Dr. Marilyn Norconk
Professor & Fulbright Scholar

Dr. Marilyn Norconk was granted emeritus status after her retirement in 2016. During her more than 20 years at Kent State, she directed 5 PhD students, more than 25 Master’s students and countless undergraduates. Marilyn is a distinguished primatologist and international expert in her field with a tremendous record of accomplishments. Her passion for her discipline and for training the next generation is unmistakable and she has a way of inspiring those that work with her to achieve their full potential. We are deeply indebted to Marilyn for her dedication and service to Kent State University and are grateful for all of her continued efforts!

Marilyn continues to be active and recently won a Fulbright Scholar award that will concentrate on conservation efforts in Suriname.

Fulbright U.S. Scholar Grant
Marilyn was awarded a Fulbright “flex-grant” which entails both teaching and research. She will be joined by colleagues, Dr. Sylvia Atsalis (University of Chicago), former KSU MA student, Ari Vreedzaam (UN Small Grants Program, Suriname), and environmental biologist, Chantal Landburg (Advanced Teachers Training Institute, Paramaribo, Suriname) to teach a 10-day workshop to local college students starting September 3rd. Marilyn will be in Suriname a total of 6 months, September-October, February-March, and September-October 2018. In addition to initiating the forest fragments project in northern Suriname, she plans to complete a longitudinal study of tree growth and death at Brownsberg Nature Park. She will be a resident researcher and advisor at Anton de Kom University, Paramaribo, in the lab of Dr. Paul Ouboter.
Dr. C. Owen Lovejoy received the President’s Medal from President Beverly Warren at the May 13th, 2017 commencement ceremony. This is the highest honor conferred by Kent State University and is in recognition of outstanding and extraordinary contributions. Dr. Lovejoy joined the faculty of Kent State University in 1968 as a ‘Temporary Instructor’ (the lowest possible rank for a faculty member). He performed sufficiently well during the next two years to be promoted to Assistant Professor in 1970. In 1989, Dr. Lovejoy was promoted to University Professor and became the Distinguished Professor of Human Evolutionary Studies in 2013 (his current rank).

Dr. Lovejoy will enter his 50th year of service to Kent State University in 2018. His contributions on all levels (teaching, advising, citizenship, scholarship and research) continue to be at the highest level and he is a leader in every capacity. His model for human origins that includes social monogamy with males provisioning females in order to decrease inter-birth intervals has stood the test of time. He was ahead of his time (and technology) when he initially proposed this hypothesis in 1981. Since that time, we’ve made significant advances in understanding the genetic, physiological, and neuroanatomical underpinnings of the human condition. Every new line of evidence contributes to and supports Lovejoy’s unique vision. Visionaries that revolutionize our views of who we are and where we come from are rare, and the impacts of their contributions have lasting and tremendous impact. Lovejoy is one of these visionaries. He re-shaped our understanding of human evolution with his contributions to Lucy in the 1970s, then again with his then-controversial model of human origins, then again with Ardi in 2009, and he continues to re-shape our views of how our species evolved. Stay tuned- Dr. Lovejoy is nowhere near finished revolutionizing our understanding of what it means to be human.
Dr. Metin Eren and Dr. Anthony Tosi each received National Science Foundation awards

**Dr. Eren** and colleagues received an NSF grant for their collaborative research on *The role and function in traditional weapon design*. The goal of this project is to understand the role that function plays in traditional weaponry design. It will investigate the evolution of Ice Age stone tool weaponry, dated to 13,500 to 12,500 years, used by hunter-gatherers in the colonization of North America... The investigators will examine whether different sizes and shapes of Clovis points possess any functional advantages or disadvantages. Through a series of realistic hunting-related experiments in conjunction with a series of controlled engineering experiments, the researchers will determine the prey penetration-ability, aerodynamics, durability, fracture mechanics, and cutting-efficiency of replica Clovis points of varying forms.

