



ICAZ NEWSLETTER



2018 ELECTION RESULTS

2018 CONFERENCE UPDATE

After validation, we are pleased to announce the results of the 2018 ICAZ election.

Contributed by Christine Lefèvre, ICAZ Secretary

The counting of votes for ICAZ President, Vice-President and members of the International Council (IC) is over. A total of 202 valid votes was cast (duplicates and anonymous votes could not be validated).

We are pleased to announce that Sarah Witcher Kansa will be the next ICAZ President, and Terry O'Connor will be the next Vice-President.

The new IC will consist of the following ICAZ members (listed in alphabetic order): Umberto Albarella, Joaquín Arroyo-Cabrales, Levent Atici, Shaw Badenhorst, Guy Bar-Oz, László Bartosiewicz, Luis Borrero, Ariane Burke, Virginia Butler, Canan Çakırlar, Pam Crabtree, Sabine Deschler-Erb, Arati Deshpande-Mukherjee, Cleia Detry, Kitty Emery, Erika Gál, Angelos Hadjikoumis, Hitomi Hongo, Salima Ikram, Hans-Christian Küchelmann, Lembi Lõugas, Ma Xiaolin, Richard Madgwick, Marjan Mashkour, Richard Meadow, Mariana Mondini, Marta Moreno-García, Sebastian Muñoz, Albérico

Nogueira de Queiroz, Terry O'Connor, David Orton, Kat Szabo, Richard Thomas, Jean-Denis Vigne, Sarah Witcher Kansa.

Three ICAZ officers complete this renewed IC: Evangelia Ioannidou Pişkin, Current Conference Organizer; Christine Lefèvre, Secretary; and Suzanne Pilaar Birch, Treasurer.

This reflects the diversity of ICAZ, with 23 countries from 5 continents represented.

The new President, Vice-President and IC members will replace the current ones at the ICAZ 2018 International Conference in Ankara, Turkey, when a meeting of the new IC will be held and elections for the new Executive Committee (EC) will also take place.

Details of the vote, including ranking for each of the elected and non-elected members, can be requested from the ICAZ Secretary, Christine Lefèvre, via email at christine.lefevre@mnhn.fr.

We would like to thank those who entered the elections for these positions as well as all voting members.

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About the Newsletter

ICAZ welcomes submissions to its biannual newsletter. Email submissions to the editor, Eva Fairnell. The annual deadlines are **15 May** for volume 1 and **15 November** for volume 2. 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:

Hearths in houses, Aşıklı höyük, Turkey. Author: Kvaestad 

Letter from the President

Greetings everyone

The season of frost and short, dull days has set in here in northern England, so it is good to be able to look back on events in warmer times and places. It was a particular pleasure to attend the Archaeozoology of Southwest Asia and Adjacent Areas (ASWA[AA]) Working Group meeting in Nicosia, Cyprus, in June. The new University of Cyprus campus on the southern edge of Nicosia is a cluster of ambitious modern buildings, with more planned or under construction. The contrast between all that modernity and our field trip to Neolithic sites, including the famous Khirrokitia settlement, was quite memorable. Jean-Denis Vigne and colleagues did an excellent job of introducing Cyprus to those of us who are unfamiliar with the island. As ever with ASWA, the academic content was diverse and fascinating. What really pleased me was to see how many of the contributions integrated several different lines of evidence to answer specific research questions. This is an encouraging trend in archaeozoology: moving away from case studies in the application of this or that technique to fully integrated studies that bring a range of specialists together. On a more personal note, I was really pleased to see friends and colleagues from many different countries gathering to exchange news and ideas at a time when international politics is so abrasive.

An important point of discussion that was raised at ASWA was whether three-dimensional (3D) scanning and printing is now precise enough and sufficiently accessible to be used as a means of 'distributing' comparative specimens. The discussion reminded some of us of an initiative in the 1990s that produced resin casts of part-skeletons of some uncommon birds. High-resolution 3D scan data filed in 'the cloud' could potentially be downloaded and used to print the specimen required. Our colleagues in palaeoanthropology are ahead of us in this: I was a bit startled to see a printed skull of *Homo naledi* within a few weeks of the first publication. The proposal has a lot to recommend it as a means of making uncommon specimens more available, or making common specimens available away from their home institution. However, we would need to take care over which specimens are scanned and distributed. The first ibex skeleton, for example, to be made available would become a sort of holotype, the comparandum used by many people. Is it a 'typical' ibex, and how would we decide? A slightly different use that is being made of 3D scanning/printing is in order to 'archive' small specimens that will be largely destroyed in order to obtain isotope or radiocarbon samples.

Speaking of 'print on demand' (PoD) comparative specimens, what about PoD for publications? I am thinking of those useful publications that detail the identification of particular groups, or that set out in detail a working method. These tend not to be attractive to publishers. There is now quite an industry around self-publishing and PoD. Some of the companies involved are little more than vanity publishers seeking to rip-off the unwary, but a few have a fair reputation. The authors usually have to format the copy to produce an acceptable PDF version that is submitted for publication and printed whenever a copy is ordered. Might this be a useful method of producing laboratory manuals and course books? I am experimenting with one of the UK self-publishing companies and will report back!

The European Palaeolithic literature is currently buzzing with an issue of academic integrity and provenance. As the matter is still under discussion, I will avoid names or specific claims and counter-arguments. The questions concern the important site at Untermassendorf, Germany, and the evidence for hominin activity at the site. At the heart of the discussion are issues such as the apparent theft of bones from the excavations and the uncertain provenance of specimens used to argue for hominin activity. These are problems normally associated with artefacts, not animal bones, and they remind us of the importance of maintaining a clear trail of evidence from the site, through the processes of research and publication, and forward to the archiving of data and specimens. Having worked on collections from excavations that are more than a century old, I am familiar with the two contrasting questions: 'Where did these bones actually come from?' and 'Where did those bones go?'.

Elsewhere in this newsletter we have details of the ICAZ 2018 conference in Ankara. The organizers would welcome more proposals for sessions, and have extended the deadline for proposals. This is your opportunity to build an international exchange and discussion around one of your favourite archaeozoology topics.

Sincerely



Terry O'Connor, ICAZ President



Abbreviated Treasurer's Report

Contributed by Pam Crabtree, ICAZ Treasurer

It has been a pleasure to serve as the ICAZ Treasurer since 2006–07, but I will be delighted to turn the job over to Susie Pilaar Birch next summer. In anticipation of the transfer, I paid Sam Disotell, a 2016 graduate of New York University (NYU) who plans to enter a PhD programme in zooarchaeology next year, to scan many of our paper records. I am working to close the NatWest accounts in the UK. We have not used the dollar and euro accounts in years, and it is easier to pay for our expenses using PayPal (lower transaction fees). I plan to complete the 2017 tax forms for ICAZ's 501 c 3 status early in 2018, and I have a friend who is a certified public accountant (CPA) who has agreed to look over our 2017 forms for free.

Table 1 shows the full list of our 2017 expenses.

The largest single expense was the development of the website for the 2018 ICAZ meeting in Ankara. Other expenses

were involved in the production of the newsletter and the scanning of older ICAZ documents. At the end of November, ICAZ became an institutional member of the Coalition for Archaeological Synthesis. Zooarchaeologists possess rich data sets, and ICAZ should have a seat at the table to determine how these data sets are used.

The Great Recession began shortly after I took over as treasurer, and we have tried to spend as little of ICAZ's money as possible. We are now in a position where we have built up a healthy balance, and this may allow us to consider new projects in the future. Table 2 shows our current fund balance compared with the previous fund balance in the October 2016 Treasurer's report.

We currently have 509 members, and all of our 2017 income to date has come from member subscriptions.

Table 1: 2017 expenses

| Claimant | Claim | USD Equivalent | Payment Method | Expense | Date |
|-----------------------|------------|----------------|----------------|------------|--------------|
| I. Grau | 758.53 GBP | \$1,000 | NatWest | Newsletter | Aug. 2017 |
| S. Disotell | 250 USD | \$250 | Santander | Scanning | Jul. 2017 |
| A. Trentacoste | 1000 USD | \$1,000 | Santander | Newsletter | Jul. 2017 |
| I. Grau | 34.70 GBP | \$41.45 | NatWest | Travel | 17 Sep. 2017 |
| A. Trentacoste | 100.5 GBP | \$131.66 | NatWest | Travel | 14 Nov. 2017 |
| ICAZ Editor | 269.34 USD | \$269.34 | PayPal | Software | 15 Nov. 2017 |
| ICAZ Editor | 123.48 USD | \$123.48 | PayPal | Hard drive | 15 Nov. 2017 |
| CfAS | 200 USD | \$200 | PayPal | Membership | 29 Nov. 2017 |
| 2018 ICAZ | 2,740 USD | \$2,740 | Santander | Website | 13 Jan. 2017 |
| Total Expenses | | \$5,756 | | | |

Table 2: Current funds

| Start October 2016 | USD Equivalent | Account | End December 2017 | USD Equivalent |
|--------------------|--------------------|------------------|-------------------|--------------------|
| \$34,339.16 | \$34,339.16 | Sovereign Bank | \$35,511.95 | \$35,511.95 |
| €5088.56 | \$5,699.58 | NatWest Euro | €5088.56 | \$6,026.42 |
| \$22,108.41 | \$22,108.41 | NatWest USD | \$22,108.41 | \$22,108.41 |
| £4375.18 | \$5,440.55 | NatWest Sterling | £3661.45 | \$4,899.21 |
| | \$67,587.70 | Balance | | \$68,545.99 |



ICAZ 2018 ANKARA

Contributed by Terry O'Connor, ICAZ President

Over the last 6 months, I have received emails from a number of colleagues asking about the practicality and advisability of holding the ICAZ Conference in Ankara given recent and ongoing political events. The proposal was accepted at our conference in San Rafael in 2014, and given final approval soon afterwards. We are going ahead as planned, in part because ICAZ has a history of working across political divides and in part because it would have been impractical to reschedule, seriously letting down our Ankara colleagues whose hard work in putting the conference together is clear to see.

