Despite the challenges of last year, many of which are ongoing, this issue of the Newsletter is a testament to the vibrant, adaptable community we belong to. By utilizing the technology available to us, productive meetings and successful conferences were held during 2020: for example, ICAZ’s International Committee, pictured above, initiated a successful membership drive as a result of their meeting in October, and two ICAZ working groups held online conferences. See the Forthcoming Conferences & Events, and the Calendar, to plan ahead for a variety of meetings that are being organized throughout 2021. There are deadlines fast approaching (31 January), for both calls for papers and to apply for the role of ICAZ secretary. As well as the role of secretary, there are other ways in which you can contribute to ICAZ, for example see the request for input into a compilation of digital resources, something that is of increasing relevance to us all. We would also be interested to hear from anyone who would like to be involved in compiling an index from the ICAZ newsletters, to facilitate access to all the knowledge shared over the last 40 years (contact icaznewsletter@gmail.com). Please do consider making an active contribution to ICAZ during the course of this year.
### Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editorial</td>
<td>1</td>
</tr>
<tr>
<td>Letter from the President</td>
<td>3</td>
</tr>
<tr>
<td>Committee News</td>
<td>4</td>
</tr>
<tr>
<td>Forthcoming Conferences &amp; Events</td>
<td>14</td>
</tr>
<tr>
<td>Working Group Reports</td>
<td>18</td>
</tr>
<tr>
<td>Laboratory Updates</td>
<td>22</td>
</tr>
<tr>
<td>Member News</td>
<td>26</td>
</tr>
<tr>
<td>Obituaries</td>
<td>29</td>
</tr>
<tr>
<td>Publications &amp; New Books</td>
<td>30</td>
</tr>
<tr>
<td>Book Reviews</td>
<td>35</td>
</tr>
<tr>
<td>Calendar</td>
<td>38</td>
</tr>
</tbody>
</table>

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### About the Newsletter

ICAZ welcomes submissions to its bi-annual Newsletter. Submissions can be emailed to the editor, Eva Fairnell: the deadlines for copy are **15 May** and **15 November**. Past issues of the Newsletter can be downloaded from the Publications section of the ICAZ website, http://www.alexandriaarchive.org/icaz.

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Cover image: A screen-shot of members at the International Committee meeting in October 2020.
Letter from the President

Dear ICAZ members

Happy New Year, and may 2021 bring good health and happiness to you, your families and your communities!

First, I want to extend a warm welcome to more than 100 new members of the ICAZ community! These individuals bring experience and expertise working in regions previously underrepresented in ICAZ. They have increased our membership by 20% and expanded our international representation from 50 to 60 countries! Our membership now includes colleagues from Armenia, Bolivia, Botswana, Costa Rica, Honduras, Morocco, Nigeria, Tanzania, Tunisia, and Zimbabwe. Check the ICAZ website for a list of current members and countries.

Ever since I joined ICAZ while still in graduate school, I greatly appreciated the organization’s ethos of supportive collegiality among its members. I don’t need to remind you that 2020 saw so many disasters and hardships. However, I want to thank all of you for your continued dedication and efforts to support our community and for your efforts in ICAZ working groups and committees. Many of you adapted, used online conferencing when appropriate, and successfully engaged wide participation in ICAZ. Regrettably, the Executive Committee (EC) and International Committee (IC) could not meet in person in Stockholm as planned this past summer, but we are so grateful to László Bartosiewicz for his tremendous efforts to host us. However, in October, the EC and IC came together virtually for friendly, efficient and productive virtual meetings. The EC and IC members who shared reports from various committees and initiatives all deserve our thanks. Patrick Faulkner shared details of his team’s thorough and thoughtful considerations for the ICAZ 2022 International Meeting in Australia. You can view the meeting minutes here.

The work of our colleagues in ICAZ have made clear and welcome impacts. The IC members have made tremendous strides building community and supporting archaeozoology worldwide. The idea of offering free one-year membership to our colleagues in underrepresented countries emerged during discussions at the virtual IC meeting as a way to help build community during this particularly challenging pandemic year. The idea had immediate and enthusiastic support and I want to thank the IC members for reaching out to colleagues around the world to promote ICAZ and share news about this initiative. We hope that we can continue to offer a number of free memberships annually going forward.

By the time you receive this newsletter, the ICAZ online membership site should be back up and running. In late 2020, the system underwent an upgrade to improve site administration and security. Many of your memberships will be up for renewal now and you should receive an email from the system reminding you to renew. You can also log in to update your personal information in the membership portal. You can add an image, a bio, research interests and contact information, as well as search the database for other members. Instructions on how to do this will be sent out when the updated database is in place.

Moving forward into 2021, I hope we can find ways to leverage ICAZ’s legal status as a non-profit organization. Thanks to the efforts of Pam Crabtree during her tenure as Treasurer, ICAZ is now recognized as a 501(c)(3) non-profit by the US Internal Revenue Service (IRS). This means that individuals in the US can make tax-deductible donations to ICAZ (please consider doing this!). Importantly, non-profit status also means that ICAZ can apply for grants from public and private funding agencies in the US. In the coming months, the EC will explore ways that ICAZ can leverage this status to support its members.

ICAZ has a mission of ‘promoting archaeozoological research of the highest scientific standards and fostering communication among the international community of archaeozoologists’. We hope that recent efforts to increase and diversify our membership and encourage collaborative research with expanded access to granting opportunities work toward this goal. Furthermore, I want to highlight that ICAZ expects respectful interactions, both in person and online. ICAZ condemns hate speech, bullying, harassment and discrimination. IC member Kat Szabó, together with graduate students Kara Larson and Samantha Aird, are working on a draft proposal for an ICAZ Code of Conduct. Look out for more about this in an email to members and on our website.

I wish you all well at the start of this new year and I share our hopes that 2021 will bring health, optimism, generosity and support, and renewed excitement and joy in our work.

Sarah W. Kansa, ICAZ President
December 2020
EC and IC meetings

Contributed by Eva Fairnell (Newsletter editor)

Both the Executive Committee (EC) and International Committee (IC) held virtual meetings in October 2020, in the absence of the planned physical meeting in Stockholm earlier in the year. The full minutes are available via the ICAZ website: https://www.alexandriaarchive.org/icaz/meetings-committee. Some of the highlights are presented below. In addition, work is planned to update some of the older webpages and the search facility for the bibliographic database.

ICAZ 2022

The conference organizers have been working hard to provide a risk assessment and budget for 2022, tasks that are particularly challenging given the current circumstances and the difficulties in planning ahead. The IC agreed unanimously to make a decision early in 2021 on whether the conference should in fact be postponed. It was also agreed to postpone the instigation of the electoral processes and other related matters until a final decision has been made concerning the 2022 conference.

Professional Protocols and Code of Conduct

A committee comprising volunteers from the EC, IC and general membership began work on the Professional Protocols and Code of Conduct towards the end of 2019 and, despite delays caused by the global pandemic, it is hoped that a draft Code of Conduct will be presented to the EC and IC soon.

ICAZ Health & Safety Guidelines

The study of archaeozoological remains is not inherently dangerous, but there are legal and health implications to handling animal remains. These may vary according to your location, the provenance of the samples and whether you are dealing with archaeological samples, bone and/or animal tissues. The best way to prepare for potential problems is to obtain proper documentation. The ICAZ webpage provides a partial list of some commonly encountered risks and suggested sources. Members are strongly encouraged to acquaint themselves with ICAZ’s Professional Protocols.

https://www.alexandriaarchive.org/icaz/about-policies-health-safety

ICAZ needs your help to expand the number of links provided. If you have links to country/regional sources that complement the information provided here, please fill out the short Google form via the webpage. If you cannot access the Google form, please send the links with the heading (microorganism/transportation/zoonotic/work&safety) and, if the link does not make it obvious, the relevant country, to: icazhealth.safety@gmail.com.

Thank you!
ICAZ is seeking a new Secretary

Contributed by Sarah Kansa (President) and Christine Lefèvre (Secretary)

We encourage you to consider taking on a more active role in ICAZ by applying to be our new Secretary. We have extended the date for responses to **31 January 2021**.

The Secretary provides key services to ICAZ in overseeing ICAZ affairs in the broader sense. After serving ICAZ since January 2013, our current Secretary, Christine Lefèvre, has announced her intention to step down due to new responsibilities entrusted to her at the Paris National Museum of Natural History.

The Secretary’s duties include the following (detailed descriptions can be found in the ICAZ Statutes (5.4):

- keeping the membership records
- keeping ICAZ archives
- working alongside the Newsletter Editor and Assistant Editor in editing and distributing the ICAZ Newsletter
- calling for elections, arranging ballots and tallying the votes
- keeping and distributing minutes of the general meetings, International Committee meetings and Executive Committee meetings
- carrying out the official correspondence of ICAZ.

If you are an ICAZ member in good standing, with solid institutional support, willing to get more involved in this great community and ready to give some time and energy to ICAZ, please send a CV and a brief statement of interest via email to Sarah Kansa at sarahkansa@gmail.com and Christine Lefèvre at christine.lefevre@mnhn.fr by **31 January 2021**.

Applications will be circulated among the International Committee members. The Secretary is elected by simple majority vote with at least 51% of the IC members voting. The position is to be filled on **March 2021**, and the Secretary serves at the pleasure of the IC.

To ensure the best transition, present Secretary Christine Lefèvre will of course share files, knowledge, experience, memories, etc., with her successor, for as long as needed!

ICAZ is a great community and serving as Secretary is a great way to get involved

So don't be shy: APPLY!

Donating to ICAZ

Please consider making a donation to ICAZ to support work such as the new membership drive. For example, the 100 new members will now receive a free 1-year membership for 2021, and we hope that many of them will renew after that. We’d like to do what we can to support multi-year memberships. A donation of just $40 will support a new member from a reduced rate country for 4 years! Students from reduced rate countries are just $20 for 4 years. Please join us in making a donation to support our growing membership!

[https://www.alexandriaarchive.org/icaz/membership-donate](https://www.alexandriaarchive.org/icaz/membership-donate)
Treasurer’s report: fiscal year 2020

Contribution by Suzanne E. Pilaar Birch (Treasurer)

I am pleased to report that ICAZ remains in good financial standing. We have just completed fiscal year (FY) 2020 (1 October 2019–30 September 2020) and are now entering FY 2021. At the end of FY 2020, we had a total of $67,348.49 in our two accounts. A record of expenditures is provided opposite.

Many thanks to those who renewed their memberships, our main source of income. We also received three donations specifically for assisting in travel costs for the Executive Committee (EC)/International Committee (IC) meetings in Stockholm scheduled for June 2020, which did not come to fruition because of the COVID-19 pandemic. These will be reserved for supporting travel in the future.