**Dr. Tosi** and colleagues received an NSF grant for their collaborative research on *The evolutionary mechanisms of hybridization across a primate radiation*. This is an investigation of whether hybridization between closely-related species has been a significant force in the evolution of primates. Recent research has uncovered that up to 5% of the DNA of many modern humans originated from ancient interbreeding with Neanderthal populations, raising the broader question of whether a species' genetic makeup includes genes brought together through occasional episodes of hybridization... The investigators will examine whether segments of DNA have been transferred between monkey species over time. Two central questions will be addressed. First, are genes more likely to be exchanged between closely related species (e.g., within a genus), or species with deep evolutionary separation (e.g., different genera)? The former scenario allows for a higher frequency of hybridization due to greater overall biological similarity, while the latter scenario allows for more variant, and possibly more advantageous, forms of genes to evolve and transfer between species. Second, will genes exchanged through hybridization be unique, or will patterns of genes with similar functions be found to repeatedly cross between species? If the latter, such patterns will reveal a more general pattern by identifying genes that are likely the essential drivers of the evolutionary process in primates.
Dr. Linda Spurlock teaches forensic facial reconstruction in Florence, Italy and a success closer to home

**Dr. Linda Spurlock** taught a new upper level Anthropology course at Kent State University’s Summer Florence Institute this summer. The course, FACES: Human Head Anatomy with a Forensic Art Focus, used insight and teachings from Renaissance artists and anatomists to learn head and neck anatomy and forensic facial reconstruction.

**Dr. Spurlock recently** provided the critical forensic facial reconstruction that led to the identification of a woman murdered in Cleveland. Linda worked with the Cuyahoga County Medical Examiner’s Office to identify the woman, whose remains were found in a vacant lot in Cleveland in 2016. The remains were mostly skeletal, so investigators called on Linda to complete a sketch.
Dr. Rick Feinberg elected Section Assembly Convener for AAA and inducted as Honorary Fellow

At the end of 2016, Dr. Feinberg took office as the American Anthropological Association’s Section Assembly Convener. The AAA [http://www.americananthro.org/] is the world’s largest association of professional anthropologists, with approximately 10,000 members. The AAA consists of forty sections. Sections are represented in the Association’s decision-making process by their respective presidents, who make up the Section Assembly. The SA convener leads the Section Assembly and chairs the Section Assembly Executive Committee. He or she also serves on the AAA’s national Executive Board and about a half dozen other committees, making this one of the most influential positions in the global anthropological community. Professor Feinberg’s term runs for three years and will conclude at the end of the Association’s 2019 annual meeting.

Rick was officially inducted as an Honorary Fellow of the Association for Social Anthropology in Oceania at its annual meeting in February 2017. ASAO [http://www.asao.org/] is the world’s largest international association devoted specifically to the anthropological study of Pacific Island cultures and societies. Honorary Fellow is a lifetime position conferred by ASAO upon a maximum of 25 scholars for their pre-eminent contributions to Pacific Island studies. Others so honored have included such luminaries as Margaret Mead, Sir Raymond Firth, Douglas Oliver, Marshall Sahlins, Maurice Godelier, and Dame Marilyn Strathern.

Rick was also invited to give a keynote address in October, 2017 at a conference sponsored by the anthropology program at Palacký University in Olomouc, Czech Republic.
Department of Anthropology Endowed Fund for Graduate Student Research- UPDATE

The first two research awards from the Endowed Fund were granted to doctoral students Morgan Chaney and Dexter Zirkle in 2017. The Endowed Fund for biological anthropology doctoral students was fully endowed in 2016, an effort spearheaded by Bob Tague (Ph.D. ’86) and supported by numerous alumni, faculty, and friends.

Morgan is currently completing a pilot project for his dissertation on the evolution of detoxifying enzymes within the cytochrome P450 2C gene-cluster. Very soon, he and two of his committee members (Drs. Anthony Tosi and Helen Piontkivska) will be submitting a manuscript of this study, which was completed using publicly available genomic data from 16 primate species. He is excited to use the funding he received through the BAP Endowed Fund to expand his dataset to include P450 sequences from species whose genomes are not freely available.

