After its provisional acceptance in San Rafael, Middle East Technical University’s (METU) bid for the 2018 International Meeting has been enthusiastically approved

Contributed by Evangelia Ioannidou, Conference Organizer (ioannido@metu.edu.tr)

Aims of the conference
ICAZ International Meetings welcome all themes envisioned by the membership, but we would particularly like to encourage sessions that touch upon:

- Regional and synthetic approaches which address “big” picture questions pertaining to the role of animals in the economic, social, and ideological life of communities.

- New techniques that evaluate zooarchaeological approaches in relation to evidence from other archaeological or historical sources.

- The role of zooarchaeology in modern archaeology, the wider scientific community, and contemporary society.

We would also like to stimulate research in under-investigated areas and give opportunities to colleagues from countries with low representation in ICAZ. We particularly invite participation from the Black Sea, Caspian Sea, North Africa, and neighboring regions.

Themes
A world of seas
Seas are both separating and connecting bodies. They impose limitations and offer opportunities. Terrestrial limitations are countered by other advantages. Coastal settlements often have less access to agricultural land, but they have a range of marine resources at their disposal. A location near the sea allows access to trade routes and the resources that come with them, allowing access to material necessities, luxuries, and the exotic. Seas and their coasts also have unique environmental profiles and fragile habitats.

This theme seeks to explore: how the animal economies of coastal settlements are formed under the influence of their

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About the Newsletter

ICAZ welcomes submissions to its biannual newsletter. E-mail submissions to the editor, Angela Trentacoste. The annual deadlines are April 15 for volume 1 and October 15 for volume 2. Past issues of the newsletter can be downloaded from the Publications section of the ICAZ Website http://www.alexandriaarchive.org/icaz.

ICAZ Membership

To join ICAZ or renew your membership, visit the Membership section of the ICAZ website. Dues may be paid online or via post. Questions and inquiries may be e-mailed to the Treasurer, Pam Crabtree.

Cover image: “Ankara” by Jorge Franganillo. Licensed under CC BY 2.0.
Letter from the President

Dear ICAZ Members,

Greetings from England, and welcome to the latest ICAZ Newsletter. It is good to be writing this letter having just spent a whole day identifying bird bones from a medieval site. Having hands on bones without interruption was refreshing. Our many and diverse careers involve so many meetings and so much paperwork. We all need those days at the bench, picking over a pile of bones or shells and thinking what they tell us about people and animals in the past. Our Conferences and Working Groups also provide a great opportunity to remember what brought us all into this field. The ICAZ webpages have been redesigned and we are, as ever, very grateful to Sarah Kansa and the Alexandria Institute for managing and hosting the site. Do take a look. The Working Group pages in particular show the diversity of interests of ICAZ members, and many opportunities to be involved in these smaller and more focused meetings. For example, the Bird Working Group will be meeting in Texas in January 2016, organized by Frank Dirrigl, with post-conference field trips for those who like their vultures alive and flying. Some of you may prefer less mobile research material, and the Archaeomalacology Working Group will meet in April 2016 in the Orkney Islands. That meeting will coincide with the Association for Environmental Archaeology, giving you two reasons to visit Orkney's famously sunny, palm-fringed beaches.

On a similar topic, how often do you have the opportunity to talk to the general public about your research? Of course, we are all “general public” as soon as we step outside our own specialist field. I am thinking of talks and hands-on demonstrations at local museums, or talks given to schools and societies. In the academic world, it has become more difficult to make the time for these activities, but they can be an excellent learning experience for the ‘expert’ as well as the public. A few months ago, I spent a day with a local amateur excavation group, running talks and practicals to introduce them to archaeozoology. The day was exhausting, but their enthusiasm was extraordinary, and at least some of them clearly began to share my own fascination with the bits of old bones that they had been excavating. More importantly, I learned a lot from them, despite having run practical classes for students for over 30 years.

The common thread here is the importance of communication, to our peers within our research disciplines, between disciplines and beyond the academic world. Communication between geographical regions has also never been easier. Although I have been preoccupied with medieval pits in the north of England over the last year or so, it has been really encouraging to see, for example, the quantity and quality of new research on prehistoric lifeways and livestock that is coming out of Southeast Asia. Perhaps ICAZ will soon have a Southeast Asia Working Group? The more we communicate, the more we learn, and the more we are reminded that there is a big research community in archaeozoology spread around the world, with fascinating research to share.

Sincerely,

Terry O’Connor
ICAZ President
proximity to the sea; how they differ from the ones in their hinterlands; how trade and contact with other cultures shaped economic behavior, consumption patterns, and taste; how ideas, economic systems, and even animals were “transported” by sea; and how maritime “new-comers” may have affected local populations and ecosystems.

Within this theme special attention will be given to the Black Sea, Caspian Sea and the Caucasus mountain area. Zooarchaeological work in these areas is not well disseminated. These regions are little explored, but from the early Paleolithic to recent periods they have played an important role as corridors over which humans and cultures migrated.

Animals, the state and the individual

It has become a habit in zooarchaeological studies to reconstruct animal husbandry on the basis that humans made rational decisions and sought maximum returns. Nevertheless, other mechanisms have also influenced animal management. Influencing factors include formal states as well as habits and socially “expected” behaviors. These can intervene through laws, taxes, control of markets, warfare, festivals, feasts, and formal hospitality expectations. Institutions may also encourage the exclusion of social groups from certain forms of consumption or other types of social participation. These are all factors that influence both the animal economy and the decisions of the individual about what to raise and what to eat. This theme aims to explore the extent to which these mechanisms shaped aspects of animal husbandry and how states and expanding empires transformed local populations. In addition, it seeks to combine evidence from animal bones with information from records of such formalized behavior: written laws and regulations, texts on animal husbandry, archives/bills of grand kitchens and palaces, literature, art, and even old cookbooks and housekeeping guides. It also addresses to what extent of information from other sources is actually visible in the archaeological record.