Our main expenditures were related to the production of the Newsletter as well as the conference support fund. Funds were granted to Dr Justin Bradfield at the University of Johannesburg, South Africa, for the upcoming Worked Bone Research Group Meeting scheduled for September 2021, and to Dr Fabienne Pigière at University College Dublin, Ireland, for the upcoming Roman Period Working Group in March 2021, to the amount of $1000 each (the maximum possible per grant), for a total of $2000. This is similar to FY 2019, in which only half the allocated funds ($2470/$5000) were actually spent. We continue to encourage working groups to apply to this fund in the future.

Calling all ICAZ Working Groups & Affiliated Groups: ICAZ can provide financial support for your next meeting!

Contribution by the Review Committee: Suzanne Pilaar Birch (Treasurer), Virginia Butler (IC member), Erika Gal (WG Liaison and IC member)

Since 2019, ICAZ may allocate up to US$5000 dollars each year to support meetings and related activities of ICAZ working groups and affiliated groups (see http://alexandriaarchive.org/icaz/working).

The total amount of any request should not exceed US$1000. These funds are intended to support travel costs for students, junior researchers and unfunded scholars who want to attend a working group meeting, although other needs will be considered. Applications should be submitted by working group coordinators and/or working group meeting organizers, not individuals seeking support. In order to maximize use of the funds, any remaining balance must be returned to ICAZ following the meeting. Please note: working groups should not plan to host meetings in the same year as the ICAZ conference (thus not in 2022, 2026, etc.).

A committee consisting of one EC officer and two IC members will review each proposal and allocate the funds as appropriate until the budget for a given year is expended.

There is no fixed deadline: Applications are accepted on a rolling basis.

Application: Please fill out and submit your application through Google Forms using this link: https://goo.gl/forms/SxqtpB1eymQAsHBq2
Working group status report

Contributed by Erika Gál (Working Group Liaison)

There are 17 ICAZ working groups, and one affiliated group, further details of which can be found on the website: https://www.alexandriaarchive.org/icaz/working. The current list of active groups (and liaison officers) comprises:

- Animal Palaeopathology Working Group (APWG) (Eve Rannamäe)
- Archaeomalacology Working Group (AMWG) (Daniella E. Bar-Yosef)
- Archaeozoology, Genetics, Proteomics and Morphometrics Working Group (AGPM) (Thomas Cucchi)
- Archaeozoology of Southwest Asia and Adjacent Areas Working Group (ASWA[AA]) (Hitomi Hongo)
- Archaeozoology of the Baltic Region and Adjacent Areas Working Group (ABRA) (Eve Rannamäe)
- Bird Working Group (BWG) (Chiara Corbino)
- Fish Remains Working Group (FRWG) (Alfred Galik)
- Grupo de Zooarqueologia de Camelidos (GZC) (Pablo Mercoll)
- Marine Mammal Working Group (MMWG) (Aikaterini Glykou)
- Microvertebrate Working Group (MVWG) (Angel Blanco-Lapaz and Sara E. Rhodes)
- Neotropical Zooarchaeology Working Group (NZWG) (A. Sebastián Muñoz)
- Stable Isotopes in Zooarchaeology Working Group (SIZWG) (Suzanne Pilaar Birch)
- Taphonomy Working Group (TWG) (Ana Belen Marin)
- Worked Bone Research Group Working Group (WBRG) (Justin Bradfield)
- Zooarchaeology of the Modern Era Working Group (ZMEWG) (Rebecca Gordon)
- Zooarchaeology of the Roman Period (RPWG) (Sabine Deschler-Erb and Silvia Valenzuela-Lamas)
- Postgraduate ZooArchaeology Forum (PZAF) (Dimitrije Marković and Teodora Mladenović)

Based on information available, it appears that many of the working group memberships are growing, and overall most of the working groups are very active, as shown in the graph below. Since 2018, four of the working groups have published five proceedings, and about five more proceedings are underway.

Six of the working groups have social media accounts: the Archaeomalacology Working Group, Animal Palaeopathology Working Group, Grupo de Zooarqueologia de Camelidos, Microvertebrate Working Group, Worked Bone Research Group Working Group and Postgraduate ZooArchaeology Forum, all of which can be found on Facebook.

All working groups can be contacted in the first instance via Erika Gál (Gal.Erika@btk.mta.hu).

Working group membership numbers, as known in 2020. For abbreviations, see the bullet list above
2 November 2020

To Whom it May Concern,

I am writing on behalf of the International Council for Archaeozoology (ICAZ) to express our repudiation of events related to the large-scale wildfires in the Amazon forest and Pantanal wetland regions of Brazil, and those more recently in the Cerrado and Caatinga biomes.

ICAZ is an international organization with more than 500 members from 50 countries around the world, including a longstanding representation from Brazil and other South American countries. Our goals are to develop and stimulate archaeozoological research, to strengthen cooperation among archaeozoologists, to foster cooperation with archaeologists and scientists working in related fields, and to promote high ethical and scientific standards for archaeozoological work. Our promotion of these goals includes raising our collective voice about wrongdoings and injustices that impact scientific understandings, the open sharing of scientific information, and the protection of global cultural heritage.

We are indignant at the occurrence of intentional deforestation and wildfires carried out in the Amazonian forest, Pantanal wetlands regions, and other biomes such as the Atlantic Forest, Cerrado, Caatinga, and Pampa. Due to the great territorial expanse and importance that the Amazon and Pantanal biomes have for countries other than Brazil, these fires will have a negative impact on the climate in several parts of the world. While we understand that natural fires are sometimes related to climatic events such as "el niño" and "la niña", in the last years of 2019 and into 2020 the proportional number of intentional wildfires has constantly increased, largely due to budget and staff cuts, political interference, and a weakening of environmental regulations.

These wildfires have been mostly caused by people who use fire as a means of clearing territory for agribusiness, disregarding the recommendations of the Brazilian and international environmental agencies that seek to be compatible with environmental protection legislation and supported by the Constitution of the Federative Republic of Brazil of 1988 for the sustainable development of agribusiness. Although researchers have warned of this problem for several years, since the beginning of 2019, the current Brazilian federal government has disregarded the constitutional scientific and legal data and has promoted the dismantling of politics and institutions responsible for environmental protection and monitoring. These attitudes and
political decisions have contributed to the degradation of the natural and social sustainability of
the traditional populations who live in the impacted biomes, resulting in the destruction of much
of their culture material and immaterial caused by economic speculation through invasions and
land grabbing in indigenous areas, illegal mining, among other ways of exploring space and
natural wealth.

These lands guarantee the preservation of natural biomes, support the life of native peoples, and
regulate the climate. These include the public lands to which indigenous peoples have a
constitutional right to use. These damaging measures have severe negative consequences for the
Brazilian natural and cultural heritage with global repercussions, particularly concerning the
intentional deforestation and wildfires resulting from human activities deeply encouraged by
noncompliance with national legislation and international agreements.

We are horrified by the ongoing, deliberate damage and destruction of these natural and cultural
resources and we join with other organizations and world leaders in deploring these activities and
calling for the destruction to stop, as well as for measures to be put in place to protect and
promote these precious resources.

Sincerely,

Sarah W. Kansa
President, 2018-2022
International Council for Archaeozoology
Web: https://alexandriaarchive.org/icaz

cc: Prof. Dr. Albérico Nogueira de Queiroz
Committee of Honor

Contributed by Christine Lefèvre (Secretary)

Six new Committee of Honor (CoH) members were nominated and elected in 2020. Brief biographies are provided below, and the CoH and ICAZ Remembers pages are being updated on the ICAZ website.

Richard Cooke (UK and Panama)

Nominate and contributed by Kitty Emery and Ashley Sharpe

Richard Cooke is one of the pre-eminent scholars of Panamanian archaeology, whose focus on archaeofauna led him on a career exploring human adaptations and survival in the tropics, from the late Pleistocene to the present day. Cooke earned a doctoral degree in 1972 at the London University Institute of Archaeology, examining what was then the little-explored region of Coclé in central Panama. Although not originally intending to pursue a career in archaeozoology, a dearth of tropical faunal analysts at the time led Cooke to learn the identification and analysis of vertebrate remains. Refining recovery methods for tropical environments and developing a vertebrate comparative collection currently unrivalled for the southern Central America region, Cooke has demonstrated how archaeozoology is a valuable asset for interpreting far-reaching anthropological questions, most particularly human subsistence adaptations in a varied landscape. Cooke became a staff archaeologist at the Smithsonian Tropical Research Institute in Panama in 1983, and has since mentored dozens of students and published over 150 articles and chapters, in both English and Spanish. He joined ICAZ in 1993. He has been actively involved with the Fish Remains Working Group (FRWG) since that time, hosting the group’s 9th annual meeting in Panama City, Panama, in 1997. He has contributed to several ICAZ publications, including two chapters on animal symbolism in art and ritual in Behavior Behind Bones (Day et al., 2004; Oxbow, Oxford, UK). Cooke’s research interests know few bounds, and he has directed investigations and international collaborations to explore such topics as the adaptive strategies among ancient fisherfolk (including the construction of stone fish traps and dolphin hunting), has demonstrated methods of fish drying and exchange in Pre-Columbian and modern Panama, has explored the possibility of deep-water diving for marine shells valued among Pre-Columbian peoples, has improved identification methods and encouraged better biological understanding of tropical fish (including several new extant species of Pacific catfish, one being the Notarius cookei, the False bronze sea catfish named in his honour) and deer species (leading to the identification of an extinct form of dwarf deer on the Panamanian islands), and has promoted recent investigations into the genetic origins of ancient and modern peoples across the isthmus. Cooke has received numerous awards and honours, among them the Order of Vasco Núñez de Balboa, Distinguished Member of the Sistema Nacional de Investigadores of Panama, and the Most Excellent Order of the British Empire.
Simon J. M. Davis (UK and Portugal)  
Nominated by Angelos Hadjikoumis and Cleia Detry; contributed by Angelos Hadjikoumis

Simon was born in 1950 in London, where he studied zoology at University College. After that, he pursued postgraduate studies at the Hebrew University in Jerusalem, completing a Master's degree (1973) and a PhD on *The Large Mammals of the Upper Pleistocene of Israel* (1979). After his formal studies, Simon followed a research and teaching trajectory that has positively transformed the field of zooarchaeology. His scientific rigour, sharp analytical mind and sterling work all over Europe and southwest Asia, have boosted zooarchaeology's international recognition and helped establish it as an indispensable component of archaeological research in many regions he worked in. Simon mainly worked in England, Israel, Cyprus, Greece, Iran and Portugal, and still does in some of these countries. As for his research interests, they are equally diverse and include, among others, palaeoenvironmental reconstruction through faunal analysis, animal domestication, livestock improvement in later periods, ritual use of animals and the development of osteometric and morphological methods that improve our identification of closely related species. His rich publication record includes ground-breaking research, as well as textbook-like works, such as *The Archaeology of Animals* (1987; Batsford, London, UK), one of the most widely read and translated books produced in zooarchaeology. Beyond research, Simon has taught at many universities around the world, such as the Hebrew University (Israel), University College London and Reading University (UK), University of Lecce (Italy), and University of Lisbon and University of Algarve (Portugal). He has also contributed significantly to the development of several laboratories and faunal collections for zooarchaeological research, such as in Jerusalem (1971–1979) and at English Heritage (London, UK; 1988–1999) and Laboratório de Arqueociências–Direção-Geral do Património Cultural (LARC-DGPC; Lisbon, Portugal; 2000–present). He has also been a staunch ICAZ supporter, participating in many of its conferences and working for many years as a member of the IC.