The recent spat over visas for US visitors to Turkey and vice versa has caught us out somewhat. My personal view is that this is temporary, and that the Trump and Erdogan administrations will ease back on the restrictions having felt that they have made a point. Most ICAZ conferences have had visa problems of some form. The best advice for those planning sessions is to carry on regardless, get the best possible sessions together, then we deal with whatever visa and other issues are in place mid-2018. The situation could be much better: it is unlikely to be much worse. ICAZ will, of course, give whatever support it can to visa and other applications. I hope that does not sound complacent of me. I am very much aware that if ICAZ just played safe in terms of conference locations, we would visit very few countries – Switzerland, Canada ... New Zealand? Three years ago, when the decision was made, Ankara was an excellent choice. I still think that it is, in terms of international outreach and 'headlining' a region so important to Old World zooarchaeology, and for the venue and facilities.

Conference deadlines

Contributed by Evangelia Ioannidou Pişkin, Conference Organizer

The 13th ICAZ International Conference organizing committee is honoured to receive you in Ankara for a week of academic sessions and exploration of some of Turkey's best known archaeological sites and landscapes.

Important deadlines for the meeting are:

- Session proposals
1 September 2017–20 January 2018
- Review of sessions by the Scientific Committee and announcement of accepted sessions
5 February 2018
- Papers and posters proposals
5 February–30 March 2018
- Review of papers and posters by session organizers and announcement of approval
15 April 2018
- Scientific programme announcement
1 May 2018
- Conference early registration deadline
15 May 2018
- Conference last registration date
15 June 2018

<http://www.ica2018ankara.com/index.html>



We would like to remind you that, as well as the themes defined for the proposed meetings and sessions, there is an 'open session' to which a variety of papers and posters can be submitted.

We would also like to announce two trips that will be guided by Turkish and foreign archaeologists.

The first trip will take place from 31 August to 1 September and will take you through the breathtaking landscape of Cappadocia to the vast plains of Konya. In Cappadocia you will visit the famous Neolithic Aceramic site of Aşıklı höyük, one of the most important in Turkey and a centre of sheep 'proto-domestication'. The excavation director, Professor Mihriban Özbaşaran of Istanbul University, has kindly offered to explain and discuss the site with you. You will then visit Neolithic Çatalhöyük within the Konya plain. A UNESCO World Heritage site, it is famous for being a 'mega-site' with exceptional works of art, unusual architecture and a complex

system of beliefs and social organization. Here, Professor Arkadiusz Marciniak, who led the team from the University of Poznań at the excavation of the East mound, has kindly agreed to guide you around the site.

The second trip will take place on 8–9 September and will take you to the heart of the Hittite lands. On the first day, you will visit the capital of the Hittite empire, Hattuşa, a vast city from the late Bronze Age, also a UNESCO World Heritage site. Professor Andreas Schachner, from the German Archaeological Institute, director of the excavations at Hattuşa, and his team will welcome you at the site and guide you around. Next, you will travel to the open-air sanctuary of Yazılıkaya, where reliefs of the Gods of the Hittite Pantheon are to be found on huge rocks within an impressive landscape. In the afternoon of the same day, you will visit Alaca höyük. This site has many Hittite-period buildings but it is more famous for the ‘tombs of the kings’. These cist-type tombs from the early Bronze Age were discovered containing a plethora of burial gifts, including animal skulls. The deer on the conference logo was inspired from the finds of Alaca höyük. On the morning of 9 September, you will visit the Çorum Museum, recently refurbished and exhibiting a large number of Hittite and other period finds. You will then travel to Ortaköy and have lunch in the vicinity of Incesu canyon. The canyon is 12.5km long and accessible via a metal walkway. A relief of Kybele was carved on the rocks some 3m above from the river level. It is still visible today, even though it has

been badly damaged by looters. The last stop of the trip will be Şapinuva, a large religious and administrative centre of the Hittite empire that often served as the seat of Hittite kings. As well as large public buildings and palatial workshops, a large ritual area with many sacrificial pits was discovered. Here, the excavation director, Professor Aygül Suel from Ankara University, will guide you.

In addition to these 2-day trips we are offering a 1-day trip to Midas city and a half-day trip to Gordion. Both of the sites are from the Iron Age and belong to the Phrygian culture. Midas city is a sacred landscape strewn with rock-cut monuments dating mostly to around the 6th century BC and related to the cult of Cybele. The site of Gordion has finds from the early Bronze Age up to medieval times but it is better known for being the capital city of the Phrygians and the seat of the famous king Midas. Part of the palatial and domestic quarters have been excavated to date, together with the impressive gates to the city. The surrounding landscape is dotted with tumuli, the graves of the Iron Age aristocracy. One of the largest, standing 53m high, is fully excavated and open to the public. It is called the Midas Mound because its gifts were fit for a king. Exceptional preservation conditions have enabled a large number of organics to be saved, including the wooden burial chamber.

We are planning for a great time, and looking forward to seeing you in Ankara!

Please add yourself to the ICAZ member database!

Contributed by Sarah Witcher Kansa, ICAZ Vice-President and Web Administrator

The new 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.

1. Go to the ICAZ membership site: <http://alexandriaarchive.org/icaz-wp/>.
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!



ICAZ FORTHCOMING CONFERENCES & EVENTS

New short course at the University of Sheffield

Contributed by Lenny Salvagno, University of Sheffield, UK

- Understanding Zooarchaeology I: **17–19 January 2018**
- Cost: £180/£120 (for student/unwaged)

The Department of Archaeology at the University of Sheffield is running for the 12th time the 'Understanding Zooarchaeology I' short course, which will take place on 17–19 January 2018.

Understanding Zooarchaeology I is an introductory course for archaeology and heritage professionals, students and enthusiasts, and does not require any previous knowledge of the discipline.

Animal bones and teeth are among the most common remains found on archaeological sites, and this 3-day course will provide participants with an understanding of the basic methods that zooarchaeologists use to understand animal bone evidence.

Understanding Zooarchaeology I includes teaching through short lectures but, most importantly, hands-on practical activities and case studies, which will provide the attendees with theoretical as well as practical experience.



- For further information visit: <https://www.sheffield.ac.uk/archaeology/research/zooarchaeology-lab/short-course>
- Contact: zooarch-shortcourse@sheffield.ac.uk
- Follow Sheffield's courses on Facebook at: <https://www.facebook.com/pages/Sheffield-Zooarchaeology-Short-Course/100619023380021?ref=hl>
- Follow Sheffield's courses on twitter: <https://twitter.com/zooarchlabsheff?lang=en>

Call for abstracts: 7th Postgraduate ZooArchaeology Forum (PZAF)

Contributed by Mauro Rizzetto, University of Sheffield, UK

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.

Abstracts from any field of zooarchaeology will be considered for the 7th PZAF. We invite contributions in the form of oral or poster

The 2016 PZAF group photo, Torun, Poland



and useful information are also on the PZAF 2018 Facebook page <https://www.facebook.com/pzaf2018/>. For any queries feel free to email pzaf2018@gmail.com.

- When: 27–29 June 2018, deadline for abstracts **31 March 2018**
- Where: Palazzo Ajutamicristo, Palermo (Sicily), Italy

presentations. The deadline for submission is **31 March 2018**. For more detailed information on the conference, submissions and registration please visit <https://www.pzaf.org/>. Updates

Logistic support has been provided by the Soprintendenza BB.CC.AA. of the Palermo Province, the University of Sheffield, Ludwig (<https://ludwig.guru/>) and ICAZ.

Workshop: exploring the transatlantic history of the turkey (*Meleagris gallopavo*) through archaeological evidence

Contributed by Aurélie Manin, University of York, UK

- Date: **12 July 2018** (9.00–18.00)
- Venue: King's Manor, York, UK
- Organizers: Aurélie Manin and Camilla Speller (Department of Archaeology, University of York, UK)
- Contact: aurelie.manin@york.co.uk

For more than 2000 years, the turkey has played a significant role among the populations of North America and Central America. In recent years, varied evidence of its management by pre-Hispanic populations has been revealed, demonstrating the turkey's symbolic value as well as its

importance as a source of feathers and meat. At the end of the 15th century, when European explorers arrived in America, they discovered a large range of new resources that they brought back to Europe, and among these was the turkey. In spite of historical texts discussing its arrival in Spain as early as 1511 and its rapid dispersal across Europe, relatively little archaeological evidence of the turkey is identified in post-medieval European sites. This workshop aims to gather together specialists from America and Europe to discuss the worldwide occurrence and context of turkeys in the archaeological record and their significance to New and Old World cultures.



A watercolour after Theodor de Bry's engravings of Jacques Le Moyne de Morgues' Brevis narratio eorum quæ in Florida Americæ provincia Gallis acciderunt, fecunda in illam navigatione duce Renato de Laudomere claffis Praefecto anno M.D.LXIII



ICAZ WORKING GROUP REPORTS

Animal Palaeopathology Working Group (APWG)

<https://www.alexandriaarchive.org/icaz/workapwg>

Contributed by László Bartosiewicz, Stockholm University, Sweden (bartwicz@yahoo.com), and Erika Gál (organizer), Hungarian Academy of Sciences, Budapest, Hungary (gal_erika@yahoo.com)

Following the successful 6th meeting of the APWG in Budapest between 26 and 29 May 2016, the publication of the proceedings by Oxbow is in an advanced stage. Eighteen papers have been included in the volume *Care or Neglect? Evidence of Animal Disease in Archaeology*. With its title referring to the osteological paradox, the book offers reviews of animal welfare at ancient settlements from both prehistoric and historic periods across Eurasia. Many poorly healed bones are suggestive of neglect in the case of ordinary livestock. On the other hand, a great degree of compassion may be presumed behind the long survival of seriously ill companion animals. Several chapters are devoted to the diseases of dog and horse, two animals of prominent emotional importance in many civilizations. Curious phenomena observed on the bones of poultry, sheep, pig and even fish are discussed within their respective cultural contexts.