Methods and theory

The rapid development of techniques in scientific fields such as chemistry, biology and information technology and their interplay with our discipline has created a number of specializations within zooarchaeology. While it is necessary to pursue new methodologies, it is also necessary to sufficiently define the applicability, reliability, and usefulness of these techniques and their contribution to our interpretations as a whole. With these new approaches we need to define the role of zooarcheology not only in the archaeology and scientific community, but also within society. This last as-
pect proposes the simple but vital question of “Who else is ever going to read our reports?” Under this theme topics related to advances in zooarchaeological method and theory are invited. Importance is put on issues of public engagement but also on the role of researchers as “stakeholders”.

Turkey as a candidate

Turkey lies in the crossroads of human migration, and it is a land where many diverse civilizations flourished. Archaeological research has a long tradition and (almost) the same holds for zooarchaeological research. Turkey’s early settlements attracted scholars investigating the Neolithic and domestication. Nevertheless, Turkey, till recently, lacked “local” zooarchaeologists. The last decade has seen an interest amongst students towards environmental studies and today a handful of them have finished their PhDs. Some of these now work in Turkey, while others are at universities abroad. At the same time, Turkey neighbors countries which also lack local zooarchaeologists and contacts with the main ICAZ community. We hope that holding the ICNZ 2018 Meeting in Turkey will stimulate interest, motivate young students and researchers, and help establish the discipline in these regions.

METU

METU was established in 1956 and since then it has become one of the leading universities in Turkey. It has 5 faculties, 53 undergraduate programs, 100 masters courses, 66 doctorate programs, 19 international joint programs, and over 26,500 students. Amongst its priorities are the training of qualified people, academic freedom, dedication to an interdisciplinary approach, lifelong education, communication with the society, and support of students from disadvantaged groups.

The Department of Settlement Archaeology aims to train students in archaeological theory, research techniques, and modern interpretative methods with particular emphasis on settlement and environmental archaeology (http://www.sa.metu.edu.tr). In 2011 we opened the Environmental Archaeology Research Unit with the aim of creating facilities for teaching and research (http://www.earu.sa.metu.edu.tr). In addition, with the support of the Biology department, an ancient DNA laboratory – the first in Turkey – was opened in 2012. Related to our department are the Archaeology Museum and the Centre of Research and Assessment of the Historical Environment, an organization which has led many excavations and large salvage projects (http://www.tacdam.metu.edu.tr). We hope that this introduction to the Meeting provides some food for thought, and we hope to see you in Ankara in 2018!
Committee of Honor

Members elected after the 2014 IC meeting

Joaquin Arroyo-Cabrales (Mexico) earns a degree in Biology from the National School of Biological Sciences of the Mexican National Polytechnic Institute, and a PhD from Texas Tech University. He is Professor at the Mexico City Archaeozoology Laboratory of the National Institute for Anthropology and History. His research focuses on palaeoenvironment reconstruction in Mexico, through the study of Quaternarian mammals, and he has a special interest for bats. Joaquin has published over 200 papers in Spanish and English.

He has been an ICAZ member since 1990, was elected at the IC in 1992, at the EC in 2004, and he was elected Vice-President in 2010. In 2006, he co-organized the 10th International Conference of ICAZ in Mexico and he plays a major role in the development of Latin American zooarchaeology. Contributed by Christine LeFèvre.

László Bartosiewicz (Sweden) is Professor of Osteoarchaeology at Stockholm University. Previously he worked as Reader in Archaeology at the University of Edinburgh (UK) and Professor in Archaeozoology at the Loránd Eötvös University (Hungary). He holds degrees in Animal Sciences from the University of Gödöllő (Hungary: 1977) and the Hungarian Academy of Sciences (1987; 1998). László’s research includes the diachronic study of animal-human relations from the Neolithic onwards in Europe (Belgium, Hungary, Scotland, Serbia, Slovenia, Switzerland), the Near East (Egypt, Israel, Turkey), and South America (Bolivia). In addition to studies on animal exploitation, cultural patterns of meat consumption and cultural attitudes toward animals, his activities also focus on animal disease in archaeology. He is the author of numerous books, book chapters and peer-reviewed journal articles.

He has been the vice-president of ICAZ from 2002 to 2006, and the president from 2006 to 2014. He has contributed to all ICAZ conferences since London 1982. László has been a key player in the world of zooarchaeology for more than three decades, contributing to many different research areas. Within ICAZ he has championed internationality and the provision of equal opportunities. Contributed by Umberto Albarella.

Ina Plug (South Africa), Academic Associate at the Department of Anthropology and Archaeology University of South Africa, is credited with the establishment of archaeozoology as a scientific discipline in southern Africa. She received her archaeology degrees at the University of Pretoria. Between 1977 and 1999, she was researcher at the Transvaal Museum (now called the Ditsong National Museum of Natural History). Her accomplishments at the Department of Archaeozoology made her name inseparable from that of the department where she is now honorary curator.

She joined ICAZ in Bordeaux, France (1986). Since then as a local researcher she has consistently represented South Africa (in fact, sometimes the entire continent) in ICAZ and attended all international conferences save one. She has also served on the International Committee of ICAZ. Retired since 1999, Ina keeps on pursuing her research. She has recently published a major book entitled What Bone is That? A Guide to the Identification of Southern African Mammal Bones (Rosslyn Press, Pretoria, 2014). Contributed by László Bartosiewicz.