Peter Rowley-Conwy (UK)  
Nominated and contributed by Ariane Burke

Rowley-Conwy held positions at Clare Hall (Cambridge, UK) and Memorial University (Newfoundland, Canada) until 1990, when he joined the Department of Archaeology at Durham University (UK), where he became a professor in 2007. He was elected Fellow of the Society of Antiquaries in 2009. Rowley-Conwy’s research focuses on archaeozoology and, more specifically, on animal domestication and the transition from hunting and gathering to farming. He has published widely but not exclusively on European material. In 2000, he co-authored a book on the transition to farming at Abu Hureyra with Anthony Legge. Rowley-Conwy and Legge had previously collaborated on a very influential re-examination of the large mammal fauna of Star Carr, published in 1988 (*Star Carr Revisited*; University of London, London, UK). In 2000, Rowley-Conwy ran the Durham Pig Project, which examined pig domestication around the world and resulted in a major co-authored book entitled *Pigs and Humans: 10,000 Years of Interaction* (2007; Oxford University Press, Oxford, UK). In addition to his interest in early farming communities, Rowley-Conwy has collaborated on several books on hunters and gatherers, and recently published a book on the history of Christian Jürgensen Thomsen’s three age system (Stone Age–Bronze Age–Iron Age), and its impact on archaeology in Denmark, Britain and Ireland (*From Genesis to Prehistory*, 2007, Oxford University Press, Oxford, UK).
Jörg Schibler (Switzerland)  
*Nominated and contributed by Sabine Deschler-Erb*

Jörg Schibler studied zoology and prehistory at the University of Basel, Switzerland. He became very interested in archaeozoology early on, and, for his Master's degree, he analysed the raw material of the worked bone objects from the Neolithic lakeshore settlement of Twann (Canton Bern) (published in 1980). He then continued working on this material for his PhD thesis, which dealt with the typological analysis of the same objects (published in 1981). Both of these projects were supervised by Elisabeth Schmid. From 1988, he held teaching positions in archaeozoology at the Universities of Basel, Bern, Freiburg (Germany), Fribourg (Switzerland) and Frankfurt a.M. (Germany). He has been heavily involved in ICAZ throughout much of his career, and was a member of the EC from 1994 to 2002 and of the IC from 2006 to 2014. Jörg has broad research interests in archaeozoology, from the Palaeolithic period to the Middle Ages, with a particular focus on the Neolithic period and on worked bone. Together with Stefanie Jacomet (archaeobotany), he supervised several large interdisciplinary projects focusing on circum-Alpine wetland sites, and has published extensively on this topic. In 2003, he founded the Integrative Prehistory and Archaeological Science (IPAS)/Integrative Prähistorische und Naturwissenschaftliche Archäologie (IPNA) at the University of Basel, where archaeozoologists, archaeobotanists, anthropologists, geoarchaeologists and ancient (a)DNA and isotope specialists collaborate closely under one roof. In September 2020 he officially retired, but he continues to work on a number of research projects.

Dale Serjeantson (UK)  
*Nominated and contributed by Umberto Albarella*

Dale has been a leading light in the world of zooarchaeology for several decades. She studied English literature at St Andrews (Scotland, UK) and then archaeology in London (UK). Her main zooarchaeology interests have been in assemblage formation processes, diet, dairy products and the past relationship between humans and birds. In all these subjects (and more) she has published extensively. Her bird bone manual (co-authored with Alan Cohen; *A Manual for the Identification of Bird Bones from Archaeological Sites*, 1996; Archetype Publications, London, UK) and her book on *Birds* (2009; Cambridge University Press, Cambridge, UK), part of the Cambridge Manuals in Archaeology series, are especially well-known. She has worked on prehistoric and medieval sites, mainly in Britain but with forays into Greece and France. Her research in Scotland, which has continued for many years, is especially noteworthy, but prominent sites she has investigated also include Neolithic and Bronze Age Runnymede and medieval Winchester (both in southern England, UK). From 1991 to 2001 she worked at the University of Southampton (UK) with a position funded by English Heritage/Historic England. During that decade she trained many students, some of whom have become professionals in the field. She has for many years been a staunch supporter of ICAZ, contributing to many conferences and playing a prominent role in the ICAZ Bird Working Group (BWG), which dedicated its last conference and two volumes of proceedings to her.
Jean-Denis Vigne (France)
Nominated and contributed by Christine Lefèvre

With a background in natural sciences and vertebrate palaeontology, Jean-Denis Vigne has combined his double passion for palaeontology and archaeology through archaeozoology. His meeting with François Poplin, to whom he brought a box of archaeological bones to confirm identification in 1976, was decisive. He was one of the first members of the archaeozoology research team based at the Paris National Museum of Natural History (France), and was the director of the laboratory there from 2000 to 2013. Hired by the French National Centre for Scientific Research (CNRS) in 1987, where he is a research director, he was awarded the Silver Medal in 2002. His main research interests have been the dynamic interactions between human societies and animal biodiversity, with a strong focus on domestication processes in the Mediterranean area and the impact of Neolithization on the vertebrate communities. He has conducted excavations in Tunisia, Corsica and Cyprus, and has published over 500 scientific papers, book chapters and monographs. He has also trained many students and directed numerous collaborative programmes. He is one of the co-founders of the journal Anthropozoologica. He joined ICAZ in 1982, and has been a member of the IC for many years, and a member of the EC from 2006 to 2014. He co-organized the 2010 ICAZ International conference in Paris and founded the Archaeozoology, Genetics, Proteomics and Morphometrics (AGPM).

Are you receiving e-mails from ICAZ?

ICAZ sends periodic emails to its members. If you are an ICAZ member but are not receiving emails from ICAZ, please check your spam folders and adjust your inbox setting to make sure you stay updated. If you are not receiving emails at all, your email address may need to be updated or your membership may have lapsed: check https://www.alexandriaarchive.org/icaz/membership-join to find out your status, join and renew.

ICAZ Membership

To join ICAZ or renew your membership, visit the Membership section of the ICAZ website, https://www.alexandriaarchive.org/icaz/membership-join. Dues may be paid online or via post. Questions and inquiries may be emailed to the treasurer, Suzanne Pilaar Birch, sepbirch@uga.edu.
14th Worked Bone Research Group (WBRG) meeting

Contributed by Justin Bradfield, University of Johannesburg, South Africa (wbrg2021@uj.ac.za).

The University of Johannesburg is delighted to announce that the 14th meeting of the Worked Bone Research Group will take place in Johannesburg, South Africa, from 30 August to 3 September 2021. This will be the first time the meeting is hosted on the African continent and the first time in the Southern Hemisphere! We hope you will be able to join us next year in making this a memorable meeting.

The conference is generously funded by the Palaeontological Scientific Trust (PAST), which allows us to waive all fees for students and African scholars.

Abstract submissions are now open, and you can follow developments on the conference webpage (www.uj.ac.za/wbrg). The deadline for abstract submissions is 30 January 2021.

The organising committee is cognisant of the fluid situation at the moment around international travel and COVID-19. For this reason, two alternative options are available: (1) move to an online forum; (2) postpone the conference. A decision will be made in March 2021, should the global travel situation not have improved by that time.

All queries may be directed to the Organizing Secretary, Justin Bradfield (wbrg2021@uj.ac.za).

9th Postgraduate ZooArchaeology Forum (PZAF)

Contributed by Dimitrije Marković and Teodora Mladenović, University of Belgrade, Serbia (pzaf2021@gmail.com)

The PZAF is an ICAZ-affiliated group run by and for postgraduate/graduate students and early-career professionals in the field of zooarchaeology, and provides the opportunity for young researchers to present their project in an informal environment. Since 2009 it has met eight times, and the 9th meeting will take place at Petnica SC (http://petnica.rs/) in Serbia on 24–26 June 2021.

Abstracts from any field of zooarchaeology will be considered. Contributions for both oral and/or poster presentations are
welcome. The abstract submission will be opened at the beginning of **February** and will last until **15 March**. Further, detailed information about the conference, submissions and registration procedures will be published on the official PZAF Facebook page (https://www.facebook.com/PZAF1), as well as webpage (http://pzaf2021.com/). For any additional information, feel free to email pzaf2021@gmail.com.

Logistical support has so far been provided by the Petnica SC; Laboratory for Bioarchaeology, Faculty of Philosophy, University of Belgrade; DAREC (Danube Area Research Center); Sirmium Palatium Imepriale; and National Museum in Belgrade.

Please bear in mind that changes regarding the holding of a live conference may have to be made, but we will do our best to update you in a timely manner.

### 21st Fish Remains Working Group (FRWG) meeting

*Contributed by Alfred Galik, Austrian Archaeological Institute, Austria (alfred.galik@oeaw.ac.at)*

The XXI FRWG International Conference will be hosted by the Austrian Archaeological Institute and the Natural History Museum in Vienna, Austria, on **23–28 August 2021**. We aim to organize a meeting with speakers and participants physically present. However, depending on the unpredictable COVID-19 situation, an alternative virtual meeting is also being planned.

The conference will deal with research fields promoted by the ICAZ FRWG, with the aim of creating a basis for an interdisciplinary discussion. Following the tradition of the FRWG, the programme is open to all, and the organizers welcome contributions from any field of ichthyo-archaeological research. One proposed topic invites papers on environmental history and historical fish fauna from various aquatic environments.

The registration period will start on **1 January 2021**, and the call for papers will close on **31 March 2021**. The conference homepage provides further information [https://www.oeaw.ac.at/conferences/icaz-frwg2021](https://www.oeaw.ac.at/conferences/icaz-frwg2021). The conference programme will comprise, if future COVID-19 rules allow, 4 days of oral presentations and half a day of poster presentations. There will also be a half-day excursion through Vienna to the Danube and a post-conference trip.

The organizing team comprises:

- Alfred Galik and Astrid Pircher, Austrian Archaeological Institute, Austrian Academy of Sciences
- Gertrud Haidvogl, Institute of Hydrobiology and Aquatic Ecosystem Management (IHG), University of Natural Resources and Life Sciences, Vienna
- Günther Karl Kunst, VIAS Vienna Institute for Archaeological Science, University of Vienna
- Jürgen Kriwet, Institute for Palaeontology, University of Vienna
27th annual meeting of the European Association of Archaeologists (EAA)

Contributed by Felipe Criado-Boado (EAA President)

- Theme: Widening Horizons
- Dates: 8–11 September 2021
- Place: Kiel, Germany

See https://www.e-a-a.org/EAA2021/Home/EAA2021/Home.aspx for more details, and Programme (e-a-a.org) for a variety of sessions of that are of potential interest to zooarchaeologists.