The next meeting is planned to take place in Tartu, Estonia, in 2019. Official confirmation of this is underway.

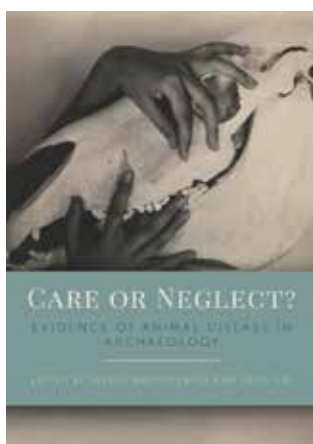


Figure 1: Cover of the APWG proceedings (Oxbow Books)

Archaeozoology of the Baltic Region and Adjacent Areas (ABRA) Working Group

<https://www.alexandriaarchive.org/icaz/workabra>

Contributed by László Bartosiewicz, Stockholm University, Sweden (bartwicz@yahoo.com)

This newly founded working group is planning to meet officially next during the 13th International Conference of ICAZ between 2 and 7 September 2018, in Ankara, Turkey. By the time the Newsletter will be published, the session abstract will have been submitted to the conference organizers by Eve Rannamäe (Tartu, Estonia) and inviting participants will be underway. We are hoping to reveal regional research to the broader community of archaeozoologists in order to initiate discussions on the general aspects of our work.

Archaeozoology of Southwest Asia and Adjacent Areas (ASWA[AA]) Working Group

<https://alexandriaarchive.org/icaz/workaswa>

Contributed by Marjan Mashkour (Marjan.Mashkour@mnhn.fr and marjanmashkour1@gmail.com)

It is 25 years since the ASWA held its first meeting in Groningen. Currently there are around 100 members, the liaison is Marjan Mashkour and the website is <https://alexandriaarchive.org/icaz/workaswa>. Previous reports about the group have been published in the ICAZ Newsletter in issues 14:2 (2013), 15:2 (2014; the Groningen conference announcement) and 17:2/18:1 (2017; the Nicosia conference announcement).



Figure 2: Covers of the ASWA proceedings (Oxbow Books)

The proceedings of the 2008 Al Ain–Abu Dhabi conference have recently been published: Mashkour, M., Beech, M.J. (eds) (2017) *Archaeozoology of the Near East 9: Proceedings of the 2008 Al Ain–Abu Dhabi Conference*. Oxford: Oxbow Books. ISBN 9781782978442. <https://www.oxbowbooks.com/oxbow/archaeozoology-of-the-near-east-9.html>

This two-part volume brings together over 60 specialists who present 31 papers that are wide-ranging in terms of period and geographical coverage: from Palaeolithic rock shelter assemblages in Syria to Byzantine remains in Palestine, and from the Caucasus to Cyprus. The papers are grouped into thematic sections examining patterns of Palaeolithic and Neolithic subsistence in northern Mesopotamia, Anatolia and the Iranian plateau; Palaeolithic to Neolithic faunal remains from Armenia; animal exploitation in Bronze Age urban sites; new evidence concerning pastoralism, nomadism and mobility; aspects of domestication and animal exploitation in the Arabian peninsula; several case studies on ritual animal deposits; and specific analyses of patterns of animal exploitation at urban sites in Turkey, Palestine and Jordan.

The 13th meeting of ASWA working group was coorganized by Jean-Denis Vigne (CNRS/MNHN-Paris), Vasiliki (Lina) Kassianidou (University of Cyprus), Julie Daujat (University of Nottingham) and Angelos Hadjidakis (University of Sheffield), with the collaboration of Jwana Chahoud (University of Beirut) and Rémi Berthon (MNHN/CNRS-Paris). It was held at the University of Cyprus in Nicosia, from 7 to 9 June 2017, with the Department of Antiquities of Cyprus (<https://aswa2017.sciencesconf.org/>).

The conference attracted a large number of scholars and students: 75 participants attended this very well-organized event. A total of 58 papers and 18 posters were presented within the 10 sessions listed opposite.

- Session 1: Humans and biodiversity
- Session 2: Domestication I
- Session 3: Domestication II
- Session 4: Strategies for animal exploitation from the Palaeolithic to the Neolithic
- Session 5: Animal economy during the Chalcolithic and Bronze Age
- Session 6: Animal economy during the historical times
- Session 7: Animal, bones and archaeology: theories and methods
- Session 8: Animal management and husbandry
- Session 9: Symbolic use of animals during the Neolithic and Bronze Age
- Session 10: Symbolic and funeral practices during the historical times

The excursion day gave us a very thorough look at the major archaeological sites of Amathus (1100 BC–AD 654) and the Neolithic village of Khirokitia (7th millennium). While driving to Amathus, Jean-Denis Vigne commented on the landscape of this site and the nearby Pre-pottery Neolithic site of Klimonas. We visited the Limassol Museum, which houses the astonishing pygmy hippos skulls, and had lunch and a bathe at the paradisiacal Kourion beach.

The proceedings of this conference will be published in 2018. Papers have been collected and are currently under review.

The 14th International ASWA meeting will be held during the spring/summer of 2019 in Barcelona, coorganized by Maria Saña and Carlos Tornero, Universitat Autònoma de Barcelona.



Figure 3: Evening light over the Neolithic houses at Khirokitia (photo Terry O'Connor)



Figure 4: A wonderful T-shirt celebrating the Pre-pottery Neolithic (photo Terry O'Connor)



Figure 5: The conference participants (photo Julie Daujat)

Bird Working Group (BWG)

<https://www.alexandriaarchive.org/icaaz/workbird>

Contributed by Chiara A. Corbino, University of Sheffield, UK

The BWG, originally founded in 1991, comprises archaeozoologists, archaeologists, zoologists and ornithologists interested in past human–bird interactions. The 9th BWG meeting, ‘The archaeology of human–bird interactions. A conference in honour of Dale Serjeantson’, will take place at the University of Sheffield, UK, from 8 to 11 June 2018.



The meeting is being organized in honour of Dale Serjeantson, a prominent ornithoarchaeologist, author of the book *Birds* (2009) and of a number of other important bird-related studies.

On the evening of the first day (8 June) there will be an opening reception to celebrate Dale’s career achievements and her important contribution to the study of human–bird interactions. The following 2 days (9 and 10 June) will be dedicated to scientific presentations, and will take place at the Humanities Research Institute. Contributions on any area of research related to the history of human–bird interactions are welcome. There will be both a poster session and oral presentations. A guided excursion to the Peak District, a nearby national park rich in birds and archaeology, will take place on 11 June.

The organizing committee comprises: Umberto Albarella (University of Sheffield), Polydora Baker (Historic England), Evelyne Browaeys (University of Sheffield), Chiara A. Corbino (University of Sheffield), Jacqui Mulville (Cardiff University), Ged Poland (University of Sheffield) and Fay Worley (Historic England). Please submit your abstracts for oral presentations and posters to the following email address: bwg2018@sheffield.ac.uk. The submission deadline is **15 January 2018**. Abstracts need to be between 150 and 200 words long, and must include five keywords, the author’s name(s), affiliation details, email address and whether the submission is for an oral or poster presentation. For more information about the conference visit <http://alexandriaarchive.org/bonecommons/exhibits/show/9bwg>.

Fish Remains Working Group (FRWG)

<https://www.alexandriaarchive.org/icaaz/workfish>

Contributed by Gabriele Carenti (gabrielecarenti@gmail.com) and Barbara Wilkens (archeozoowilkens@gmail.com)

The 19th FRWG meeting, dedicated to fishing in antiquity, was held in Alghero and Stintino from 1 to 4 October. The conference was possible thanks to the contributions of the Sardinia Foundation, the municipality of Stintino, the Archaeological Association Aidu Entos, Comunica Cooperative Society, Beta Analytics and the registration fees of participants.

Many associations offered their patronage: the University of Sassari; Alghero municipality; META Foundation; the Tonnara Museum of Stintino; the Center for Studies on the Sea Civilization and the Development of the Gulf and Park of Asinara; the Park of Porto Conte. We must thank also, for their support and help, the Superintendence for Archeology Fine Arts and Landscape for the Provinces of Sassari and Nuoro and the Superintendence for Archeology, Fine Arts and Landscape for the Metropolitan City of Cagliari and for the Provinces of Oristano, Medio Campidano, Carbonia-Iglesias, Ogliastra functional archeological heritage area.

Conference registration included the abstract book, access to conference sessions and activities, a welcome drink on 1 October, lunches and coffee breaks with local products from 2 to 4 October, a participation certificate, and transfer to Stintino on 4 October.

Sunday 1 October: registration opened at 10:00. In the afternoon, at 16:30, opening remarks were made by Barbara Wilkens and Gabriele Carenti (organizers of the 19th ICAZ FRWG meeting), Ornella Piras (for the Mayor of Alghero), Piero Bartoloni (Professor of Phoenician and Punic Archaeology), Arturo Morales Muñiz (founder member of the FRWG). After the speeches, there was a reception party with Sardinian products.



Figure 6: Sunday 1 October, the opening ceremony (photo Alessandra La Fragola)

Monday 2 October: work began in the conference hall of the Fondazione META in Alghero. In the morning, the first session was held on 'Commercial fishing including storage and trade of fish' (chair Filippé Béarez); in the afternoon session 2 was 'Freshwater fishes: fishing and aquaculture' (chair Heide Hüster Plogmann) and session 3 'Dawn of fisheries: Stone Age fishing techniques' (chair Harry Robson).