Elizabeth (Betsy) Reitz is Professor of Anthropology at the University of Georgia where she also serves as Curator of the Zooarchaeology Laboratory of the Georgia Museum of Natural History which maintains a comparative skeletal collection of more than 4,000 modern vertebrate and invertebrate specimens from Georgia, the southeastern U.S., and adjacent coastal waters. Betsy’s zooarchaeological research focuses on the Late Pleistocene to Colonial archaeology of Latin America and the southeastern United States with an emphasis on ecological and environmental archaeology, and a special interest in coastal fauna and human impacts. She has numerous publications, most well-loved among them, the Zooarchaeology text co-authored with Elizabeth Wing (1999 and 2004), the Case Studies in Environmental Archaeology co-edited with Newsom and Scudder (1996) and Scarry and Scudder (2007), and the new Environmental Archaeology manual co-authored with Shackley (2012). Within ICAZ, Betsy was an International Committee member from 2002 to 2014, and an at-large Executive Committee member from 2002 to 2010, and was the task force leader in creating the ICAZ Professional Protocols for Archaeology in 2009. Contributed by Kitty Emery.
Results of the 2014 Open Zooarchaeology Prize

Contributed by Sarah Kansa (sarahkansa@gmail.com)

The Junior Researcher Open Zooarchaeology Prize competition awards the best open access, reusable content based on presentations at the International Council for Archaeozoology (ICAZ) International Meeting by a junior researcher (current student or degree in the past 10 years). The 2014 competition is the third time the contest has been held, the first being at the 2006 ICAZ meeting in Mexico City. We commend this year’s nine contestants for their excellent entries.

A panel of five judges from the ICAZ International Committee evaluated the entries with the primary criterion being the presentation’s value for reuse in teaching or research. We are grateful for their careful consideration of the entries.

2014 Judges
Virginia Butler, Portland State University, USA
Arati Deshpande-Mukherjee, Deccan College, Pune, India
Angelos Hadjikoumis, Muséum National d’Histoire Naturelle, Paris, France
Jan Storå, Stockholm University, Sweden
Kat Szabo, University of Wollongong, Australia

The two winners, who tied for 1st place, are:
Morgan Disspain: Do fish otoliths provide a reliable palaeoenvironmental record? An examination of the effects of cooking on morphology and chemistry.
Session: Ichthyoarchaeology in the Americas.
Available online at: http://alexandriaarchive.org/bonecommons/items/show/1974

Morgan Disspain is a PhD candidate in the School of Earth and Environmental Sciences at The University of Adelaide, South Australia. Her research explores how otoliths from archaeological sites can contribute to our understanding of human behaviour and palaeoenvironmental conditions, directly enhancing models of human-environment interaction. It involves examining the reliability of otolith analyses, and analysing large otolith assemblages from two archaeological sites, one which is located in South Australia and the other in Arica, Chile. Morgan travelled to San Rafael to present one aspect of her research that focused on the effects of cooking on the chemistry and morphology of fish otoliths.

The Judges thought it was “a well-structured and clearly articulated taphonomic investigation of broad relevance” and that “it will certainly help ichthyoarchaeologists improve their work both in terms of methodology and interpretative framework. It is expected to inspire relevant work and in turn better-informed methodologies but also more reliable interpretations.”

Also, “[this work] provides outstanding images – and the close link with the text [makes it] easy to use/reuse.”

William Taylor: Demographic Profiles and Ancient Horse Use in Bronze Age Mongolia.
Session: Zooarchaeology of Pastoralism.
Available online at: http://alexandriaarchive.org/bonecommons/items/show/1975

William is a Ph.D. candidate at the University of New Mexico. In his dissertation, he aims to clarify the role of the horse (herding, riding, and chariotry) in the spread of mobile pastoralism into the Eastern Steppe. Using 3D scanning and osteological study of modern horses with known histories, his project has developed new methods for the archaeozoological identification of horse transport. In his entry for the Open Zooarchaeology competition, William produced demographic estimates for a sample of ancient horses from Mongolia’s Deer Stone-Khirdsuur (DSK) complex (1300-700 BCE). When combined with paleopathological analysis, these data shed light on herd management practices, and point to the selection of adult male horses for use in transport and ritual. His work has been supported by the American Center for Mongolian Studies, the Frison Institute Patrick Mullen Award in Archaeological Science, the Society for Archaeological Sciences R.E. Taylor Award, and the ICAZ Stine Rossel Prize.

The Judges believed that “the applicability of the methodological innovations produced by this study to other regions and periods and the clarity of the overall presentation of the study render it an invaluable tool to be used both in research and teaching.” “[Taylor’s] synthesis of the research context and how to address the gaps in our current knowledge was outstanding.” Lastly, that “this is a great case study to demonstrate that detailed zooarchaeological analyses can address broader cultural questions.”

About the Prize
The Junior Researcher Open Zooarchaeology Prize is one of a series of open archaeology prize competitions organized since 2006 by the Alexandria Archive Institute, with sponsorship from the William and Flora Hewlett Foundation. The competition is also sponsored in part by ISD, Distributor of Scholarly Books. Read more about the Open Zooarchaeology prize here: http://alexandriaarchive.org/bonecommons/items/show/1973
Fish Remains Working Group

By László Bartosiewicz, Working Group liaison

The 18th Fish Remains Working Group (FRWG) conference (Lisbon September 28–October 3, 2015) will take place at the Sociedade de Geografia de Lisboa (SGL), Secção de Arqueologia. The general title “Fishing Through Time” will cover archaeoichthyology, biodiversity, ecology and human impact on aquatic environments. According to the kind personal update by the organizer Sónia Gabriel, as of early April the number of abstracts submitted was 58 (oral presentation: 44; poster: 14). These dry numbers cover an impressive international interest including twenty countries (Australia, Belgium, Estonia, Finland, France, Germany, Greece, Israel, Hungary, Italy, the Netherlands, Panama, Peru, Portugal, Poland, Russia, Spain, Switzerland, UK, USA). There will be a special session dedicated to the COST-Oceans Past Platform (COST-OPP) project whose results and developments will be presented by a number of participants. This project is aimed at measuring and understanding the significance of living marine resource exploitation and production to European societies. Exploring the ancient past of fishing is of evident importance in helping to shape future strategies affecting both coastal areas as well as oceans as a whole. For detailed information follow: http://18frwg.wix.com/18frwglisboa#!venue-and-accommmodation/c1ihl

