON, B. BOZ.
 87. **Did Akhenaten bite off more than he could chew? Dental analysis of the Commoners' Cemetery of ancient Akhetaten.** A.M. LOPINTO, J.C. ROSE.
 88. **Skeletal and dental health during the Basketmaker and Pueblo Periods in Durango, Colorado.** D.M. MULHERN, M.C. CHARLES.

- 89. **Fracture patterns in rhesus macaques (*Macaca mulatta*): addressing locomotor behavior and managed care.** H. JARRELL.
- 90. **Dental morphology and pathologies of Chinese immigrants from historic Carlin, Nevada.** J.D. VILOS, J.L. THOMPSON, D.L. MARTIN.
- 91. **Poster to be used by organizers**
- 92. **Poster to be used by organizers**

Session 8. Skeletal biology: Bioarchaeology. Contributed posters. Alvarado EFG. Chairpersons: Chin-Hsin Liu.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

- 93. **Fluctuating asymmetry in the protohistoric Arikara.** N. STORMS.
- 94. **Intrapopulation variation in body size and shape: social status and sex differences in an Italian medieval population (Trino Vercellese, VC).** G. VERCELLOTTI, S.D. STOUT, R. BOANO, P.W. SCIULLI.
- 95. **Stature and activity-related osteological changes in Late Neolithic populations from Qinhai and Hebei Provinces, China.** M. HERNANDEZ, H. ZHU.
- 96. **Poster to be used by organizers**
- 97. **Stable carbon and nitrogen isotope analysis of human hair reveals substantial intraindividual seasonal variation in the diet of early southwestern US maize-based agriculturalists.** M.E. MORGAN, S.A. LEBLANC, J.H. CURTIS.
- 98. **Oxygen, carbon, and nitrogen isotope analyses of Middle/Late Archaic populations from the Lower Ohio River Valley.** E.N. CHAMBERS, C.W. SCHMIDT, M.R. SCHURR.
- 99. **poster to be used by organize**
- 100. **Preliminary evidence for maize consumption on the Taraco Peninsula, Bolivia, 1500 B.C. – A.D. 1000: human tooth enamel stable carbon isotope data.** M.J. MILLER, C.A. HASTORF.
- 101. **Heterogeneity of maternal diet in a stable isotope weaning study.** S. HOLT, H. SCHWARCZ, C. FITZGERALD, A. KEENLEYSIDE.
- 102. **Carbon and nitrogen stable isotope analysis of dietary differences among the Jomon population in Japan.** S. KUSAKA, F. HYODO, T. YUMOTO, M. NAKATSUKASA.
- 103. **poster to be used by organize**
- 104. **Mobility evidence during the Bell Beaker period in Western Switzerland through strontium isotope study.** J. DESIDERI, D. PRICE, J. BURTON, P. FULLAGAR, M. BESSE.
- 105. **Isotopic evaluation of modern human remains from the University of Tennessee William M. Bass Donated Collection.** N.P. HERRMANN, Z. LI, M. SOTO.
- 106. **Poster to be used by organize**
- 107. **Health, diet and mobility at the medieval Bowl-Hole cemetery, Bamburgh, Northumberland, England: a contextual study of skeletal and isotopic data.** C. ROBERTS, S. GROVES, G. PEARSON, G. NOWELL, C. MACPHERSON.
- 108. **Stable isotope analysis of Shelter Island, NY Native American remains.** V.H. STEFAN.
- 109. **Isotopic analysis of diet and residential mobility at San Pedro de Atacama, Chile: understanding the Tiwanaku phenomenon through patterns of local social organization in the Solcor *ayllu*.** K.L. NADO, S.J. MARSTELLER, L.M. KING, B.M. DAVERMAN, C. TORRES-ROUFF, K.J. KNUDSON.
- 110. **The use of strontium isotopes to examine residential mobility in the semi-arid north of Chile: a preliminary study.** E.A. DIGANGI.
- 111. **Assessing the practicality of ancient mitochondrial DNA analysis through extraction, amplification and sequencing.** A. J. KOEHL, M. RITKE, S. P. NAWROCKI, AND K. E. LATHAM.
- 112. **Bio-archeological analysis of a faunal assemblage from the Castro de Chao Samartín, Asturias, Spain.** A. KLALES, A. MARJENIN, A. NESBITT, Á.V. VALDÉS, L.L. CABO.
- 113. **Bioarchaeology at the emergence of social status: an example from Iron Age central Thailand (Promtin Tai, Lopburi Province).** C. LIU, T. LERTCHARNRIT.
- 114. **Fluctuating asymmetry and developmental stress in three Imperial Roman cemeteries.** S.M. HENS, V.B. DELEON.
- 115. **An assessment of health and lifestyle among pre-1521 Chamorro from Saipan, Commonwealth of the Northern Mariana Islands.** M. PIETRUSEWSKY, M.T. DOUGLAS, M. SWIFT, R. HARPER, M.A. FLEMING.
- 116. **Subadult age estimates of an Early Bronze Age charnel house at Bab edh-Dhra', Jordan.** C.I. VILLAMIL, J. ULLINGER, S. GUISE SHERIDAN.
- 117. **Analysis of Postcranial Remains from Sanjan, Valsad District, Gujarat State, India.** G. PITALE.
- 118. **Lesions of the humerus rotator cuff muscles insertions in a French historical population.** B. MAFART.
- 119. **The daily grind: osteoarthritis and activity patterns associated with grain preparation in Early Bronze Age Jordan.** L. GREGORICKA, J. ULLINGER.
- 120. **The effects of health stressors on postcranial sexual dimorphism: A comparison of recent American populations.** H.M. GARVIN, C.W. RAINWATER, C.B. RUFF.
- 121. **Cross-cultural comparison of upper limb asymmetry in adults and juveniles from the Archaic period of the American Southeast.** G. THOMAS.
- 122. **Temporal Changes in Prehistoric Trophy Taking in the Ohio River Valley.** R.A. LOCKHART SHARKEY, C.W. SCHMIDT.

123. **Life after collapse: the impact of political fragmentation on resource availability and nutritional deficiency in southern Peru.** J.S. STARBIRD, M.R. PALMA MÁLAGA, N.O. SHARRATT, M. KOLP-GODOY.
124. **What happened at five finger ridge?** D. KOPP, D. GRAHAM, K. CARLISLE.
125. **Pseudoarthrosis of the acromion as possible indicator of biomechanical stress.** E. OPLESCH, M. SCHULTZ.
126. **Humeral bilateral asymmetry in two Florida archaic hunter-gatherers populations: Bay West and Gautier.** J.L. ANDERSON, H.A. WALSH-HANEY.
127. **Reconstructing habitual activities in Paleoamericans.** D.J. WESCOTT.
128. **Do impact forces associated with horseback riding result in stronger femora?** B. HOLT, N. RADI, G. BELCASTRO, A. CANCI.
129. **Mechanical loading and remodeling: comparing porosity in two Lake Baikal hunter-gatherer populations with differing patterns of mobility using micro-CT.** K. FACCIA, H. BUIE.
130. **Activity-related changes in the geometry of the proximal femur: a study of two Near Eastern samples.** K.G. HATALA, S.E. CHURCHILL, J. ULLINGER, S. GUISE SHERIDAN.
131. **The Arctic effect: does the inclusion of high latitude populations in ecogeographical study samples bias the results?** K.A. KING.
132. **Poster to be used by organizers**
133. **Poster to be used by organizers**

Session 9. Skeletal biology: Paleopathology. Contributed posters. *Alvarado EFG.* Chairperson: Robert Stark.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

134. **Traumatic injury and physical activity: correlations between robust musculoskeletal markers and fractures on the clavicle.** C.S. KOONTZ, T.A. TUNG.
135. **A bioarchaeological assessment of health and trauma in post-imperial Peru.** A. MONDESTIN, D.S. KURIN.
136. **A contribution of health status and mortuary practices in the Colonial and Republican Quito. A case of study from the San Francisco Church excavations.** A. GUZMAN, P. LEON, A. SANTAMARIA.
137. **An assessment of health and activity of the nineteenth-century Junkin-Yost Cemetery from the Village of Indian Hill, Ohio.** M.L. DAVID.
138. **Paper withdrawn.**
139. **Health and nutrition: a paleopathological and paleochemical study of the historical Euro-Quebecois population from the protestant St-Matthew cemetery (Quebec City, Canada, 1771-1860).** F. MORLAND, I. RIBOT.
140. **High incidence of craniosynostosis in a large ossuary collection from Switzerland (17th-19th c. AD).** A. WENK, F. SIEGMUND, G. D' EYRAMES, V. ROTH, C. STUDER, C. PAPAGEORGOPOULOU.
141. **New evidence on headshaping from the Early Byzantine Maroneia in Thrace, Greece.** P. TRITSAROLI.
142. **Deformed or not deformed, that is the question: quantifying cranial deformation.** S.H. BLATT, P.W. SCIULLI.
143. **Cranial bone thickness in artificially deformed skulls.** M. FRIESS, R.H. KHONSARI.
144. **The influence of artificial cranial deformation on human temporal bone shape.** Y. EL GABBANI.
145. **New evidence from the Early Bronze Age in Italy of surgical practice following skull trauma.** V. FORMICOLA, G. FORNACIARI, D. CARAMELLA, S. CAMMELLINI, M.V. SACCONI.
146. **Another hole in the head?: Brain treatment in ancient Egyptian mummies.** A. WADE, A. NELSON, G. GARVIN.
147. **Sixteen trepanations on eight skulls from Keushu (Ancash, Peru).** K. GERDAU-RADONIC, A. HERRERA.
148. **Drilling away the spirits: a worldwide study of trepanation.** L. FRAME.
149. **Temporomandibular joint disorders in archaeological populations: A pilot study examining the shifting prevalence of TMJ osteoarthritis between the medieval and post-medieval periods in London.** C. RANDO.
150. **Evidence for abnormalities of the vertebral artery in cervical vertebrae. Are aneurysms and tortuosities of the vertebral artery being overlooked in palaeopathology?** D. ANTOINE, T. WALDRON.
151. **The dish on DISH: A "severe" case of Diffuse Idiopathic Skeletal Hyperostosis from Medieval Nubia with implications for etiology of DISH and the progression of knowledge on this disorder.** M. LAFLEUR, M. SEAMONT, P. SANDBERG, D. VAN GERVEN.
152. **Spondylolysis in Late Byzantine Priene (Turkey).** W. TEEGEN.
153. **Evaluating the emergence of tuberculosis in South Africa.** T.J. CAMPBELL, R.R. ACKERMANN.
154. **Three-dimensional paleopathological study on chronic osteomyelitic lesions.** G. GUIPERT, B. MAFART.
155. **Maxillary sinusitis in Roman Colchester.** L. JENNY.
156. **Juvenile scurvy in the valley of Stymphalos, Greece: a radiographic and macroscopic assessment.** R. STARK, S. GARVIE-LOK.
157. **Mummy's skin folds: A preliminary study.** K.S. AL NAIMI.
158. **First terahertz imaging of ancient mummies and bone.** L. OEHRSTROEM, A. BITZER, M. WALTHER, T. BOENI, G. COLACICCO, F. RUEHLI.
159. **Swiss Mummy Project: experimental mummification of fresh human limbs.** N. SHVED, C. PAPAGEORGOPOULOU, J. WANER, G. COLACICCO, F. RUEHLI.
160. **A taphonomic study of human remains from Neolithic Orkney.** R. CROZIER.
161. **Human versus non-human: the burned, fragmentary osseous assemblage from the Donner party campsite.** G. ROBBINS.
162. **Frequency of Long Bones Fractures in Early Medieval European Populations: Frankish Empire vs. Great Moravian Empire.** J. LIKOVSKY, P. VELEMINSKY, J. VELEMINSKA, J. BRUZEK, M. THURZO, A. SEFCAKOVA, L. POLACEK, A. LEFEBVRE.

163. **Interpersonal conflict in America during the early 20th century: a bioarchaeological study of cranial trauma in the Hamann-Todd collection.** K.D. GRANT, J.T. ENG.
164. **Preliminary health assessment of eight skeletons from Isla San Lucas penal colony, Costa Rica.** K. ASTONE, M. FARALDO.
165. **Skeletal evidence for kneeling among prehispanic Zapotec women at the Mitla Fortress.** L. CADWELL BAKER, G. FEINMAN, L. NICHOLAS.
166. **Breech birth in antiquity: a Nubian example from the Fourth Cataract region, Sudan.** B.J. BAKER, M. DÍAZ-ZORITA BONILLA.
167. **Pre-term, neonate, and infant death: explaining high infant mortality in an otherwise healthy and robust Bronze Age population.** K. BAUSTIAN, D.L. MARTIN, J. THOMPSON.
168. **Anterior femoral curvature tracks decreasing mobility from Woodland to Mississippian.** A. ABU DALOU.
169. **The effects of terrain on cross-sectional geometric properties of the femur and tibia in two Puebloan populations from the Middle Rio Grande region.** R.M. CORDERO, V.S. SPARACELLO, O.M. PEARSON.
170. **The prevalence of axial developmental defects among Florida Archaic hunter-gatherers from Gautier (8BR193).** K. SHEPHERD, H. WALSH-HANEY, C. HERRICK.
171. **Stature estimation in central Europe (5000 BC–7th c. AD): methodological considerations and diachronic trends.** F. SIEGMUND, C. PAPAGEORGOPOULOU.
172. **A comparison of traumatic injury patterns between a rural and an urban population from medieval Poland.** A.M. AGNEW, T.K. BETSINGER, H.M. JUSTUS.
173. **Evidence for ritual and trauma in 2nd to 6th century AD human skeletal remains from Samtavro in the Republic of Georgia.** V. PILBROW, C. BRIGGS, A. SAGONA, V. NIKOLAISHVILI, C. SAGONA, C. OGLEBY, G. GIUNASHVILI, G. MANJGALASHVILI.
174. **Life and death at Jamestown: bioarchaeology of an early 17th-century colonial cemetery.** A.H. MCKEOWN, J.E. MAY, D.W. OWSLEY, W.M. KELSO, B.A. STRAUBE.
175. **Survivorship and porotic hyperostosis in prehistoric West-central Illinois: a *Paradox*-appropriate methodology for inter-group comparisons of skeletal lesions.** J.M. BAUDER.
176. **Skeletal evidence for widespread juvenile scurvy at Butrint, Albania.** J. BEATRICE, C. HURST, T. FENTON.
177. **Sexual dimorphism in health status at pre-historic Point Hope, Alaska.** G. DABBS.
178. **When home is the front: a paleopathological study in Medieval Britain.** J. JENNINGS.
179. **Paleopathology and public health in “America’s healthiest city”: a comparative study of health from the Milwaukee County Indigent Grounds Cemetery.** C. MILLIGAN.
180. **Poster to be used by organizers**
181. **Poster to be used by organizers**

Session 10. Skeletal biology: Population History. Contributed posters. *Alvarado EFG*. Chair: Jennifer Thompson.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

182. **Cultural continuity and cranial indices in prehistoric California Amerinds.** E. WEISS.
183. **An investigation of European skeletal remains buried on San Nicolas Island, California: new insights into early European contact with native Californian populations.** S.B. SHOLTS, A. CLEMENT, M. CLEGG.
184. **Craniometric variation in prehistoric central and southern Florida.** W.C. SCHAFFER.
185. **Hypertrophic osteoarthropathy: dry-bone evidence from the Coimbra Skeletal Identified Collection (Portugal).** A L SANTOS, S ASSIS and C ROBERTS
186. **An assessment of human variation among prehistoric Florida populations through the analysis of craniometric data.** S.M. SEASONS.
187. **Was the high morphological diversity of recent Native South Americans present among the first inhabitants of the continent?** A. STRAUSS, M. HUBBE, T. NUNES, W.A. NEVES.
188. **Cranial diversity of human skeletal remains from Serra da Capivara, Northeastern Brazil: implications for the origin of the Native Americans.** D. VICENSOTTO BERNARDO, W. A. NEVES, N. GUIDON.
189. **The Solcor *Ayllu*: Exploring Variation in Biological and Cultural Elements from Contemporary Cemeteries in pre-Columbian North Chile.** L.M. KING, B.M. DAVERMAN, K.L. NADO, S.J. MARSTELLER, C. TORRES-ROUFF, K.J. KNUDSON.
190. **Preliminary analyses of five skulls from wet-burial bundles recovered from *Sitio La Regla (P30 Rg)*, Costa Rica.** M. FARALDO.
191. **Utilizing mtDNA to look at cold cases: Who were the people in the Jackson Street burials?** J.F. BYRNES, E.J. LEE, D.A. MERRIWETHER, J.E. SIRIANNI.
192. **“Standard” cemetery population from fluctuating residential patterns: A decade-by-decade comparison of census records and cemetery demography from the St. Lawrence County Almshouse.** B.M. USHER, K. CASEY, J. CRANDALL ECHARD.
193. **The Biological Diversity of the Early Medieval European Population in Light of Non-Metric Traits: Frankish Empire versus Great Moravia Empire.** P. VELEMINSKY, J. LIKOVSKY, J. BRUZEK, J. VELEMINSKA, A. SEFCAKOVA, M. THURZO, A. LEFEBVRE, L. POLACEK, M. DOBISIKOVÁ.
194. **How people lived in Imperial Rome: a multivariate approach.** P. CATALANO, V. BENASSI, C. CALDARINI, F. DE ANGELIS, A. NAVA, W. PANTANO.

195. **Funerary practices and biological relationships at Barbuise-La Saulsotte (Aube, France) at the beginning of the late Bronze Age.** R. LEAHY, P. MURAIL, S. ROTTIER.
196. **The peopling of Easter Island: A test of the single-wave vs. two-wave migration models using three-dimensional cranial morphology.** H.F. SMITH.
197. **Biological Affinity of Ancient Leptiminius: An Analysis of Dental Morphological Traits.** C.K. WALTH.
198. **Tracing Wakhi origins: an odontometric approach.** P. O'NEILL and B.E. HEMPHILL.
199. **A new look at an old problem: assessing population structure in Mesolithic – C-Group Nubians using population genetics statistics for cranial discrete traits.** K. GODDE.
200. **Poster to be used by organizers**
201. **Biological Affinities and the Construction of Cultural Identity within the Proposed Coosa Chiefdom.** M.S. HARLE.
202. **A population genetics approach to studying Egyptian state formation.** A. RUSSELL, K. GODDE.
203. **Population history and substructure of Anatolia and Turkey as evidenced by craniofacial diversity.** N. SEGUCHI, S. EROGLU, R.W. SCHMIDT, C. BRACE.
204. **Poster to be used by organizers**
205. **Poster to be used by organizers**

Session 11. Invited poster session in Honor of Elizabeth Harmon. Contributions by friends and colleagues.