Figure 7: Monday 2 October in the conference hall of Fondazione META in Alghero (photo Gabriele Carenti)

Tuesday 3 October: the conference continued in the conference hall of the Fondazione META in Alghero. In the morning, the fourth session was 'Life in ancient and modern fishing communities: ethnicity' (chair Kenneth Ritchie). In the afternoon there was a poster session and session 5 'Fish food supply: historical and archaeological data' (chair Alfred Galik).

Wednesday 4 October: the congress moved to Stintino. In the Museum of Tonnara, the director, Professor Salvatore Rubino, welcomed the participants. After a brief visit to the museum, the curator of the Tonnara Museum, Esmeralda Ughi, the Mayor of Stintino, Antonio Diana, and the Cultural Heritage council member of the Stintino community, Francesca Demontis, welcomed the visitors.

Session 6 'Advance in methodology, microbiology and applied chemistry' was held in the late morning (chairs Salvatore Rubino and Tatiana Theodoropoulou) and afternoon (chair Elise Dufour). After the last session there were closing remarks and proposals for the 20th FRWG Meeting. Three proposals were presented: one for Vienna (Austria), one for China and one for Portland (USA).



Figure 8: 4 October in the conference hall of the Museo della Tonnara in Stintino (photo Salvatore Rubino)



Figure 9: 4 October near the Pelosa Tower at Capo Falcone, Stintino (photo Gabriele Carenti)

In the evening, participants were transferred to Capo Falcone for the social dinner.

In total, 120 scholars from 29 countries were involved: 64 scholars participated in congressional work together with 11 accompanying persons, and 40 of them participated in the final tour.

| Total | Participants | Contributors | Country |
|------------|--------------|--------------|-----------------|
| 2 | 2 | | Austria |
| 4 | 2 | 2 | Belgium |
| 8 | 4 | 4 | Canada |
| 2 | 2 | | China |
| 1 | | 1 | Cyprus |
| 2 | 2 | | Denmark |
| 4 | 2 | 2 | Estonia |
| 1 | | 1 | Ethiopia |
| 1 | 1 | | Finland |
| 33 | 13 | 20 | France |
| 4 | 2 | 2 | Germany |
| 1 | 1 | | Israel |
| 20 | 7 | 13 | Italy |
| 1 | 1 | | New Zealand |
| 1 | 1 | | Perù |
| 1 | 1 | | Poland |
| 2 | 1 | 1 | Portugal |
| 1 | 1 | | Russia |
| 1 | 1 | | Serbia |
| 1 | | 1 | South Africa |
| 4 | 3 | 1 | Spain |
| 2 | 2 | | Sweden |
| 2 | 2 | | Switzerland |
| 1 | 1 | | The Netherlands |
| 1 | | 1 | The Philippines |
| 2 | | 2 | Turkey |
| 12 | 9 | 3 | UK |
| 1 | 1 | | Ukraine |
| 4 | 2 | 2 | USA |
| | | | |
| 120 | 64 | 56 | Total |

Thursday 5 October: the field trip started. Forty of the 75 conference participants attended the tour. The bus trip started from Alghero to Bosa to Mont'e Prama, where the excavation was visited and, in the vicinity, the Cabras fish pond Mar'e Pontis and the museum of Cabras. In the evening, the participants reached the hotel in Oristano where they stayed for two nights. Friday 6 October began with a visit to the Byzantine church of San Giovanni di Sinis, of the Phoenician and Roman city of Tharros, and the hypogeum of San Salvatore. On Saturday 7 October, participants attended Nuraghe Losa and Santa Cristina di Paulilatino, where they visited the well sanctuary, the medieval village and the nuragic village. On the way back the bus stopped at the medieval church of Saccargia before reaching the airport of Alghero and then heading back to the city of Alghero.



Figure10: The visit to the Mont'e Prama excavation (photo Barbara Wilkens)



Figure 11: The visit to the Byzantine church of San Giovanni di Sinis (photo Barbara Wilkens)

An overview of FRWG meetings

Contributed by Łászló Bartosiewicz (WG Liaison), Stockholm University, Sweden (bartwicz@yahoo.com)

The 19th meeting of the FRWG was held in Alghero and Stintino, Sardinia, Italy, from 1 to 7 October 2017. As the two venues indicate, the event was organized by Barbara Wilkens (Dipartimento di Scienze della Natura e del Territorio, Università degli Studi di Sassari Alghero) and Gabriele Carenti (Centro Studi sulla Civiltà del Mare e per la Valorizzazione del Golfo e del Parco dell'Asinara Stintino). The thematic definition of the meeting was summarized in the title: 'Fish and fishing communities: understanding ancient and modern fisheries through archaeological fish remains'.



Figure 12: The conference logo (graphic design Gabriele Carenti)

Since 1987 I have had the privilege to take part in 11 of the 19 FRWG meetings. Although this time I could not be personally present, numerous accounts by those who could participate describe yet another well-organized, refreshingly non-institutional event. A viable blend of highly professional and warm-heartedly informal attitudes was again furthered by the organizers, who should be congratulated for their impressive achievement.

The 63 contributions listed in the conference programme were divided into the following six sessions.

| Session title | Presentations |
|--|---------------|
| Commercial fishing including storage and trade of fish | 10 |
| Freshwater fishes: fishing and aquaculture | 9 |
| Dawn of fisheries: Stone Age fishing techniques | 13 |
| Life in ancient and modern fishing communities: ethnicity | 12 |
| Fish food supply: historical and archaeological data | 4 |
| Advance in methodology, microbiology and applied chemistry | 15 |

Various trends are immediately apparent in this list. There is a dominance of cutting-edge scientific methods in the programme, a welcome development in archaeoichthyological studies. This fell in line with the goal of the meeting to offer a platform to 'the use of new techniques and the initiation of research in new environments with the goal of encouraging multidisciplinary research in conducting fish-related studies', as stated by the organizers.

The way archaeoichthyological research is being carried out on five continents is represented by the geographical composition of topics (rather than the very international group of participants) at this meeting. Although the list of participants was rather different from that of the previous meeting, the 18th FRWG conference in Lisbon, there is a striking similarity in the representation of continents on the basis of contributions (Figure 13, top; oral and poster presentations pooled). While 38 topics from Europe dominated the agenda and the number of entries discussing North America was somewhat decreased, there was a welcome increase in representation of Africa and Asia among the subjects. Most importantly, this conference again reflected the immense geographical diversity of our working group.

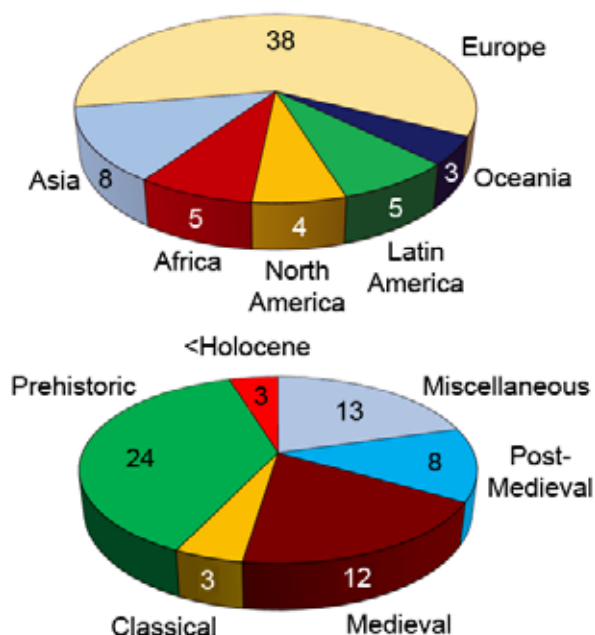


Figure 13. A representation of the continents (top) and archaeological periods (bottom) by pooled oral and poster contributions presented at the 19th FRWG meeting (raw data: Carenti and Wilkens, conference abstract book)

The chronological distribution of presentations (Figure 13, bottom) was also similar to that of the Lisbon conference, although relatively fewer participants discussed the Classical period, while there was an increase in later prehistoric as well as pre-Holocene subjects. The medieval and post-medieval components of the programme remained largely the same.

Following advanced methodology, the next best represented topic remains prehistoric fishing with particular emphasis on the Stone Age. This reflects the long tradition that archaeozoology in general is most appreciated in earlier archaeological periods, where animal remains do not compete with other sources for the attention of archaeologists and historians. While archaeozoological reports have become a staple in prehistoric research since its beginnings in the 1850s, medievalists began embracing the study of animals only in the last decade thanks to the 'animal turn' in the humanities. This increasing scholarly interest in animals, including fish as a staple, ecofact and metaphor (Figure 14), has so far affected medieval studies far more than classical archaeology. This seems to be reflected by the trend that archaeozoologists are more frequently commissioned to participate in medieval projects. In Sardinia slightly more papers and posters fell into the chronologically miscellaneous category than in Lisbon. These had no particular emphasis on a single time period. Such presentations included both broad chronological surveys and reports on methodologically orientated laboratory research, such as stable isotopes and zooarchaeology by mass spectrometry (ZooMS).