Meeting of Hungarian archaeozoologists dedicated to Bökönyi

On 24–25 April, the spring meeting of Hungarian archaeozoologists was dedicated to the memory of Sándor Bökönyi (1926–1994) who established modern archaeozoology in Hungary after WWII and was a founding member of ICAZ. On this occasion, Erika Gál organized a one day academic session at the Institute of Archaeology (Research Center for the Humanities, Hungarian Academy of Sciences) on 24 April with the participation of the local community of specialists. Beyond commemorating Bökönyi’s work as a scholar and past director of this institute, the 13 presentations offered a review of recent research results in Hungary. On 25 April, the celebration continued in the historic city of Visegrád, the “Capital of Hungarian Archaeozoology”, where the series of largely informal biannual (spring/autumn) archaeozoology meetings have taken place for well over a decade.
First meeting of the Stable Isotopes in Zooarchaeology Working Group
3–5 March 2016  |  University of Georgia in Athens, Georgia, USA

Contributed by Suzanne Pilaar Birch (sepbirch@uga.edu)

The University is home to the Center for Applied Isotope Studies and the Zooarchaeology Laboratory at the Georgia Museum of Natural History, which houses over 4,000 specimens in its comparative collection. Athens is a very walkable city about 70 miles east of Atlanta, GA, with plenty of accommodation and restaurant choices.

Planning is currently underway, and further information regarding abstract submission, registration, and travel will be available via the conference website, currently in development. If you have any questions or would like to be involved in organization, please don’t hesitate to get in touch with the group coordinators, Suzanne Pilaar Birch (sepbirch@uga.edu) and Catherine West (cfwest@bu.edu).

6th Animal Palaeopathology Working Group Meeting
26–29 May 2016  |  Budapest, Hungary

Contributed by Erika Gál (gal_erika@yahoo.com)


The preliminary program includes three days of meetings, paper and poster presentations, a visit to the Faculty of Veterinary Science in Budapest, and an excursion to Szentendre and/or Visegrád along the Danube.

For information on the APWG, visit:
https://animalpalaeopathologywg.wordpress.com

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ICAZnewsletter@gmail.com
My ICAZ History | Pierre Ducos

by Pierre Ducos

My first contact with non-French researchers in “archaeozoology” (no clear name was in use at the time) took place in Kiel, in 1961. There, Prof. Dr. Wolf Herre organized what is considered by most to have been the First International Symposium on the Origin of Domesticated Animals, although some purists say the first one already took place during the thirties. Participation was very difficult for me because ninety-five percent of the papers were in German. Two papers were in French; that of Srgiu Hairmovici and my own. I was very impressed by the great number of German participants. It was clear then that this scientific topic was in essence German!

In 1971, one section of the symposium organized in Budapest at the Museum of Agriculture was devoted to archaeozoology. Aside from the scientific papers and discussion, I also participated in the meeting where it was decided to create an international association to provide common rules for archaeozoological methods. This was, in fact, the first sign of what was to become, some years after in Groningen, ICAZ. The list of 23 persons, including myself for France, may be found in Matolcsi’s preface to the papers presented in this symposium, published in 1973.

My main contribution to ICAZ is, I believe, to have organized the 5th International Meeting which was held in Bordeaux in 1986 after the decision had been made at the 4th Meeting in London in 1982. I must say that the inspiration for the organization came to me as I was flying to London to attend that meeting. Upon arrival in London, I phoned Professor François Prat, the director of the Laboratory of Prehistory at Bordeaux University to have his agreement. So, when I presented my plan to the ICAZ International Committee, it was rather improvised. Perhaps the famous wines from Bordeaux area helped my fellow committee members to agree to the project I submitted without any help from my French colleagues on the committee.

I must say that without the help of Professor Prat and Mme de Sonneville-Bordes, who gave me access to the University Administration, it would have been impossible include housing and food in the inscription fees for the participants. Many of them went to restaurants, and it is said that at the end of some nights, when they returned to the University village, the ambience was very noisy with barbarian songs clearly inspired by the famous wines.

As I was hard at work organizing the symposium, I met, “par hasard”, a publisher, Allan Geoffroy, who wonderfully agreed to publish texts in archaeozoology. By doing so, he opened the way to starting a journal devoted solely to archaeozoology. The first articles to be published in it were to be the papers submitted to the congress itself. I presented what was to be this new journal with a ‘volume zero’ entitled Mélanges, a volume received by each participant when they paid the inscription fees. (Another publication, edited by Nathalie Desse-Berset and published by the CNRS’s CRA at Antibes, was also presented to the participants). During the four years which followed, I edited the three first volumes of this new journal, Archaeozooologia. I discussed with the International Committee whether it might become the official review recognized and edited by ICAZ. The aim was to introduce a single annual inscription fees for being an ICAZ member. The inscription fees were to include the journal. The cost for each member would have been very low, about $20 at the time.

ICAZ’s statutes presented an obstacle, since it was not allowed to receive money. With the agreement of the general secretary for this project, a modification of the statutes was presented to the International Committee at the Symposium in Washington in 1990. However, the new regulation would have to wait until the next meeting to be applied, that is, four years. During those years, Archaeozooologia continued to be issued up to Vol. 6, no. 2, published in 1994. This year, at the same time that the new regulations came into being, a new Executive Committee was elected, and, unfortunately, no one remembered why the regulation had been modified. Thus, Archaeozooologia never became what I had tried to realize, that is, the official journal of ICAZ. Uder these circumstances, after publishing the 9th volume (the papers presented at the Victoria Symposium in 1998, edited by Anne Pike-Tay) Allan Geoffroy and myself decided for financial reasons to end the publication of Archaeozooologia. Large numbers archaeozoological documentation may still be found in the archives of the Pensée Sauvage Editions, in Grenoble, France. The director, Allan Geoffroy, can sell these volumes either as a complete set or separately as in PDF format. His address is contact@penseesauvage.com.