Organizers: Shara E. Bailey and William Harcourt-Smith. *Alvarado H*

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:30	Discussion. All authors present at posters 217-220.
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

Elizabeth Harmon's life was sadly cut short by a sudden illness on March 23, 2009. In her short career she had already become a well-respected member of the paleoanthropological community and made significant contributions to the field in a number of different areas. She was equally active in pursuing fieldwork-based initiatives at African Plio-Pleistocene localities and museum-based scholarship around the world on fossil hominin morphology and behaviour. In her two years at Hunter College, CUNY, New York she trained several masters students who have now gone on to prestigious PhD programs in the US and who continue her legacy working on taphonomy and lower limb morphology of early hominins. In this session we would like to honor Harmon's contribution to the field by having colleagues and former students present work that (1) was in press/progress when she died (Beyrehtsmeyer, Plavcan, Reed); (2) was inspired and influenced by her (Weis, Congdon, Russo) and (3) reflects her diverse research interests and collaborations (Harcourt-Smith, Richmond, Ward, Villmoare, Gordon, Drapeau). Elizabeth was a gifted scholar and an exceptional mentor. We feel that this symposium would serve the dual purpose of both honoring her and making a significant impact to the scientific community.

Taphonomy and Field Work

206. **Renewed work in the Mursi Formation.** M.S.M. DRAPEAU, R. BOBE.
207. **Biogeographic patterns in the mid-Pliocene: the effects of time-averaging and site deposition.** K. E. REED, E.H. HARMON.
208. **Taphonomy and Paleocology of the A.L. 333 hominin fossil assemblage, Hadar, Ethiopia.** A.K. BEHRENSMEYER, E.H. HARMON
209. **A taphonomic analysis of Hadar hominins and cercopithecids: implications for predation pressure during the Pliocene.** P. WEIS, E.H. HARMON.

Morphology

210. **Selection, morphological integration, and Strepsirhine locomotor adaptations.** B.A. VILMOARE, J.L. FISH.
211. **Intraspecific variation in primate pedal phalangeal curvature.** K.A. CONGDON.
212. **Comparative scarcaudal anatomy in catarrhines.** G.A. RUSSO, L.J. SHAPIRO.
213. **Placing bipedalism within a phylogentic framework: preliminary results.** W. HARCOURT-SMITH.
214. **Femoral, skeletal, and body mass size variation: relationships and implications for sexual dimorphism studies.** A.D. GORDON.
215. **Novel 3D analysis of the proximal femur and hip joint function in living and fossil anthropoids.** A.S. HAMMOND, J.M. PLAVCAN, C.V. WARD.
216. **The anatomy of footprints from Koobi Fora, Kenya.** B.G. RICHMOND, M.R. BENNETT, J.W.K. HARRIS, A.K. BEHRENSMEYER, D.R. BRAUN, S. CARNATION, H. CHIRCHIR, D.J. GREEN, P. KIURA, E. MBUA.
217. **The proximal femur of early hominins: the pattern and significance of interspecific shape variation.** EH Harmon, Department of Anthropology, NYCEP, Hunter College and JMI Plavcan, Department of Anthropology, University of Arkansas
- 218-220. **Discussant:** B. KIMBEL.

Session 12. Invited Poster Symposium. The Bioarchaeology of the Southeastern United States: Current Research on Prehistoric, Protohistoric, and Historic Populations. Alvarado H

Organizer: Steven N. Byers.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
3:00-3:30 pm	Discussion. All authors present at posters 231-234.
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

Since the publication of papers from a symposium on southeastern bioarchaeology in 1991, there has been much research in this part of the country concerning the lifeways of prehistoric, protohistoric, and historic populations as gleaned from skeletal remains. Specifically, new research is coming to light from Louisiana, Mississippi, Florida, Tennessee and other states on newly excavated prehistoric sites as well as sites never before submitted to full study. Also, since the southeast was one of the first areas most affected by European contact, protohistoric skeletal data is being amassed that helps in understanding the impact of this momentous historic event on both the indigenous peoples and the invading population. Finally, new data is coming to light concerning the human cost of slavery, as seen in the osteological remains of African-Americans from slave cemeteries. Thus, it is the purpose of this symposium to present the newest research on the bioarchaeology of this key part of the country.

221. **Biodistance between four Louisiana archaeological sites dated 800 B.C. to A.D. 1250, with a note on methods.** S.N. BYERS, R. SAUNDERS.
222. **Changes in “health” through time: A temporal analysis of non-specific skeletal pathologies in the southern Lower Mississippi Valley.** G.A. LISTI.
223. **Life and death in the land of Coosa: Oral health in a Late Mississippian village.** M.C. GRIFFIN.
224. **From ritual use to dietary staple: Maize consumption and oral health within the Mississippian Period of East Tennessee.** T.K. BETSINGER, M. OSTENDORF SMITH.
225. **The canary in the coal mine: Treponemal disease across subsistence, settlement patterning and sociopolitical changes in southern Appalachia.** M. OSTENDORF SMITH, T.K. BETSINGER, L.L. WILLIAMS, A.M. ROBBINS.
226. **Osteological Indicators of Health and Nutrition along the Central Tombigbee River in Eastern Mississippi.** K. SHULER, C. BREEDEN, D. COOK.
227. **The taphonomy of secondary burials at Carson Mounds, Coahoma County, Mississippi.** J.JAMES, G. WROBEL, J. JOHNSON, J. CONNAWAY.
228. **Status and health at the King Site revisited: Results and conclusions from recent burial and DNA analysis.** M.A. WILLIAMSON, D.J. HALLY.
229. **The paleopathology of a French colonial cemetery on the Mississippi gulf coast.** J.L. FUNKHOUSER, M. DANFORTH.
230. **Life and health among the enslaved of Ingleside Plantation, Davidson County, Tennessee** S. CHAPPELL HODGE
- 231-234. **Discussant:** S.N. BYERS.

Thursday April 15, 2010. Afternoon sessions

Session 13. Invited podium symposium. **Bioarchaeological Signatures of Violence and Aggression.** *Alvarado AB.* Organizers: Debra L. Martin and Ryan P. Harrod.

The origin and evolution of violence in human groups is a topic that has had a great deal of method, theory and data presented from almost all of anthropology's subdisciplines except for bioarchaeology. However, bioarchaeologists have robust empirical data drawn from analysis of human remains that examine patterns of violence in many different cultures from precolonial and historic contexts. Presentations in this session reveal key manifestations in the burial and mortuary context that provide a more nuanced approach to discussing a wide variety of culturally patterned activities including warfare, captivity, slavery, cannibalism, ritual violence, homicides and torture. Bioarchaeologists also have data on non-lethal forms of aggression and violence since traumatic injury often leaves diagnostic changes on the skeleton. Research questions that this session deals with include understanding what the skeletal patterns of traumatic injury and untimely death reveal about the role of violence in cultural systems. Skeletal and mortuary evidence reveals the groups that are most vulnerable to aggression and violence, and the accumulative role that violence plays on morbidity and mortality. Given the persistence of aggression and violence today, bioarchaeology offers a unique lens on the longevity, patterns and cross-cultural variability of violence, and an understanding of how disproportionate power relations affect the health and well-being of subaltern groups within a population. Finally, these collective bioarchaeological patterns reveal important connections between the role and political economy of different forms of violence and aggression in regional and interregional perspectives.

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| 1:00-1:15 | The walking wounded: mapping nonlethal violence on living Africans to provide insight for bioarchaeological interpretation. R.P. HARROD, P. LIÉNARD, D.L. MARTIN. |
| 1:15-1:30 | The social and cultural implications of violence at Qasr Hallabat. T. MONTGOMERY, M.A. PERRY. |
| 1:30-1:45 | Bioarchaeology of structural violence: theoretical model and case study. H.D. KLAUS |
| 1:45-2:00 | The taphonomy of violence: deconstructing social behavior through the paleopathology of trauma analysis. V.R. PÉREZ. |
| 2:00-2:15 | A bioarchaeological reconstruction of cultural perspectives of violence in the ancient Andes. T.A. TUNG. |
| 2:15-2:30 | The space of war: connecting geophysical landscapes with skeletal evidence of warfare-related trauma. H. WÖRNE, C.R. COBB, G. VIDOLI, D.W. STEADMAN. |
| 2:30-2:45 | Courteous knights, holy blissful martyrs, and cruel avengers: a consideration of the changing social milieu of medieval warfare from the perspective of human remains. C.J. KNUSEL. |
| 2:45-3:00 | Bioarchaeological evidence for violence in Roman London. R. REDFERN. |
| 3:00-3:15 | The Bioarchaeology of Genocide: The Mass Grave at Sacred Ridge, Site LP0. A.L.W. STODDER, A.J. OSTERHOLTZ, K. MOWRER. |

- 3:15-3:30 **Break**
- 3:30-3:15 **Community Violence and Everyday Life: Death at Arroyo Hondo.** A.M. PALKOVICH.
- 3:15-3:30 **Traumatic lesions and other pathological conditions observed in subadult human remains from Chaco Canyon.** K. MARDEN, D.R. HUNT.
- 3:30-3:45 **Bioarchaeological signatures of strife in terminal Pueblo III settlements in the northern San Juan.** K.A. KUCKELMAN.
- 3:45-4:00 **Biological distance among victims of ritual violence from a Postclassic Maya temple.** W. DUNCAN.
- 4:15-4:30 **Where are the warriors? Cranial trauma patterns and conflict in the Maya realm.** V. TIESLER, A. CUCINA.
- 4:30-4:45 **Discussant.** R.J. CHACON

Session 14. Human Biology: Parental Investment Decisions. Dietary Trade-Offs. Parasites and People Contributed papers. *Alvarado CD.* Chair: Peter B. Gray.

- 1:00-1:15 **Assessing fertility and fecundity in slave groups of the Caribbean from mtDNA sequence variation.** M. DEASON, V. MACAULAY, Y. PITSILADIS.
- 1:15-1:30 **Parental investment strategies of teen and adult mothers: nighttime parenting behaviors and sleep-related risks to infants.** L. VOLPE, H. BALL.
- 1:30-1:45 **Where do men's foods go? The sharing and eating of male acquired foods among the Hadza.** B.M. WOOD, F.W. MARLOWE.
- 1:45-2:00 **Seasonal changes in dietary composition for Hadza foragers of Tanzania: implications for hominin evolution.** D.S. SHERRY, F.W. MARLOWE.
- 2:00-2:15 **Juvenile food sharing among the Hadza hunter-gatherers of Tanzania.** A.N. CRITTENDEN, D. ZES, F.W. MARLOWE.
- 2:15-2:30 **Growth and life history in indigenous children of the Argentine Gran Chaco.** C. VALEGGIA.
- 2:30-2:45 **Grandmothering and the strength of selection.** A.F. KACHEL, L. S. PREMO, J. HUBLIN.
- 2:45-3:00 **Energetic significance of food processing: a case study in tubers.** R.N. CARMODY, G.S. WEINTRAUB, R.W. WRANGHAM.
- 3:00-3:15 **A cross-cultural perspective on human-pet dynamics.** P.B. GRAY, S.M. YOUNG.
- 3:15-3:30 **Break**
- 3:30-3:45 **The diet of the Dani: Isotopic analysis of a low-protein consuming human population from the highlands of Western New Guinea, Indonesia.** A.D. SOMERVILLE, M.J. SCHOENINGER, and P.L. WALKER
- 3:45-4:00 **Sleep as a risk factor for cardiovascular disease: the relationship between sleep, sleep quality, blood pressure and inflammation in older Americans.** S. R. WILLIAMS.
- 4:15-4:30 **Exposure to parasites and development of immune response? Age profile of immunoglobulin E (IgE) in the Shuar of Eastern Ecuador, the Tsimane of Bolivia, and the U.S. NHANES.** A. BLACKWELL, J.J. SNODGRASS, M. GURVEN, H. KAPLAN, F. MADIMENOS, M. LIEBERT, L. SUGIYAMA.
- 4:30-4:45 **Recreational drug use as potential protection against pathogens: Smokers among Central African foragers have fewer worms than non-smokers.** E.H. HAGEN, C. ROULETTE, B.S. HEWLETT, R.J. SULLIVAN, R. LAGANIER.
- 4:45-5:00 **HLA DQ and onchocerciasis in Ecuador: interactions between genetic and environment in an endemic infection.** F. DE ANGELIS, A. GARZOLI, G.F. DE STEFANO.

Session 15. Non-hominin primate evolution. Contributed papers. *Turquoise.* Chair: Andrew S. Deane

- 1:00-1:15 **Rudimentary pedal grasping in mice and implications for terminal branch arboreal quadrupedalism.** C. BYRON, H. KUNZ, S. LEWIS, D. VANVALKENBURG.
- 1:15-1:30 **Morphological systematics of the kipunji, *Rungwecebus kipunji*.** C.C. GILBERT, W.T. STANLEY, L.E. OLSON, T.R.B. DAVENPORT, E.J. SARGIS.
- 1:30-1:45 **Does diagonal limb phasing improve above-branch stability?** J.W. YOUNG, B. DEMES.
- 1:45-2:00 **Leaping adaptations in the hindlimb of middle Eocene omomyid primates from the Uinta Formation, Utah and Mission Valley Formation, California.** R.H. DUNN.
- 2:00-2:15 **Paleobiological inferences on cognition in apes and humans: Does encephalization reflect intelligence in fossil hominoids?** D.M. ALBA.

- 2:15-2:30 **A comparative stereological analysis of neuron numbers in the human and non-human primate basolateral amygdala.** N. BARGER, C.M. SCHUMANN, J. ANNESE, C.C. SHERWOOD, L. STEFANACCI, P. HOF, K. SEMENDEFERI.
- 2:30-2:45 **Does anthropoid labyrinthine morphology reflect phylogeny or locomotion?** R. LEBRUN, M.S. PONCE DE LEÓN, C.P.E. ZOLLIKOFER.
- 2:45-3:00 **The hungry brain: an assessment of liver size correlation with brain size as it relates to energy storage trade-offs across primate evolution.** J.L. JOGANIC, H. PONTZER, B.C. VERRELLI.
- 3:00-3:15 **The evolution of molar shape diversity in primates and euarchontan mammals: a geometric morphometric approach.** E.M. ST. CLAIR, D.M. BOYER, J.M.G. PERRY.
- 3:15-3:30 **Break**
- 3:30-3:45 **Paper withdrawn.**
- 3:45-4:00 **New catarrhine fossils from Rudabánya (Hungary): evidence for sympatric primates in a late Miocene swamp forest.** D.R. BEGUN, M.C. NARGOLWALLA, L. KORDOS.
- 4:00-4:15 **Paleoecology of *Oreopithecus* faunas based on stable isotopic analyses.** S. NELSON, L. ROOK.
- 4:15-4:30 **3D geometric morphometric analysis of Miocene hominoid mandibular symphysis shape.** M.K. PITIRRI, N. SINGH, K. HARVATI, D.R. BEGUN, L. KORDOS.
- 4:30-4:45 **The lumbar vertebrae of the Middle Miocene stem great ape *Pierolapithecus catalaunicus* (Primates: Hominidae).** I. SUSANNA, D.M. ALBA, S. ALMÉCIA, S. MOYÁ-SOLÁ.
- 4:45-5:00 **Who's in and who's out? Re-evaluating the proposed congeneric status of *Afropithecus turkanensis* and *Morotopithecus bishopi*.** A.S. DEANE, M.C. NARGOLWALLA, D.R. BEGUN, E.J. SMITH.

Session 16. Primatology: Theory and Practice: Food, Ecological Variables and Conservation. Contributed papers. *Fireplace*. Chair: Andrew J. Marshall.

- 1:00-1:15 **Neutrality, niches, and the assembly of primate communities.** A.J. MARSHALL, L.H. BEAUDROT.
- 1:15-1:30 **Food resources affect the timing of intercommunity interactions in the Kanyawara community of chimpanzees, Kibale National Park, Uganda.** M.L. WILSON, M. WELLS, S. KAHLENBERG, R.W. WRANGHAM.
- 1:30-1:45 **Spontaneous ingestion of alcohol by non-human primates: Seven hypotheses and some preliminary findings.** W.C. MCGREW.
- 1:45-2:00 **Digestive physiology and use of carbohydrates by arboreal, frugivorous Carnivora (*Arctitis binturong*, *Potos flavus*): a test of convergent evolution with the primate pattern.** J.E. LAMBERT, A. HARTSTONE-ROSE, V. FELLNER.
- 2:00-2:15 **Nutritional and mineral composition of Diademed Sifaka foods in undisturbed and disturbed forest at Tsinjoarivo, Madagascar.** M.T. IRWIN, J.M. ROTHMAN, J. RAHARISON, C.A. CHAPMAN.
- 2:15-2:30 **Commensalism among humans, nonhuman primates, and duikers: paths to evaluating wildlife populations and sustainable livelihoods.** C.A. JOST, M.J. REMIS.
- 2:30-2:45 **Javan gibbon (*Hylobates moloch*) feeding and ranging behavior in lower montane forest in the Gunung Halimun-Salak National Park, Indonesia.** S. LAPPAN, S. KIM, J.C. CHOE.
- 2:45-3:00 **How wild Bornean orangutans (*Pongo pygmaeus wurmbii*) cope with fruit scarcity: behavioral, physiological, and morphological adaptations.** E.R. VOGEL, M.A. VAN NOORDWIJK, N.J. DOMINY, A. MEIDIDIT, C.P. VAN SCHAIK.
- 3:00-3:15 **Ecological risk aversion in juvenile Bornean orangutans.** C.D. KNOTT. FIX THIS LINE
- 3:15-3:30 **Break**
- 3:30-3:45 **What predicts day range length and group size in gibbons?** U.H. REICHARD, M.G. NOWAK.
- 3:45-4:00 **Home range overlap between adjacent troops of Japanese macaques in Yakushima, Japan.** D.S. SPRAGUE.
- 4:00-4:15 **Habitual sleep tree use by white-faced capuchins (*Cebus capucinus*) and implications for seed dispersal.** K. VALENTA, J.A. KLEMENS, L.M. FEDIGAN.
- 4:15-4:30 **Measurement of Daily Energy Expenditure and Time Budgets in *Lemur catta*.** M.C. O'NEILL, K.M. MULDOON.
- 4:30-4:45 **Maturation and social organization: males grow more slowly in multi-male groups of Phayre's leaf monkeys.** C. BORRIES, A. KOENIG.
- 4:45-5:00 **A first look at jaw-muscle activity in free-ranging primates: The ecological physiology of feeding in howling monkeys (*Alouatta palliata*) at La Pacifica, Costa Rica.** C. J. VINYARD, K.E.

Friday April 16, 2010. Morning sessions

Session 17. Invited podium symposium. Pathogens and Evolution of Humans and Non-human Primates. Co-sponsored by the HBA and the AAPA. *Alvarado A.* Organizers: Jessica F. Brinkworth and Ekaterina Pechenkina.

This symposium showcases recent research by a multidisciplinary group of scholars on the evolutionary interactions between pathogens and their primate hosts. The exposure of primate populations to pathogens has historically differed due to considerable divergence in host geographic distribution, landscape exploitation, group structure, and diet. In response to differing pathogen exposure, primate species have evolved highly divergent immune and behavioral defenses to infectious agents. Ultimately, infections by major agents of human disease manifest differently across the Primates order. Understanding the evolution of these responses is not only important for explaining differences in primate disease morbidity, but may also clarify the molecular mechanisms of lineage divergence within order Primates.