Dexter’s research focus is growth and development of the ilium under the direction of Dr. Owen Lovejoy. Dexter is examining a unique growth center on the human ilium that appears to have a dedicated vascular system. Dexter is using the money awarded by the BAP Endowed Fund to obtain nonhuman primate biological material. He will be employing a radiologic method to visualize the internal structures of bone and vessels using CT scans.

We want to continue increasing the amount of the principal in the account (and, more importantly, increasing the amount of awards to doctoral students). Our long-term goal is to augment the fund by $10,000 every seven years. We can achieve this target if 15 people donate $100 each year. Please consider being one of the 15 people. You do not have to donate every year, but consider doing so once every other year. Here is information on how you can help. Checks should be made payable to: Kent State University Foundation. You can also pay by Mastercard or Visa; call the Foundation Office at 330-672-2222. Include our account number – 34363 – on your check or letter accompanying your payment. The title of our account is “Department of Anthropology Endowed Fund-Graduate Student Research.” The postal address is: Kent State University Foundation, P.O. Box 5190, Kent State University, Kent OH 44242.
This past July I was fortunate enough to be one of the 10 students participating in the 2017 Summer Institute for Museum Anthropology (SIMA) at the Smithsonian Institution. SIMA is an intensive four-week program in residency at the Smithsonian, which offers instruction from museum staff and visiting anthropologists, provides hands-on instruction for learning “how to look” at objects, and is tailored towards individual research projects. The primary goal of the program is to offer students of cultural anthropology the tools and experience needed to work with museum collections as a source of data for ethnographic research.

My daily routine was divided between instruction in the mornings, followed by individual research time in the afternoons. During the afternoon, I divided my time between reading the accession record for the collection which ultimately became my research focus, and looking at the objects in storage while accompanied by one of the three interns who assisted with the program. Students are not expected to complete their projects during SIMA, instead it is expected that during the four weeks students will refine their initial proposals and continue working on their projects during the following year.

Initially, I went into the program with the intention of researching Melanesian stone tools with the goal of understanding the manufacture of traditional canoes. This proved to be untenable for a number of reasons, most importantly was the lack of materials available which would be appropriate for such a research project. Instead, my research turned towards one collection in particular, the George C McGhee Collection. The collection is comprised of 464 objects which were purchased and collected during the 1970s by former US ambassador and Mobil Oil Director George McGhee. Though all of the objects originate from Melanesia, over half of the collection is from the Sepik River. The objects range in design from seemingly mundane personal adornments to sacred ancestral carvings, and range in size from something that can fit in the palm of your hand to a 16ft carved pole from a Haus Tambaran along the lower Sepik River. This relatively short collection period combined with a fairly focused geographical origin makes the McGhee collection particularly interesting as a “snapshot” of the kinds of items which were made to circulated in both the tourist and art trade at the time. Following the example of anthropological studies of expeditions, my goal is to describe the McGhee collection through a number of frameworks including: a biographical examination of the collector and his motivations for acquiring the objects, a network approach to the collecting process focusing on the various intermediaries involved, a systematic object-focused analysis of the collection and a comparative analysis of the McGhee collection with similar collections. I will be excited to see how much I am able to discover over the next several months, which at this point feels like the surface has only been scratched.
International Collaborations with the Primate Research Institute, Kyoto University