Some good memories? Yes, there are: the Steinway in Melinda’s parents house; the meeting in Basel in a Roman style villa; László’s action at the TV when my car, full of bone collections, was stolen in Budapest. (The car was recovered six months later still with the valuable collections inside, but unfortunately missing the bottle of cognac which was packed among them). Indeed there were many other nice moments.
The Virtual Curation Laboratory (VCL) at Virginia Commonwealth University (VCU) in Richmond, Virginia was initially established under VCU archaeology professor Dr. Bernard K. Means in August 2011 to comply with the requirements of a Defense Department (DoD) Legacy Program funded-project (#11-334) “Virtual Artifact Curation: Three-Dimensional Digital Data Collection for Artifact Analysis and Interpretation” (Means 2014; Means et al. 2013a, 2013b). The basic goal of this project was to test the suitability of the NextEngine Desktop 3D scanner on as wide a range of archaeological materials as possible, including animal remains recovered from archaeological contexts or present in vertebrate and mollusk type collections. VCL staff demonstrated that the NextEngine scanner was well suited to certain animal remains, and particularly to bone. 3D digital morphological models and printed replicas were created of groundhog (Marmota monax), raccoon (Procyon lotor), dog (Canis lupus familiaris), deer (Odocoileus virginianus), cow (Bos taurus), pig (Sus scrofa domesticus), and other species, some recovered from archaeological contexts.

Following the conclusion of this pilot project, a new DoD Legacy Program project (#13-134) was funded in October 2013 entitled “Virtual Mobility Archaeology Project with Further Applications of Three Dimensional Digital Scanning of Archaeological Objects”. The new project is targeted toward the creation of digital type collections to ensure speedy and accurate identification of materials recovered from archaeological sites on DoD (and other) lands, specifically one digital type collection of temporally diagnostic chipped stone tools and another of animal remains. Zooarchaeologist Dr. Elizabeth Moore of the Virginia Museum of Natural History (VMNH) aided with the selection of materials for this digital faunal collection, and the majority of material 3D scanned as part of the new DoD Legacy project are from VMNH’s physical type collection or from archaeologically recovered bone currently being studied at VMNH. VCU alumnus Mariana Zechini served as the Digital Zooarchaeologist on this project while still an undergraduate student, and guided much of the day-to-day work of creating and editing the 3D digital morphological models. Ms. Zechini has presented and published on her research (Zechini 2014a, 2014b, 2014c) and completed an undergraduate honors thesis under the direction of Dr. Means and Dr. Moore (2014d).

The digital morphological models can be readily shared with researchers across the globe, who can use freely available software to examine the skeletal models from every perspective – something not possible with static photographs or illustrations. These digital bone models can also be accurately measured, enabling detailed comparisons between the digital type element and the element being studied by a researcher. The digital bone models can also be readily printed, either with a home-based desktop 3D printer or sent to a variety of commercial 3D printer bureaus, who can print not only in plastic, but also in a variety of other materials, including metal, ceramic, and even chocolate.

continued on page 12
As more institutions join in the effort to create a digital zooarchaeological type collection, it will be possible for anyone to assemble accurate animal bone collections—without actually having any animal bones. This is particularly useful for small institutions with limited space and limited budgets. Accurately printed plastic replicas do not have the storage or preservation considerations of actual skeletal elements, and can be readily and inexpensively replaced from the source digital models if they are lost or stolen. The plastic replicas can also be printed on-demand on an as-needed basis to meet specific identification needs. While there are issues of resolution to be addressed with plastic additive printing, when accompanied with high resolution 3D images of the bones, accurate identifications are more feasible with these tools than with standard two dimensional photographs or line art drawings.

The VCL’s director, Dr. Bernard K. Means, uses printed replicas of skeletal remains in his archaeology methods course. Real skeletal remains cannot be used easily, as there is no permanent laboratory space currently for teaching students zooarchaeology. The printed bone replicas—which are designated ecofictions in the VCL—have been used to help identify worked and unworked bone from archaeological sites to species and to side.

In the VCL, there has been a particular effort directed toward creating digital morphological models of skeletal elements from the passenger pigeon (*Ectopistes migratorius*) and the harelip sucker (*Moxostoma lacerum*). Both species are extinct—in fact, September 1, 2014, was the centenary of the extinction of the last known living passenger pigeon. Archaeologists likely have at least the former in their collections, as the species was ubiquitous in diets extending deep into antiquity and until the late 19th century (Manzano et al. 2014; Means et al. 2014). However, without reference skeletal material, high resolution images, or even printed replicas of passenger pigeon bones, it is challenging for zooarchaeologists to accurately identify skeletal elements from these species. Post-cranial elements of the passenger pigeon were largely obtained from an archaeological site in the collections of the Virginia Museum of Natural History and two skulls, a sternum, and pelvic bones were scanned in the Bird Division of the Smithsonian’s National Museum of Natural History. The harelip sucker remains were obtained from the University of Kentucky from a rockshelter site and were also scanned to aid in the accurate identification of this species in archaeological assemblages (Manzano et al. 2014).

Some of the animated bone images created through this project can be found at the VCL Virtual Curation Museum at https://virtualcurationmuseum.wordpress.com/.

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**References**


Contributed by Ariane Burke (Université de Montréal)

The Department of Anthropology at the Université de Montréal recently inaugurated a new laboratory for the analysis of osteological remains. The “Ecomorphology and Paleoanthropology laboratory” was funded by the Canadian Foundation for Innovation and is affiliated with GEOTOP, a scientific consortium based in Montreal. Our primary mission is to conduct ecomorphological analyses of both faunal and human skeletal remains. We offer training in microscopy (Olympus DSX-100 stereo-microscope and Olympus BX43 TurboScan microscope), in the use of a pQCT scanner (quantification of bone density, three-dimensional high-definition images), radiography, three-dimensional scanning (NextEngine), and the making of thin sections of mineralized tissues. We also offer sample preparation services. Information about the associated costs of training and/or sample preparation is available on our GEOTOP website (see below) and our technician, Dr. Youssef Chebli, would be happy to answer your questions.