8:00-8:15	Primates, Pathogens, and Evolution: A Context for Understanding Emerging Disease. G.J. ARMELAGOS, K. HARPER.
8:15-8:30	Molecular arms races between hosts and pathogens in primate evolution. N.C. ELDE, H.S. MALIK.
8:30-8:45	Tracking ancient lentiviral infiltrations in the genome of Malagasy lemurs. C. FESCHOTTE, C. GILBERT, D.G. MAXFIELD, S.M. GOODMAN.
8:45-9:00	Infectious disease dynamics in socially-structured populations. C.L. NUNN.
9:00-9:15	Primate evolution of antimicrobial high-density lipoprotein. J. RAPER, R. THOMSON, M. CARRINGTON.
9:15-9:30	Evolution of functional genetic variation at immune loci in wild baboons. J. TUNG, S.C. ALBERTS, G.A. WRAY.
9:30-9:45	An evolutionary and population genetic approach to malaria susceptibility in Africa. W. KO, F. GOMEZ, S.A. TISHKOFF.
9:45-10:00	Variation in toll-like receptor function in old world monkeys, apes and humans. J.F. BRINKWORTH, S.M. GOYERT, J. SILVER.
10:00-10:15	Discussion
10:15-10:30	Break
10:30-10:45	Sialic acids and the host-pathogen interface – roles in hominid evolution. A. VARKI.
10:45-11:00	Indigenous intestinal flora, polyparasitism, and immune responses in the Bolivian lowland tropics. M. MARTIN, M. GURVEN, H. KAPLAN, D. SELA.
11:00-11:15	Evolution of human aging. C. FINCH.
11:15-11:30	Cytokine polymorphisms in human populations: testing the pathogen hypothesis. F. CRESPO, R. FERNANDEZ-BOTRAN, M. CASANOVA, C. TILLQUIST.
11:30-11:45	Discussion.

Session 18. Invited podium symposium. Juvenile primates: it's about time. *Alvarado B.* Organizers: Connie D. Fellmann and Christopher A. Schmitt.

The juvenile period of development in Primates, loosely defined as the period between weaning and sexual maturity, remains the most neglected phase of life histories. Nonetheless, successful negotiation of this period is critical to attaining reproductive success, and recent hypotheses regarding the evolution of body size and shape (among other aspects of biology) focus on potential evolutionary trade-offs taking place during this period. Although only a handful of past studies have explicitly addressed behavioral and morphological development in juveniles, new research places a stronger focus on the juvenile period in the context of an individual's entire life history and as an independent and modular unit subject to unique selective pressures. In this symposium, we highlight this shift in thought by showcasing recent studies that offer a phylogenetically broad survey of the ecological and social selective pressures acting throughout the juvenile phase in primates. These studies emphasize the genetic and hormonal structure underlying the timing of the juvenile phase and investigate the associated strategies – behavioral and anatomical – that juveniles use to offset selective pressures. In so doing, we gain a better understanding of the challenges and rewards of studying juvenile primates, encourage continued research, and identify novel avenues of research for this exciting but neglected field.

8:00-8:15	Juvenile primates: development from a life history perspective. L.A. FAIRBANKS.
8:15-8:30	Sub-adult survival and the 'invisible fraction': the contribution of juveniles to the heritability of fitness in female macaques. G.E. BLOMQUIST.
8:30-8:45	Social and ecological influences on the process of maturation: growth, body size, and skill attainment in chacma baboons. S.E. JOHNSON.
8:45-9:00	Food properties and implications for juvenile foraging in Phayre's leaf monkeys (<i>Trachypithecus phayrei crepusculus</i>). K. OSSI-LUPO, A. KOENIG.
9:00-9:15	The Misadventures of Huck Finn: the costs and benefits of being orphaned for juvenile male chimpanzees. H.M. SHERROW.
9:15-9:30	Juvenility in <i>Ateles geoffroyi</i>: Life history comparisons. L. VICK.
9:30-9:45	The interaction of social organization and juvenile risk aversion: A case study in atelin

- 9:45-10:00 primates. C.A. SCHMITT, A. DI FIORE.
Individual variation in the social interactions of wild juvenile capuchins: what is the role of temperament and an evolved behavioral plasticity? K.C. MACKINNON.
- 10:00-10:15 **Using locomotor ontogeny to understand the interaction between small body size and arboreal locomotion: a case study using sugar gliders (*Petaurus breviceps*).** L.J. SHAPIRO, J.W. YOUNG.
- 10:15-10:30 **Break**
- 10:30-10:45 **Lemurs, hormones, and the pace of life histories: IGF-I and somatic growth in *Lemur, Eulemur, Propithecus, and Varecia*.** R.M. BERNSTEIN, H. CHIRCHIR, N.H. FOURIE.
- 10:45-11:00 **The ontogenetic covariance structure of postcranial elements in sifaka.** R.R. LAWLER and R.E. WUNDERLICH.
- 11:00-11:15 **Limb development and its relationship to locomotion in juvenile apes: *Pan* and *Gorilla*.** C.D. FELLMANN.
- 11:15-11:30 **Coming of age in female *Pan paniscus*: biological attributes of juveniles.** A. ZIHLMAN, D. BOLTER.
- 11:30-11:45 **Grasping primate development: ontogeny of intrinsic hand and foot proportions in white-fronted capuchin monkeys (*Cebus albifrons*).** A.N. HEARD-BOOTH, J.W. YOUNG.
- 11:45-12:00 **Discussion.**

Session 19. Skeletal biology: Bone tissue adaptation in human and non-human primates. Functional anatomy and kinematics of locomotion. Contributed papers. Alvarado C.

Chair: Maureen J. Devlin. This session is dedicated to the memory of Phillip L. Walker, primatologist, dental anthropologist, bioarcheologist and skeletal biologist, constructive citizen and productive scholar and teacher (Dedication penned by Russell Tuttle).

- 8:00-8:15 **Predominant collagen fiber orientation data support the multi-domain load hypothesis in the chimpanzee femur.** A.B. BECKSTROM, J.G. SKEDROS, C.J. KISER, K.E. KEENAN.
- 8:15-8:30 **Why does starvation make bones fat?** M.J. DEVLIN, A.M. CLOUTIER, I. PINZ, C.J. ROSEN, M.L. BOUXSEIN.
- 8:30-8:45 **Does variation in fibular robusticity reflect variation in mobility patterns?** D. MARCHI, C.N. SHAW.
- 8:45-9:00 **Appendicular asymmetry altogether: gradients of directional asymmetry through the human upper limb.** B.M. AUERBACH, D.T. CASE, T.L. KIVELL, E.M. GAROFALO.
- 9:00-9:15 **Sex difference in human locomotion and its skeletal correlates.** K. WHITCOME, J.P. O'CONNOR.
- 9:15-9:30 **First metatarsal adduction: How "inline" are humans?** P.A. KRAMER.
- 9:30-9:45 **High-speed throwing in humans requires elastic energy storage at the shoulder.** N.T. ROACH, M. VENKADESAN.
- 9:45-10:00 **Mouse shoulder morphological development responds to locomotor differences in climbing and running.** D.J. GREEN, B.G. RICHMOND, S.L. MIRAN.
- 10:00-10:15 **This little piggy went running, that little piggy stayed home: a forelimb perspective of limb loading.** J. NING, K.A. CONGDON, A.S. HAMMOND, M.J. RAVOSA.
- 10:15-10:30 **Break**
- 10:30-10:45 **Biomechanics of climbing in 4 species of prosimian, with special reference to lorises.** J.B. HANNA, S. EVERETT, D. SCHMITT.
- 10:45-11:00 **Predicted compared to observed limb support asymmetry during quadrupedal walking in *Ateles* and *Cebus*.** S.G. LARSON, B. DEMES.
- 11:00-11:15 **Pelvic biomechanics and locomotor adaptation within the Order Primates.** K.L. LEWTON.
- 11:15-11:30 **The interplay between function and phylogeny in the manifestation of phalangeal morphology.** T. REIN.
- 11:30-11:45 **An affine-adjusted analysis of tibial shape in hominoids.** M.A. FRELAT, S. KATINA, G.W. WEBER, F.L. BOOKSTEIN.
- 11:45-12:00 **Ontogenetic patterns of long bone shape of humans and great apes.** N. MORIMOTO, M.S. PONCE DE LEÓN, C.P.E. ZOLLIKOFER.

Session 20. Paleoanthropology: Early hominins. Contributed papers. *Turquoise.*

Chair: Kristian Carlson.

8:00-8:15	Scaling of the hominoid distal humerus: implications for shape variation among early hominins. M.R. LAGUE.
8:15-8:30	<i>Orrorin tugenensis</i> suggests a common origin for human-like precision grasping and bipedalism. S. ALMÉCIJA, S.MOYA-SOLÁ, D.M. ALBA.
8:30-8:45	A symmetric virtual reconstruction of OH5. S. BENAZZI, F. BOOKSTEIN, D.S. STRAIT, B. RICHMOND, P. LUCAS, P. DECHOW, C. ROSS, I. GROSSE, G.W. WEBER
8:45-9:00	Sexual dimorphism and social structure in <i>Australopithecus robustus</i>: How strong is the evidence for “hominid harems”? K.A. KASZYCKA.
9:00-9:15	<i>Australopithecus afarensis</i> exhibited a chimpanzee-like pattern of female transfer. M.L. MCCROSSIN, L.D. REYES.
9:15-9:30	The ecological importance of abundance in early hominids. R. BOBE.
9:30-9:45	Hand pressure during Oldowan stone tool production. E.M. WILLIAMS, B.G. RICHMOND.
9:45-10:00	Hand biomechanics during simulated Oldowan tool use. C. ROLIAN, D.E. LIEBERMAN, J.P. ZERMENO.
10:00-10:15	How long were australopithecine toes? K.E. SCHROER, A.D. GORDON, B.G. RICHMOND.
10:15-10:30	Break
10:30-10:45	Shape correlation within and across Plio-Pleistocene hominin lower limb elements. M. TALLMAN.
10:45-11:00	The locomotor repertoire of early <i>Homo</i>: insights from chimpanzee variation. K. CARLSON, R. WRANGHAM, M. MULLER, R. SUMNER, M.E. MORBECK, T. NISHIDA, A. YAMANAKA, C. BOESCH.
11:00-11:15	Body size and body shape in early <i>Homo</i> – implications of the Gona pelvis. C. RUFF.
11:15-11:30	Morphological integration and the knuckle-walking “complex”: Implications for the evolution of knuckle-walking and bipedalism. S.A. WILLIAMS.
11:30-11:45	Sacral orientation in hominid evolution. E. BEEN, A. BARASH, M. BAHA, S. PELEG.
11:45-12:00	A case of valgus ankle in an early Pleistocene hominin. J.M. DESILVA, A. PAPAKYRIKOS.

Friday April 16, 2010. Poster sessions

Session 21. Paleoanthropology: The *Australopithecus* genus. On the move: Bipedalism/locomotion. Late hominin ecology and evolution. Methods. Contributed posters. *Alvarado EFG.* Chair: Frank Williams.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

- Cross-sectional geometries in Plio-Pleistocene hominins and their relevance to taxonomic assignments.** M.M. BLEUZE, A.J. NELSON.
- Conspicuity of South African robust australopithecines.** Z. COFRAN, J.F. THACKERAY.
- How Many Species of South African *Australopithecus*: A Morphometric Analysis of the Maxillary Premolars and Molars.** T. CRAWFORD.
- Premolar microwear texture analysis of *Australopithecus africanus*.** J. R. SCOTT, P.S. UNGAR, F. E. GRINE, M. F. TEAFORD.
- Testing the “second australopithecine species hypothesis” for Sterkfontein Member 4, South Africa.** C. FORNAI, R.J. CLARKE, J. MOGGI-CECCHI, J. HEMINGWAY, F.C. DE BEER, M.J. RADEBE.
- Missing data and the taxonomy of *A. africanus*.** T. PETERSEN.
- Texture complexity in Swartkrans bone tools.** J. LESNIK.
- Environmental change during Bed II deposition at Olduvai Gorge.** R. SLEPKOV, K.F. KOVAROVIC.
- The A.L. 333-106 cervical vertebra: a detailed description with implications for positional behavior in *Australopithecus afarensis*.** T.K. NALLEY.
- Assessing changes in stature and body size scaling from *Australopithecus* to *Homo* using femoral length/iliac breadth ratios.** A. SAMS, J. HAWKS.
- A 3-D geometric morphometric study of the “keystone” tarsals: implications for diversity in the foot of early bipedal hominins.** K.M. VITERBO, W. HARCOURT-SMITH.
- Femoral shaft waist distribution and its relationship to mobility levels and other size/shape measures in three temporally distinct populations.** L. FRIEDL, T.W. HOLLIDAY, V. SLÁDEK.
- The calcar femorale in the fossilized partial femur BAR 1003'00 and its relation to bipedal locomotion.** A.J. KUPERAVAGE, R.B. ECKHARDT.
- Absence of bipedal morphology in a postural biped.** M. CARTMILL, K. BROWN.
- Divergent patterns of integration and reduced constraint in the human pelvis and the origins of bipedalism.** M. GRABOWSKI.
- The hallucal metatarsal sesamoid complex in the evolution of hominin gait.** J. MELDRUM, E. SARMIENTO, R. CHAPMAN.
- From Modern Humans to Neandertal Ancestors? Comparison of the locomotion of anatomically modern humans and Neandertals: a feasibility study.** T. CHAPMAN, S. VAN SINT JAN, F. MOISEEV, S. LOURYAN, M. ROOZE.

18. **Foramen magnum position is influenced by neocortex size but not posture.** A. RUTH, M.A. RAGHANTI, R. MEINDL, C.O. LOVEJOY.
19. **Forward shift of the foramen magnum in humans and other bipedal mammals.** E.C. KIRK, G.A. RUSSO.
20. **Does day range impact long bone morphology? What we know from observations of baboon femora and humeri.** K.M. HAMM.
21. **Body size and maneuverability in human evolution.** A.D. FOSTER, H.M. EDWARDS, D.A. RAICHLEN.
22. **Carrying the load: Is there evidence for infant transport in the human fossil record?** F.L. WILLIAMS, L.Q. AMARAL, D.L. CUNNINGHAM.
23. **The evolution of sexual dimorphism in the petrous bone. A comparative analysis between modern humans and the great apes using the lateral angle method.** S. REEDY.
24. **Morphometric analysis of MT 2 with *Pan*, *Gorilla*, *Homo* (recent and Holocene), and South African fossil hominins.** D.J. PROCTOR.
25. **Testing the scaling relationship of tooth size and jaw size in three hominin species: are hominins “good” primates?** P.M. GRIMMETT, A. OLDAK, L.E. COPES, W.H. KIMBEL.
26. **Evolving instructional practice: how do we research ourselves?** J.T. ACHTERBERG, P.A. KRAMER.
27. **Revisiting shrinkage: a test of the long-term integrity of dental molds.** C. ROBINSON, Z. KLUKKERT.
28. **The 10kTrees Project: A New Inference of Primate Phylogeny for Comparative Studies.** C. ARNOLD, L.J. MATTHEWS, C.L. NUNN.
29. **Ranking morphological characters by phylogenetic signal: an approach using null models.** S. WORTHINGTON.
30. **The role of phylogenetic theory in taxonomic practice.** R.C. McCARTHY, T.A. DIVITO.
31. **A GIS-based approach to documenting carnivore and hominin damage to bones.** J.A. HODGSON, T.W. PLUMMER, J.S. OLIVER, R. BOSE.
32. **Spatial ranks, depth functions, and scale curves as tools for testing the single-species hypothesis.** T.M. COLE III, D.L. CUNNINGHAM.
33. **Large mammal community evolution, modern human subsistence, and climate change through time in the Western Cape, South Africa.** A.L. RECTOR.
34. **The quantification of bovid tooth morphology and its implications for reconstructing past hominin environments.** J.K. BROPHY.
35. **Vegetation heterogeneity as a predictor of large mammal community structure in palaeoecology and conservation.** J. LOUYS, S. ELTON, C. MELORO, P. DITCHFIELD, L.C. BISHOP.
36. **New support for a human hand in the collapse of Madagascar’s megafaunal community: using 14C dates to track species persistence and population decline during the Holocene.** B.E. CROWLEY, L.R. GODFREY, D.A. BURNEY.
37. **Assessing diagenetic alteration of carbon and oxygen isotope values in fossil faunal enamel from Kromdraai, South Africa.** K. KIRSANOW and N. TUROSS.
38. **Reconstructing the paleoecology of fossil primates from Taung using low-magnification of dental microwear features.** J.W. PATTERSON and F. L. WILLIAMS.

Session 22. Paleoanthropology: Pleistocene *Homo*. Contributed posters. *Alvarado EFG*.

Chair : Jennifer L. Thompson.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

39. **Molar crown variation in *Homo erectus*.** J.W. LANTZ, J.L. THOMPSON, D.L. MARTIN.
40. **Deciduous molar enamel thickness distribution in the *erectus*-like sample from Tighenif (Ternifine), Algeria.** C. ZANOLLI, R. MACCHIARELLI.
41. **A 3D reconstruction of the first *Homo erectus* specimen from Turkey.** B.A. NACHMAN, S. AKYAR, M. CIHAT ALÇIÇEK, J. KAPPELMAN, N. KAZANCI.
42. **A new reconstruction of the KNM-WT 15000 juvenile male pelvis.** S.W. SIMPSON, L.B. SPURLOCK, C.O. LOVEJOY, B. LATIMER.
43. **Implications of reduced mortality risk for late Pleistocene humans.** R. CASPARI, S. LEE, A. VAN ARSDALE.
44. **Body proportions of the Jebel Sahaba sample.** T.W. HOLLIDAY.
45. **Spatial determinants of chin prominence in extant humans.** J.E. SCOTT, N.E. HOLTON, M.F. LAIRD, R.G. FRANCISCUS, S.D. MARSHALL, T.E. SOUTHARD.
46. **Comparison of the LBI neurocranium to extinct hominins, normal and pathological modern humans.** K.L. BAAB.
47. **Growing up in the Gravettian: ontogeny of cross-sectional geometry in the lower limb.** V.S. SPARACELLO, O.M. PEARSON, L. COWGILL.
48. **Interpreting late Pleistocene footprints at the Willandra Lakes, southeastern Australia.** M.C. WESTAWAY, H. JOHNSTON, D. RAICHLEN, M.L. CUPPER, I. GRAHAM.
49. **Multivariate assessment of the fossilized frontal bone from Aitape, New Guinea.** A.C. DURBAND, J.A. CREEL.
50. **Cioclovina: A virtual assessment of endocranial morphology in an early European fossil.** E.F. KRANIOTI, K. HARVATI, T. CIPRUT, D. GRIGORESCU.
51. **Three-dimensional analysis of the scapular glenoid fossa: Neandertals and morphological adaptations to habitual behavior.** M. MACIAS.