This summer three members of the Anthropology Department visited the Primate Research Institute (PRI) of Kyoto University and – building on foundations formally established last year (MOU signed August 2016) – expanded inter-institutional research ties. Master’s student Danielle Jones received an NSF East Asia and Pacific Summer Institutes (EAPSI) award to study a gene that modulates aggression in primates. She worked for 10 weeks with Dr. Yukiori Goto and Dr. Hiroyuki Tanaka to examine whether different alleles of the MAOA gene were correlated with different levels of aggression in two species of macaque monkeys. Dr. Metin Eren visited the PRI for two weeks in July and was hosted by Dr. Masaki Tomonaga. Dr. Eren gave two presentations related to primate experimental archaeology, followed by an extended flintknapping demonstration. Later he discussed with Dr. Tomonaga potential projects focusing on primate tool use. Dr. Tosi also visited in July and was hosted by Dr. Hirohisa Hirai. Together they worked on two manuscripts: one on X-chromosome exchange between hybridizing Cercopithecus monkeys (which is now accepted to Cytogenetics and Genome Research) and a second on chimpanzee chromosome dynamics during sex cell development. Dr. Tosi also met with several of the PRI faculty and discussed a grant proposal to the NSF International Research Experience for Students (IRES) program.
In the Eren Lab for Experimental and Prehistoric Archaeology, faculty, graduate students, and undergraduates are busy unraveling the origins and evolution of technology -- from 3 million years ago to the present day. Analyses of actual prehistoric artifacts from the Late Pleistocene thru the Holocene allow lab members to discern *how* the evolution of technology actually occurred. Then, through experiments, lab members make, break, use, and abuse replica artifacts to reverse engineer them and figure out how they work. This involves a lot of shooting, knapping, cutting, stabbing, burning, crushing, and generally lots of destruction. These experiments help Eren Lab members to hypothesize and infer *why* technology evolved. Biological methods and procedures, like quantitative methods, inferential statistics, phylogenetic methods, morphometrics, among others, then permit faculty and students to make conclusions relevant to human evolution, essentially turning archaeology into the evolutionary anthropology of primate technology.
Researchers Find Pathologic Hallmarks of Alzheimer’s Disease in Aged Chimpanzee Brains

Dementia affects one-third of all people older than 65 years in the United States. The most common cause of dementia is Alzheimer’s disease (AD), a progressive, irreversible brain disease that results in impaired cognitive functioning and other behavioral changes. Humans are considered uniquely susceptible to AD, potentially due to genetic differences, changes in brain structure and function during evolution, and an increased lifespan. However, a new study published in an upcoming issue of *Neurobiology of Aging* provides the most extensive evidence of AD brain pathology in a primate species to date.

Dr. Melissa Edler (Ph.D. ’16) found that the brains of aged chimpanzees, our closest living relatives, show pathology similar to the human AD brain.

Dysfunction of two proteins, amyloid beta (Aβ) and tau, play a role in the development of AD. In healthy brains, Aβ is degraded and eliminated, but in AD, overproduction and disrupted clearance of the protein results in the formation of plaques between brain cells called neurons. Aβ in the form of insoluble plaques and soluble peptides initiates changes in tau, another protein found mostly in neurons, that destabilizes the cell’s skeleton. In AD, alterations in tau lead to the formation of neurofibrillary tangles (NFT) and cell death. These neuronal changes result in the onset of dementia.

While Aβ and tau pathology have been identified in species other than humans, these animals typically present with only one lesion type. The only evidence of Aβ plaques and NFT coexisting in the same individual of a primate species had been reported in a single chimpanzee that suffered a stroke prior to death. “Very few studies have investigated AD pathology in chimpanzees, the species closest in phylogeny and most genetically related to humans,” states senior author Mary Ann Raghanti, Ph.D., “Brain samples from great apes, particularly aged individuals, are incredibly scarce, so a study of this size is rare.”