In 2014–2015 we welcomed visiting professors Dr. Albérico Nogueira de Queiros and Dr. Olivia A. de Carvalho, of the Universidade Federal de Sergipe (Brazil). Albérico and Olivia helped launch a collaborative project designed to investigate the relationship between the environmental context and development of bone shape and density in Rangifer tarandus and humans, with the help of researchers at the Canadian Museum of Nature and the Canadian History Museum who made collections available for study. Several student projects including the taphonomic analysis of bone surface modifications were also carried out in this, our inaugural year. Find out more at: http://www.geotop.ca/fr/bases-de-donnees/10-laboratories/1173-laboratoire-d-ecomorphologie-et-de-paleoanthropologie.html

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Zooarchaeology and taphonomy at the Bluefish Caves (Canada)

by Lauriane Bourgeon, Université de Montréal (lauriane.bourgeon@umontreal.ca)

Excavated from 1977–1987 by archaeologist Jacques Cinq-Mars, the Bluefish Caves (Yukon Territory) have much to contribute to the debate on the arrival of humans in the Americas at the end of the Pleistocene. At the site, a small lithic assemblage composed of microblades and burin industry (similar to the Diuktai culture from Siberia) has been discovered along with a rich and well preserved faunal assemblage typical of the Mammoth steppe. Several bones from the assemblages of Caves 1 and 2 were reported as having anthropogenic modifications, particularly cutmarks and fresh fractures (Cinq-Mars 1990). Radiocarbon dating of these bones placed human presence at the site between 10–25 kyr BP. Other archaeological sites in Alaska and the Yukon Territory have suggested a date for the first presence of modern humans in Beringia at c. 12 kyr BP. Ongoing zooarchaeological and taphonomic study of the bone assemblage of Cave II is evaluating the role of humans and carnivores in the creation of the faunal accumulation and in the modification of faunal material from the Bluefish Caves. This study also seeks to investigate the antiquity of human occupation in the caves at the end of the Pleistocene (Bourgeon 2015).

Over 18,700 bone specimens were recovered in Cave 2. Mammoth, horse, bison, caribou, and Dall sheep dominate the assemblage. Muskox, moose, and wapiti are represented by single individuals. Lion, brown bear, wolf, and smaller canids are also present. Black coatings and root etching were frequently observed on the remains, making taphonomic observation difficult in 27% of cases. Tooth marks and digested bones indicate that carnivores played a significant role in modifying the assemblage, and, combined with rockfall and freeze–thaw cycles, may have contributed to its high level of fragmentation. Only two bone fragments bear cutmarks from butchery activities. The modified bones belong to medium-sized ungulates, including one caribou and a possible Dall sheep. Since the stratigraphy does not indicate of the precise age of these specimens, radiocarbon dating will be used to estimate the date of human occupation in Cave 2. Two bone specimens, a mammoth long bone fragment and a refitted flake, both dated ca. 23,500 14C BP, were thought to have been altered by humans and thus illustrate a human presence in the cave during the Last Glacial Maximum. These specimens, still on display at the Canadian Museum of History (Gatineau, QC), will be re-examined shortly. The results of our taphonomic analysis were presented at the SAA meeting in San Francisco, California, in April 2015. The interpretation of the faunal remains of Cave 1 is ongoing.

Works Cited

Haskel Greenfield, Professor of Anthropology and Archaeology at the University of Manitoba and co-director (with his wife, Dr. Tina Greenfield) of the university’s Near Eastern and Biblical Archaeology Lab, has achieved a career pinnacle. He has been recognized as one of the university’s Distinguished Professors.

“It’s wonderful to be recognized by my university,” Greenfield says. There are only 20 professors at the University of Manitoba at any given time who are designated as Distinguished Professors. The official presentation will occur at Fall Convocation, because the honoree will once again be on fieldwork with his students at his current dig at Tel Tzafit (Tell es-Safi/Gath) in Tel Tzafit National Park in southern Israel.

Greenfield was born in Newark, New Jersey. He showed an early childhood interest in ancient history and dinosaurs, so it was not surprising that, after briefly trying a business course in university, he chose to follow his first love in academia. His first full-time university posting – after earning his Ph.D. from the City University of New York – was at Indiana University in Bloomington, Indiana. His first official visit to Israel was in 1973 when he was on his first excavation at Tel Gezer.

Greenfield came to the University of Manitoba in 1989. “It was a golden opportunity,” he says of his decision to teach at the university. “This is a very good university in a city that still had a thriving Jewish community when I first came here. “At the University of Manitoba, I could be who I was. I didn’t have to fit into anyone else’s mold. No one tried to dictate what research I could do. I received a lot of support from the administration and my colleagues.”

He and his students have been excavating Tel Tzafit since 2008, when they joined forces with the director of the excavation, Professor Aren Maier of Bar Ilan University. The site is thought to be ancient Gath, the Philistine city that was the home of Goliath, who fought David nearby. Gath was not only a Philistine City in the Iron Age; it has now been convincingly demonstrated that it was also a large Bronze Age city.

Greenfield has been working on the site with his team, which pools resources with the Israeli, American, Australian, Korean and other teams that come with their professors. Each summer, there is an average of about 100 professors, students and volunteers. The excavation is organized as a large field school where students and volunteers are educated in the archaeology of the region and the latest scientific approaches to the archaeology.

Greenfield will be going back to Tel Tzafit this summer with seven undergraduate students and five graduate students, along with his wife and children. But first, he has a stopover at Cambridge University where he has been invited to serve as an overseas visiting scholar at St. John’s College. “It’s a six month position that began in January,” he says of his Cambridge posting. “I am doing research and have helped to mentor a few Ph.D. students.”