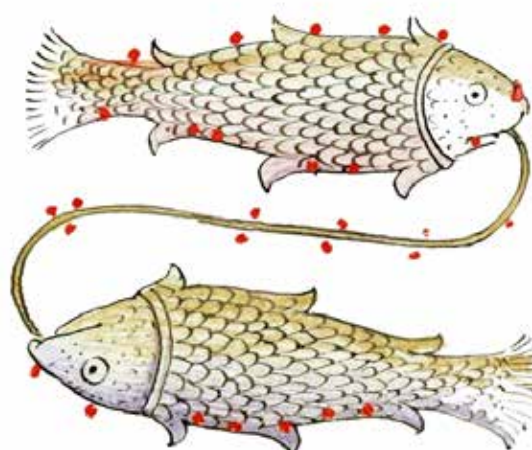


Figure 14: Astral fish from Genus Arati (Napoli, 15th century), Fondation Martin Bodmer, Köln

Page 60 of the conference abstract book compiled by Gabriele Carenti and Barbara Wilkens contains an elucidating tabulated summary of all previous FRWG meetings, listing the numbers of participants, papers and posters for each conference. A brief analysis of these data (Figure 15) reveals that during 36 years the number of FRWG presentations (oral and poster) has, on average, more than doubled at meetings. The overall trend (Figure 15, dashed line) shows an increase from 25 to 57 contributions in this time period, which means almost two (1.7) additional presentations for each meeting. Although this generally increasing trend of attendance shows some oscillations, many of these may be attributed to prevailing conditions of funding and choices of venue.

The mean value of participants in Figure 15 is 48.2 (standard deviation = 19.0). Undoubtedly, the four largest conferences attracting over 70 participants (including the recent event in Sardinia) were organized in Europe. However, participation suffered only a relatively minor setback during the period between 1997 and 2003, when four consecutive FRWG meetings were held on other continents: the average number of participants at 13 meetings in Europe did not significantly differ from those at the five conferences organized in other continents. I would say, that the latter importantly contributed to the current geographical diversity of FRWG. Although I began analysing these trends in the report following the 18th FRWG meeting in Lisbon, they are worth recalling as we are preparing for the next, 2019, conference in the New World again: the destination being Portland, Oregon (USA).

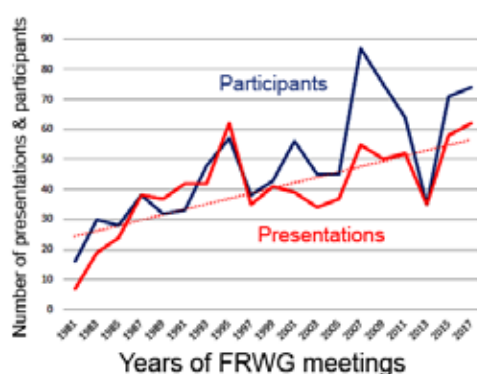


Figure 15: Trends in the numbers of pooled oral and poster presentations and participants presented at the 19 FRWG meetings (raw data: Carenti and Wilkens, conference abstract book). The increasing trend in contributions is marked by the dashed line

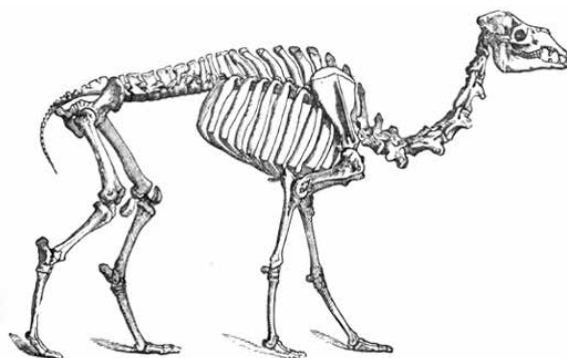
The local organizer and host will be Virginia Butler (Portland State University, USA), with help from a planning committee: Madonna Moss (University of Oregon, USA), Iain McKechnie (University of Victoria, Canada), Elizabeth Reitz (University of Georgia, USA) and Jen Harland (University of the Highlands and Islands, UK).

A message from Virginia sums it all up as follows: “Mark your calendars, for the 20th Meeting of the Fish Remains Working Group (FRWG) set for 26–30 August 2019 in Portland, Oregon, USA, followed by a weekend field trip to the Oregon Coast. As you all know, the FRWG is an outstanding way to meet with scholars from around the world in a small supportive atmosphere. And Portland, Oregon, is a perfect place for such gathering. Fish were and continue to be of fundamental importance to indigenous people and the broader citizenry of the region. Please consider joining us in August 2019!”

There will be a website in place by April 2018, to help you with planning.

Questions? Contact virginia@pdx.edu

Grupo Zooarqueología de Camélidos



<https://www.alexandriaarchive.org/ica2/workgzc>

Contributed by Hugo Jacobaccio, Universidad de Buenos Aires, Argentina

Between 28 and 30 September, the IV Workshop of Zooarchaeology of Camelids was held in the Museo Arqueológico ‘Eduardo Casanova’ of the Universidad de Buenos Aires in the city of Tilcara (Prov Jujuy, Argentina), organized by the Camelid Zooarchaeology Group. The workshop was structured with three roundtables on the following topics: (1) the camelid–human relationship from



Figure 16: The workshop participants



Figure 17: Camelid rock engravings



Figure 18: The field trip to Barrancas

diverse social and symbolic perspectives; (2) exploitation and management of wild and domesticated camelids; and (3) environment and camelids, climate change and correlations with human populations. A total of 21 papers was presented, and 38 authors participated. The discussions were interesting and illuminating, including zooarchaeological analyses of camelid hunters and pastoralists; current use of wild and domesticated camelids; taxonomic diversity of Pleistocene camelids; and the influence of climate change on the human–animal relationship. On 30 September, a field trip to Barrancas locality took place. Barrancas is a municipal rock art reserve containing hundreds of camelid designs from the last 3200 years. One of the main outcomes of the workshop was the creation of a webpage hosted by the Universidad Nacional de Córdoba with the aim of keeping people interested in camelid zooarchaeological research in contact.

<http://vicam.org.ar/index.html>



<https://alexandriaarchive.org/icaaz/workneotropical>

Contributed by Mariana Mondini, LaZTA (IDACOR, CONICET/UNC) and Universidad de Buenos Aires, Argentina (mmondini@filo.uba.ar); logo Patricio López Mendoza

The Neotropical Zooarchaeology Working Group (NZWG), which is focused on human–animal relationships and their record in the biogeographic region ranging from southern North America to southern South America and adjacent islands, now has more than 200 members.

The NZWG holds periodic academic meetings and, as voted at the last meeting (San Rafael, 2014), the 3rd Academic Meeting of the NZWG was held on 22–24 November 2017. Jointly organized with Dr Laura Beovide, it was held in San José de Mayo, Uruguay. Information about the meeting can be found on the website <https://sites.google.com/site/nzwgicaz2017/> and blog <https://nzwgicaz2017.wordpress.com/>, where you can register for follow-ups.

The meeting's theme was 'From ocean to ocean, multiple looks on human–animal relationships in the Neotropics'. It sought to reflect in some way the diversity of studies being

carried out in the region, which transcend diet studies and cover varied topics such as palaeoecological and symbolic studies. The meeting was also dedicated to the memory of Dr Christopher Markus Götz, an active and generous member of the NZWG, who did so much for the zooarchaeology of the region (for a review of his contributions, see NZWG Newsletter No. 8 at <http://alexandriaarchive.org/bonecommons/exhibits/show/nzwg>).

The meeting included 2 days of oral sessions, posters and invited lectures at the Espacio Cultural de la Ciudad de San José, on 22–23 November. Oral presentations included 35 contributions distributed across four thematic sessions: (1) methodological tools for interpreting the Neotropical zooarchaeological record; (2) interactions between humans and Neotropical animals – regional trajectories; (3) human–animal relationships in Neotropical coastal and riverine environments; and (4) the archaeological record of Neotropical small carnivores. Invited speakers included Dr Antonio Rosas González (MNCN-CSIC, Spain), Dr Walter Norbis (Instituto de Biología, Facultad de Ciencias, Universidad de la República, Uruguay) and Dr Sergio A. Martínez (Dpto. de Paleontología, Facultad de Ciencias, Universidad de la República, Uruguay). On Friday 24 November a field trip took place to different archaeological areas of the Department of San José.

The book of abstracts has already been issued and can be downloaded at <https://nzwgicaz2017.files.wordpress.com/2017/09/nzwg3-libro-de-resumen-es-san-jose-2017.pdf>. The contributions will be published in *Archaeofauna*, *International Journal of Archaeozoology*.

Both the meeting registration and the field trip, as well as student accommodation, were free to participants thanks to the efforts of Laura Beovide and collaborators and the sponsorship of the Government of San José Department in Uruguay through the following agencies:



Figure 19: Abstract book of the 3rd NZWG meeting

- Agencia de Desarrollo y Descentralización Ciudad del Plata
- Centro de Investigación Regional Arqueológica y Territorial San José
- Dirección de Innovación, Ciencia y Tecnología para el Desarrollo, Ministerio de Educación y Cultura.



<https://www.alexandriaarchive.org/icaz/workroman>

Other recent news is that contributions to the 2nd NZWG academic meeting, which was held during the 12th ICAZ international conference (Argentina 2014), have now been published by Springer in a volume entitled *Zooarchaeology in the Neotropics: Environmental Diversity and Human–Animal Interactions*. It includes 10 chapters on a wide array of subjects and case studies on human–animal interactions and the properties of the zooarchaeological record throughout the region, with implications for the whole Neotropics and beyond. Check it out at <http://www.springer.com/us/book/9783319573267>.

This and other information on Neotropical zooarchaeology, including notes, reviews and plenty of news, can be found in the NZWG newsletters. These can be accessed from the NZWG webpage: <https://www.alexandriaarchive.org/bonecommons/exhibits/show/nzwg>.

We invite researchers and students interested in zooarchaeology in the Neotropics to join the NZWG and stay tuned for interesting news in this research area. You just need to email us at nzwg.icaz@gmail.com. Please spread the word!