52. **The facial reconstruction of the Amud 1 fossil.** B.E. PIERSON, T.W. HOLLIDAY.
53. **Three-dimensional study of pulp chamber and radicular canal morphology in hominin premolars.** L. PRADO-SIMÓN, A.J. OLEJNICZAK, J.M. BERMÚDEZ DE CASTRO, A. GÓMEZ-ROBLES, P. BACA GARCÍA, M. MARTINÓN-TORRES.
54. **Analysis of Qafzeh 27 - A New Adult Fossil from Qafzeh, Israel.** S. CONDEMI, A. BARASH, B. VANDERMEERSCH.
55. **Incisor and Molar Root Morphology of the Juvenile Neanderthal from Scladina Cave (Belgium).** A. LE CABEC, K. KUPCZIK, M. TOUSSAINT, J. BRAGA, J. HUBLIN.
56. **Aquatic habitat use in hominins.** E.N. KEMPF
57. **Another small head from Flores.** N. LYNNERUP

Session 23. Non-hominin primate evolution. Contributed posters. Alvarado EFG. Chair: ELISABETH K. N. LOPEZ

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

58. **The influence of relative brain size on basicranial morphology in a mouse model of prenatal encephalization.** E.K.N. LOPEZ, A. CHENN, M.M. TAKETO, M.J. RAVOSA.
59. **Basicranial shape variation and the developmental determinants of primate craniofacial evolution.** T.E. PARSONS, B. HALLGRÍMSSON.
60. **Asymmetry in facial musculature of rhesus macaques: implications for evolution of laterality in facial expression.** M.D. BALCENIUK, B.M. WALLER, A.M. BURROWS.
61. **Intraspecies volumetric comparison of insular regions based on cytoarchitectonics.** A.L. BAUERNFEIND, P.R. HOF, C.C. SHERWOOD.
62. **Hallucal metatarsal of euarchontan mammals** S.G.B. CHESTER, D.M. BOYER, J.I. BLOCH, E.J. SARGIS, R.L. JACOBS, B.A. PATEL.
63. **Trabecular structure in the craniofacial skeleton of select anthropoid primates.** L.C. SMITH, P.C. DECHOW.
64. **The influence of sexual dimorphism on allometric interpretations in sister colobine species.** B.C. FRAZIER.
65. **A possible cause of incongruence between molecular and morphological hypotheses of primate phylogeny.** M.A. TORNOW, R.R. SKELTON.
66. **The sequence of dental emergence in the Malayan colugo (*Galeopterus variegatus*) and its bearing on a potential synapomorphy of Euprimates.** W. DIRKS, R.L. ANEMONE, K.C. BEARD, P. TAFFOREAU.
67. **New fossil evidence on the structure of the plesiadapiform hand skeleton: implications for the evolution of grasping in primates.** D.M. BOYER, S.G.B. CHESTER, J.I. BLOCH.
68. **A distal humerus of the strepsirrhine primate *Karanisia* from the late Eocene of Egypt.** K.E. GOODENBERGER, E.R. SEIFFERT, E.L. SIMONS.
69. **Forelimb morphology and locomotor profile of *Protopithecus* and *Caipora*.** L. HALENAR.
70. **Relative limb strength in *Paracolobus chemeroni*.** S. CARNATION, I.J. WALLACE, M. NAKATSUKASA.
71. **Early Eocene mammalian fossils from an extraordinarily rich new locality in the Great Divide Basin, Wyoming.** R.L. ANEMONE, R. WATKINS, B.A. NACHMAN, B. MOORE, W. DIRKS, T. HELD, V. KERSBERGEN.
72. **A structural analysis of feeding in *Archaeolemur* and *Hadropithecus* using finite element analysis.** E.R. DUMONT, L.R. GODFREY, T.M. RYAN.
73. **Paleoenvironmental reconstruction of the Old World monkey locality; Wadi Moghra, early Miocene, Egypt.** E. MILLER, M. CLEMENTZ, A. EL-BARKOOKY, M. HAMDAN, M. ADBEL GAWAD, S.M. ALI HASSAN.
74. **New catarrhine fossils from the early Miocene of Rusinga and Mfangano Islands, Kenya.** H.M. DUNSWORTH, W.E.H. HARCOURT-SMITH, K.P. MCNULTY, D.J. PEPPE.
75. **Earliest colobine skeletons from Nakali, Kenya.** M. NAKATSUKASA, E. MBUA, S. YOSHIHIRO, T. SAKAI, H. NAKAYA, Y. KUNIMATSU.
76. **Preliminary report of new research on the Lake Manyara Beds, Arusha Region, Tanzania.** S.R. FROST, K. HARVATI, C. SAANANE, L. GIEMSCH, F. SCHRENK, L.E. MORGAN, P.R. RENNE, M.M. WILDGOOSE, H. SCHWARTZ.
77. **Functional morphology of the hand in *Theropithecus*.** E.H. GUTHRIE, S.R. FROST.
78. **Partial skeleton of *Theropithecus brumpti* (Primates: Cercopithecidae) from the Chemeron Formation of the Tugen Hills, Kenya.** E.D. GOBLE, C.C. GILBERT, J.D. KINGSTON, A. HILL.
79. **Tell me more about *Theropithecus*: an investigation of cranial morphology in African papionins.** T.A. PEBURN.
80. **The combination of a small brain, large olfactory bulb and high visual acuity in the stem middle Miocene cercopithecoid *Victoriapithecus macinnesi*.** L. GONZALES, B. BENEFIT, F. SPOOR, P. MORRISON, M. MCCROSSIN.
81. **Evidence for dietary niche separation in the Miocene hominoids *Morotopithecus* and *Afropithecus*.** L. MACLATCHY, J. ROSSIE, T.M. SMITH, P. TAFFOREAU.
82. **Anthropoid first metatarsal from the late Eocene of Egypt.** B.A. PATEL, D.M. BOYER, R.L. JACOBS, E.R. SEIFFERT, E.L. SIMONS.
83. **Morphology and relationships of the large-bodied adapiform *Afradapis* from the late Eocene of Egypt.** E.R. SEIFFERT, J.M.G. PERRY, E.L. SIMONS, D.M. BOYER.
84. **Who's your Daddy? Developmental simulation yields insights into the hybrid origin of *Rungwecebus kipunji*.** M. SINGLETON, K.P. MCNULTY, S.R. FROST, J. SODERBERG, E.H. GUTHRIE.

85. **Enamel thickness and tooth development in a subadult *Dryopithecus brancoi* (*Rudapithecus hungaricus*) individual.** T.M. SMITH, J.P. ZERMENO, J. POUÉCH, P. TAFFOREAU, A.J. OLEJNICZAK, D.J. REID, L. EASTHAM, J. HUBLIN, L. KORDOS, D. BEGUN.
86. **Eurasian middle and late Miocene hominoid paleobiogeography: Perspectives from non-primate terrestrial mammals.** M.C. NARGOLWALLA.
87. **Poster to be used by organizers**
88. **A new species of *Anchomomys* (Cercamoniinae, Primates) from the Sant Jaume de Frontanyà fossil site (Eastern Pyrenees, Catalonia, Spain).** J. MARIGÓ, R. MINWER-BARAKAT, S. MOYÀ-SOLÀ.
89. **New *Pseudoloris* (Microchoerinae, Omomyidae, Primates) from the Robiacian of Northeastern Spain.** R. MINWER-BARAKAT, J. MARIGÓ, S. MOYÀ-SOLÀ.
90. **Calcaneal proportions in the small adapid *Anchomomys* from the Middle Eocene Spain.** I. ROIG, S. MOYÀ-SOLÀ, M. KOHLER, D. M. ALBA.
91. **Nasal anatomy of *Paradolichopithecus gansuensis* (early Pleistocene, Longdan, China) and its phyletic relationships with the other species of this genus.** T.D. NISHIMURA, Z. QIU, M. TAKAI, Y. ZHANG, C. JIN.
92. **Assessing the dental microwear of *Oreopithecus* using low-magnification stereomicroscopy.** A. K. SMITH and F. L. WILLIAMS
93. **Predation on subfossil *Prolemur* by multiple predator species: evidence from Ankarana Massif, northern Madagascar.** K.M. MULDOON, L. R. GODFREY and E. L. SIMONS
94. **Asymmetries of the temporo-parietal cortical areas in common chimpanzee: functional correlates and comparison with human.** E.P. GILISSEN, W.D. HOPKINS
95. **Poster to be used by organizers**

Session 24. Human Biology: Life History, Reproductive Strategies and Demography. Epidemiology. Nutrition and Diet. Contributed posters. *Alvarado EFG*. Chair: Lynette Sievert.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

96. **Twinning in humans as a measure of maternal heterogeneity.** S.L. ROBSON, K.R. SMITH.
97. **Assessing maternal lactation costs, infant postnatal growth and weaning: new issues in human and non human primates reproductive strategies.** A. MATEOS, I. GOIKOETXEA, J.A. MARTÍN, J. RODRÍGUEZ, J.M.B. DE CASTRO.
98. **Late Children and Increased Female Longevity in Migrating Mennonites.** J.C. STEVENSON, P.M. EVERSON, R.W. EVERSON.
99. **Are cross-population differences in hot flash frequency due to variation in women's awareness of hot flashes?** L.L. SIEVERT, K. BEGUM, T. SHARMEEN, L. MURPHY, S. MUTTUKRISHNA, G.R. BENTLEY.
100. **Paper withdrawn**
101. **Is the age at onset of menopause adaptive?: putting the "adaptive onset" hypothesis to the test.** A.E. STINESPRING HARRIS, R.M. BERNSTEIN, B.X. KUHLE.
102. **Japanese-Americans show enhanced blood pressure responsiveness compared to European Americans when reporting negative moods: the Hilo women's health study.** D.E. BROWN, L.L. SIEVERT, L.A. MORRISON, A.M. REZA.
103. **Population differences in the testosterone levels of young men are associated with prostate cancer disparities in older men.** L.C. ALVARADO.
104. **Gender, BMI, and migration: a meta-analysis of populations of the East-Asian diaspora.** J. BRADY, L. MADRIGAL.
105. **Isolation of C-reactive protein from human urine.** L.D. KLEIN, T.N. MELBER, K. CLANCY.
106. **Relationship between waking-sleep blood pressure and catecholamine changes in Filipino-American and European-American women.** G.D. JAMES, H. VAN BERGE-LANDRY, D.E. BROWN.
107. **The hazard of death on Mount Everest: individual success and death over time.** B. TRUMBLE, D. HOLMAN, R. SALISBURY.
108. **Rapid changes in cardiovascular risk factors associated with economic development and lifestyle change in an indigenous circumpolar population from Siberia.** J.J. SNODGRASS, W.R. LEONARD, L.A. TARSKAIA, T.J. CEPON, T.M. KLIMOVA, V.G. KRIVOSHAPKIN.
109. **A profile of bone health in an Ecuadorian forager-horticulturalist population.** F.C. MADIMENOS, M.A. LIEBERT, J.J. SNODGRASS, A.D. BLACKWELL, L.S. SUGIYAMA.
110. **Heritability of serological measures of common infections: a family-based study of Mexican Americans.** R. RUBICZ, R. YOLKEN, E. KRAIG, C.T. LEACH, H.H. GÖRING.
111. **Event history analysis of Dengue Fever outbreaks in eight different endemic regions.** D. PARKER, D. HOLMAN.
112. **Exploring the relationship between craniofacial morphology and cause of death in the modern Portuguese using three-dimensional geometric morphometrics.** K. WEISENSEE, K. SPRADLEY.
113. **The role of tuberculosis in sex-specific mortality, Massachusetts 1850-1910.** N.F. SMITH, A.C. SWEDLUND.
114. **Tertiary syphilis and admission to the late 19th century Colorado insane asylum.** A.L. MAGENNIS, L.A. JOHNSON.
115. **Population structure by isonymy of 19th century Tioga County, New York.** K.E. SHERIDAN.
116. **The fate of patients in a 19th century insane asylum.** M.G. LACY, A.L. MAGENNIS.
117. **An application of the crisis index to the 19th century cholera epidemics in Gibraltar.** L. SAWCHUK, L. TRIPP.
118. **How diet affects gastrointestinal microbial communities: a study of two sympatric lemurs (*Lemur catta* and *Propithecus verreauxi*) in Beza Mahafaly special reserve, Madagascar.** A. FOGEL, M.T. O'MARA, N. YAMASHITA.
119. **The association between several serum biomarkers and cardiovascular disease status in captive western lowland gorillas (*G. gorilla gorilla*).** E. HENTHORN, P. DENNIS, H.M. WESTON, I. KUTINSKY, W. DEVLIN, M.A. RAGHANTI.

120. **Longitudinal evaluation of spinal osteoarthritis in *Macaca mulatta* supports a cross-sectional approach.** A.E. DUNCAN, R.J. COLMAN, P.A. KRAMER.
121. **Therapeutic outcomes of medicinal plant applications in three cultural groups.** R.A. HALBERSTEIN.
122. **Agricultural subsistence and sex-differential effects to dental health at La Playa (BC 1600-200 AD).** M. FIELDS.
123. **Using discriminant function analysis as a hypothesis-generating technique.** R.L. BENDER, P. SANDBERG, D.P. VAN GERVEN.
124. **Bacterial fermentation of resistant starch in an in vitro model of the large intestine.** N. LONERGAN, H. CORKE, K. VENEMA.
125. **The impact of physical activity on dietary choices of a western population and its correspondence to hunter-gatherer macronutrient profiles.** S. SCHNORR, K.P. LEWIS.
126. **Father's education is a crucial predictor of the direction of relationship between the number of children and testosterone levels in Polish men.** G. JASIENSKA and P.T. ELLISON
127. **Correlations between genetic ancestry and superficial traits indicate substantial admixture stratification in Brazil.** L.N. PEARSON, D. K. LIBERTON, E. E. QUILLEN, R. L. ZIKATANOVA, R.W PEREIRA, and M. D. SHRIVER.

Session 25. Human Biology: Growth and Development. Human Variation and Adaptation. Contributed posters. *Alvarado EFG.* Chair: Kathryn Driscoll.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

128. **Ontogenetic patterning of the whole long bone: patterns of metaphyseal and epiphyseal growth.** E.M. GAROFALO.
129. **Population variation in human skeletal growth prior to adolescence.** K. MACCORD, J. CRAY.
130. **Does the effect of body mass on energy expenditure scale allometrically in walking children?** I.SARTON-MILLER, P. KRAMER.
131. **Chronic but not acute undernutrition predicts salivary IgA levels in Ariaal infants.** E.M. MILLER, D.S. MCCONNELL.
132. **Assessing bone growth and development in modern American children.** S. OUSLEY, K. FRAZEE, K. STULL.
133. **Sexual dimorphism in growth of human manual digital proportions.** D.M. MORRIS, S.R. FROST, R. PASTOR, J.J. SNODGRASS, L. SUGIYAMA, F.J. WHITE.
134. **Secular change of the pelvis in the United States: 1842-1981.** K. DRISCOLL.
135. **Pelvic variability and sexual dimorphism in Prehistoric Rapanui.** A. HARRISON, N.K. HARPER.
136. **Is pelvic dimorphism related to body size dimorphism in humans?** H. KURKI.
137. **Variation in the human hand: growth, sexual dimorphism, and ancestry.** R.A. GONZALEZ.
138. **Effects of distance from Africa on within-population phenotypic diversity in modern human dermatoglyphic finger ridge counts.** E.S. DALY, S. OUSLEY, R. JANTZ.
139. **Biometrics and locomotion in the Dassanech, a modern pastoral population from northern Kenya.** M.D. CRISFIELD.
140. **Craniofacial variability and diachronic changes from early medieval to recent period in central European population: 3D geometric morphometric comparison.** L. BIGONI, J. VELEMINSKA, K. KRCHOVA, J. PROKOP, P. VELEMINSKY.
141. **Handedness and entheses size: a relationship?** C. HENDERSON.
142. **Developmental integration of the cerebrum and cerebellum: implications for human brain evolution.** I.D. GEORGE, K.K. POPE, A.J. MOFFITT, L. WANG, L.D. SELEMON, K. ALDRIDGE.
143. **Morphometric variations of the 7th Cervical Vertebrae of Zulu, Caucasian and Coloured South Africans.** J. KIBII.
144. **Sexual dimorphism of sub-cortical structures in the adult human brain using MRI.** P.E. JELINEK, K. ERICKSON, S.R. LEIGH.
145. **Size and shape dimorphism in the human cranium.** A. NESBITT, S.D. OUSLEY.
146. **Was heat retention important in determining *Homo* infant limb lengths?** M. MYERS, M. KETTER, A. HEITHOFF, K. BOEFF, K. STEUDEL-NUMBERS, C. WALL-SCHEFFLER.
147. **Poster to be used by organizers**
148. **Evolutionary tradeoffs: How thermoregulation and the cost of mobility impact morphology.** C. WALL-SCHEFFLER.
149. **Borders and boundaries: a clash between culture and biology in Southeast Asia.** M. KENYHERCZ, M. PIETRUSEWSKY, F. DAMANN, S. OUSLEY
150. **Cross-cultural cognition and reasoning strategies in a group of Tibetan Buddhist monks.** N.D. TAYLOR.
151. **Confirmation of secular increase in spina bifida occulta among Swiss birth cohorts.** M. HENNEBERG, Y. C. LEE, L. B. SOLOMON, F. J. RÜHLI, R. SCHIESS, L. ÖHRSTRÖM, T. SULLIVAN, and H. ALKADHI.
152. **Variation in anterior nasal spine prominence in extant human adults and subadults.** R.G. FRANCISCUS, C.L. NICHOLAS.
153. **The ontogeny of variation in internal nasal floor configuration in extant *H. sapiens*.** C.L. NICHOLAS, R.G. FRANCISCUS.
154. **Cross-sectional variation in human nasal passages and the effect on heat and moisture exchange.** T. YOKLEY.

Session 26. Invited poster session. Hard Object Feeding in Primates: Biomechanics, Behavior and the Fossil Record. *Alvarado H.* Organizers: Callum F. Ross, Mark F. Teaford, and Andrea B. Taylor.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:30	Discussion. All authors present at posters 215-218.
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

Primate hard-object feeding has long been of interest to physical anthropologists because of the functional and evolutionary impact of such behaviors on anatomy/morphology and the potential importance of such behaviors in extinct primates. Recently, researchers have begun exploring the nature of hard object feeding adaptations from multiple perspectives, using multiple approaches. For instance, behavioral work has shown that hard objects are often consumed as fallback foods when preferred foods are unavailable - laboratory work has suggested that the processing of hard objects may lead to a complex array of strains in the craniofacial region - and paleobiological inferences have suggested that some human ancestors may have only resorted to hard objects as fallback foods. The purpose of this symposium is to bring together workers from various fields to give physical anthropologists a more realistic understanding of the wide-ranging implications of hard object feeding behaviors.