Greenfield says that he loves archaeology, which he describes as a lifestyle more than a job. “Part of the excitement is being involved in the process of discovery. I could spend my life in a lab, but it’s more fun in the field, especially when I can take students with me and introduce them to the excitement of field work and research. It is gratifying that so many of my students have become professional anthropologists and archaeologists in their own right.”
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Visit the new, searchable publications section of the ICAZ website for this year’s submissions. Publications accessible through the ICAZ site are organized in a Zotero group (https://www.zotero.org/groups/icaz), which allows you to search by keyword and download or export the library. Zotero is a reference management system, like Endnote, that allows you to create, manage, and export reference lists. Publications from past Newsletters will be added as finalize the group and ICAZ interface.

If you are interested in adding publications, please e-mail ICAZ Newsletter Editor Angela Trentacoste at ICAZNewsletter@gmail.com.

ICAZ is very grateful to Andreas Walter (vorneweg.de) for developing this bibliographic database and to Sarah and Eric Kansa who spear-headed the project. Watch this space for further details and featured publications in coming issues of the Newsletter!
Anglo-Norman Parks in Medieval Ireland
by Fiona Beglane
2015. Dublin, Four Courts Press
ISBN 9781846825699 / 240 pages / b&w illustrations / hardback

This illustrated volume examines the evidence for medieval parks in Anglo-Norman Ireland. It is the first book on the subject and concentrates on the parks documented in the period 1169 to c.1350. Drawing on archaeological fieldwork together with historical and place-name evidence, it provides a broad understanding of the role of parks in medieval society. It stresses the importance of the landscape and of the deer, cattle, and timber within it as integral aspects of the material culture of high-medieval Ireland. The research is underpinned by extensive fieldwork, which has identified surviving park features in the landscape. Key topics include the form and function of medieval parks, their occurrence and location in the landscape, the status and identity of their owners, and a comparison with parks elsewhere. Notably, the evidence suggests that both parks and fallow deer were relatively uncommon in Ireland compared to England. The reasons for this lie in Ireland’s chronology, landscape, and politics, and these form a major theme within the book. The book can be ordered through your local bookshops or online at http://www.fourcourtspress.ie/books/2015/anglo-norman-parks-in-medieval-ireland/

Bone Guide To Selected Land Mammals Of the Northwestern States
written, illustrated, and published by Lee Post / 2014
ISBN: 9781495117275 / 135 illustrated pages

Lee has been illustrating animal bones for the past 25 years and this book presents a collection of his illustrations, arranged by species, for 30 different land mammals from the Northwestern states. To view a list of the taxa illustrated, and to order a copy of the book for yourself, go to http://theboneman.com/BoneGuide.html.

Neotropical and Caribbean Aquatic Mammals:
Perspectives from Archaeology and Conservation Biology
edited by A.S. Muñoz, C.M. Götz and E. Ramos Roca
ISBN 9781633213067 / 234 pages

In the Americas, the relationship between humans and aquatic mammals in the Neotropics has been important since deep prehistory, but these relationships have varied across time and space. In this book, contributions from experts in zooarchaeology, environmental archaeology, and conservation biology present different lines of evidence that investigate these long-term relationships through an archaeological approach. One of the aims of this book is to discuss research questions, methodologies, and results from different Neotropical regions. The variation in the zooarchaeological evidences related to aquatic mammal exploitation across time and space still cannot be clearly defined, and the book’s chapters clearly show that the different strategies visible in the archaeological record seem to be linked to the ecological properties and internal subdivisions of the Neotropical region. The book challenges the reader to consider the different ways in which humans impacted aquatic mammal populations in both the prehistoric and historic past. For this reason, we believe that the volume and its archeological data can contribute to current understanding of the natural history of Neotropical aquatic mammals, eventually even helping to evaluate the ecological status of these animals in different areas within the region.
Obituary | Michael Ryder

by László Bartosiewicz

Michael Lawson Ryder (1927–2015)

Michael Lawson Ryder passed away peacefully at his home in Romseysouth of England on the 6th of February.

Michael’s interest in archaeozoology was marked by the 1969 book *Animal Bones in Archaeology* published for the Mammal Society by Blackwell Scientific. He attended the 1971 conference in Budapest, which later on turned out to be the founding event of ICAZ, and lectured on the changes in the skin and coat of sheep connected to domestication. At the 1974 ICAZ conference in Groningen he presented Phoenician animal remains from Sicily, and he spoke about the primitive sheep breeds of Europe in Szczecin in 1978. His unique specialist knowledge was best used in the analysis of rarely preserved ancient wool and textile remains, such as the rich finds from the eponymous site of Hallstatt in Austria (2007). This selection of a few archaeozoological topics, however, should be seen within the context of the 229 academic papers that Michael wrote.

Michael belonged to the post-war “Great Generation” of archaeozoologists in Europe whose members were predominantly natural scientists (zoologists, veterinarians, paleontologists) who put their knowledge at the service of archaeology. Born in Leeds, England in 1927, he was to become an internationally renowned wool expert. Following service in the British Army (1945–1948) he studied at the University of Leeds (BSc 1951, MSc 1954, PhD 1956). He began his academic career at the biology department of the Wool Industries Research Association, Leeds in 1951. Between 1960–1962 he was a senior lecturer at the University of New England, Australia. Upon returning to the UK, Michael settled in Scotland. He worked for over two decades (1962–1984) as Principal Scientific Officer at the Animal Breeding Research Organization in Roslin near Edinburgh. Subsequently he served in the same quality at the Hill Farming Research Organization (1984–1987). He became Honorary Lecturer at the University of Edinburgh in 1966 and held a National Science Foundation grant between 1974–1975.

Michael’s career is best characterized by a keen scholarly interest in the relationship between *Sheep and Man*, the title of his almost 1000 pages long, seminal book on the subject (first published in 1983 by Duckworth and reissued a quarter of a century later). Michael studied the domestication and spread of sheep among ancient civilizations, and in early medieval times in Europe, and the Islamic world throughout his life.