The NZWG coordinators (nzwg.icaz@gmail.com) are:

- Pablo M. Fernández, NZWG Coordinator (CONICET-INAPL, Argentina, pfernand@retina.ar)
- A. Sebastián Muñoz, NZWG Coordinator and Liaison (CONICET-UNC, Argentina, smunoz@conicet.gov.ar)
- Elizabeth Ramos Roca, NZWG Coordinator (Universidad de los Andes, Colombia, eramosroca@uniandes.edu.co).

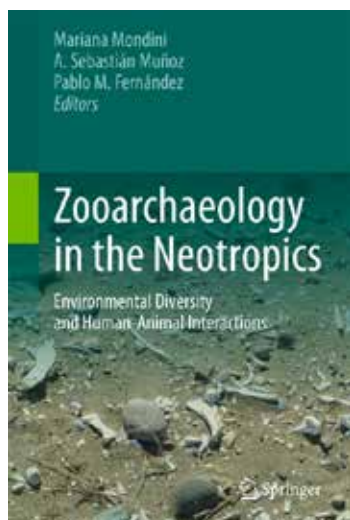


Figure 20: Publication of the 2nd NZWG meeting

Contributed by Silvia Valenzuela (silviavalenzuelalamas@gmail.com), Umberto Albarella (u.albarella@sheffield.co.uk), and the Organizing Committee in Basel, Switzerland: Sabine Deschler-Erb, Monika Mraz and David Roth

The Integrative Prehistory and Archaeological Science (IPAS) and the Vindonissa Chair (University of Basel, Switzerland) will host the 2nd meeting of the Roman Period Working Group (RPWG) between 1 and 4 February 2018 in Basel. The main topic will be 'Animals in ritual and funerary context'. The preliminary programme includes 26 oral presentations discussing rituals in Roman times on a diversity of *provinciae* across the Roman Empire, as well as two position papers (M. Groot and S. Lépetz), a public lecture (T. King) and poster presentations. More information is available on the website <https://ipna.unibas.ch/rpwg/index.html>. The meeting will also include two excursions to widely known Roman sites in Switzerland (Augusta Raurica and Vindonissa) combined with a fondue at IPAS. We have been overwhelmed with many excellent paper submissions, but can still accept posters. The relevant forms and additional information are available on our website (<https://ipna.unibas.ch/rpwg/index.html>). If you have any questions, please do not hesitate to get in touch with us (rpwg2018-ipna@unibas.ch).

We hope to see you in Basel, for what promises to be an exciting 2nd RPWG meeting.

The organizing committee: Sabine Deschler-Erb, Monika Mraz and David Roth.



Figure 21: Flyer for the 2nd RPWG



Animals on the Move in the Middle Ages, 5th International Symposium of the Medieval Animal Data-Network (MAD)

9-11 November 2017

Contributed by *László Bartosiewicz, Stockholm University, Sweden*
(bartwicz@yahoo.com)

This symposium, hosted in the Osteoarchaeological Research Laboratory at Stockholm University, Sweden, brought together researchers working on various aspects of medieval animal history. The aims were to improve communication further and encourage cooperation between archaeozoologists and medievalists around the theme of animal movement.

The international Medieval Animal Data-Network (MAD; <http://mad.hypotheses.org>; Figure 1) was founded in 2005 at the Department of Medieval Studies of the Central European University (Budapest, Hungary) as an attempt to bring together research methods and perceptions of animal-human relationships in the Middle Ages from a variety of academic disciplines. It is intended to explore the way medieval people thought about and exploited animals by integrating animal bone finds, written sources and iconographic data.

The 20 participants came from 13 countries (Figure 2). This rainbow coalition of experts discussed various aspects of animal movement, both physical and symbolic, in five subtopics:

- travelling animal imagery
- animals on the road
- herding and trade
- dangerous animals
- circulating animal parts.

MAD has helped popularize previously neglected animal studies in medieval research with a strong emphasis on archaeozoology. Medievalists began embracing the study of animals in the last decade thanks to the 'animal turn', heralding an increasingly sophisticated approach to animal-related matters in the social sciences and the humanities. This increasing scholarly interest in animals, in animal-human relationships, and in the role and status of animals in society, offers a unique opportunity for archaeozoologists as the



Figure 1: The MAD logo

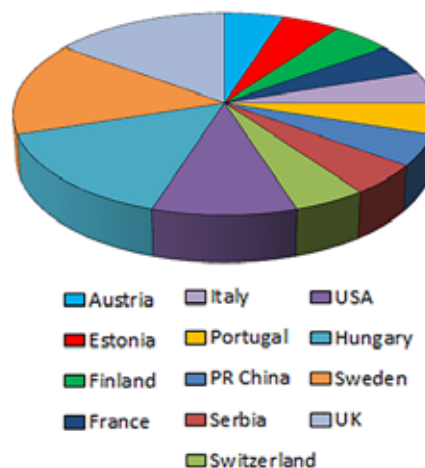


Figure 2: Participants by country at the 5th MAD symposium

scholarly marketplace for our 'product' expands. Negotiations are underway with Palgrave to publish the proceedings of this meeting in the form of a thematic volume.

The Bountiful Sea Classical Banquet

6-8 September 2017

Contributed by *Dale Serjeantson (D.Serjeantson@soton.ac.uk)*

Several members of the ICAZ Fish Working Group will have attended the conference in Oxford 'The Bountiful Sea: Fish Processing and Consumption in Mediterranean Antiquity' from 6-8 September 2017 at the Taylor Institute of the University of Oxford, UK, organized by Dimitra Mylona, Angela Trentacoste



Figure 3: The dinner table prepared for the meal, with the menu (in Latin, Greek and English), salads and fruit, water jug and the honeyed wine aperitif.

and colleagues. As well as archaeologists, classical scholars, scientists and cooks discussed fish exploitation and the manufacture, transport and consumption of fish products in Mediterranean antiquity.

This is not a report of the meeting but a note to describe the splendid dinner that was served on the first evening. It took place in the Sculpture Gallery of the Ashmolean Museum and was an original and outstanding recreation of a Classical Mediterranean Fish Feast. The meal was created by Sally Grainger and chefs from Benugo: Sally is the author (with Andrew Dalby) of *The Classical Cookbook*.

Honeyed wine was served as an aperitif. We then had starter dishes of steamed oysters, fresh oysters with black garum, prawns and pickled vegetables. All served with panem, a sourdough bread, salad and pickled vegetables. After that came kidneys stuffed with a mix of pine kernels and herbs and a salad of chicken livers. The main fish dishes included salted mackerel and tuna, stuffed squid, tuna baked with herbs, and baked fresh mullet. As well as the salad, cabbage cooked with honey and vinegar was served as a vegetable. Desert was a honey and nut confection reminiscent of baklava and fruit. Definitely the most delicious and most original conference dinner I have ever eaten.

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Fulbright award

Contributed by Emily Lena Jones, *The University of New Mexico, USA* (elj@unm.edu)

Emily Lena Jones has been awarded a Fulbright for 2017–18 to spend a semester at the Laboratorio de Bioarqueología at the Instituto Internacional de Investigadores Prehistóricas de Cantabria, University of Cantabria, working on archaeofaunas from the Cantabrian Lower Magdalenian with Ana Belén Marín Arroyo.

Research from Bulgaria

Contributed by Z. Boev, *National Museum of Natural History, Bulgarian Academy of Sciences, Bulgaria* (boev@nmnhs.com, zlatozarboev@gmail.com, zlatozarboev@yahoo.com)

Details of recent publications by Z. Boev in avian archaeology and palaeontology can be found via the ICAZ Zotero group: <https://www.alexandriaarchive.org/icaz/publications-zooarch>.

Lightning whelk research

Contributed by Laura Kozuch, *Illinois State Archaeological Survey, USA*

Laura Kozuch and colleagues have been researching the lightning whelk (*Busycon sinistrum*): its natural history, and the sourcing and artefact crafting of this unique shell. Spiritual artefacts were made from these shells for thousands of years in the south-eastern interior of the United States. Large deposits of shell artefacts indicate that people travelled from inland sites that were about 800 miles from the marine coastal source to obtain hundreds of shells. Kozuch *et al.*'s work is ongoing and their next step is to investigate disconnected time periods during which lightning whelk shells were used for making sacred artefacts. Their work has already resulted in several publications and presentations: for details see <https://illinois.academia.edu/LauraKozuch/Publications> and <https://www.zotero.org/groups/353233/icaz>.



A lightning whelk shell



A lightning whelk mask



A lightning whelk spiro engraved shell cup

A National Zooarchaeological Reference Resource

Contributed by Eva Fairnell (eva.fairnell@york.co.uk) and David Orton (david.orton@york.ac.uk)

The National Zooarchaeological Reference Resource (NZRR) is a UK project funded by Historic England (project number 7444) that is entering its third year of development. The aim of the project is to improve the visibility and accessibility of osteological specimens held in zooarchaeological reference collections, and so facilitate good-quality species identifications and research across the sector.

An initial workshop was held in York in 2016 to discuss the sector's requirements for a coordinated reference resource, and so inform the design of the interface and the data fields required. The resource was launched in June 2017, with specimen data contributed by Bournemouth University, Cardiff University, Durham University, Grant Museum of Zoology, Historic England, The Manchester Museum, Museum of London Archaeology, Oxford University Museum of Natural History, SHD Zooarchaeology, University of Birmingham, University of Edinburgh, University of Leicester, University of Nottingham, University of Sheffield, University of Southampton, University of York and the York Museums Trust. Additional data are expected in the near future from a number of additional institutions.

A second workshop was held in York in June 2017 to evaluate the development of the NZRR to date, and consider options for the future. Topics that were discussed included expanding the geographical remit of collections, for example to be pan-European, and including existing digital collections, for



Part of the mammal collection at the University of York, UK (photo Luke Spindler)

example three-dimensional (3D) images that could be viewed online and downloaded.