206. **Bone strain and finite element modeling of the *Cebus* mandible during hard object feeding.** C. ROSS, L. PORRO, D. REED.
207. **The dental microwear of hard-object feeding in laboratory primates.** M.F. TEAFORD, P.S. UNGAR, C.F. ROSS, C.J. VINYARD.
208. **Modulation of jaw kinematics to food material properties in *Cebus*.** D.A. REED, C.F. ROSS.
209. **A tough nut to crack: reconstructing diet and interpreting feeding adaptations in early hominins.** D.S. STRAIT.
210. **Diet and ingestive behaviors of a hard object feeder: feeding and foraging of sooty mangabeys (*Cercocebus atys*) in Tai Forest, Ivory Coast.** W.S. MCGRAW, D.J. DAEGLING, A.E. VICK, A. BITTY, R. PAACHO.
211. **Masticatory effort and dietary hardness in sooty mangabeys (*Cercocebus atys*) from Tai Forest, Ivory Coast.** D.J. DAEGLING, W.S. MCGRAW, A.E. VICK, A.J. RAPOFF, A. BITTY, R. PAACHO.
212. **Jaw-muscle fiber architecture in tufted capuchins favors generating relatively large muscle forces without compromising jaw gape.** A.B. TAYLOR, C.J. VINYARD.
213. **You are how you eat: hard food feeding behavior in primates.** B.W. WRIGHT, K.A. WRIGHT.
214. **Sagittal suture mechanics in apelloid vs. non-apelloid *Cebus* during hard-object feeding.** J. DHABLIWALA, C. BYRON, C. ROSS, D. REED, Q. WANG.

215-218. Discussant. R.F. KAY.

Session 27. Invited Poster Symposium. The Macro and the Micro: Analytical Scale in Southwestern Bioarchaeology. *Alvarado H.* Organizers: Ann L. W. Stodder and Catrina Banks Whitley.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
3:00-3:30 pm	Discussion. All authors present at posters 229-232.
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

This session addresses the different scales of analysis employed in current bioarchaeological research in the American Southwest. Describing projects undertaken in academic, museum, and CRM contexts, the posters identify the challenges of working at different analytical scales and integrating the results of these varied studies in the broader understanding of human biological history in this region. The contributors address the issue of scale in the analysis of bioarchaeological sample composition and small sample size; in the use of biodistance data to examine social and biological processes within a chronologically and geographically circumscribed community and in the context of culture contact along the Plains Pueblo frontier. The regional scale of synthetic analysis is exemplified in reconstruction of biosocial impacts on the skeleton as reflected in subadult growth patterns and trends in artificial cranial modification. Paired taphonomy studies highlight issues of methodological adjustment required for small and large assemblage analyses and how these modifications affect the comparability of results. The extreme range in project size and project duration in Southwestern bioarchaeology (from one-day mitigations to multi-year research programs) presents additional challenges for data management and integration both within and between projects. Special challenges in museum management of collections from variable and inconsistently documented provenience add to the mix of issues facing this small field as practitioners aim for data transparency, comparability and innovative contribution to the rich legacy of research here.

219. **What If? Exploring the Effects of Sample Composition on Basic Population Structure.** N.J. AKINS.
 220. **A view from Black Mesa: integrating bioarchaeological data from individuals to hamlets and regions.** D.L. MARTIN.
 221. **Looking for life in Lost City: limits and latitudes of working with small samples.** J. THOMPSON, D.L. MARTIN.
 222. **Social dimensions of local cranial variation in the ancestral Puebloans of the Ridges Basin.** M.T. DOUGLAS, A.L.W. STODDER.
 223. **The residents of Tecolote Pueblo (LA96): were they Plains or Pueblo?** R.E. MAINS.
 224. **Ritual, integration, and female kiva societies: bioarchaeological insights into social structure at Pot Creek Pueblo.** C. BANKS WHITLEY.
 225. **Temporal and spatial variation in Southwestern cranial variation.** G.C. NELSON.
 226. **Juvenile Growth in Prehistoric-Early Historic Pueblo Indians.** M.A. SCHILLACI, D. NIKITOVIC, L. TRIPP.
 227. **Conjoining a Neighborhood: Data Structure and Methodology for Taphonomic Analysis of the Very Large Assemblage from Sacred Ridge.** A.J. OSTERHOLTZ, A. L.W. STODDER.
 228. **Another roadside attraction: repercussions and responsibilities regarding human remains from the "Million Dollar Museum."** A.L. RAUTMAN, H.J.H. EDGAR.
- 229-232. Discussant.** M. L. POWELL.

Friday April 16, 2010. Afternoon sessions

The AAPA luncheon: A temporary paradise for collaboration and training: our experience with EVAN, the European Virtual Anthropology Network. Delivered by Dr. Gerhard W. Weber. Dept. of Anthropology, University of Vienna. *Alvarado D.* 12:00pm-2:00 pm.

Session 28. Anthropological genetics: Human Genetic Variation. Contributed papers. *Alvarado A.* Chair: CM Worthman.

- 2:00-2:15 **Variation and adaptation in the human MMP9 gene.** A. LOBELL.
- 2:15-2:30 **Looking for genetic adaptations to diet from a comparative study of herders and agriculturalists in Central Asia.** L. SEGUREL, P. PASQUET, M. GEORGES, T. HEGAY, A. ALDASHEV, R. VITALIS, E. HEYER.
- 2:30-2:45 **Why are pygmies Small? An anthropometrical and anthropogenetical question.** N. BECKER, P. VERDU, E. PATIN, A. FROMENT, Y. LEBOUÇ, E. HEYER.
- 2:45-3:00 **Analysis of exome variation from 24 Maasai individuals.** A.W. BIGHAM, S.B. NG, E.H. TURNER, D.A. NICKERSON, J. SHENDURE, M. BAMSHAD.
- 3:00-3:15 **Fluctuating asymmetry in the face is negatively correlated with genetic ancestry.** D.K. LIBERTON, R.W. PEREIRA, T. FRUDAKIS, D.A. PUTS, M.D. SHRIVER
- 3:15-3:30 **Genetic Structure of Mennonite General Conference, Halderman and Old Colony Populations: Molecular Perspective.** M.H. CRAWFORD, P.E. MELTON, M.J. MOSHER, R. RUBICZ, M. ZLOJUTRO.
- 3:30-3:45 **Break**
- 3:45-4:00 **Are sex-specific effects of dietary phytosterol intake on adiponectin levels an underlying factor explaining variation in TG/HDL ratio associated with APOE polymorphisms: The Kansas Nutrition Study.** M.J. MOSHER, D. DEMARCHI, R. RUBICZ, M. ZLOJUTRO, P.E. MELTON, M.H. CRAWFORD.
- 4:00-4:15 **The role of selection-nominated candidate genes in determining Indigenous American skin pigmentation.** E.E. QUILLEN, A.W. BIGHAM, R. MEI, M.D. SHRIVER.
- 4:15-4:30 **HLA genes in Afro American Colombians (San Basilio de Palenque): the first free Africans in America.** A. ARNAIZ-VILLENA, R. REGUERA, C. PARGA, P. GOMEZ-PRIETO, C. SILVERA.
- 4:30-4:45 **Early maltreatment, adrenal regulation, and adult depression among rural Nepali: gene-environment interactions in life history.** C.M. WORTHMAN, B.A. KOHRT, K.J. RESSLER, E.B. BINDER.
- 4:45-5:00 **Genetic analysis of human head and clothing lice indicates an early origin of clothing use in archaic hominins.** A. KITCHEN, M.A. TOUPS, J.E. LIGHT, D.L. REED.

Session 29. Human and Non-Human Skeletal Biomechanical Analyses. Isotopic studies. Contributed Papers. *Alvarado B.* Chair: Christopher J. Vinyard.

- 2:00-2:15 **Drifting osteons occur in higher concentrations in habitual tension environments: a microstructural toughening mechanism?** K.E. KEENAN, A.N. KNIGHT, S.D. TINGEY, C. J. KISER, S.C. THOMAS, J.G. SKEDROS.
- 2:15-2:30 **The biological impact of culture contact: a bioarchaeological study of Roman colonialism in Britain.** J. J. PECK.
- 2:30-2:45 **Torsion and bending resistance provided by the mesial groove of maxillary canines in cercopithecoid monkeys.** A.J. RAPOFF, W.S. MCGRAW, D.J. DAEGLING.
- 2:45-3:00 **Is the functional adaptation of the mandibular symphysis during ontogeny constrained by the presence of the developing permanent incisors?** O. PANAGIOTOPOULOU, S.N. COBB.
- 3:00-3:15 **The global impact of sutures assessed in a Finite Element Model of a macaque cranium.** Q. WANG, A.L. SMITH, D.S. STRAIT, C.D. BYRON, I.R. GROSSE, B.W. WRIGHT.
- 3:15-3:30 **The feeding experiments end-user database (FEED).** S.H. WILLIAMS, V. GAPAYEV, X. LIU, R.Z. GERMAN, C.J. VINYARD, C.E. WALL.
- 3:30-3:45 **Break**
- 3:45-4:00 **Finding Vikings in the Danelaw: an osteological and isotopic analysis of the Masham Anglo-Scandinavian cemetery.** J.L. BUCKBERRY, J. MONTGOMERY, N. NEALE, J. TOWERS.
- 4:00-4:15 **Isotope evidence for human diets in the Mesolithic and Neolithic periods of eastern coastal Iberia (Valencia).** D.C. SALAZAR GARCÍA, M. RICHARDS.
- 4:15-4:30 **Late hunter-gatherer and early agro-pastoral diets in the Mediterranean: the isotopic evidence from the skeletal remains of Grotta dell'Uzzo (Sicily).** M. A. MANNINO, R. DI SALVO, M. PIPERNO, S. TUSA, M. P. RICHARDS.

- 4:30-4:45 **The isotopic identification of pre-Hispanic sacrificial victims from Huaca de la Luna, Peru, using paleodiet.** J.M. TOYNE, C.D. WHITE, J.W. VERANO, F.J. LONGSTAFFE, S. UCEDA CASTILLO.
- 4:45-5:00 **Life and death of an Andean traveler: isotopic evidence for geographic origins and paleodiet in an individual buried along a route connecting the coast and interior of the Atacama Desert, northern Chile.** K.J. KNUDSON, W.J. PESTLE, C. TORRES-ROUFF, G. PIMENTEL

Session 30. Bioarchaeology of Teeth. Contributed papers. *Alvarado C.* Chair: Sharon DeWitte.

- 2:00-2:15 **Dental health and population stress at Ancón, an archaeological site on Peru's central coast.** M.J. PISCITELLI, S.R. WILLIAMS.
- 2:15-2:30 **Assessing dental health predictors in a Swiss medieval population by a spatial probit model.** C. PAPAGEORGOPOULOU, F. RÜHLI, F. SIEGMUND, U. WOITEK.
- 2:30-2:45 **Dental wear and antemortem tooth loss among three Archaic Florida hunter-gatherer skeletal samples: Gautier (8BR193), Bay West (8CR200), and Windover (8BR246).** C. HERRICK, H. WALSH-HANEY, K. SHEPHERD.
- 2:45-3:00 **Sex differences in dental attrition and consumption in Hadza hunter-gatherers.** J.C. BERBESQUE, F.W. MARLOWE, A. MABULLA, A.N. CRITTENDEN.
- 3:00-3:15 **Comparing macroscopic, microscopic, and metric methods of assessing enamel hypoplasia: an alternative approach using a metric assessment of perikymata spacing.** B. HASSETT, S. HILLSON, D. ANTOINE.
- 3:15-3:30 **Dental metric variation among Late Paleoindian of Lagoa Santa, Central Brazil.** T.L. NUNES, W.A. NEVES, T. HANIHARA.
- 3:30-3:45 **Break**
- 3:45-4:00 **Color of Dentine as an Age Indicator for Hispanic Populations in Southwest Texas. I** MARRERO
- 4:00-4:15 **Dental phenotypic variation at Neolithic Çatalhöyük, Turkey: Identifying kin relationships in an early farming society** M.A. PILLOUD, C.S. LARSEN.
- 4:15-4:30 **Prognathism and the ontogeny of canine sexual dimorphism in *Macaca mulatta*.** S.N. COBB, H. BAVERSTOCK.
- 4:30-4:45 **Structural and material compliance in the alveolar process of colobine mandibles.** M. GRANATOSKY, D.J. DAEGLING, W.S. MCGRAW, A.J. RAPOFF.
- 4:45-5:00 **Morphological changes associated with tooth loss and alveolar resorption in male baboons.** C. PERCIVAL, K. WILMORE, S. SIRIVUNNABOOD, J. ROGERS, J. CHEVERUD, A. BUCHANAN, K. WEISS, J. RICHTSMIEIER.

Session 31. Human Biology: Patterns of Adaptation. Contributed papers. *Turquoise.* Chair: K. Lindsay Eaves-Johnson.

- 2:00-2:15 **Variations on a theme: cold adaptations across the New World.** K.L. EAVES-JOHNSON.
- 2:15-2:30 **Variation in human body proportions during ontogeny.** C.D. ELEAZER, L.W. COWGILL, B.M. AUERBACH.
- 2:30-2:45 **Patterns of morphological integration in the newborn brain.** C.A. HILL, J.R. AUSTIN, J.T. RICHTSMIEIER, Y. WANG, E.W. JABS, K. ALDRIDGE.
- 2:45-3:00 **Gait acclimatization as a function of age and task demands in young children.** J.D. POLK, K.S. ROSENGREN.
- 3:00-3:15 **Demographic, lifestyle, and socioeconomic variation in bone mineral density.** M.S. MEGYESI.
- 3:15-3:30 **C-reactive protein across the menstrual cycle: variation in inflammation and its impact on ovarian and endometrial function in a sample of Canadian women.** K.B.H. CLANCY, A.R. BAERWALD, R.A. PIERSON.
- 3:30-3:45 **Break**
- 3:45-4:00 **Thyroid function and resting metabolism in the Yakut of Eastern Siberia.** W.R. LEONARD, J.J. SNODGRASS, L.A. TARSKAIA, T.J. CEPON, T.M. KLIMOVA, V.G. KRIVOSHAPKIN.
- 4:00-4:15 **The premature closure of the sagittal suture and its consequences on the human skull shape: new findings and hypothesis.** Y. HEUZE, S.A. BOYADJIEV, J.T. RICHTSMIEIER.
- 4:15-4:30 **Facial phenotypic differences in children with Autism spectrum disorders.** K.K. POPE, I.D. GEORGE, T.N. TAKAHASHI, J.H. MILES, Y. DUAN, K. ALDRIDGE.
- 4:30-4:45 **Conditional independence of dental and skeletal ontogeny relative to chronological age in modern and fossil humans?** M. ŠEŠELJ.
- 4:45-5:00 **Determinants of skeletal age deviation in South African children.** N. HAWLEY, E. ROUSHAM, S. NORRIS, J. PETTIFOR, N. CAMERON.

Saturday April 17, 2010. Morning sessions

AAPA Teaching Outreach Workshop. Weaver.

- 8:20-9:00 **Primate Clues to Human Behavior.** Dr. Andrew Petto, Univ. of Wisconsin-Milwaukee.
- 9:05- 9:45 **Using the Fossil Record in Teaching Human Evolution.** Dr. Martin Nickels, Illinois State & Illinois Wesleyan Universities.
- 9:50-10:05 **Break**
- 10:05 - 10:45 **Human Skin Color Variation and Race** Dr. Pamela Ashmore, University of Missouri-St. Louis & Dr. Barbara O'Connell, Hamline University.
- 10:50- 11:30. **Who are you? Strategies for Presenting Forensic Anthropology and Human Variation in the Classroom.** K. Lindsay Eaves-Johnson, M.A., University of Iowa
- 11:30-12:00 **State standards and standardized tests -- where and how does human evolution fit in?** Caitlin Schrein, Doctoral Candidate, School of Human Evolution and Social Change, Arizona State University.
- Between-Presentation Comments** by Dr. Michael Alan Park, Central Connecticut State University

Session 32. Primatology: Bonobos, Humans and Chimpanzees, Oh My! The Behavior of Our Closest Living Relatives and Ourselves. Contributed papers. Alvarado A. Chair: William C. McGrew.

- 8:00-8:15 **Sex differences in stick use by subadult chimpanzees (Kanyawara, Kibale, Uganda).** R. WRANGHAM, S. KAHLENBERG.
- 8:15-8:30 **Sex Differences in Tool Use: Chimpanzees vs. Hadza Hunter-Gatherers.** F.W. MARLOWE, J.C. BERBESQUE.
- 8:30-8:45 **Social bonding and benefits of gregariousness among East African chimpanzee (*Pan troglodytes schweinfurthii*) females at Ngogo, Kibale National Park, Uganda.** M. WAKEFIELD.
- 8:45-9:00 **Bonobo adult male interactions with infants and why no infanticide.** F. WHITE, R. TINDALE, I. MINTON, M. WALLER.
- 9:00-9:15 **Hominoid daily energy expenditure and the Human Paradox.** H. PONTZER, D.A. RAICHLEN, B.M. WOOD.
- 9:15-9:30 **Evidence that selection against aggression juvenilized bonobo social psychology.** V. WOBBER, B. HARE, R. WRANGHAM.
- 9:30-9:45 **Paper withdrawn**
- 9:45-10:00 **Inter- and intra-population variation in aggression by adult male chimpanzees.** M.EMERY THOMPSON, M. MULLER, N. NEWTON-FISHER, I. GILBY, S. KAHLENBERG, Z. MACHANDA, K. ZUBERBÜHLER, R. WRANGHAM.
- 10:00-10:15 **Female chimpanzees in the Kanyawara community form social bonds and utilize valuable relationships despite female dispersal and male-bonded philopatry.** K.D. WILD.
- 10:15-10:30 **Break**
- 10:30-10:45 **Numerical asymmetries influence range use in two neighboring chimpanzees communities in Gombe National Park, Tanzania.** D.C. MJUNGU, M.L. WILSON, L. PINTEA, A.E. PUSEY.
- 10:45-11:00 **Reproduction and resistance to stress in wild chimpanzees.** M.N. MULLER, M.EMERY THOMPSON, S. KAHLENBERG, R.W. WRANGHAM.
- 11:00-11:15 **Chimpanzee nest distribution and density in mixed forest habitats of Mainaro, Kibale National Park, Uganda.** G.P. ARONSEN, S. TEELLEN.
- 11:15-11:30 **Pilot study for the analysis of stress and kinship in wild bonobos (*Pan paniscus*), Lomako Forest, Democratic Republic of Congo.** A.K. COBDEN, M. WALLER, F.J. WHITE.
- 11:30-11:45 **The influence of shared benefits on cooperation in chimpanzee (*Pan troglodytes*) groups.** R.J. LEWIS, M.C. MARENO, M. BUTCHER, S.P. LAMBETH, S.J. SCHAPIRO.
- 11:45-12:00 **Affiliative and agonistic social behavior in *Pan troglodytes verus*; a pilot study.** J.L. MARSHACK.