The deadline for paper/poster submissions is 11 February 2021.

Taphonomy and palaeoecology of Quaternary vertebrates: advances in fossil and experimental studies

Contributed by Juan Rofes, University of the Philippines Diliman, Philippines (jcrofes@up.edu.ph)

On behalf of my co-editors, Drs Janine Ochoa and Emmanuelle Stoetzel, and Quaternary Assistant Editor Daisy Du, we would like to invite you to contribute a scientific paper of your choice to the Quaternary Special Issue entitled Taphonomy and palaeoecology of Quaternary vertebrates: advances in fossil and experimental studies.

All papers focusing on (but not restricted to) palaeontology, zooarchaeology, palaeoanthropology, palaeoclimatology and paleoenvironmental studies, as well as modern taphonomic referentials and experiments, are welcome.

Note that this open access journal asks for an Article Processing Charge (APC) of 1000 CHF (Swiss Francs), but there is the possibility of applying for significant discounts.

Deadline for manuscript submissions: 20 July 2021.

Please visit the special issue website for details on the scope of the volume and information on manuscript submission, https://www.mdpi.com/journal/quaternary/special_issues/quaternary_vertebrates, and do not hesitate to contact us if you have any questions or concerns.
Bone morphology in paleontology and evolution

Contributed by Marco Zedda, University of Sassari, Italy (mzedda@uniss.it)

You are invited to submit a feature article to a Special Issue of the journal Animals entitled Bone morphology in paleontology and evolution. The article may be either a full paper or a communication based on your own research in this area, or may be a focused review article on some aspect of the subject. Animals is an open access journal with an impact factor of 2.323. All submissions, including featured articles will be subject to peer review.

If you plan to submit a review article please provide Marco Zedda mzedda@uniss.it with a title and brief description at your earliest convenience, in order to avoid multiple reviews covering the same material.

For more information about the Special Issue, please see: https://www.mdpi.com/journal/animals/special_issues/bone_morphology_paleontology_evolution_research.

For information on manuscript preparation and related matters, please see the instructions for authors: https://www.mdpi.com/journal/animals/instructions.

Although the deadline for submission of manuscripts to the Special Issue is 31 August 2021, I would appreciate hearing from you in the next few weeks whether you would be willing to submit a contribution.

If you have any questions please do not hesitate to contact Marco Zedda mzedda@uniss.it.

Turkish Journal of Archaeological Sciences

Contributed by Mihriban Özbaşaran, Istanbul University, and Güneş Duru, Mimar Sinan Fine Arts University, Turkey (archaeologicalsciences@gmail.com)

We are happy to announce a new journal, Arkeoloji Bilimleri Dergisi/Turkish Journal of Archaeological Sciences. This peer-reviewed journal will be published online by Ege Yayınları in Turkey. We hope that it will cover an important gap in Turkish archaeology.

https://en.arkeolojibilimleridergisi.org

Archaeology is being transformed by the integration of innovative methodologies and scientific analyses into archaeological research. With the establishment of new departments, institutes, and programmes focusing on archaeological sciences, archaeology has moved beyond the traditional approaches of the discipline. When placed within their archaeological context, studies can provide novel insights and new interpretive perspectives to the study of archaeological materials, settlements and landscapes.

In Turkey, the number of interdisciplinary excavation and research projects incorporating scientific techniques is on the rise. A growing number of researchers are being trained in a broad range of scientific fields, including but not limited to archaeobotany, archaeozoology, tool technologies, dating methods, micromorphology, bioarchaeology, geochemical and spectroscopic analysis, geographical information systems, and climate and environmental modeling. The Turkish Journal of Archaeological Sciences aims to situate Turkish archaeology within this new paradigm and to diversify and disseminate scientific research in archaeology. New methods, analytical techniques and interdisciplinary initiatives that contribute to archaeological interpretations and theoretical perspectives fall within the scope of the journal.

The Turkish Journal of Archaeological Sciences is an international peer-reviewed journal. The journal is published online by Ege Yayınları in Turkey. The journal publishes articles in Turkish and English. The principal language is Turkish so that the journal can effectively contribute to debates needed to establish specialist scientific terminologies in the Turkish language. Because of the international nature of scientific collaboration in Turkey, articles written in English are also welcome. Excavation reports and manuscripts focusing on the description, classification and cataloging of finds do not fall within the scope of the journal.
The 3rd biennial MVWG meeting was held virtually on 1–2 September 2020, hosted by the Institut Català de Paleoecologia Humana I Evolució Social (IPHES) of Tarragona (Spain).

The meeting was organized by Drs Juan Manuel López García and Hugues-Alexandre Blain of IPHES, and Dr Sara E. Rhodes and Ángel Blanco-Lapaz of the University of Tübingen and Senckenberg Center for Human Evolution (Tübingen, Germany). Despite moving to a virtual platform (Google meetings) because of the worldwide pandemic, our biannual meeting received an exceptional response from microvertebrate researchers and students, with 60 participants and more than 35 oral communications and posters.

The meeting consisted of four sessions covering topics such as past climate change and microvertebrate taphonomy, commensalism, taxonomy, evolution, biostratigraphy and biochronology. New methodologies and techniques (DNA, isotopes, etc.) in microvertebrate studies were also presented. The virtual platform allowed participation by researchers working in and researching disparate geographic areas, from South America and the Caribbean (Argentina, French Antilles) to South Asia (Thailand and Cambodia), Europe, the Middle East and South Africa. The success of the 3rd MVWG meeting can be attributed to the enthusiasm our members bring to their work and their excitement to share and discuss their research with colleagues and students alike. Along with the resounding success of our previous MVWG meetings, which took place in Alcalá de Henares (Spain, 2016) and Ankara (Turkey, 2018), our most recent meeting showcased the exceptional work being done by a growing number of microvertebrate researchers across the globe.

The first session, Human and small vertebrates interactions, included ‘Statistics, taphonomy and representativeness: making the most out of archaeological micromammal assemblages’, by Andrzej Romaniuk (University of Edinburgh, UK); ‘On the dispersal of the Etruscan shrew (Suncus etruscus) across the Mediterranean Basin’, by Ángel Carmelo Domínguez García (Universidad Complutense of Madrid, Spain); ‘Reconstructing the context of the earlier human occupation of Europe. New results from the small mammals of Pirro Nord 13 (Early Pleistocene, Apricena, southern Italy)’, by Claudio Berto (University of Warsaw, Poland); ‘Zooarchaeology of reptiles in tropical areas: the beginning of a long story?’, by Corentin Bochaton (University of Burdeux, France); ‘Palaeobiogeographic analysis of the amphibians and reptiles from the mid-late Holocene transition of El Mirador cave (Atapuerca, Spain) in the North-Iberian post-glacial context’, by Josep Francesc Bisbal-Chinesta (IPHES-URV, Spain); and ‘Human meets woodmouse: an assemblage of anthropophilous Apodemus in Middle Neolithic wells from the site Les Bagnoles, SE-France’, by Simone Häberle (University of Basel, Switzerland).

During the second session, Paleoenvironmental and Paleoclimatic reconstruction, the presentations included: ‘One million years of diversity shifts in amphibians and reptiles in a Mediterranean landscape: resilience rules the Quaternary’, by Almudena Martínez-Monzón (IPHES-URV); ‘The microvertebrate assemblage of Ghar-e Boof (Iran): new data for the Late Pleistocene paleoenvironmental reconstruction of the Southern Zagros Mountains’, by Ángel
During the third session, New and/or improved methods applied to small vertebrates, the presentations were:

- ‘Systematic and geometric morphometrics analysis applied to the current and fossil genus *Ellobius* (Fischer, 1814) from the Middle East’, by Iván Rey-Rodríguez (National History Museum of Paris, France); ‘Deep population history of common vole (*Microtus arvalis*) populations reconstructed using ancient DNA’, by Mateusz Baca (University of Warsaw, Poland); ‘Evolutionary history of narrow-headed vole from the Late Pleistocene Europe’, by Danijela Popovic (University of Warsaw, Poland); ‘The environment in NE Iberia during MIS 3, combining taxonomy, taphonomy and geochemistry on small-mammal assemblages’, by Mónica Fernández-García (IPHES-URV); and ‘Cryptic speciation in the fossil record? The herpetological assemblage from Subunit Xb of El Salt Middle Palaeolithic site, Alcoi, Spain’; preliminary results’, by Rafael Marquina-Blasco (University of Valencia, Spain).

On behalf of the organizing committee and the ICAZ MVWG coordinators, we would like to thank all the participants for their participation, contributions and continued support. Furthermore, we are indebted to IPHES, Tarragona, for hosting the virtual meeting, and the Agència de Gestió d’Ajuts Universitaris i de Recerca (AGAUR; groups 2017-SGR-859 y 2017-SGR-836) for sponsoring the event.

Lastly, we look forward to inviting all our members and interested academics to join us (virtually or otherwise) in 2022 at our next MVWG meeting, hosted by the Institute of Archaeological Sciences (INA) and the Senckenberg Center for Human Evolution and Paleoenvironment (SHEP) at the Universität Tübingen, Germany.
The fourth academic meeting of the Neotropical Zooarchaeology Working Group (NZWG) has been postponed by one year, moving it to 29 September–2 October 2021. It will be held at the Federal Rural University of Pernambuco, in the city of Recife, Pernambuco state, on the north-east coast of Brazil. The meeting will cover the theme, even more pertinent, ‘Zooarchaeology, traditional societies, biodiversity and climate change: integrative perspectives between past and future’.

However, in March 2021, the organizing committee will analyse the situation and the conditions for controlling the COVID-19 pandemic in Brazil, and will decide whether to maintain the physical meeting or move to an online format. Information about the meeting continues to be available at https://doity.com.br/nzwg-icaz-2021.

Osteometric Database of South American Camelids
The Osteometric Database of South American Camelids project seeks to store and make freely accessible osteometric measurements of Neotropical camelids that can be easily consulted and compared, as well as adequately cited. Taking into account that most publications do not allow the inclusion of raw data such as these in detail, this project seeks to provide a searchable repository for them, as well as enabling access to osteometric data that are currently circulating informally or are scattered across a range of different publications.

The project arises from a proposal launched at the first academic meeting of the NZWG-ICAZ in Santiago (Chile), in 2012, and discussed at the 2014 ICAZ International Meeting in San Rafael, but later postponed. We have recently started to resume the project, having already relaunched the database and making it a reality in 2021, edited by Mariana Mondini, Lorena L’Heureux, Sebastián Muñoz and Sarah Kansa. It will be available on the Open Context portal. Initially, we will focus on modern specimens used as reference standards, with the idea of later expanding it to archaeological and palaeontological specimens.