This research adds to a growing number of studies using an evolutionary perspective to identify differences between humans and their closest living relatives that could lead to potential targets for therapeutic interventions in humans. “We initiated the Great Ape Aging Project twenty years ago, because we saw an aging chimpanzee population under human care that would need geriatric attention for disorders similar to those affecting aging humans,” says Joseph Erwin, Ph.D., research professor of anthropology at The George Washington University. “Findings like those reported in this paper provide significant evidence of the value and need for continued behavioral, cognitive, and neurogenomic work with this important species,” says William D. Hopkins, Ph.D., professor of neuroscience at Georgia State University and associate research scientist at Yerkes National Primate Research Center, Emory University. “This study confirms the value of a "One Health" approach to gerontology and the neurobiology of aging for the benefit of humans and apes,” adds Erwin.
NEW! Forensic Anthropology Minor

The Department of Anthropology at Kent State University offers several undergraduate degrees which include two B.S. tracks (biological anthropology and archaeology), a B.A., and a minor in anthropology. We are excited to announce that we also have a new forensic anthropology minor. Forensic anthropology is the application of biological anthropology in a medico-legal context. We use archaeology, genetics, and skeletal analyses to (1) discover, recover, and identify human remains and (2) compare DNA profiles from evidence against those of suspected criminals. We have three faculty recognized as expert witnesses by numerous courts from California to New York (Lovejoy, Spurlock, and Tosi), making this a perfect addition to our degree offerings. We’ve structured the coursework to allow students that are majoring in anthropology to also take this minor.

NEW!!

Forensic Anthropology Minor

18 credit hours

Forensic anthropology (def.) the application of biological anthropology in a medico-legal context.

We use archaeology, genetics and skeletal analyses to discover, recover and identify human remains, and compare DNA profiles from evidence against those of suspected criminals.

ACTIVE FALL 2017
www.kent.edu/anthropology/forensic-anthropology-minor
Alumni Spotlight: Robert Walker, Ph.D. ‘89

Robert A. Walker (Rob) was one of the earliest graduates of the Kent State Graduate Program in Biological Anthropology. He graduated from the University of Arkansas in 1980 (with high honors) in 1973. He received his MA (1982) and Ph.D. (1989) from our program and then became a postdoctoral fellow at Northwestern in 1990-1991. There he began his long term interest in bone biology and learned many of the techniques that he would apply over his long career in biological anthropology. He also taught anatomy at the Northwestern Dental School while there. For a while after her Postdoc she actually worked for the U.S. army as a project officer collecting anthropometric data on U.S. troops. Those of us from the “old school” will instantly recognize where we worked (Natick, Massachusetts) as it was also central to 20th century forensic research back then—Natick was the location of the Stewart-McKern project on pubic symphyseal ageing of the Korean War Dead. In 1994 he joined the faculty of the New York Chiropractic College in Seneca Falls, N.Y., then and now recognized essentially as the “Harvard” of Chiropractic training. He advanced rapidly and became head of the anatomy department in 1996 and then head of the entire Department of Basic Medical Sciences in 2003. He then initiated an MS program in anatomy and became its Founding Dean in 2006. Rob’s work on bone histology has been exemplary and has greatly contributed to our understanding of hard tissue structure—especially at the histological level. This has always involved substantial dedication in sample preparation and hours of work at the microscope counting osteons and osteon fragments and their relationship to a variety of other variables, but especially skeletal homeostasis and the effects of age, sex, and population geography. Remodeling is an exceptionally difficult process to figure out, and Rob’s work has greatly contributed to our (yet incomplete) understanding of it. He has published widely and has presented 50+ papers at national meetings. In 2002 he was the principal author of a widely used text: *Skeletal and Developmental Anatomy for Students of Chiropractic* that included both Lovejoy and Lisa Bedford (who also taught at New York Chiropractic for some years). The book was published by F.A. Davis, and has gone through several printings. A few years back Rob bought a cabin in the Arkansas woods and has been remodeling it whenever he has gotten the time away from work. I suspect his on-the-job training in helping build the privacy fence in Lovejoy’s back yard has come in handy for this project. He plans to retire there after a few more years of teaching but we certainly hope he will drop by during his trips to and from his cabin project when he’s able.

If you would like to make a donation to the Mark F. Seeman Fund for Archaeological Research or the Endowed Fund for Graduate Student Research, visit our website to follow the link to make a donation or contact David Grober at dgrober@kent.edu or 330-672-5297.