Session 33. Paleoanthropology. Late *Homo*: variation, distribution, and climate. Contributed papers.**Alvarado B.** Chair : Christopher J. Norton

- 8:00-8:15 **Modern human origins revisited: Perspectives from Luna Cave (Guangxi, China).** C.J. NORTON, W. WANG, J. JH JIN.
- 8:15-8:30 **The Late Stone Age human remains from Ishango (Democratic Republic of Congo). Contribution to the study of the African Late Pleistocene modern human diversity.** I. CREVECOEUR, P. SEMAL, E. CORNELISSEN, A.S. BROOKS
- 8:30-8:45 **New research on the Iwo Eleru cranium from Nigeria.** C. STRINGER, K. HARVATI, P. ALLSWORTH-JONES, R. GRÜN, C. ADEBAYO FOLORUNSO.
- 8:45-9:00 **Shape variation and morphological integration in the human dentition: evolutionary and static approaches.** A. GÓMEZ-ROBLES, M. MARTINÓN-TORRES, J.M. BERMÚDEZ DE CASTRO, A.J. OLEJNICZAK, L. PRADO-SIMÓN, J.L. ARSUAGA.
- 9:00-9:15 **Functional constraint: variation in the human face demonstrates cranial modularity is expressed as invariance and taxon-specificity.** J.Y. ANDERSON.
- 9:15-9:30 **Climatic and physiological constraints on human body size and shape.** C. OCOBOCK, H. PONTZER, T. EREZ, J. MAKI.
- 9:30-9:45 **3D semilandmark geometric morphometric quantification of modern human facial development.** S.E. FREIDLINE, P. GUNZ, K. HARVATI, J. HUBLIN.
- 9:45-10:00 **Brain white matter asymmetries in humans and non-human primates: a comparative Diffusion Tensor Imaging (DTI) study.** J.K. RILLING, B.K. ERRANGI, L. LI, M. GLASSER, X. ZHANG, H. MAYBERG, X. HU, T.M. PREUSS.
- 10:00-10:15 **Isotopic evidence for the geographic origins and diet of the 36,000 year-old Hofmeyr skull.** S.R. COPELAND, M.P. RICHARDS, J.A. LEE-THORP, J. NEVELING, V. GRIMES, F.E. GRINE.
- 10:15-10:30 **Break**
- 10:30-10:45 **Butchered but not eaten? New evidence from the analyses of cut-marks on human remains at Gough's Cave (Somerset, England, 14,700 cal BP).** S.M. BELLO.
- 10:45-11:00 **Color centers induced in dental enamel during synchrotron microcomputed tomography: phase I assessment.** C.F. HORTON, G.D. RICHARDS, T.D. WHITE, A. MACDOWELL, R.S. JABBOUR, J. NASIATKA.
- 11:00-11:15 **Long-bone geometry and skeletal biomechanics in *Homo floresiensis*.** W. JUNGERS, A. FARKE, T. SUTIKNA, C. RUFF, L. SHACKELFORD, J. STOCK, K. CARLSON, O. PEARSON, F. GRINE, M. MORWOOD.
- 11:15-11:30 **Endocast of Taung (*Australopithecus africanus*) compared to that of LB1 (*Homo floresiensis*)—more than just a coincidence?** D. FALK.
- 11:30-11:45 **Abnormal is the new normal: In some paleoanthropological, but not biomedical, research.** R.B. ECKHARDT, A. WELLER, K.M. MCGRATH, M. HENNEBERG.
- 11:45-12:00 **General discussion.**

Session 34. Invited Podium Symposium: Anthropological Genetics in the Genomic Era: Challenges, Opportunities, & Directions. Session co-sponsored by the AAAG and the AAPA. Alvarado C. Organizers: Graciela S. Cabana and Lorena M. Havill.

The genomic era is in full swing. No longer limited by low-resolution marker sets or cost-prohibitive technology, genetic researchers have been powerfully addressing traditional questions of anthropological import in new ways. High-throughput technologies have allowed the typing of hundreds of thousands of markers throughout the human genome, so that questions involving human variation, population structure, and selection, and their relationships to human evolutionary history, phenotype (including “race”), disease susceptibility, etc. have been at the forefront of anthropological genetic research. Contributors to this symposium showcase some of the most innovative research of the last decade, while at the same time highlighting the concomitant challenges to anthropological genetic research. Despite the potential of these new technologies and methodologies, they require training in novel laboratory methods and bioinformatics to access them. For this reason, anthropological geneticists – particularly those in anthropology departments – have been relatively slow to employ them. Additionally, anthropologists must seek high level funding simply from non-traditional sources to access some of latest sequencing, chip, and array technology. How can anthropological geneticists reposition themselves to face these challenges?

- 8:00-8:15 **Anthropological genomics: Old dogs learn new tricks.** G.S. CABANA, L.M. HAVILL.
- 8:15-8:30 **Integrating social science and anthropological genetics: race, human variation, and health.** C.C. GRAVLEE, C.J. MULLIGAN.
- 8:30-8:45 **Genetic analyses reveal a history of serial founder effects, admixture between long-separated founding populations in Oceania, and interbreeding with archaic humans.** S. JOYCE, K.L. HUNLEY, J.C. LONG.
- 8:45-9:00 **De novo sequencing and evolutionary analyses of liver-expressed genes in primates.** G. PERRY, Y. WANG, J. MARIONI, Y. GILAD, J. PRITCHARD.
- 9:00-9:15 **Developing and genotyping SNPs for non-model organisms: Examples from the genus *Macaca*.** R.S. MALHI, J.S. TRASK, D.G. SMITH.
- 9:15-9:30 **Technological advances in biomolecular analysis of ancient disease.** A.C. STONE, A.K. WILBUR, T. CAMPBELL, J.E. BUIKSTRA.
- 9:30-9:45 **Rapid field assessment of mycobacterial exposure in primates.** A. WILBUR, L. PFISTER, A.C. STONE, L. JONES-ENGEL.

- 9:45-10:00 **Using a human assay to discover and type SNPs in orthologous regions of the baboon genome: the “spaghetti-on-the-wall” experiment.** MICHAEL C. MAHANEY, C. BELLIS, M.A. CARLESS, D.E. NEWMAN, L.A. COX.
- 10:00-10:15 **Monkeys in the mountains versus the plains: geography drives genetic variation.** U. RAMAKRISHNAN.
- 10:15-10:30 **Break**
- 10:30-10:45 **New evidence for natural selection acting at the *ALDH* locus.** J.C. LONG, K.L. HUNLEY.
- 10:45-11:00 **Anthropological genomics in the era of affordable and highthroughput technologies.** Ö. GÖKÇÜMEN.
- 11:00-11:15 **Genetic diversity of European population isolates in the context of neighboring populations.** J. NOVEMBRE, K. VEERAMAH, A. TONJES, P. KOVACS, M. STUMVOLL.
- 11:15-11:30 **Explaining patterns of human genetic variation using coalescent-based models of human origins.** M. DEGIORGIO, M. JAKOBSSON, J.H. DEGNAN, N.A. ROSENBERG.
- 11:30-11:45 **Discussant.** D. O’ROURKE.
- 11:45-12:00 **General discussion.**

Session 35. Invited podium symposium. Anthropological Perspectives on Tooth Morphology: Genetics, Evolution, Variation. A Symposium in Honor of Christy G. Turner II. Sponsored by the Dental Anthropology Association. *Alvarado D.* Organizers: G. Richard Scott and Joel D. Irish.

In 1956, Albert A. Dahlberg released a set of graded dental plaques for researchers to record various tooth crown traits, with the goal of minimizing intra- and inter-observer error. Building on this foundation, Christy G. Turner II contributed standards for two lower molar traits in 1970 and, along with his students, developed and distributed additional plaques for >30 crown and root traits over the next 30 years. Based on the likely polygenic, quasi-continuous nature of these highly heritable traits, each plaque's grades are intended to represent equally spaced "slices" through the normal distribution of trait presence and expression. The resulting Arizona State University Dental Anthropology System (ASUDAS) is now used throughout the world to address issues in recent human population history on regional, continental, and global scales. It has also been utilized to address problems of the hominid fossil record. While Dahlberg laid the cornerstone with his early efforts in standardization, Turner built the first floor of the edifice and brought dental morphological studies into mainstream biological anthropology. This symposium honors these efforts by presenting cutting-edge research on dental genetics and morphological variation in hominid fossils and recent populations.

- 8:00-8:15 **Human sex chromosomes in oral and craniofacial growth.** L.ALVESALO.
- 8:15-8:30 **Experimental tinkering with signaling and patterning during tooth development.** J. JERNVALL, E. HARJUNMAA.
- 8:30-8:45 **Twin studies of dental crown morphology: genetic, epigenetic and environmental determinants.** T. HUGHES, J. VO, S. MIHAILIDIS, G. TOWNSEND.
- 8:45-9:00 **Hierarchical analysis of dental variation using geometric morphometrics.** O.T. RIZK, T.M. GRIECO, L.J. HLUSKO.
- 9:00-9:15 **The functional and phylogenetic implications of *Paranthropus boisei* gnathic and dental morphology.** B. WOOD.
- 9:15-9:30 **Dental morphology of European Middle Pleistocene populations.** M. MARTINÓN-TORRES, J. BERMÚDEZ DE CASTRO, A. GÓMEZ-ROBLES, L. PRADO-SIMÓN, A. OLEJNICZAK, J. ARSUAGA.
- 9:30-9:45 **The mid-trigonid crest of Neandertals and modern humans: concordance between the enamel and dentine surfaces.** S.E. BAILEY, M.M. SKINNER, J. HUBLIN.
- 9:45-10:00 **From outer to inner structural morphology. The integration of the third dimension in the visualization and quantitative analysis of fossil dental remains.** L. BONDIOLI, P. BAYLE, C. ZANOLLI, R. MACCHIARELLI.
- 10:00-10:15 **Significant among-population associations found between dental characters and environmental factors.** Y. MIZOGUCHI.
- 10:15-10:30 **Break**
- 10:30-10:45 **Do all Asians look alike: a dental nonmetric analysis of population diversity at the dawn of the Chinese Empire.** C. LEE, L. ZHANG.
- 10:45-11:00 **Geographic structure of dental variation and the peopling of East/Southeast Asia and Pacific.** T. HANIHARA, H. ISHIDA.
- 11:00-11:15 **Were the Bronze Age inhabitants of Tepe Hissar biological participants in an inter-regional exchange network across the Iranian Plateau? A dental morphometric investigation.** B.E. HEMPHILL.
- 11:15-11:30 **Deciduous tooth crown morphology of Javanese Malay: Trait expression, affinities and evidence of Sundadonty?** J.R. LUKACS, S. KUSWANDARI.
- 11:30-11:45 **New approaches to the use of dental morphology in forensic contexts.** H.J.H. EDGAR, S.D. OUSLEY.
- 11:45-12:00 **DISCUSSANT:** Clark Spencer Larson

Saturday April 17, 2010. Poster sessions

Session 36. Anthropological genetics: Genetic variation and evolutionary history of human and non-human populations. Contributed posters. *Alvarado EFGH*. Chair: S. R. WILLIAMS.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

1. **The genetic legacy of indigenous Caribbean peoples: evidence from autosomal and mitochondrial data.** J. B. TORRES, A. STONE, S. HOOKER, R. KITTLES.
2. **The evolution of the serotonin system in macaques.** M. R. SHATTUCK and R. S. MALHI.
3. **Genetics and history reconstruction of Brazilian afroderived populations.** S.F. DE OLIVEIRA, C.E. GUERRA AMORIM, C.C. GONTIJO, G.G.B. LOBO RIBEIRO, M.A.F. PEDROSA, M. RIZZATTI LUIZON, L.B. FERREIRA, A.L. SIMOES, C.T. MENDES JUNIOR, M.N. KLAUTAU-GUIMARAES.
4. Paper withdrawn.
5. **Variability of GST Omega class gene polymorphisms in Cayapa and Colorados Amerindians of Ecuador.** G.F. DE STEFANO, S. PIACENTINI, R. POLIMANTI, M. FUCIARELLI.
6. **Chuvash origins: Evidence from mtDNA Markers.** O.M. GRAF, J. MITCHELL, S. WILCOX, G. LIVSHITS, M.H. CRAWFORD.
7. **The diversity of recent positive selection in human populations.** J. HAWKS.
8. **The Genetics of the Alaskan North Slope (GeANS) Project reveals a higher than expected frequency of mtDNA haplogroup D among Alaskan Inupiat populations.** M.G. HAYES, M. RZHETSKAYA.
9. **Inferring geographic origin of a population range expansion using GIS and multi-locus genomic data: the origin of modern humans as a test case.** J.A. HODGSON, M. BLAIR.
10. **Mestizo identity in the Lower Huallaga region of Peruvian Amazonia: molecular perspectives.** A.E. JUSTICE, B.C. DEAN, M.H. CRAWFORD.
11. **Microevolutionary analysis of Y-chromosome variation in five Native American populations from Lower Central America.** P.E. MELTON, N. BALDI-SALAS, R. BARRANTES, M.H. CRAWFORD.
12. **Coalescent simulation models of modern human migrations out of Africa give insight into complex demographic scenarios.** A. MIRÓ-HERRANS, C.J. MULLIGAN.
13. **Lack of regional continuity in the Alabama-Coushatta tribe: mitochondrial DNA analysis in the Southeastern United States.** A.R. RODE, M.C. SCHANFIELD, R.S. MALHI.
14. **Comparison of SNPs, STR and InDels to measure local differentiation in SW Chinese populations.** M.S. SCHANFIELD, S. MILLER, K. LABATO, S. BIN.
15. **The effects of ancestry models and ascertainment on methods of detecting population structure.** N.M. SCOTT, J.C. LONG.
16. **Complete mitochondrial DNA sequencing of Siberian populations.** M. WHITTEN, M. LI, B. PAKENDORF.
17. **ABO blood group frequencies in a pre-Columbian Native American population from California.** F.A. VILLANEA, C. MONROE, A. LEVENTHAL, R. CAMBRA, B.M. KEMP.
18. **Mitochondrial DNA from pre-Columbian Tainos and the prehistoric colonization of Puerto Rico.** A. WANG, A. MIRO-HERRANS, W. PESTLE, A. CURET, E. CRESPO, C.J. MULLIGAN.
19. **Coalescent modeling of Yakut origins points to small founding population based on mtDNA variation.** M. ZLOJUTRO, L.A. TARSKAIA, M. SORENSEN, J.J. SNODGRASS, W.R. LEONARD, M.H. CRAWFORD.
20. **Paper withdrawn**
21. **Temporal continuity in mitochondrial DNA of Native American populations from the Northwest Coast.** J.W. JOHNSON, J. CYBULSKI, R.S. MALHI.
22. **Functional genomic signatures of human brain growth and development.** K.N. STERNER, A.M. BODDY, C.W. KUZAWA, C.C. SHERWOOD, P.R. HOF, L. LIPOVICH, L.I. GROSSMAN, M. UDDIN, D.E. WILDMAN, M. GOODMAN, E. MAIR-MEIJERS, A.L. WECKLE, L. GREGOIRE, H.T. CHUGANI.
23. **Limited dispersal in mobile hunter-gatherer Pygmies.** P. VERDU, R. LEBLOIS, A. FROMENT, S. THERY, S. BAHUCHET, F. ROUSSET, E. HEYER, R. VITALIS.
24. **Mitochondrial DNA variation at position 16189 and diabetes: frequency amongst South Eastern Kenyan populations.** J.P. ARROYO, K. BATAI, S.R. WILLIAMS.
25. **Ancient Swahili origins: a mitochondrial study of ancient inhabitants of the Kenyan coast.** S.R. WILLIAMS, C.M. KUSIMBA, K. BATAI.
26. **Heritability of axial quantitative ultrasound measures of bone strength in children from the Jirel population of eastern Nepal.** K.D. WILLIAMS, J. BLANGERO, M. LEE, T. DYER, J. SUBEDI, B. JHA, S. WILLIAMS-BLANGERO, B. TOWNE.
27. **Paper withdrawn.** Poster to be used by organizers.
28. **Phylogenetic relationships of the mangabeys inferred from analyses of multiple independent loci.** A.P. CANEDO, A.S. BURRELL, E. JAGODA, C.M. BERGEY, A.J. TOSI, T.R. DISOTELL.
29. **Accelerated evolution of the oxytocin receptor system in Callitrichine primates.** C. CHIU, E. GENNE-BACON.
30. **Complete mitochondrial DNA sequences lend insight into the evolutionary history and biogeography of Central American squirrel monkeys.** K.L. CHIOU, J.A. HODGSON, L. POZZI, A. DI FIORE.
31. **Population genetic structure and landscape genetics of the endangered Central American Squirrel Monkey (*Saimiri oerstedii*).** M. BLAIR, D.J. MELNICK.
32. **The circle is unbroken: hybridization occurs between Kinda and chacma baboons in the Kafue Valley, Zambia.** C.J. JOLLY, J.E. PHILLIPS-CONROY, A.S. BURRELL, C. BERGEY, E. LARNEY, T.R. DISOTELL.
33. **The heritability of baboon limb bone morphometry.** B.I. HULSEY, G.S. CABANA, L.M. HAVILL.

34. **Pathogen-Mediated Selection of the Major Histocompatibility Complex in Great Apes.** C.M. LEWIS.
35. **Genetic variation among geographically widespread populations of vervets (*Chlorocebus aethiops*) in southern and eastern Africa.** J.G. LORENZ, J.P. GROBLER, K. MCAULIFFE DORE, N.B. FREIMER, A. JASINKA, T. TURNER.
36. **Genetic diversity of the black crested gibbon (*Nomascus concolor*) from the Wuliang Mountains of Yunnan, China: preliminary results** J.D. ORKIN, H. KAI, J. XUELONG.
37. **Gene flow and genetic admixture in three Brazilian afroderived populations.** CARLOS EDUARDO GUERRA AMORIM, CAROLINA CARVALHO GONTIJO, MARIA ANGÉLICA F. PEDROSA, GABRIEL FALCÃO-ALENCAR, NEIDE MARIA O. GODINHO, RAFAELA C. P. TOLEDO, MARIA DE NAZARÉ KLAUTAU-GUIMARÃES, MARCELO R. LUIZON, AGUINALDO L. SIMÕES, SILVIENE FABIANA DE OLIVEIRA.

Session 37. Primatology. Getting Around: Habitat Use, Ranging Patterns and Dispersal in Nonhuman Primates. Primate Feeding Strategies and Nutritional Ecology. Contributed posters. Alvarado EFGH.