On 4 December 2020, the Zooarchaeology of the Modern Era (ZMEWG) hosted its first working group meeting online via Zoom.

The meeting was originally planned to be held at Newcastle University in September 2020, but once the pandemic hit and it became clear that no meeting could take place in person, we decided to move the meeting online. We were pleased to see an enthusiastic reply to our call for papers and received many requests from the Zooarch community to be a part of the audience.

On the day of the meeting, there were 108 participants from 26 countries. There was a full programme of speakers, featuring talks from across seven different time zones. The range of papers did a fantastic job in showcasing how far the discipline has come, and how rapidly we are broadening our research interests and contributing to knowledge.

There was an extensive range of papers, some discussing using dietary habits to reconstruct identities, cultural interactions and food economics in places ranging from the Ottoman Empire to Scandinavia, South America and the USA. We learnt about new research approaches such as geographial information systems (GIS) to investigate enslaved and free Black diets in 18th–19th-century America, and the use of ZooMS and radiocarbon dating to investigate the spread of the brown rat in Europe. We saw first-hand investigations of comparative improved husbandry strategies.
across Europe; took a glimpse into the world of famous individuals like Jumbo the elephant; and explored human–animal relationships with an unknown puppy in 18th century Massachusetts.

One big challenge in running a global online conference was making sure events happen at a reasonable time for both presenters and audience members. Unfortunately, this was not always possible (with a big apology to friends and colleagues in Australasia and eastern Asia). Nevertheless, the online format allowed us to increase participation so we hope to continue adopting this approach moving forward for future meetings, allowing people to meet in one place but others to participate online.

Thank you to all of the speakers and audience members for making the first ZMEWG conference a huge success given the current circumstances. Although it was not possible to meet in person we’re glad we could still meet up digitally.

What next?
We are looking into publishing the conference proceedings in a themed volume of a peer-reviewed journal, and will be working towards this in 2021.

Want to join?
ZMEWG was founded in 2018 and currently has more than 100 members. The purpose is to bring together zooarchaeologists working on assemblages dating from roughly the last 500 years to meet, exchange ideas and experiences, and share knowledge. We have a formal working group meeting once every four years but also a scheduled meeting during the quadrennial ICAZ meeting, so we get a chance to meet every two years.

If you are interested in joining the working group, please contact Eric and Becky at zmeworkgroup@gmail.com.

Contributed by Sarah Whitcher Kansa, ICAZ President and Web Administrator

The ICAZ membership registration site has a searchable member database, which is accessible only to current ICAZ members. The database contains contact information, interests and brief bios for all members. This is an opt-in database, so please take a moment to log in to the new system and add yourself to the database.

Here’s how to add yourself to the member database.

2. If you know your login info, enter it here and go to Step #6.
3. If you do not have login info, enter your username, which is the email address at which you receive email messages from ICAZ. Leave the password field blank.
4. Scroll down to below the orange Log In button and click on ‘Reset Password’.
5. You will receive an email with a new password. Log in with this information.
6. Go to ‘Member Database Addition’ (http://alexandriaarchive.org/icaz-wp/member-database-addition/) to add yourself to the database (using your membership email address)
7. You are done! If you wish, you can go to ‘My Account’. (http://alexandriaarchive.org/icaz-wp/account/) to update your mailing address and country.

Please contact Sarah with any questions: sarahkansa@gmail.com

Thank you!
Fifty years of Archaeozoology at Deccan College, Post-Graduate and Research Institute, Pune, India

Contributed by Arati Deshpande-Mukherjee, Deccan College PGRI, Pune, India (adm.muk@gmail.com)

The Deccan College Post-Graduate and Research Institute (PGRI) at Pune, India, is one of the oldest educational institutions in India, and it is celebrating its bicentenary year in 2020–21. While it has been carrying out archaeological research and teaching since the 1940s, the establishment of the Archaeozoology Laboratory almost 50 years ago helped to initiate faunal research in Indian archaeology. Prior to that there were no trained archaeozoologists, and some of the excavated faunal remains from across the country were studied by palaeontologists, veterinary doctors, zoologists from the Zoological Survey of India, and university departments at Dharwad and MS University Vadodara. These included individuals such as B. Prashad, H. C. Ray, Bholanath, K. Alur, Desai and D. R. Shah.

In the early 1970s faunal studies were initiated by Dr P. K. Thomas under the guidance of Professor A. T. Clason from the Biologisch-archaeologisch Institute of Groningen (the Netherlands), who was then visiting Deccan College to study the faunal remains from a few southern Neolithic sites (Figs 1 and 2). At that time, because of the large recovery of animal remains from various excavations by Deccan College, it was felt necessary to establish an archaeozoology laboratory in its archaeology department. Hence, after setting up a modest reference skeletal collection containing both modern domestic and wild animals, important sites such as Bagor, Inamgaon and Prabhas Patan came to be studied.

Subsequently, over the past few decades, three generations of archaeozoologists, starting with the late Dr P. K. Thomas, and followed by his doctoral students P. P. Joglekar and Arati Deshpande-Mukherjee and their students, have been carrying out faunal research on sites from the Neolithic, Mesolithic, Harappan, Chalcolithic, Iron Age, historical and medieval periods. In addition to the study of mammalian remains, those of molluscs and later fish were also initiated. Archaeomalacological studies for Harappan sites such as Kuntasi, Shikarpur, Khirsara and Dholavira have yielded new insights into the shell working industry of the Indus valley civilization in Gujarat. It has also helped highlight the role of molluscs in ancient India.

Today the laboratory has a good reference skeletal collection, comprising mainly mammalian fauna that are common to the Indian subcontinent, such as cattle, water buffalo, pig, dog, sheep, goat, camel, gazelle, antelopes (Nilgai, four horned antelope), deer (sambar, chital, barking deer, hog deer), mongoose, porcupine, hare, etc. (Figs 3 and 4). The laboratory is actively engaged in faunal analysis for archaeological sites excavated by the archaeological survey of India, state archaeological and university departments.
(Figs 5 and 6). Noteworthy studies have been carried out for sites such as Kuntasi, Balathal, Adam, Bhagimohari, Raipur, Kaote, Inamgaon Naikund, Budhihal, Mahurjhari, Bhoi, Farmana, Khirsara, Padri, Sishupalgarh, Dihar, Kanmer and Kotada Bhadli. Currently studies are underway for the Harappan sites of Bhirrana and Rakhigarhi, Iron Age site of Kodumanal, and historic sites of Indor Khera and Vadnagar. While most studies have focused on the identification, and exploring the role, of animals in ancient subsistence economy, other aspects, such as palaeoenvironment, palaeoclimate, taphonomy, shell and bone working, are also being studied. An important contribution in recent years has been the use of animal remains as palaeoenvironmental proxies through the application of stable isotope analysis for the Harappan sites of Bhirrana and Dholavira. Attempts are underway for exploring the possibilities of extracting ancient animal DNA. To date, the laboratory has produced nine PhDs, one MPhil, 20 MA dissertations and more than 200 research publications. Since its beginning, the laboratory has contributed significantly to Indian archaeology, with its research helping to generate considerable quantities of archaeozoological data for the protohistoric and historic cultures of India. It has also been responsible for teaching and providing training in archaeozoology, which is currently lacking at most archaeology departments in Indian universities.
The Department of Archaeology in Sri Lanka: further research work at prehistoric sites

Contributed by Sudevi Ranasinghe, Department of Archaeology, Sri Lanka (sudeviranasinghe@ymail.com)

The Department of Archaeology in Sri Lanka, established in 1890, has been functioning as the apex institution and chief regulatory body for the management of the archaeological heritage of the country. However, prehistoric research in Sri Lanka only really started after 1960, with the involvement of the Department. The research in this specific field has been predominantly limited to identifying human and animal bones, and making preliminary study of the subsistence patterns associated with prehistoric humans. The notable prehistoric sites analysed for this work were Fa-Hien cave, Batadombalena cave at Kuruvita, the shell midden site at Pallemalala and a cave site at Beli lena at Kitulgala (Fig. 1).

There is still a substantial amount of work to be done to analyse and interpret the data properly, utilizing modern scientific methods and technology. Early in 2020, a group of researchers started the first phase of further analytical studies of the faunal remains, with the aim of identifying the dietary patterns of prehistoric humans. For that we were able to consult with a team from the Anthropological Department of Sri Jayawardene University, and the dental faculty of the Peradeniya University, Sri Lanka. Facilities for conducting further scientific work, i.e. laboratories, specialists and training, are minimal within the Department of Archaeology.

Fig. 1. Map of Sri Lanka and sites
Zooarchaeology at the University of the Witwatersrand, South Africa

Contributed by Drs Shaw Badenhorst, Jerome Reynard and Christine Steininger, University of the Witwatersrand, South Africa

(shawbadenhorst@yahoo.co.uk)

Research and training in zooarchaeology is alive and well in South Africa. The University of the Witwatersrand (Wits) in Johannesburg, South Africa, currently employs three full-time zooarchaeologists in two departments (The Evolutionary Studies Institute, and the School of Geography, Archaeology and Environmental Sciences). Research focuses on a number of diverse time periods, from the Pliocene to the Holocene, in countries from the southern African region. A range of zooarchaeological analyses, from zooarchaeology by mass spectrometry (ZooMS) to taphonomy, are covered in our research at Wits. Training the next generation of zooarchaeologists is a major priority; each year numerous postgraduates are trained in zooarchaeology on diverse aspects including methodological aspects, isotopic analyses, taphonomy and analyses of site faunas. Currently, postgraduate students are working on a number of site-based projects covering various regions from coastal rock-shelters to inland open-air assemblages. Students are also engaged in lab-based research including isotopic analyses at the National Research Foundation’s (NRF) iThemba Laboratory at Wits and international ZooMS collaborations. Through generous funding from various sources, including the NRF, the DST-NRF Centre of Excellence in the Paleosciences, the NRF Research Chair Initiative, the Palaeontological Scientific Trust, as well as the University of the Witwatersrand, many students receive bursaries to study zooarchaeology, and we are able to upgrade and expand the comparative skeletal collection using these funds. We are looking forward to many years of research, training and collaborations!

Wits student Hannah Munro busy with her analyses
Faunal Isotopes Database webinar

Contribute by Suzanne E. Pilaar Birch, University of Georgia, USA (sepbirch@uga.edu)

A two-hour webinar was held on Friday 30 October 2020, introducing the Faunal Isotopes Database, which has been in development for the last few years in collaboration with the Neotoma Paleoecology Database (neotomadb.org) and the Stable Isotopes in Zooarchaeology Working Group. Over 65 people attended the virtual meeting, which included a presentation on the purpose, structure and functionality of the database, as well as a brief tutorial on using the data entry template. There are currently data for over 25 North American sites in the database, and we are actively soliciting more submissions. More information and a recording of the webinar, the data entry template and template instructions are available at zooarchisotopes.com/faunal-isotopes-database/, or contact Suzanne Pilaar Birch at sepbirch@uga.edu or Matt Veres at mveres@uga.edu.