The NZRR provides a working model that has been well received across the sector, particularly by museums and collections that otherwise find it difficult to have an online presence. To access the NZRR, visit http://archaeologydataservice.ac.uk/archives/view/nzrr_he_2017/index.cfm.

Since the second workshop, two further museum collections (from Leeds and Manchester) have been submitted, and will be added to the resource in 2018. If you are interested in adding your collection to the NZRR, it is not too late. Please contact Eva Fairnell (eva.fairnell@york.ac.uk) or David Orton (david.orton@york.ac.uk) by the end of **January 2018**, and we will provide further information.



Fish vertebral series, part of the reference collection at the University of York, UK (photo Terry O'Connor)



New zooarchaeological reference collection in Iceland

Contributed by Albína Hulda Pálsdóttir, Faculty of Agricultural and Environmental Sciences, The Agricultural University of Iceland, Keldnaholti-Árleyri 22, 112 Reykjavík, Iceland, and Centre for Ecological and Evolutionary Synthesis (CEES), Department of Biosciences, University of Oslo, Postbox 1066, Blindern, 0316 Oslo, Norway (albinap@gmail.com)

The Icelandic zooarchaeological reference collection housed at the Agricultural University of Iceland is now open to outside researchers. This is the first such collection in Iceland and it currently has specimens of various mammals, birds and fish found in or around Iceland. There are 260 specimens in the collection that are ready for use, with an additional 80 samples in various stages of preparation. Detailed information such as origin, species, age and sex is available for many specimens.

There are about 148 samples from mammals in the collection, mostly domestic. These include 90 partial skeletons from Icelandic sheep, which have detailed information about sex, age and size. Most of the sheep samples include at a minimum a skull, mandibles, humerus, femur, tibia, scapula, parts of the vertebral column and ribs. For wild animals the collection has dolphin, seal, arctic fox and more.

The bird bone reference collection includes a diverse range of species found in Iceland, with 150 specimens. Most of the bird specimens are whole skeletons. The collection includes 22 skeletons of Icelandic chickens, both males and females and of various ages.



Figure 1: Sheep bones in preparation for the reference collection in 2017 (photo Elísa Skúladóttir)

The fish collection is still limited; currently there are only 40 fish specimens but the plan is to expand this in the coming years.

Work on the reference collection has been funded by grants from the Archaeological Heritage Fund in Iceland (grant nos 201702-0044 and 201602-0099).

Researchers interested in visiting the collection or obtaining further information about available specimens can contact Albína Hulda Pálsdóttir at albinap@gmail.com. An annual report for 2017 with an updated sample list will be published before the end of the year.

The list of available samples is accessible on the Agricultural University of Iceland website: http://www.lbhi.is/sites/default/files/gogn/vidhengi/thjonusta/utgefid_efni/RitLbhi/rit_lbhi_nr_71_samanburdarsafn_lbhi_aui_reference_collection.xlsx.

The annual report for the year 2016 (in Icelandic) is available at: http://www.lbhi.is/sites/default/files/gogn/vidhengi/thjonusta/utgefid_efni/RitLbhi/rit_lbhi_nr_71.pdf.



Figure 2: Grey seal skeleton in preparation for the reference collection in 2016 (photo Albína Hulda Pálsdóttir)

New archaeozoology laboratory at the University of Kerala, India

Contributed by Abhayan G.S., University of Kerala, India (abhayangs@gmail.com)

An archaeozoology laboratory has been set up at the Department of Archaeology, University of Kerala, Thiruvananthapuram, India, under Dr Abhayan G.S. The laboratory was formally inaugurated by Professor P. Ajithprasad (Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda, Gujarat) on 16 January 2017. This is the only archaeozoology laboratory in any institution in southern India. The archaeozoology laboratory houses a set of indexed osteological collections of different animals, which is a prerequisite for the identification of any archaeological faunal samples. The laboratory has complete skeletons of several domestic and wild mammals, birds, reptiles, fishes and shells. The laboratory possesses a comprehensive collection of complete skeletons of 246 fish specimens in the archaeoichthyology section.



Figure 3: A view of the laboratory space

An unpublished manual of osteological identification keys developed by Dr Abhayan G.S. for most fish species occurring in the region is also accessible for reference in the laboratory. This is the only centre in India where an archaeoichthyological collection is available. The laboratory also holds a section for archaeomalacology. The laboratory facilities include maceration apparatus, microscopes, computers, measuring devices such as digital vernier calipers, digital balance, chemical reagents, deep freezer, refrigerator, racked containers, laboratory furniture, basic laboratory manuals, etc. The reference collection as a whole is divided into two parts, i.e. an anatomical collection and a comparative osteological collection. The osteological collection is ideal in that it



Figure 4: Professor P. Ajithprasad inaugurating the archaeozoology laboratory at the University of Kerala

includes animals of different age groups, breeds and sex. The indexed reference collection of bones of anatomical units of animals is stored in retractable metal drawers to facilitate easy and repeated consultation while doing archaeozoological analyses. The laboratory is now equipped for providing consultancy work in archaeozoological analyses for other archaeological institutions. Several faunal assemblages from recent excavations have already been studied in this laboratory.

The researchers working in the laboratory have been experimenting with various maceration methods and successfully added to the existing skeletal collection. Recent projects in the laboratory include the preparation of identification keys for osteological differences in cattle (*Bos indicus*), buffalo (*Bubalus bubalis*) and nilgai (*Boselaphus tragocamelus*) and analyses of faunal assemblages from



Figure 5: A view of the laboratory space

excavated sites in the Kerala, Gujarat and Tamil Nadu regions. In southern India, archaeozoological studies were previously not popular. The inception of this laboratory is very significant because of the rarity of such facilities in this part of the world. The setting up of this laboratory is already showing signs of a good response with regard to faunal assemblages on behalf of the archaeological institutions in the region.

Figure 6: The reference collection of fish bones in drawers



‘Next Generation’ zooarchaeology at the University of Exeter, UK

Contributed by Alan Outram, University of Exeter, UK (A.K.Outram@exeter.ac.uk)

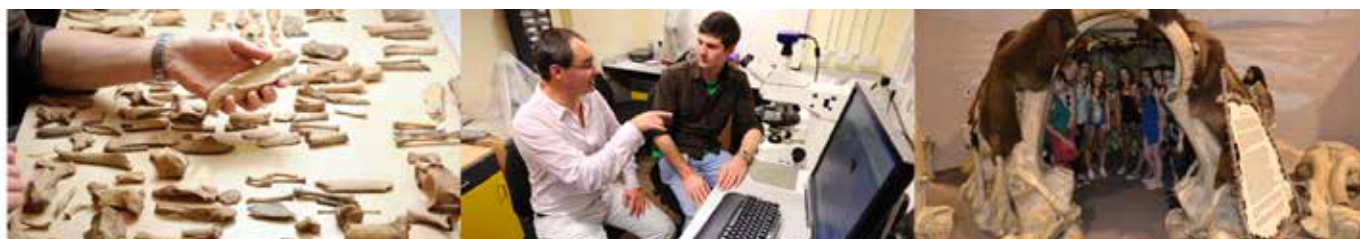


Figure 7: Zooarchaeology at the University of Exeter

We are delighted to announce that, at the University of Exeter, we have dramatically up-scaled our zooarchaeological expertise and capability. Alongside new academic hires, we have excellent reference collections of mammals, fish and birds, new in-house digital X-ray facilities and use of the recently opened digital humanities laboratory, which houses advanced scanning and photogrammetry equipment. With this step-change in capacity, we have redesigned our teaching and research programme, and are keen to share our ethos.

For us, zooarchaeology is about more than just bones and reconstructing ancient diet. We believe that fats, isotopes, DNA and proteins, whether recovered from skeletal material or residues, are all forms of zooarchaeological data. So too can zooarchaeological information be found in art, manuscripts, soils, landscapes and environments. In the 21st century, zooarchaeology has ever broadening power to enlighten us about humanity's rich cultural behaviour and contribute to wider scientific endeavour. As well as informing research into big evolutionary questions, zooarchaeology helps us understand societies, their development and their impact over the *longue durée* in a way that has vital relevance for modern human–environmental wellbeing and sustainability.

To achieve such ambitions, zooarchaeology needs to be highly collaborative and, at Exeter, we are precisely that. Our team is active within a wide network of interdisciplinary and international research. The same is true at our department level, where we work in partnership with our human osteology colleagues, palaeobotany specialists and period-based staff.

The line-up to teach on our MSc Bioarchaeology:

Zooarchaeology next academic year is:

- Professor Naomi Sykes (integrated arts–science approaches to explore bio-cultural histories of single species, to model human–animal–environment relationships over the last 10,000 years, and to consider implications for the present)
- Professor Alan K. Outram (prehistoric zooarchaeology, horse domestication, early pastoralism, origins of milking, bone fracture and fragmentation, bone fat exploitation, lipid residue and genetic applications in zooarchaeology)
- Dr Alex Pryor (Palaeolithic animal exploitation, isotopic approaches to animal mobility, mammoths).

Other key staff include:

- Dr Catriona McKenzie (palaeopathology, funerary osteoarchaeology)
- Dr Laura Evis (forensic anthropology).

And plants, environments and landscapes context can be included too:

- Professor Jose Iriarte (palaeobotany, environmental archaeology, phytoliths, Amazonia)
- Professor Stephen Rippon (landscape archaeology, historic landscape characterization, environments and agriculture)
- Professor Oliver Creighton (high-status and designed landscapes).

<http://www.exeter.ac.uk/postgraduate/taught/archaeology/bioarch/>



Figure 8: Zooarchaeological projects at the University of Exeter

Some of the current major zooarchaeological research projects we are involved with are outlined below (logos in Figure 8).