Chair: Katharine Jack

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

38. **Metagenomic approaches to studying primate dietary ecology.** S. PICKETT, A. DI FIORE.
39. **Niche construction and the evolution of primate sex-biased dispersal patterns.** L.J. MATTHEWS, C. ARNOLD, C.L. NUNN.
40. **Diet and the parallel evolution of increased salivary amylase expression in primates.** A.J. CUNNINGHAM, A. ZULFA, E.R. VOGEL, J.M. ROTHMAN, N.L. CONKLIN-BRITTAIN, K.E. GLANDER, S.A. WICH, G.H. PERRY, N.J. DOMINY.
41. **Factors influencing countershading diversity in primate coat coloration.** J.M. KAMILAR, B.J. BRADLEY.
42. **Diet and phylogeny in primate communities.** L. PORTER, J. FLEAGLE.
43. **Energetic costs of feeding in primates: methods and preliminary data.** C.E. WALL, M.C. O'NEILL, J.B. HANNA.
44. **Diet and ranging patterns of the tufted capuchin *Cebus apella* in a Bolivian mixed forest fragment.** M. BOSSE, K. DINGESS, J. ELLERS.
45. **Red howler defecation behavior and the hygiene hypothesis.** J.L. WESTIN.
46. **An assessment of forest loss and habitat connectivity regarding *Alouatta pigra* in the Natural Protected Area of Mézabok, Chiapas, Mexico.** A. HURST, E. ERHART, N. CURRIT.
47. **Predicting natal dispersal in male white-faced capuchins (*Cebus capucinus*).** K. JACK, C. SHELLER, L. FEDIGAN.
48. **Diet, ranging, and activity budget of white-faced capuchins (*Cebus capucinus*) in an anthropogenic habitat.** T. MCKINNEY.
49. **Local predictors of primate response to tourists in the Central Suriname Nature Reserve.** L. KAUFFMAN.
50. **The ethnoprimateology of Limón, Costa Rica: A survey in conservation.** I.I. DIAZ.
51. **Using GIS interpolation to analyze the relationship between topographic features and bearded saki monkey travel patterns in Brownsberg Nature Park, Suriname** T. GREGORY, M. NORCONK, A. MULLETT.
52. **The role of dietary toughness in the ontogeny of Nicaraguan mantled howler monkey (*Alouatta palliata*) feeding behavior.** M. RAGUET-SCHOFIELD.
53. **Patterns of habitat use and ranging behavior of squirrel monkeys (*Saimiri sciureus*) in the Yasuni National Park, Ecuador.** M.C. REILLY, S.A. SUAREZ.
54. **The role of nutrients in the selection of food items by black howlers (*Alouatta pigra*) in Southern Belize.** A.M. BEHIE, M.S.M. PAVELKA.
55. **Food mechanical property variation during ontogeny in *Cebus libidinosus*** J. CHALK, B.W. WRIGHT, P.W. LUCAS, B.G. RICHMOND, D. FRAGASZY, E. VISALBERGHI, P. IZAR, E.B. OTTONI.
56. **Effects of Weather, Temperature, and Humidity on Feeding Patterns of Mantled Howler Monkeys (*Alouatta Palliata*).** S. KAHRIG, A.R. HALLORAN.
57. **Competition increases during resource abundance in wild Verreaux's sifaka (*Propithecus verreauxi*).** B.L. LITTLEFIELD, P.L. WHITTEN.
58. **Trophic assessment of giant lemurs and associated fauna from Andrahomana Cave, Madagascar by LA-ICP-MS.** B.A. ALEX, K.M. MULDOON, L.R. GODFREY, S.J. KING.
59. **Lemurs on the rocks: Preliminary study of ring-tailed lemur demography, habitat use, and feeding ecology in rocky outcrop habitat in south-central Madagascar.** L. GOULD, A. CAMERON, D. GABRIEL.
60. **Niche separation between mouse lemurs (*Microcebus murinus*) and clutter foraging bats at Berenty Private Reserve, Madagascar.** K. FISH, M. SAUTHER.
61. **Are primates particularly dexterous?: an examination of unimanual object manipulation in prosimian feeding.** K.L. ALLEN.
62. **Interior versus exterior edges: their effect on home range, spatial ecology and feeding ecology of Milne-Edwards' Sifakas (*Propithecus edwardsi*) in Ranomafana National Park, Madagascar.** K.H. BANNAR-MARTIN, S.M. LEHMAN.
63. **Ecological and reproductive influences on *Varecia variegata* ranging and feeding behavior in Ranomafana National Park, Madagascar.** E. CUNNINGHAM, L. SCHOFIELD.
64. **Effectiveness of seed dispersal by an endangered lemur species.** O.H. RAZAFINDRATSIMA.
65. **Paper withdrawn.**
66. **The physical properties of Northeast Bornean orangutan plant foods.** L. C. LOYOLA, E. VOTEL, A. ZULFA, R. DELGADO.
67. **Ecogeographical analysis of nutritional status in South African vervet monkeys.** P. WHITTEN, T. TURNER, P. GROBLER, J.G. LORENZ, C. BARRETT, M. ORTIZ, J.D. PAMPUSH.
68. **Resource availability and social structure in wild hamadryas baboons.** A.L. SCHREIER, L. SWEDELL.
69. **Long-term trends in diurnal primate densities in natural and plantation forests at Kakamega Forest, Kenya.** J. CASH, P.J. FASHING, N. NGUYEN, P. LUTESHI, W. OPONDO.
70. **Survey and recensus of the longtailed macaques (*Macaca fascicularis*) of Mauritius.** L.M. GUIDI, R.W. SUSSMAN.

71. **First data on daily ranging behavior of simakobu monkeys (*Simias concolor concolor*) at Betumonga Research Station, Pagai Islands, Mentawai, West Sumatra, Indonesia.** L.M. PACIULLI, S.N. RENFROE, R.A. WASHINGTON.
72. **Primate diversity, conservation, and behavioral ecology at Ta Kou Nature Reserve, Binh Thuan Province, Vietnam.** H. COVERT, H. DUC, L. TRUONG, T. BANG.
73. **Spatial distribution of territorial boundary patrols by chimpanzees at Ngogo, Kibale National Park, Uganda.** S. AMSLER.
74. **Nutritional composition of actual and potential insect prey for the Kasakela chimpanzees of Gombe Stream National Park, Tanzania.** R.C. O'MALLEY, M.L. POWER, C.B. STANFORD.
75. **Chimpanzee insectivory detected: resource availability, monitoring, and consumption.** L.F. MARCHANT, T.H. WEBSTER, W.C. MCGREW, C.L.R. PAYNE, K.D. HUNT.
76. **Monitoring nutritional stress with urinary $\delta^{15}\text{N}$ and C/N ratios in captive bonobos.** T. DESCHNER, B.T. FULLER, V. OELZE, S. ORTMANN, M.P. RICHARDS, G. HOHMANN.
77. **Diets of sympatric chimpanzees and elephants at Mainoro during an extended dry season.** C.L.R. PAYNE, G.P. ARONSEN.
78. **Wild expectations: Evaluating the standards of care for chimpanzees in the federal sanctuary system.** R. PERSAD-CLEM, M. DORNER, L. SARRINGHAUS, G. STANLEY, W. MCGREW.
79. **Paper moved to session 16, 4:45 pm.**

Session 38. Primatology: The Evolution of Sociality. Primate Reproduction and Mating Strategies. Growing Up. Contributed posters. *Alvarado EFGH.*

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

80. **Variation in NMB and ATF3 protein expression in Von Economo neurons of hominoids: Implications for evolution of social cognition.** C.D. STIMPSON, J.M. ALLMAN, N.A. TETREAULT, C. BUTTI, P.R. HOF, C.C. SHERWOOD.
81. **The evolutionary roots of human social norms in chimpanzees: an experimental study.** C.R. VON ROHR, J. BURKART, C. VAN SCHAIK.
82. **Paper withdrawn.**
83. **How do different methods and data sets affect measures of female dominance?** J.L. LODWICK, D. DORAN-SHEEHY.
84. **No need for violence: episodic memory and scramble competition can explain primate "war zones".** M. CROFOOT, D. CAILLAUD, L. SALVADOR, S. SCARPINO, D. BOYER, S. RYAN, P. WALSH.
85. **Danger in the black of night: Are diurnal primates more at risk during the new moon?** L.R. BIDNER.
86. **Chimpanzee behavioral anomalies: possible sensory integration difficulties in a captive individual (*Pan troglodytes*).** E.J. INGMANSON, T.A. MAY-BENSON, T. HUNNICUTT, I. PORTON, M.A. WEBER, J.R. PRUETT JR, D.Q. BEVERSDORF, M.L. BAUMAN.
87. **Representational play in wild chimpanzees (*Pan troglodytes*).** A.A. SANDEL.
88. **The endocrine profile of a geriatric female chimpanzee (*Pan troglodytes*) 72 years of age suggests that menopause in the species is deferred in tandem with somatic aging.** C.T. CLOUTIER, D.C. BROADFIELD, A.R. HALLORAN.
89. **Optimal foraging in the mind: chimpanzee long-term spatial memory and food profitability characteristics.** K. SAYERS, C.R. MENZEL.
90. **Why male orangutans do not kill infants.** L.H. BEAUDROT, S.M. KAHLENBERG, A.J. MARSHALL.
91. **Mother-infant interactions during moderate global maternal nutrient restriction in captive baboons (*Papio hamadryas anubis*).** L. OVERBAUGH, M. NIJLAND, K. KEENAN, P. NATHANIELSZ, A. POYAS, T. BARTLETT.
92. **Fecal glucocorticoids and social contact among female rhesus macaques on Cayo Santiago.** J. DANZY, V. GUTIERREZ, P. WHITTEN, B. CAMPBELL.
93. **Observations of multiple live births in wild geladas (*Theropithecus gelada*) at Guassa, Ethiopia.** L. LEE, N. NURMI, N. NGUYEN, P.J. FASHING.
94. **Patterns and sources of mortality among geladas (*Theropithecus gelada*) at Guassa, Ethiopia.** P.J. FASHING, N. NGUYEN, J.T. KERBY, L.M. LEE, N.O. NURMI, V.V. VENKATARAMAN.
95. **Testosterone and life-history stages in adult male chacma baboons (*Papio ursinus*).** S.A. LIBERMAN, T.J. BERGMAN, J.C. BEEHNER.
96. **Factors influencing testosterone concentration in a captive population of genetically variable male baboons (*Papio sp.*).** J. CALIFF, J. ROGERS, L. GESQUIÈRE, C.J. JOLLY.
97. **Does the behavior of blind night monkeys (*Aotus*) differ from conspecifics with normal vision?** J.P. HERRERA, B.C. FURFEY, L. TAYLOR.
98. **Hierarchical clustering of the vocal analyses of alarm calls reveals precise number of callers in a group of wild white-faced capuchin monkeys (*Cebus capucinus*).** A.R. HALLORAN, C.T. CLOUTIER.
99. **Interactions and proximities between adult male and immature mantled howling monkeys (*Alouatta palliata*) on Ometepe Island, Nicaragua.** A. ASHBURY.
100. **Encephalization and reproduction in lemurs: higher metabolic rates in mothers and infants of larger-brain species reflect the cost of brain growth.** N.L. BARRICKMAN, M. LIN.
101. **Inter-individual differences in male vocalization behaviour within *Lemur catta* troops.** L. BOLT.
102. **Social drive and the coevolution of auditory sensitivity with group size in strepsirrhine primates.** M.A. RAMSIER, A.J. CUNNINGHAM, J.J. FINNERAN, N.J. DOMINY.
103. **Wild Brown Mouse Lemurs Live Long and Prosper.** S. ZOHDY, S. TECOT, T.H. RAKOTOARINIVO, J. CARAG, S.J. KING, J. JERNVALL, P.C. WRIGHT.
104. **Grooming, group size, and feeding priority in female Rhesus macaques** M.A. RODRIGUES, D.L. HANNIBAL.

105. **Grooming and ectoparasitism in ring-tailed lemurs (*Lemur catta*) and Verreaux's sifaka (*Propithecus verreauxi*).** J.E. LOUDON, M.L. SAUTHER.
106. **Do mate advertisement calls given by male mouse lemurs (*Microcebus murinus*) contain patrilineal signatures?** S.E. KESSLER, M. SCHEUMANN, L.T. NASHI, E. ZIMMERMANN.

Session 39. Human and non-Human Primate Positional and Locomotor Behavior. Morphology and Dentition. Contributed posters. Alvarado EFGH. Chair: Scott Legge.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

107. **Locomotor development of wild chimpanzees.** L. SARRINGHAUS.
108. **Locomotor versatility in wild ateline primates.** D.M. GUILLOT.
109. **Ontogeny of positional behavior in captive silvered langurs (*Trachypithecus cristatus*).** A.L. EAKINS, W.S. MCGRAW.
110. **The effect of unstable substrates on the locomotion of capuchin monkeys.** ASHLEY D. GOSSELIN-ILDARI.
111. **Intraspecific variation in spectral tarsiers.** S. GURSKY.
112. **Molecular phylogenetics and chronometrics of Tarsiidae based on 12s mtDNA haplotypes: Evidence for Miocene origins, numerous diversifications within the Sulawesi clade.** M. SHEKELLE, R. MEIER, I. WAHYU, WIRDATETI, N. TING.
113. **Paper withdrawn**
114. **The skull of *Tarsius*: functional morphology, eyeballs, and the non-pursuit predatory lifestyle.** A.L. ROSENBERGER.
115. **The visual ecology of *Tarsius*.** G.L. MORITZ, N.J. DOMINY.
116. **Hominoid visual brain structure volumes and the position of the lunate sulcus.** A.A. DE SOUSA, C.C. SHERWOOD, H. MOHLBERG, K. AMUNTS, A. SCHLEICHER, C.E. MACLEOD, P.R. HOF, H. FRAHM, K. ZILLES.
117. **Differential selection for color vision in two nocturnal folivores.** C.C. VEILLEUX, E.E. LOUIS, D.A. BOLNICK.
118. **Orbit and skull size in catemeral owl monkeys of the Argentinean Chaco.** M.N. COLEMAN.
119. **Ecological determinants of morphological integration in the capuchin face.** J. MAKEDONSKA, B.W. WRIGHT, D.S. STRAIT.
120. **Variation in lingual fungiform papillae taste buds among primates.** M.N. MUCHLINSKI, A.M. BURROWS, T.D. SMITH, L.J. ALPORT.
121. **Face to face with the social brain: correlated evolution of neocortical structure and facial expression in anthropoids.** S.D. DOBSON.
122. **Length of Weaning, Not Gestation, Predicts Brain Size in Rodents.** J.D. PAMPUSH, L. BARONE, B.C. CAMPBELL.
123. **Dietary influences over temporomandibular joint shape.** C.E. TERHUNE.
124. **Do old sifakas (*Propithecus edwardsi*) chew differently?** S. BLATCH, D.M. BOYER, S.J. KING, J.M. BUNN, J. JERNVALL, P.C. WRIGHT.
125. **Paranasal maxillary spaces in Old World monkeys: The perinatal period.** T. D. SMITH, J. B. ROSSIE, G. M. COOPER, R. M. SCHMIEG, C. J. BONAR, M. P. ZUMPARO, A. M. BURROWS and V. B. DELEON.
126. **Correlated evolution in the anthropoid dentition: Is canine size influenced by changes in incisor and postcanine size?** JEREMIAH E. SCOTT.
128. **Characterizing 'kindergartens': nest use and infant parking strategies in *Varecia variegata*.** ANDREA L. BADEN
129. **Chronology of the developing dentition in a juvenile gorilla.** H. GLOWACKA.
130. **Dental development timing in *Pan paniscus* with comparisons to *Pan troglodytes*.** D. BOLTER, A. ZIHLMAN.
130. **Molar size variation related to age in Amboseli baboons (*Papio cynocephalus*).** J. GALBANY, . DOTRAS, J. ALTMANN, A. PÉREZ-PÉREZ, S.C. ALBERTS.
131. **Incisor curvature and diet in cercopithecoids.** R. SCHUBERT, D. GUATELLI-STEINBERG, P. SCIULLI, S. MCGRAW.
132. **Craniofacial variation and its relationship to diet in sympatric species of colobine monkeys.** J.M. HARRINGTON, J.E. SIRIANNI.
133. **Functional loading, facial remodelling and the formation of the maxillary sinus and maxillary fossa in *Macacca fascicularis* and *Cercocebus torquatus*.** L.C. FITTON, J. SHI, J. LIU, M.J. FAGAN, P. O'HIGGINS.
134. **Allometry of masticatory loading parameters in primate and non-primate mammals.** M.J. RAVOSA, C.F. ROSS, D.B. COSTLEY, S.H. WILLIAMS, S.W. HERRING, Z.-J. LIU, K.L. RAFFERTY, W.L. HYLANDER.
135. **Lower molar cusp pattern variation in Gorilla gorilla gorilla and Gorilla beringei graueri.** S. LEGGE.
136. **Carabelli's trait expression at the enamel-dentine junction (EDJ) and outer enamel surface (OES) of *Pan* maxillary molars.** A. ORTIZ, M.M. SKINNER, S.E. BAILEY, J.-J. HUBLIN.
137. **Enamel Prisms Revealed in Three-Dimensions by Phase Contrast Synchrotron Microtomography.** J.P. ZERMENO, T.M. SMITH, P. TAFFOREAU.
138. **Step width and carrying: a biomechanical mystery solved.** D. WEBB, S. BRATSCHE.
139. **Generating and equal effective limb length creates equal step lengths in four New World monkeys.** L.E. JOHNSON, D. SCHMITT, M.D. ROSE, J.E. TURNQUIST.
140. **Intersegmental coordination during quadrupedal walking in Japanese macaques (*Macaca fuscata*).** Y. HIGURASHI, E. HIRASAKI, H. KUMAKURA.
141. **The effect of spatial variation in the arboreal environment on gibbon brachiation mechanics.** F. MICHILSENS, K. D'AOÛT, P. AERTS.
142. **Manual and pedal pressures during sloped quadrupedal locomotion in *Lemur catta* and *Varecia rubra*.** L.R. PARKER, R.E. WUNDERLICH, T.L. KIVELL.
143. **Plantar pressure during bipedalism and quadrupedalism in *Cebus*.** M.B. BARDEN, R.E. WUNDERLICH, B. DEMES.
144. **Paper withdrawn**