Digital resources

Contribute by Hans Christian Küchelmann, Knochenarbeit (info@knochenarbeit.de)

At the recent meeting of the International Committee on 16 October 2020, Sarah Kansa suggested adding a page with digital resources useful for archaeozoological research to the ICAZ website. During the following discussion it was mentioned that such a resource already exists on the website of Knochenarbeit (https://www.knochenarbeit.de/adresses/?lang=en). To avoid duplicated efforts in maintenance, it was decided to link these directories to each other. Thus, the ICAZ website now contains a page for digital resources at http://alexandriaarchive.org/icaz/resources-digital. It consists of three directories for:

- skeletal collections and identification keys
- archaeozoological institutions and
- journals publishing zooarchaeology-related content.

The directories of institutions and collections at present contain links predominantly to European laboratories++ and collections. They were formerly linked to Frank Dirrigl’s zooarchaeology homepage, covering North American laboratories, and to a network of South American laboratories. Both of these resources are unfortunately not online anymore. To expand the present directories to a worldwide resource without geographical restrictions, we therefore need your assistance. Please check the directories and report missing institutions to Hans Christian Küchelmann at info@knochenarbeit.de. Furthermore, because the directories have been slowly developing since 2001, contact data for the listed institutions may have changed unnoticed. If you notice any incorrect names, addresses, broken links, etc., a short message would be much appreciated.

Currently, 145 laboratories and other archaeozoological institutions are listed and linked in the directory, plus 64 skeletal collections and identification keys and 28 journals.
Liber amicorum for Roel Lauwerier

Contributed by Inge van der Jagt, Cultural Heritage Agency of the Netherlands, Amersfoort, the Netherlands (I.van.der.Jagt@cultureelerfgoed.nl), On behalf of all the editors of the liber amicorum

Our valued colleague and archaeozoologist Roel Lauwerier turned 67 on 17 October 2020. Because of this memorable event and his impending retirement next year, Dutch archaeozoologists and (former) colleagues of Roel at the Cultural Heritage Agency of the Netherlands published a liber amicorum and offered it to Roel on 16 October 2020 (Bazelmans et al. 2020). Given the current COVID-19 pandemic, we out of necessity decided to celebrate this festive moment with a digital symposium in which four of the book’s authors presented their research.

The book consists of a rich palette of 24 articles about bioarchaeology, archaeo(zoo)logical methods and techniques, and archaeological heritage management, the focal points of Roel’s research. The articles are written in Dutch and English, but all contain an English summary. Maaike Groot’s contribution, ‘A chronological and regional analysis of cattle withers height in the Iron Age and the Roman period in the Netherlands’, and Hans Huisman’s article, ‘Archeozoomicromorphology for dummies – and for Roel Lauwerier’, deserve special attention for an international audience. The article of Bloemers et al., concerning a Roman amphitheatre in Nijmegen, might also be of interest. The liber amicorum can be downloaded in its entirety from the website of the Cultural Heritage Agency (www.cultureelerfgoed.nl): https://www.cultureelerfgoed.nl/publicaties/publicaties/2020/01/01/tot-op-het-bot-onderzocht.

We would like to take this opportunity to put Roel’s career in the spotlight. His first encounter with archaeozoology was when he took it as a minor at the Biological Archaeological Institute (BAI) in Groningen, the Netherlands, during his studies of biology. After this, Roel initially seems to have chosen a different career path, however fate decided differently when he became involved in the excavations of Roman Nijmegen, his hometown in the Netherlands. The animal bone material found during these excavations sparked his interest, and in 1980 led to the start of his doctoral research at the BAI. During his PhD, he published, among other things, the article ‘Pigs, piglets and determining the season of slaughtering’ in the Journal of Archaeological Science (Lauwerier 1983b). Both this publication and his dissertation clearly show his preference for a strictly scientific approach (Lauwerier 1988). This preference has been a constant throughout his career. Roel always emphasizes the importance of clarity and unambiguity. He finds a clear presentation of the research question, research method and data just as important as a strict division between results, discussion and conclusions. This approach is not only visible in his archaeozoological work, but also in scientific syntheses and in cultural heritage-related reports. Anyone who has worked with Roel will recognize this scientific attitude.

In 1990, Roel joined the Cultural Heritage Agency of the Netherlands (first ROB, later RCE) as an archaeo(zoo)logist. Together with fellow bioarchaeologists, he focused on the study of animal bone material from a number of large-scale excavations, including Nijmegen, Woerden, Alphen aan den Rijn, Wijk bij Duurstede and Castricum. Roel is always able to generate new insights when it comes to the relationship between humans and animals in Roman times. His articles on the development of the withers height of horses and the consumption of horse meat, the use of animals in burial ritual, the breeding of polled cattle and the consumption of thrushes are good examples of this (Lauwerier 1983a, 1993, 1999, 2015; Lauwerier & Robeerst 2001). But he certainly does not limit himself to his beloved Roman period, and also writes on other topics, often together with others, for example about rabbits in the Low Countries, burnt bone from the Federmesser Gruppen, whale jaws, gutted herring and migratory salmon (Lauwerier 1983c; Lauwerier & Deeben 2011; Lauwerier & Laarman 2008; Lauwerier & Zeiler 2001; Lenders et al. 2016).

During the course of the 1990s, a change of direction can be seen in Roel’s work, which coincided with an increasing emphasis on the preservation and management of the archaeological heritage by the ROB during that period. In 1994, for example, Roel published an article on the research and management of archaeological remains in medieval cities (Lauwerier 1994). He also published various archaeozoological overviews and methodological guidelines. The Laboratory Protocol for Archeozoology, developed by Roel in 1997, is
still used by many archaeozoologists in the Netherlands as a basis for the analysis of bone material (Lauwerier 1997).

Roel’s work at the ROB and later the RCE has played an important role in shaping and professionalizing the archaeological heritage management in the Netherlands. The preservation of the archaeological heritage, and especially that of vulnerable animal bone material, is an important focus of Roel’s work. The recent study of the Merovingian cemetery at Borgharen, for example, is largely devoted to this topic (Lauwerier & de Kort 2014; Lauwerier, Müller & Smal 2011). Furthermore, the integration of specialist contributions in archaeological synthetic studies is important to Roel (Lauwerier & Brinkkemper 2012). And last but not least, the key characteristics of Roel that are relevant to his success and have been much appreciated throughout his career are his unshakeable enthusiasm, cheerful character, broad interests and stimulating work approach and collaborations.

References

Obituaries

Arlene Fradkin (1951-2020)

Contributed by Elizabeth J. Reitz, Kitty F. Emery and Sorayya Carr

Arlene Fradkin passed away on 10 October 2020, after a brief illness. Born and raised in New York City, Arlene pursued studies in music early on, before moving into the sciences. She received her BA in anthropology from the State University of New York at Albany in 1973, then joined the graduate program at the University of Florida, receiving her MA in 1976 and her PhD in 1988, both in anthropology. Arlene studied archaeozoology with Dr Elizabeth S. Wing at the Florida Museum of Natural History and later was a courtesy faculty member at the Museum, frequently conducting research in environmental archaeology and other collections. She joined the faculty of the Department of Anthropology at Florida Atlantic University in 1998, where she was promoted to professor in 2017. Arlene was as an enthusiastic teacher, a generous member of interdisciplinary teams, a dedicated member of the global community of archaeozoology, and a skilled archaeozoologist.

Arlene specialized in environmental archaeology and archaeozoology but her interests extended to folk zoology, history and Native American studies. She was particularly interested in the lifeways of people living in coastal areas. Much of her research focused on the use of fish in ecological and economic contexts, especially ethnogenesis, foodways, seasonality and trade. The breadth of her research is demonstrated by publications in *Archaeofauna, Environmental Archaeology, Historical Archaeology, International Journal of Osteoarchaeology, Journal of Archaeological Science: Reports, Near Eastern Archaeology* and *Quaternary International*. Her temporal and spatial interests ranged from pre- to post-Columbian sites in the Americas, especially Florida, to Roman and Byzantine sites in the Middle East.

Arlene was an active member of the International Council of Archaeozoology (ICAZ), attending her first ICAZ meeting in 1990 (Washington, DC). She is best known as a member of the ICAZ Fish Remains Working Group (FRWG). She served as co-editor of the 2013 and 2016 FRWG proceedings, and was editing the 2019 FRWG proceedings at the time of her passing. On learning of her passing, many ICAZ members commented on their strong and happy relationships with her. She was welcoming and supportive to early career researchers, making their first experiences at meetings and in the field great fun.

She was a dedicated scholar whose passion lives on in the students for whom she was an inspiration and to whom she was deeply devoted. She was also committed to sharing archaeological insights with the public through museum exhibitions, traveling exhibits and public programs.

She is remembered as a helpful, enthusiastic, warm, thoughtful, clever and cheerful friend and colleague. Her enthusiasm for science and ICAZ, her caring support and mentoring, her boundless energy, and her infectious laugh will be missed.
The ICAZ Publications List is Now Online!

Please remember you can view and download the latest zooarchaeology references in our Zotero library: https://www.zotero.org/groups/353233/icaz. You can also request access to our group library and add the references yourself. The complete list of publications submitted to recent newsletters can be consulted on the ICAZ website: https://alexandriaarchive.org/icaz/publications-zooarch.

Many new publications were submitted by ICAZ members to this issue of the Newsletter. We have chosen to highlight just a few of the great works that zooarchaeologists all over the world have published recently. These publications provide a very brief sample of the important and very diverse research carried out recently in zooarchaeology!

Please remember to submit your new (or old!) publications, press news, videos, podcasts, interviews, etc. to Idoia Grau-Sologestoa (icaznewsletterassistant@gmail.com) so that they can be included in the ICAZ database.