I met the Ryder family through my then mentor in archaeozoology, the late Sándor Bökönyi. I enjoyed their hospitality in Edinburgh in 1976 and 1982. I will always remember Michael as a dedicated yet very modest scholar who was active in developing British archaeozoology to its current state-of-the-art quality.
APRIL 15-19, 2015
Consuming Landscapes session at the 80th Annual Meeting of the Society for American Archaeology (SAA) in San Francisco, California, USA.
• alexandra.livarda@nottingham.ac.uk.uk
• saa.org/AbouttheSociety/AnnualMeeting/tabid/138/Default.aspx

MAY 27-30, 2015
Conference of the Association of Archaeological Wear and Residue Analysts in Leiden, Netherlands.
• AWRANA2015@arch.leidenuniv.nl
• archaeology.leiden.edu/awrana

MAY 27-29, 2015
Environmental Archaeology of European Cities conference at the Natural History Museum Brussels, Belgium.
• caeac@naturalsciences.be

JUNE 4-5, 2015
Chelonian remains from palaeontological and archaeologi-cal contexts: morphology, taxonomy and interpretation short course in Torino, Italy.
• massimo.delfino@unito.it

JUNE 10-14, 2015
12th Meeting of the Archaeozoology of Southwest Asia and Adjacent Areas Working Group at Groningen University, Netherlands.
• 12thaswa2015@gmail.com
• sites.google.com/site/aswagroningen2015/home

JUNE 26-27, 2015
El mundo animal en la Romanización de la Península Ibérica conference in Lisboa, Portugal.
• e-mail: munanirom@gmail.com

JULY 27-AUGUST 2, 2015
The Isotope Ecology of Migration: Reconstructing mammalian ethology and its implications for prehistoric human mobility and decision-making session at the 19th congress of the International Union for Quaternary Research in Nagoya, Japan.
• sepilaar@gmail.com
• http://www.inqua2015.jp

JULY 27-31, 2015
Introduction to Geometric Morphometrics workshop in Barcelona, Spain
• courses@transmittingscience.org
• http://www.transmittingscience.org/courses/gm/introduction-to-gm

PZG
10th anniversary meeting of the Professional Zooarchaeology Group in Fort Cumberland, UK
• PZG@english-heritage.org.uk
• http://www.historicengland.org.uk/research/current-research/heritage-science/PZG

SEPTEMBER 2-5, 2015
Multi-disciplinary approaches to the study of poultry exploitation in Europe, Farming Frontiers, and Global markets and local manufacturing: wool production and trade sessions at the 21st meeting of the European Association of Archaeologists in Glasgow, Scotland.
• best@bournemouth.ac.uk • c.cakirlar@rug.nl
• eaaglasgow2015.com

SEPTEMBER 14-20, 2015
Food & Drink session at the LIMES (Roman frontiers) congress in Ingolstadt, Germany.
• Sue.Stallibrass@english-heritage.org.uk
• info@limes2015.org
• http://www.limes2015.org/home

SEPTEMBER 28–OCTOBER 3, 2015
18th Meeting of the ICAZ Fish Remains Working Group in Lisbon, Portugal.
• gabriel.sonia@gmail.com
• http://www.alexandriaarchive.org/icaz/workfish.htm

SEPTEMBER 23-27, 2015
The 1st International Congress: Birds in Natural History, in Prehistory and in History (Origin, Evolution and Domestication) at the Portuguese National Library, Lisbon, Portugal.
• http://www.i-m.co/cpgp/congressoaves/inicio.html

SEPTEMBER 24-26, 2015
5th Postgraduate Zooarchaeology Forum (PZAF) Intstitut Català de Paleoecologia Humana i Evolució Social (IPHES) in Tarragona, Spain.
• edgard.camaros@GMAIL.COM
• pzaf2015.wordpress.com/author/pzaf2015/
SEPTEMBER 28-OCTOBER 3, 2015
18th Meeting of the ICAZ Fish Remains Working Group (FRWG) in Lisboa, Portugal.
• gabriel.sonia@GMAIL.COM
• http://www.alexandriaarchive.org/icaz/workfish.htm

NOVEMBER 6-8, 2015
From Anthrosphere to Lithosphere (and back again): A Celebration of the Career and Research of Terry O’Connor, the 36th Annual Association for Environmental Archaeology (AEA) Conference in University of York, UK.
• envarch2015@gmail.com
• http://www.york.ac.uk/archaeology/news-and-events/events/conferences/aea/

NOVEMBER 11-14, 2015
8th Meeting of the Italian Association of Archaeozoology (A.I.A.Z.) in Lecce, Italy
• aiazsegreteria@yahoo.it
• http://www.aiaz.it/

JANUARY 11-14, 2016
8th ICAZ Bird Working Group Meeting at the University of Texas-Rio Grande Valley in Edinburg, USA.
• diriglf@utpa.edu
• portal.utpa.edu/utpa_main/daa_home/cosm_home/esp_home/esp_about/bwg-meeting

MARCH 1-3, 2016
III Encuentro Latinoamericano de Zooarqueologia / III Encontro Latino-Americano de Zooarqueologia (III Zooarchaeology Latin American Meeting) in Aracaju, Brazil.
• ELAZ2016@hotmail.com
• https://www.facebook.com/IIIELAZ

MAY 26, 2016
Meeting of the Animal Palaeopathology Working Group (APWG) in Budapest, Hungary.
• gal_enika@yahoo.com
• animalpalaeopathologywg.wordpress.com

MEMBER PHOTOS

With the new color Newsletter we’ll be publishing members photos. Please send in fieldwork images, family pictures, and old photos from your adventures in archaeozoology and beyond!

Newsletter Editor Angela Trentacoste recording scapulae in Orvieto.

Nosy neighbors in Mallorca.

Pam Crabtree and Doug Campana at work in the lab at Kink.