145. **Shape variation and morphological integration in the atlas and axis of anthropoids and their functional implications.** K. CARTER.
146. **Shape analysis of the hominoid clavicle.** T.M. GREINER.
147. **Rectal flexion is homoplastic amongst great apes.** T.R. DISOTELL, C.M. BERGEY.
148. **Astragalar shape: differences and similarities in articular morphology among diverse catarrhines taxa.** K. TURLY, E. MIDTTVEIT, E.H. GUTHRIE, S. FROST.
149. **Internal phalangeal morphology: adaptations to loading in primate locomotion.** D. L. BEGUN
150. **Representing the geometry of organisms: precision and accuracy in finite element modeling.** A.L. SMITH, I.R. GROSSE, P.C. DECHOW, D.S. STRAIT.
151. **Asymmetry in *Saguinus oedipus* limb bone dimensions.** A.D. SYLVESTER.
152. **Robusticity, architecture and asymmetry in the upper limb: an investigation into the division of labor and soldier status in the ancient Middle East.** J.A. RHODES.
153. **A comparative analysis of sexual shape dimorphism in the human midcarpal joint.** T.L. KIVELL, I. GUIMONT.
154. **Geometric morphometric analysis of the human innominate for sex estimation.** J. VOLLNER, A. KLALES, S. OUSLEY.
155. **The impact of weight on long bone cross-sectional geometry.** G. AGOSTINI.
156. **Comparison of limb bone biomechanical properties among primates, bats, gliders, and squirrels.** J. RUNESTAD CONNOUR.
157. **Humero-femoral strength indices, locomotion and foraging strategies among hunter-gatherers, primates and fossil hominins.** J.T. STOCK.
158. **Remodeling variation in the human appendicular skeleton.** R.A. WALKER.
159. **Does mean osteon size decrease with increasing age in the second metacarpal?** B. DENNY, M.A. STREETER, R. LAZENBY, M.S.M. DRAPEAU.
160. **Histomorphology of human ribs in methamphetamine users.** R. KARINEN, M. STREETER.
161. **Secondary osteon cross-sectional size and morphotype score are independent in limb bones subject to habitual bending or torsion.** T.J. WILLIAMS, C.N. JARDINE, K.E. KEENAN, J.G. SKEDROS, C.J. KISER.
162. **Twelve-point osteon morphotype scoring schemes are not better than a six-point scoring scheme for interpreting habitual bending: evaluation in chimpanzee femora.** C.J. KISER, J.G. SKEDROS, K.E. KEENAN, S.C. THOMAS, A.B. BECKSTROM.
163. **Female mating tactics in wild Phayre's leaf monkeys.** A. LU, J.C. BEEHNER, N.M. CZEKALA, C. BORRIES.
164. **Covariation between facial and mandibular shape in *Hylobates* and *Pongo* with respect to facial orientation.** S. SENCK, M. COQUERELLE, G.W. WEBER.
165. **Metric assessment of the human bicondylar angle.** E.B. WAXENBAUM, M.K. STOCK, D.R. HUNT.
166. **Activity, genes, and diaphyseal structure.** I.J. WALLACE, K.M. MIDDLETON, S. LUBLINSKY, S.A. KELLY, S. JUDEX, T. GARLAND JR., B. DEMES.
167. **Subtrochanteric dimensions of the femur: where, oh where, to measure?** S. DANESHVARI.
168. **Scapular spine orientation determines the relative proportions of the supraspinous and infraspinous fossae.** M.S. SELBY, C.O. LOVEJOY.
169. **Lumbar spine spondylolysis: using computed tomography to evaluate the possibility of adult onset lumbar spondylosis as a cause of back pain.** M.C. ROSETT, B.K. BROOKS, S.L. SOUTHAM, G.W. MLADY, J. LOGAN.
170. **Evidence of perimortem trauma in free-ranging mountain gorillas (*Gorilla beringei beringei*) from Volcanoes National Park, Rwanda.** A.B. ERIKSEN, S.P. NAWROCKI, S.C. MCFARLIN, T.G. BROMAGE, K. FAWCETT, M.R. CRANFIELD, A. MUDAKIKWA.
171. **Adaptations in prosimians glenohumeral joint structure relative to posture and locomotion.** A.S. WRIGHT-FITZGERALD, A.M. BURROWS.
172. **Rib shapes and thoracic cage morphology in prosimians and anthropoids.** M. KAGAYA, N. OGIHARA, M. NAKATSUKASA, B. SENUT.
173. **Grasping, clasping, and claw climbing: locomotor specializations of non-hallucal distal phalanges in plesiadapiform primates.** S. MAIOLINO, D.M. BOYER, J.I. BLOCH.
174. **Musculoskeletal markers of the ankle and foot: another look at obesity's effect on modern American white males.** R. WILSON, K. GODDE, E. KNAPP.
175. **Assessment of musculoskeletal stress markers in the hand.** L.A. CASHMORE, S.R. ZAKRZEWSKI.
176. **Analysis of lipping on appendicular joint surface in known age and sex samples from the Terry and Spitalfields collections.** M.L. WEBB, F.L. WILLIAMS.

Session 40. Growing Up Primate: Human and Nonhuman Craniofacial Ontogeny and Biomechanics.

Contributed posters. Alvarado EFGH. Chair: Rebecca Jabbour.

8:00-8:30 am:	Poster set-up
6:00-6:30 pm:	Poster take-down
10:00-10:30 am and 2:00-2:30 pm:	Authors of even number posters present for discussion
10:30-11:00 am. and 2:30-3:00 pm:	Authors of odd number posters present for discussion

177. **Contrasting growth patterns in strength of the human mandible and long bones.** M. HOLMES, E. GAROFALO, C. RUFF.
178. **Human fetal and postnatal rates of cranial bone growth and patterns of vault curvature.** D.J. RUSSELL, F.L. WILLIAMS.
179. **Metric, morphologic, and functional analysis of frontal bone ontogeny in *Homo sapiens*.** C.L. IBARRA, G.D. RICHARDS, R.S. JABBOUR, C.F. HORTON.
180. **Foramen magnum growth in modern humans: the ventral component.** R.S. JABBOUR, G.D. RICHARDS.
181. **Correlation between measures of the lateral and midline basicranium: implications for understanding facial positioning in anthropoid primates.** T.B. RITZMAN, L.E. COPES, K.L. LEWTON.
182. **Midfacial and dental factors that constrain maxillary sinus expansion in anthropoids: the perinatal period.** R.M. SCHMIEG, G.M. COOPER, J.B. ROSSIE, C.J. BONAR, M.P. MOONEY, M.I. SIEGEL, T.D. SMITH.

183. **Getting in the groove: indirect observations of the primate vomeronasal system using CT.** E. GARRETT.
 184. **Constrained development of language processing: ontogenetic organization of the developing petrosal conditions the early human speech pattern.** L.A. HOGAN.
 185. **Platyrrhine incisal curvature and diet: an independent test of the incisor morphological correlates with dietary proportions reported for extant hominoids.** Z.M. KISER, D.B. STEPHENS, A.S. DEANE.
 186. **Craniofacial developmental instability and masticatory behavior.** R.A. MENEGAZ, S.V. SUBLETT, S.D. FIGUEROA, T.J. HOFFMAN, M.J. RAVOSA.
 187. **Trabecular bone volume fraction may reflect dietary adaptations: an analysis of the mandibular condyles of non-human primates.** S. COINER-COLLIER, R.S. SCOTT.
 188. **Enlarged jaw proportions: load magnitude or load frequency?** J.A. LEDOGAR.
 189. **Adaptations to tree-gouging in the anterior masticatory apparatus of marmosets (*Callithrix*).** R. HOGG, M.J. RAVOSA, C.J. VINYARD, T.M. RYAN.
 190. **Influence of body size on jaw-gape related characteristics among marmosets.** E.C. FORSYTHE, S.M. FORD.

Saturday April 17, 2010. Afternoon sessions

Session 41. Hominin morphology, integration and growth. Contributed papers. *Alvarado A.* Chair: Peter S. Ungar.

- 1:00-1:15 **Petrous bone orientation, foramen magnum position and the evolution of early hominids.** A. BARASH, E. BEEN, Y. RAK.
 1:15-1:30 **Statistical analysis demonstrating the species distinctions of the Lothagam and Tabarin mandibles.** M. KISSEL, J. HAWKS.
 1:30-1:45 **Dental microwear texture analysis of newly discovered hominins from Olduvai Gorge.** P.S. UNGAR, K.L. KRUEGER, R.J. BLUMENSCHINE, R.S. SCOTT, J.K. NJAU.
 1:45-2:00 **Mandibular variation in southern African early *Homo*.** L. SCHROEDER, R.R. ACKERMANN.
 2:00-2:15 **Non-dietary abrasives and the evolution of hominin megadonty.** R. CUDDAHEE, R. MADDEN, S. CHURCHILL, R. BOBE.
 2:15-2:30 **Magnitude of the “wild effect” in tooth emergence in chimpanzees of the Taï and Gombe forests.** B.H. SMITH, C. BOESCH.
 2:30-2:45 **Paper withdrawn.**
 2:45-3:00 **Sexual Dimorphism in the Human Mandible: Fourier Descriptors.** P.E. LESTREL, F. OHTSUKI, Y. MIZOGUCHI, C.A. WOLFE.
 3:00-3:15 **The modern human mandible prior to M1 emergence: a closer look incorporating muscle insertions and the deciduous tooth arrangement.** M. COQUERELLE, S. BENAZZI, F.L. BOOKSTEIN, J. BRAGA, S. KATINA, D.J. HALAZONETIS, G.W. WEBER.
 3:15-3:30 **Break**
 3:30-3:45 **Beyond thick versus thin: Sex and cranial vault thickness in recent humans.** H.E. MARSH.
 3:45-4:00 **Genome-Wide Association Studies (GWAS) of Multiple Related Bone Traits: How to Deal with the Information Overflow.** D. KARASIK, Y. HSU, M. GUPTA, S. DEMISSIE, L.A. CUPPLES, D.P. KIEL.
 4:00-4:15 **Changes in the trabeculae of spongy bone as an indicator of anemia?** K. KOEL, M. SCHULTZ.
 4:15-4:30 **The effects of age, sex and geographic location on diet in Dark Age England.** S. MAYS, N. BEAVAN-ATHFIELD.
 4:30-4:45 **Allometric and ecogeographic limb growth among Late to Final Jomon period foragers from Japan.** D.H. TEMPLE, K. OKAZAKI.
 4:45-5:00 **Discussion.**

Session 42. Invited podium symposium. Computational methods for the automated analysis of virtual hominid endocasts. *Alvarado B.* Organizers: Sylvain Prima, Gérard Subsol and José Braga.

- 1:00-1:15 **Community repositories for voxel datasets and derivative D visualizations: Opportunities and obstacles identified by the DigiMorph.org Project.** T. ROWE.
 1:15-1:30 **D automatic methods to segment “virtual” endocasts: state of the art and future directions.** G. SUBSOL, G. GESQUIÈRE, J. BRAGA, F. THACKERAY.
 1:30-1:45 **D automated quantification of asymmetries on fossil endocasts.** B. COMBÈS, J. BRAGA, F. THACKERAY, S. PRIMA.
 1:45-2:00 **Evolutionary morphing.** N. AMENTA, D. GHOSH, A. SHARF, F.J. ROHLF, W. HARCOURT-SMITH, S. FROST, D. WILEY, K. ST. JOHN, E. DELSON.
 2:00-2:15 **Creating statistical atlases of modern primate endocranial morphology using non-rigid deformation analysis of high-resolution CT images.** P.T. SCHOENEMANN, J. MONGE,

2:15-2:30	R.L. HOLLOWAY, B.B. AVANTS, J.C. GEE. Comparison of endocranial ontogenetic trajectories with implications for hominin brain evolution. S. NEUBAUER, P. GUNZ, J. HUBLIN.
2:30-2:45	The relationship between hard and soft tissue: lessons for reconstructing virtual endocasts. K. ALDRIDGE, Y. HEUZÉ, C. PERCIVAL, J. STELLA, L.G. HOWELL, I. GEORGE, J. MARSH, A. KANE, T.M. RYAN, J.T. RICHTSMEIER.
2:45-3:00	Brain shape and human variation: from integration to cognition. E. BRUNER, M. MARTIN-LOECHES, R. COLOMA
3:00-3:15	Paper moved to session 23 #94
3:15-3:30	Break
3:30-3:45	Endocranial shape asymmetries in hominids, including fossil hominins and extant hominids, assessed via skull based landmark analysis of D reconstructions from CT images. A. BALZEAU, E. GILISSEN, D. GRIMAUD-HERVÉ.
3:45-4:00	Endocranial anatomy of a new <i>Homo erectus</i> specimen from Sangiran (Java, Indonesia). D. GRIMAUD-HERVÉ, A. BALZEAU, H. WIDIANTO, T. DJUBIANTONO, F. DÉTROIT, A. SÉMAH, F. SEMAH.
4:00-4:15	The Hobbit Brain: some questions about its ‘derived’ features. R. HOLLOWAY, J. MONGE, T. SCHOENEMANN.
4:15-4:30	Measuring the inter-species variability of endocast growth using shape regression and spatiotemporal registration. S. DURRLEMAN, X. PENNEC, A. TROUVÉ, N. AYACHE, J. BRAGA.
4:30-4:45	Discussants. S. PRIMA, J. BRAGA.
4:45-5:00	General discussion.

Session 43. Invited Podium Symposium. Trabecular Bone Structure and Function in Primates: Recent Advances and Future Directions. *Alvarado C.* Organizers: Timothy M. Ryan, James H. Gosman, and Brian G. Richmond.

Building on Wolff's (1892) seminal observations regarding the link between trabecular bone form and function, the functional significance of trabecular bone has been a topic of interest to morphologists for many years. As a tissue that potentially responds to changes in the degree and manner of activity, trabecular bone offers the potential to provide information about functional activity during life in living and extinct animals. Computational advancements and the increased availability of high-resolution computed tomography now allow researchers to image and analyze complex three-dimensional (3D) trabecular structures. These advances have catalyzed novel research on the structure and variation of trabecular bone in the primate postcranial skeleton. Biological anthropologists are now examining bone microarchitecture and structural parameters in a range of skeletal elements with the goal of elucidating the relationships among 3D trabecular bone architecture, ontogeny, and locomotor function in living and extinct primates. This symposium explores current research on the functional significance of 3D trabecular bone architecture, its relationship to locomotor behavior in extant primates, and its potential for providing a new approach to reconstructing locomotor behaviors in the fossil record based, in part, on a fossilized evidence of activity during life. The papers in this symposium highlight a diversity of approaches, taking advantage of high-resolution imaging and advanced quantitative and modeling techniques to investigate inter- and intraspecific variation in trabecular bone morphology.

1:00-1:15	Trabecular eccentricity: this new characteristic reveals relative influences of tension and compression stress in adapting metaphyses/epiphyses for habitual bending. J.G. SKEDROS, C.J. KISER, K.E. KEENAN.
1:15-1:30	Accounting for resolution effects in trabecular metrics. R.A. KETHCAM, J.H. GOSMAN.
1:30-1:45	Growth change of calcaneal internal structure in Japanese macaques: correlations with locomotor development. N. EGI, N. OGIHARA, W. YANO.
1:45-2:00	First steps: trabecular morphology of the juvenile calcaneus. A. ZEININGER, T.M. RYAN.
2:00-2:15	Looking up: human tibial trabecular bone microarchitecture and the development of the femoral bicondylar angle. J.H. GOSMAN, D. KIM, R.A. KETCHAM.
2:15-2:30	Does the amount of bone dictate the trabecular bone structure in strepsirhine lumbar vertebrae? R. FAJARDO, J. DE SILVA, L. MACLATCHY.
2:30-2:45	Variation in trabecular microarchitecture within the thoracic vertebral body of extant hominoids. M.M. COTTER, B.J. GOODWINE, S.W. SIMPSON, C.J. HERNANDEZ.
2:45-3:00	Morphological differences in humeral cancellous bone of Neanderthals and extant hominids. H. SCHERF, J. HUBLIN.
3:00-3:15	Interlimb variation in trabecular bone architecture in primates. T.M. RYAN, A. WALKER, A. SWIATONIEWSKI, B. VAN RIETBERGEN.
3:15-3:30	Break
3:30-3:45	Hand biomechanics and trabecular architecture in hominoid metacarpals. H. CHIRCHIR, B.G. RICHMOND, N.L. GRIFFIN, M. NAKATSUKASA, A. ZEININGER, R.A. KETCHAM.
3:45-4:00	Tool use and inter-population variation in metacarpal trabecular microarchitecture in <i>Pan troglodytes</i>. R. LAZENBY, M.M. SKINNER, J. HUBLIN, C. BOESCH.

4:00-4:15	Comparative forefoot trabecular bone architecture in extant hominids. N.L. GRIFFIN, R.A. KETCHAM, K. D'AOÛT, A. POSTNOV, N. DE CLERCK, T.M. RYAN, B.G. RICHMOND.
4:15-4:30	Quantitative analysis and functional significance of subchondral and cancellous bone micro-architecture in the hominid hind foot. A. SU.
4:30-4:45	Discussant. C.B. RUFF
4:45-5:00	General discussion

Session 44. Human and Non-Human Population and Phylogenetic Studies. *Alvarado D.* Contributed papers.

Chair: J. Phillips-Conroy.

1:00-1:15	Signatures of selection at obesity-implicated genes in a worldwide sample. Y. KLIMENTIDIS, M. ABRAMS, J. FERNANDEZ, D. ALLISON.
1:15-1:30	Evolutionary and functional analysis of a developmental enhancer with human-specific expression. S.J. SHOLTIS, H. BRESLAWSKI, L. DEMARE, C. PEASE, J. MCGRATH, J.P. NOONAN
1:30-1:45	Sequence variation at the <i>TYRP1</i> gene suggests positive selection for darker pigmentation in the African Mandenka population. H.L. NORTON, M.F. HAMMER.
1:45-2:00	Levels of genetic differentiation at a small geographic scale in human and chimpanzee societies. L. VIGILANT, G. SCHUBERT, K. LANGERGRABER.
2:00-2:15	<i>AluHunter</i>: A new computer program for large-scale identification of Alu-elements for use in primate phylogeny. C.M. BERGEY.
2:15-2:30	Conflicting mitochondrial and Y-chromosomal phylogenies indicate complex evolutionary history of <i>Papio</i> baboons. A.S. BURRELL, C.J. JOLLY, J.E. PHILLIPS-CONROY, T.R. DISOTELL.
2:30-2:45	Discovering developmental signals in phylogenetic dental data - from micro- to macro-evolutionary variability. I. CORFE, E. SEIFFERT, D. BOYER, L. SÄILÄ, J. JERNVALL.
2:45-3:00	Phylogenetic analysis of two malaria-resistance loci. M.E. STEIPER, J.M. ZICHELLO, F. WALSH.
3:00-3:15	Sex gets less dangerous: rapid evolution of syphilis in Renaissance Europe. M. ZUCKERMAN, K. HARPER, A. CAMPBELL, G. ARMELAGOS.
3:15-3:30	Break
3:30-3:45	Intestinal microbial community composition in monkeys. S. YILDIRIM, B.A. WILSON, A. SALYERS, R.M. STUMPF, T.L. GOLDBERG, T. MANOLITO, K.E. NELSON, B.A. WHITE, S.R. LEIGH.
3:45-4:00	Comparative primate vaginal microbial ecology. R.M. STUMPF, S. YILDIRIM, S. LEIGH, A. SALYERS, B.A. WHITE, M. IRWIN, T. GOLDBERG, S. ALBERTS, J. ALTMANN, B.A. WILSON.
4:00-4:15	Regional variation in marine and terrestrial resource consumption in precontact central California: stable sulfur, carbon, and nitrogen isotope analysis of human remains from the San Francisco Bay and Sacramento Valley. E.J. BARTELINK, B.T. FULLER.
4:15-4:30	Application of LC-IRMS to measure $\delta^{13}\text{C}$ values of single amino acids in archaeological bone collagen from north-central California. B.T. FULLER, C.I. SMITH, E.J. BARTELINK.
4:30-4:45	Bone as a biomarker of mercury exposure in prehistoric arctic human populations: initial method validation using animal models. C.M. HALFFMAN.
4:45-5:00	Discussion.