JOURNAL SPECIAL ISSUES

Journal of Archaeological Science: Reports


https://www.sciencedirect.com/journal/journal-of-archaeological-science-reports/vol/30/suppl/C
https://www.sciencedirect.com/journal/journal-of-archaeological-science-reports/vol/31/suppl/C

Special issue: Animal domestication and biotic exchange in east and central Asia, *Journal of Archaeological Science: Reports* (2020), papers in volumes 31 and 32. These volumes also include papers based on a session at the 2018 ICAZ International Committee meeting.

https://www.sciencedirect.com/journal/journal-of-archaeological-science-reports/special-issue/10HTL6MBCQT


https://www.sciencedirect.com/journal/journal-of-archaeological-science-reports/special-issue/10V0L80B4FV

Quaternary International


https://www.sciencedirect.com/journal/quaternary-international/vol/543/suppl/C


Journal of Roman Archaeology
https://journalofromanarchaeology.com/supplement-107/

Environmental Archaeology
Special Issue: Past Andean pastoralism: a reconsidered diversity, Environmental Archaeology (2020), volume 25, issue 3. This issue includes papers based on a session at the 82nd Annual Meeting of the Society for American Archaeology.
https://www.tandfonline.com/toc/yenv20/25/3?nav=tocList

Anthropozoologica

BOOKS

Animals: Cultural Identifiers in Ancient Societies?
Documenta Archaeobiologiae 15
Edited by Joris Peters, George Mcglynn and Veronika Goebel
2019 Rahden/Westf: Verlag Marie Leidorf
ISBN 9783896466747

These are the proceedings of a conference in Munich from 4 to 6 April 2016. The papers in this volume deal with urban Roman pigs in the 1st millennium AD, animal palaeopathology, early farmers in the southern Caucasus, activity areas at Asikli Höyük, discarding practices amongst 3rd-millenium herders in Chile, bucrania as a social marker in Bronze Age Sudan, animal exploitation at Çukuriçi Höyük in the Neolithic and the Bronze Age, Celtic archaeozoology at Manching, palaeogenetics, camels in cuneiform inscriptions, food production in the Upper Tigris Valley, the Holocene fauna of northern Sudan, Joachim Boessneck’s work in Iran, Mongolian horses and their fate, horse cures in Tibetan medicine, the European hake in Iberia, the diet of caprines in Early Neolithic Anatolia, hunting religion in western Greenland, polled cattle, the taphonomy of a French Neolithic site, Theodoricus Cerviensis’ 13th-century Mulomedicina, funeral sacrifices of camel and horse in pre-Islamic south-eastern Arabia, a fish deposit at Oxyrhynchus, the beginnings of cat domestication in eastern and western Asia, as well as the ethnobiology of donkey and camel management on the Afar salt route.

The Origins and Evolution of Pig Domestication in Italy. A Regional and Diachronic Study of Husbandry Practices
Sofía Tecce
2020 Oxford: BAR Publishing
ISBN 9781407357362

The domestication of the wild boar and the emergence of the domestic pig are a fundamental aspect of the Neolithic and a key moment in human history. This book represents the most comprehensive zooarchaeological study to date of the origins and evolution of the domestication of the pig in the Italian peninsula, from a wide regional scale and a diachronic perspective. Some key archaeological questions addressed concern how and when the process of pig domestication commenced in Italy, how it evolved, and how it compares with the wider European and Middle Eastern scenarios. Through the collection of mainly biometrical data from several Italian prehistoric sites, this book explores changes in pig management through time, from the Upper Palaeolithic to the Bronze Age. The results are articulated with both historical changes in Italian societies and evidence from other areas, to achieve a comprehensive understanding of domestication.


The Fish Lands. German Trade with Iceland, Shetland and the Faroe Islands in the Late 15th and 16th Century
Bart Holterman
2020 Berlin: De Gruyter Oldenbourg
DOI 10.1515/9783110655575

The first part of the book explores the historical background of German trade with the North Atlantic from both an economic and a political perspective, combined with a critical re-evaluation of the historical evidence. Substantial attention is devoted to the attitude of the different factions within the Hanse and the Danish-Norwegian (or in Shetland: Scottish) authorities towards the North Atlantic trade, as their policies provided the conditions under which the German merchants operated. The second part of the book focuses on how the trade was organized on the islands themselves, both from a socioeconomic (e.g. the maintenance of networks with islanders, the use of credit, relations with local authorities) and from a physical perspective (e.g. harbours, buildings and commercial infrastructure). Finally, the last part is dedicated to the merchants’ trading with the North Atlantic in the socioeconomic context of their hometowns: how did they organize their trading companies, what was their social status within the city’s merchant community, how were they involved in urban social structures, and what role did family relations play?

Open access: https://www.degruyter.com/view/title/552449
On the Hunt for Medieval Whales. Zooarchaeological, Historical and Social Perspectives on Cetacean Exploitation in Medieval Northern and Western Europe
Youri van den Hurk
2020 Oxford: BAR Publishing
ISBN 9781407357201

Medieval cetacean (whales, dolphins, and porpoises) exploitation has frequently been connected to various medieval societies, including the Basques, Norse, Normans and Flemish. Primarily for the 9th to the 12th centuries AD, it has been argued that the symbolic significance of cetaceans surpassed their utilitarian value and that their consumption was restricted to the social elite. The extent to which active whaling was practised remains unclear. The identification of zooarchaeological cetacean fragments to the species level is hard and as a result they are frequently merely identified as ‘whale’, resulting in a poor understanding of human-cetacean interaction in the past. Zooarchaeological research as part of this study has revealed that medieval cetacean exploitation was widespread and especially the harbour porpoise (Phocoena phocoena), common bottlenose dolphin (Tursiops truncatus), and the North Atlantic right whale (Eubalaena glacialis) were frequently targeted. The exploitation additionally seems to have often been restricted to the social elite.

https://www.barpublishing.com/on-the-hunt-for-medieval-whales.html

Los artiodáctilos de Fuego-Patagonia (Chile). Explotación alimenticia y su importancia en la tecnología ósea de los cazadores-recolectores del Holoceno medio y tardío
Victor Sierpe G.
2020 Oxford: BAR Publishing
ISBN 9781407357157

This book presents research on the dietary and technological exploitation of the remains of artiodactyls, Hippocamelus bisulcus (huemul) and Lama guanicoe (guanaco) from the heterogeneous archaeological contexts of the Middle and Late Holocene in Chile. Specific archaeozoological and technological analyses demonstrate the different stages linked to the processing of these two species from disarticulation to the fracture of long bones and phalanges to obtain marrow as a food resource. Results of long bone fractures allowed us to link patterns of grinding to obtain supports and subsequent technological processes for the manufacture of a wide variety of bone artifacts. The analyses made it possible to determine technological processes for the treatment of bones, applied indifferently to one species or another for the elaboration of the bone industry, thus complementing a comprehensive study and the proposal of global operational treatment chains by hunter-gatherer groups in Fuego Patagonia.

https://www.barpublishing.com/los-artiodactilos-de-fuego-patagonia-chile.html
Preservación Ósea Diferencial en un Ambiente Subtropical del Centro-Este de Argentina: Tafonomía Regional en Perspectiva Arqueológica
Paula E. Galligani
2020 Oxford: BAR Publishing
ISBN 9781407357300

En este libro se presentan y discuten resultados de estudios sobre diagénesis ósea en restos humanos y de mamíferos grandes, recuperados en una región subtropical del sur de Sudamérica: el centro-este de Argentina. Tales estudios se llevaron a cabo desde la perspectiva teórico-metodológica de la tafonomía regional, cuyo objetivo es el reconocimiento de espacios dentro de los cuales hay mayores probabilidades de depositación, enterramiento y preservación de huesos. En este marco, un objetivo central fue especificar las condiciones que producen tasas variables de destrucción del registro óseo, así como identificar áreas con potencial de preservación diferencial de huesos. Para ello, se construyeron modelos espaciales predictivos basados en las propiedades de los suelos, mediante el uso de Sistemas de Información Geográfica (SIG). Estos modelos fueron luego contrastados con información empírica obtenida de análisis específicos realizados sobre huesos recuperados en sitios arqueológicos del área.


Animal Husbandry and Hunting in the Central and Western Balkans Through Time
Edited by Nemanja Marković and Jelena Bulatović
2020 Oxford: Archaeopress
ISBN 9781789696936

Herding and hunting, along with farming, represented the economic basis of subsistence of communities in the past. The strategies of animal husbandry and hunting were diverse and different between communities, whilst they also changed over time. The differences and variations were sometimes caused by local or regional environmental conditions, but were also the result of social, cultural, political and even religious factors.

Animal Husbandry and Hunting in the Central and Western Balkans Through Time brings new results of research on animal herding and hunting in the central and western Balkans during prehistoric and historic periods. The investigations presented here cover a wide range of topics related to animal exploitation strategies; they range from broad syntheses to specific case studies and, moreover, include interdisciplinary studies that use zooarchaeological and historical data, iconographic representations and modern laboratory analysis.

https://www.archaeopress.com/ArchaeopressShop/Public/displayProductDetail.asp?id={23136CE0-0E47-44CD-8721-6421114DBFEB}
An Introduction to Zooarchaeology

By Diane Gifford-Gonzalez

Contributed by Teresa E. Steele, Department of Anthropology, University of California, Davis, USA (testeele@ucdavis.edu)

Despite the growth in the number of zooarchaeologists and the increasing recognition of our contributions to understanding past human societies, only a few handbooks are available describing zooarchaeological methods, analyses and interpretations. Fortunately, recently Diane Gifford-Gonzalez provided an impressive volume to advance the field. With 26 chapters and 600 pages, Gifford-Gonzalez comprehensively covers the discipline. Her goals are two-fold: to ‘offer a framework for arranging and mobilizing the constant stream of new information’ and to assemble a ‘methodological and conceptual toolkit for getting on with zooarchaeological research’ (p. 592). Gifford-Gonzalez successfully achieves these goals.

The volume is divided into five parts. Part I introduces the book, provides some history, and discusses how zooarchaeologists incorporate uniformitarianism and analogy into inference making. Part II reviews the intrinsic traits of bone and vertebrates, which includes bone biology, vertebrates as nutritional resource, and inferring species, sex and age. Part III covers field, laboratory and curation methods, including making identifications and basic counting units (NISP, MNE, MNI). Part IV extensively reviews surface modifications: breakage, carnivore damage, anthropogenic modifications, burning and other natural agents. Finally, Part V, the majority of the book (chapters 17–25) focuses on analysing and interpreting these data. These chapters include methodological topics such as statistics, bone counting, bone durability and diversity measures, as well as case studies investigating agents of accumulation, carcass processing and transport, historical ecology and the theoretical approaches of behavioral ecology and social zooarchaeology. The volume concludes with a chapter that considers the future of the discipline and offers a comprehensive table to guide someone through a zooarchaeological project, from thinking about what to investigate through to publication and data curation (and rest!).

Gifford-Gonzalez’s writing is clear and engaging, and each chapter is detailed and thoroughly referenced. Useful illustrations are present throughout. Gifford-Gonzalez carefully reviews the fundamentals of zooarchaeological approaches. However, what I really appreciated was Gifford-Gonzalez’s honesty about practising zooarchaeology; she shares many common experiences that usually go unsaid in publications. Two sections provide examples. First is her acknowledgement of having a ‘Saint Jude Box’ for hopeless cases – specimens that seemed like they should be identifiable but that she couldn’t quite get at the time (p. 172; in my laboratory we call it our ‘Better Day Bag’). She further admits that 16 years later she could identify everything in her box. I am willing to bet that anyone who has practised zooarchaeology for some time has had this experience; we just rarely talk about it, at least beyond our close mentees. Gifford-Gonzalez continues to discuss the thorny issues of consistency in identifications and then helpfully describes how her laboratory and others work towards standardizing their identifications. Second is her discussion of the benefits and challenges of integrating zooarchaeological datasets into conservation biology (applied zooarchaeology), including her frankness about the challenges of getting some of this research published when there are competing interests (pp. 522–523).

As Gifford-Gonzalez acknowledges (p. 1), the book is focused on faunal analysis as practised in North America, and on vertebrate remains, particularly large mammals; she provides references for additional manuals for fish, birds and molluscs, and incorporates these taxa into some examples and relevant literature throughout. The close focus on mammals provides for a more cohesive volume, but some practitioners may be disappointed to see their favourite non-mammal receive so little attention. In addition, there is almost no mention of the
fundamental role that bones, teeth, ivory and antler play as material for human technology, including tools and ornaments that are such an important component to so many industries. A comprehensive review would not be feasible, but some engagement would help integrate the analyses of these materials into zooarchaeology, not keep them separate as only technology. I also missed a discussion of the emergence of zooarchaeology in Africa. Some of this history is covered in the section on Human Origins Research (pp. 28–30), but it seems an oversight to not include a further discussion of all the other foundational work that has been conducted on the continent, including Gifford-Gonzalez’s own contributions. Finally, Springer should have provided more copy-editing support; unfortunate typos persisted into the final version, but these should not detract from the quality of the content. Springer did allow free downloads for a limited time, which provided a great opportunity for many interested parties from around the world to access these valuable materials. I have now used the volume twice for teaching. First to my undergraduate Introduction to Zooarchaeology course and then in my Advanced Zooarchaeology graduate seminar. The book was ideal for the graduate seminar. I appreciated that it provided historical context and current research on each of the topics, and I further supplemented the book with key and current primary literature. For my undergraduates I indicated targeted readings of page ranges; I did not try to cover the entire volume. Even so, I am afraid that the students found the amount of material overwhelming for a 10-week course where it was not possible for them to get into too many details; the book may be more digestible for undergraduates over a semester or longer. I conclude that the book is best for advanced undergraduates, graduate students and professionals, i.e. colleagues who want a deeper read and will appreciate the detailed bibliography. In this way, the volume should be of great interest to everyone reading this Newsletter.


Equids and Wheeled Vehicles in the Ancient World
Essays in memory of Mary A. Littauer

By P. Raulwing, K.M. Linduff and J.H. Crouwel
BAR International Series 2923

Contributed by Helene Benkert, University of Exeter, UK (H.Benkert@exeter.ac.uk)

In 2010, Sandra Olsen organized a symposium in honour and memory of the ‘grand dame de l’hippologie ancienne’, Mary Aiken Littauer, held very fittingly at the International Museum of the Horse in Lexington, Kentucky, USA. The papers presented there explored topics that were closest to Mrs Littauer’s heart: equids and wheeled vehicles. The monograph reviewed here is the result of this symposium, sharing not only this exciting research with the wider world but also appreciation for an outstanding researcher and a pioneer in the world of equine history.

The essays published in this volume cover a wide range of topics spanning many regions in Africa and Asia, especially in the Near East. Under the broad term of ‘ancient’, a multitude of different periods are covered, bridging several millennia from the earliest phases of equid domestication through to the Middle Ages. While the horse takes prevalence, other species of the equine family are subject to detailed analysis in the majority of papers as well.

Grouped by geographic region as well as topic, 13 papers are presented in four parts. Each paper is preceded by a brief abstract, which in many cases highlights the authors’ or essay’s connection to Mrs Littauer and conveys a pleasant sense of familiarity. A brief, thoughtful preface acknowledges...
the people whose support and influence facilitated the publication of this book.

The first part is a homage to the academic this volume is dedicated to. Mary Aiken Littauer is portrayed by long-time friends and colleagues as a generous and passionate person with a vast knowledge and interest in ancient equine history. These accounts draw a picture of a straightforward and inquisitive pioneer and stand testament to the impact Mrs Littauer had on the field of equine history, both academically and on a personal level.

The second and largest part of the book is concerned with equids and wheeled vehicles in the ancient Near East, a topic Mrs Littauer influenced heavily during her academic career. An exceptional variety of archaeological and historical evidence is examined by a total of 6 papers. While some essays collate previous research into accessible summaries, others present new data, viewpoints or propose new scientific methods to explore equine exploitation in the past.

In the third part, three contributions explore the arrival of the horse in North Africa and Arabia. Travelling well beyond the North African littoral, a variety of sources are analysed to understand equestrianism in a geographic area where horses are not native, and which is often hostile to this species.

Concluding the volume are two papers that venture into the Far East, examining horse depictions and visualization in two very different ways. Both essays highlight the strong connections between the Far and Near East, with emphasis on the key role horses played in creating these links.

The book is structured plainly and sensibly. It is rich in high quality illustrations throughout, including a variety of photographs, maps and technical drawings. Though some images are in colour, the majority stick to classic black-and-white. However, formatting choices and style of captions often lead to a somewhat messy layout. The use of easily distinguishable fonts for text and captions would have prevented small fragments of text from almost disappearing amongst the image captions. As it is, some sections are difficult to read due to individual short passages being easily overlooked.

The large time gap between the symposium and the published manuscript becomes obvious in some instances. In recent years, a number of publications have changed our understanding of horse domestication quite considerably. Older references, as cited by those papers that graze this much discussed topic, are therefore now partly outdated. Additionally, the lack of recent papers in some of the bibliographies highlights the need for further research in these fields. In light of new data, a review of some of the impacted essays in the future, potentially with adjusted interpretations, would be highly desirable.

Overall, this volume offers an exceptional wealth of insight into equine history in the ancient world. The broad range of topics, periods and regions demonstrates at once both the larger picture and smaller details from various different angles. Although the contents of the essays presented seem spread over a vast field, they all manage to tie back into each other, creating a web of the different aspects of ancient equids and their role in past societies. These links perfectly mirror the connecting quality of the animals that brought the world a little closer together and inspired many revolutionary inventions.


Proposing a book for review

We are delighted to now have a section dedicated to critical reviews of books related to any zooarchaeological/archaeozoological topic. Reviews should have a limit of 700–1000 words, and should be submitted by 15 May (to be published in July) and 15 November (to be published in January) each year.

If you are interested in writing a review for our Newsletter, please send your proposal by email to Idoia Grau-Sologestoa (icaznewsletterassistant@gmail.com).
**ICAZ Calendar 2021**

**8-9 MARCH**

Human societies and environments in the circum-Mediterranean area from the Pleistocene to the early Holocene
University Toulouse, France
Email: colloquehommagecampmas@gmail.com
Internet: https://sites.google.com/view/assemca/actions-scientifiques/colloque-2021

**11-12 MARCH**

3rd ICAZ Roman Period Working Group (RPWG)
Animals in the Roman economy: production, supply and trade within and beyond the Empire’s frontiers
University College Dublin, Ireland
Email: romanwg@ucd.ie
Internet: alexandriaarchive.org/icaz/workroman; https://www.ucd.ie/archaeology/icaz_romanperiodworkinggroup_3rdmeeting/

**19-20 MARCH**

Zooarchaeology beyond food
Symposium of the Archaeology Centre’s Faunal Interest Group (FIG)
University of Toronto, Canada
Email: faunalinterestgroup@gmail.com

**14-18 APRIL**

86th meeting of the Society for American Archaeology (SAA)
San Francisco, CA, USA
Internet: www.saa.org

**5-6 JUNE**

10th meeting of the ICAZ Bird Working Group (BWG)
University Museum of Bergen, Norway
Internet: alexandriaarchive.org/icaz/workbird

**21-23 JUNE**

9th Postgraduate ZooArchaeology Forum (PZAF)
Petnica SC, Serbia
Email: pza2021@gmail.com
Internet: http://pzaf2021.com/

**LATE JUNE**

2nd Iberian Zooarchaeology Meeting (EZI 2020 Madrid)
Universidad Autónoma de Madrid
Internet: https://eventos.uam.es/46188/detail

**23-28 AUGUST**

21st meeting of the ICAZ Fish Remains Working Group (FRWG)
Archaeological Institute and the Natural History Museum, Vienna, Austria
Email: alfred.galik@OEAI.AT
Internet: alexandriaarchive.org/icaz/workfish

**30 AUGUST-3 SEPTEMBER**

14th meeting of the ICAZ Worked Bone Research Group (WBRG)
Johannesburg, South Africa
Email: wbrg2021@uj.ac.za
Internet: www.uj.ac.za/wbrg

**1-30 SEPTEMBER**

9th international conference on Taphonomy and Fossilisation (Taphos) and 6th meeting of the ICAZ Taphonomy Working Group (TWG)
Alcalá de Henares, Madrid, Spain
Email: taphostwg2020@gmail.com
Internet: taphostwg2020.es, alexandriaarchive.org/icaz/worktaphonomy

**8-11 SEPTEMBER**

27th annual meeting of the European Association of Archaeologists (EAA)
Widening Horizons
Kiel, Germany
Internet: www.e-a-a.org

**11-13 SEPTEMBER**

Molluscs and ancient human societies and the ICAZ Archaeomalacology Working Group (AMWG)
Deccan College Post-Graduate and Research Institute, Pune, India
Email: amwg2020@gmail.com
21-24 SEPTEMBER
9th Bone diagenesis meeting
Evora, Portugal
Email bonediagenesis2021@uevora.pt

23-25 SEPTEMBER
9th meeting of the ICAZ Archaeozoology, Genetics, Proteomics and Morphometrics Working Group (AGPM)
Oulu, Finland
Email: icazagpm2021@oulu.fi
Internet: www.oulu.fi/archaeology/node/193085

29 SEPTEMBER-2 OCTOBER
4th meeting of the ICAZ Neotropical Zooarchaeology Working Group (NZWG)
Universidade Federal Rural de Pernambuco, Recife, Brazil
Email: nzwg.icaz@gmail.com
Internet: https://doity.com.br/nzwg-icaz-2021

1-15 OCTOBER
13th Meeting of the Gesellschaft für Archäozoologie und Prähistorische Anthropologie (GAPA)
Museum für Ur- und Frühgeschichte Weimar, Germany
Email: gapa-vorstand@gmx.de
Internet: www.gapa-kl.de/tagungen.html

4-6 NOVEMBER
Transmission of knowledge on fish and aquatic animals, texts and images (Antiquity, Middle Ages, 16th century)
Caen, France
Email: thierry.buquet@unicaen.fr
Internet: zoomathia2021.sciencesconf.org

LATE 2021
41st conference of the Association for Environmental Archaeology (AEA)
Groningen, Netherlands
Email: aeawinter@rug.nl
Internet: https://envarch.net/events/41st-aea-conference-groningen/

ICAZ Bibliographic Database

Please remember to submit your publications to Idoia Grau Sologestoa (icaznewsletterassistant@gmail.com) in order to have them included in the database. The database currently holds more than 1000 references related to zooarchaeology, which are searchable via either the ICAZ website, https://alexandriaarchive.org/icaz/publications-zooarch, or the Zotero library, https://www.zotero.org/groups/353233/icaz.

ICAZ Newsletter back issues

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