A) NeoMilk: The Milking Revolution in Temperate Neolithic Europe

<http://neomilk-erc.eu/>

Alan is a senior researcher on a major interdisciplinary European Research Council project led by Professor Richard P. Evershed (School of Chemistry, Bristol, UK). It explores the introduction and spread of cattle-based agriculture by early Neolithic Linearbandkeramik (LBK) farmers and its implications for modelling the Mesolithic–Neolithic transition in northern and central Europe during the 6th millennium BC. There is a particular focus on the origins of dairying as a major component of economy. The Exeter work package particularly addresses variation in taphonomy, butchery patterns and animal fat use across time and space within the LBK.

B) The Chicken Project (x 3)

<http://www.scicultchickens.org/>

Naomi has been Principal Investigator/Co-Investigator on three Arts and Humanities Research Council (AHRC)-funded projects investigating the origins, spread and bio-cultural impact of the chicken. This species is native to South-East Asia and its modern worldwide distribution is almost entirely due to human-assisted transportation. As such, the chicken's natural history is a reflection of human history. The overarching aims of the Chicken Project are threefold:

1. to bring together expertise from across the arts, humanities and sciences and create a new mutually transformative paradigm for research
2. to work together to explore human culture and how cultural attitudes to the natural world have changed over millennia
3. to consider the implications of our research for addressing modern global challenges.

C) Pegasus: The Makeup of the Modern Horse: A History of the Biological Changes Introduced by Human Management

<http://orlandoludovic.wixsite.com/pegasus-erc>

Alan is engaged as the senior zooarchaeologist on a project led by Professor Ludovic Orlando (CNRS Toulouse, France). The horse provided us with rapid transportation, an almost unrivalled secondary product that tremendously impacted the politico-economical trajectory of our societies, revolutionizing the circulation of ideas, people, languages, religions and communication. In this project, we are building on the latest advances in DNA analysis to gather new genomic, epigenomic and metagenomic information from ancient horses. This is being integrated with zooarchaeological, isotopic and historical data to enhance our understanding of the multiple processes underlying the transformation of the animal that perhaps most impacted human history.

D) Exploring the Easter E.g.: Shifting Baselines and Changing Perceptions of Cultural and Biological 'Aliens'

<http://easter-origins.org/>

Naomi is Principal Investigator of an AHRC project investigating the bio-cultural origins of Easter. Easter is the most important event in the Christian calendar, yet little is known about the festival's genesis, when it first appeared in Britain, the origins of its component customs (such as hunting for eggs left by the Easter 'bunny') or how they coalesced to form modern traditions. We also know less than we think about the animals most commonly associated with Easter: brown hares, rabbits and chickens. The project's cross-disciplinary team is integrating evidence from anthropology, (zoo)archaeology, (art) history, evolutionary biology, law, historical linguistics, natural history and religious studies. Together, the team members are questioning the accepted truths of the origins of Easter and, more generally, the team is providing insights into the shifting nature of attitudes to religion, conservation and nationalism.

Late Gravettian ecological diversity in Central Europe

Alex is isotopic specialist on this 5-year project led by Dr Jarosław Wilczyński of the Institute of Systematics and Evolution of Animals in Kraków, Poland. This project seeks



Figure 9: Fieldwork carried out by Exeter zooarchaeologists

to test the hypothesis that hunters in the latter half of the Gravettian period in central Europe adapted to the harsher climates by developing seasonally diverse subsistence strategies involving long-distance mobility between distinct hunting regions, making different tools to hunt different animals at different times of the year. Alex will use isotopic analysis to investigate the seasonal mobility of hunters and the prey species they targeted, focusing on woolly mammoth, horse and reindeer. These data will be integrated with results from lithic and zooarchaeological analyses (e.g. dental cementum data) to understand the seasonal subsistence strategies employed in central Europe at the height of the last ice age.

We are also zooarchaeologists that engage in our own fieldwork (Figure 9).

A) Central Asian prehistory, horse domestication and origins of steppe pastoralism

Alan has, for the last 18 years, worked in northern and central Kazakhstan on collaborative projects investigating the Eneolithic Botai Culture, horse domestication and the origins of steppe pastoralism in the Bronze Age. This has involved extensive geophysical and geochemical surveys alongside excavation and analysis of faunal remains and lipid residues from ceramics. The work has cast light on the first harnessing and milking of the horse by hunter/herders and also the way pastoralism changed once ruminant domestic species were introduced to the area.

B) Circular mammoth bone structures in Kostenki, Russian Federation

Alex has worked on several archaeological excavation projects in the Kostenki Upper Palaeolithic site cluster during the past 10 years. Most recently Alex has begun a collaboration with Sasha Dudin (National Archaeology Museum in Kostenki) to study a circular mammoth bone feature discovered at Kostenki 11. Mammoth bone circles are well known from many sites in Ukraine and western Russia, dated mostly to the Late Glacial period, and are widely interpreted as dwellings surrounded by food storage pits. The bones of more than 50 individual mammoths are represented within the Kostenki 11 feature. The research Alex is leading combines the use of isotopic, residue and phytolith analysis

with a programme of micro-excavation and flotation to provide complementary data on both the mammoths whose bones were brought to the site, and the subsistence-related activities that humans engaged in at the site.

C) Initial Middle Missouri archaeology: the hunter/farmers of the Northern Plains of America

Alan has, for 15 years, co-directed excavations at Mitchell Prehistoric Indian village (South Dakota, USA). This is an Initial Middle Missouri Culture site belonging to the period when farmers first settled in villages in the Northern Plains to grow crops such as maize, beans and squash. These farmers did not have domestic food animals, only dogs, but they hunted bison in large quantities as well as other game, fished and collected shellfish and other wild foods. These excavations are conducted in conjunction with Dr Adrien L. Hannus of Augustana University. Particular zooarchaeological topics have included the detailed examination of bone grease exploitation and rendering features in addition to consideration of methods to identify trade in fats through novel techniques of lipid residue analysis. Our PhD student Xuelei Li has also been studying the foxes at the site, most of which were swift foxes, now an endangered species, no longer found in that area.

Sheffield zooarchaeology in new modern facilities!

Contributed by Angelos Hadjikoumis and Umberto Albarella, University of Sheffield, UK

The Department of Archaeology of the University of Sheffield has opened a new chapter in its long and zooarchaeologically rich history, with a move into new facilities. Zooarchaeological activity now takes place mainly in two new laboratories, our teaching laboratory (Figure 10) and our research laboratory (Figure 11). Our team of zooarchaeologists (including staff, students and volunteers) are currently busy with the job of reorganizing our faunal collections and improving their display and user-friendliness. This task involves detailed checks on more than 2000 mammal, bird, fish and reptile specimens and, in some cases, remedial work. Even more importantly, we are in the process of expanding our collections through



Figure 10: The brand new teaching laboratory at Sheffield



Figure 11: The new research laboratory and collections at Sheffield

obtaining and preparing new specimens. We are also very keen to exchange specimens with other laboratories so please do get in touch if you are interested. Moreover, we are taking curational measures to limit the damage to the collection due to its intense use. Besides regularly degreasing, cleaning and re-marking specimens, we are also currently applying Plastazote sheets (chemical-free, with consistent cell structure and density) in all our collection trays to provide a soft substrate and avoid the rolling of specimens in trays.

We took the opportunity of this major reorganization to improve the quality of our popular zooarchaeology programmes and short courses. Recently, we have also received some minor funding to employ a student and develop new teaching tools with hands-on experience in mind. Our laboratories are always open for people to visit, work with and meet us. There is also a downloadable version of our reference collection database at: <https://www.sheffield.ac.uk/archaeology/research/zooarchaeology-lab/ref-coll>.

We'd also like to invite you to our Facebook (@[SheffieldZooarchaeologyLab](#)) and Twitter (@[ZooarchLabSheff](#)) pages and interact with us on a regular basis!

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 provenience 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!



My ICAZ History in Photos | Hans-Hermann Müller

Contributed by Hanns-Hermann Müller, Germany

With this contribution, I would like to share with you photos of colleagues taken during the symposium 'Domestikationsforschung und Geschichte der Haustiere', held during the III Internationaler Kongress der Landwirtschaftsmuseen in Budapest, Hungary, 19–23 April 1971, including the excursion into the Puszta (Hungarian steppe).



*Joachim Boessneck
(Germany) and
Hans-Rudolf Stampfli
(Switzerland)*



*Cyril Ambros
(Czechoslovakia), Stefan
Ivanov (Bulgaria) and
Johannes Lüttschwager
(Germany)*



*Alexandra Bolomey
(Romania), Beate
Müller (Germany)
and Sergiu Haimovici
(Romania)*



*Juliet Clutton-Brock and
Caroline Grigson-Banks
(both Great Britain)*



*Nils-Gustav Gejvall
(Sweden)*



*Michael Ryder (Great
Britain)*



Johannes Lepiksaar and his wife Niina Lepiksaar (Sweden)



Marian Kubasiewicz (Poland)



*Nils-Gustav Gejvall
and his wife*



*Caroline Grigson-
Banks*



*Barbara Lawrence
(USA) and Beate Müller*

My ICAZ History | Louis Chaix

Contributed by Louis Chaix

In 1976, I was participating at the 9th Congress of Union Internationale des Sciences Préhistoriques et Protohistoriques (UISPP) in Nice, south of the France. François Poplin had organized a session devoted to 'Problèmes ethnographiques des vestiges osseux'. In this session, many archaeozoologists presented various papers. Jean Bouchud, Sándor Bökönyi, Anneke Clason, Wietske Prummel, Lucien Jourdan, Richard Meadow, Elisabeth Schmid and Hans-Peter Uerpmann were present. I was invited to participate in the first official meeting of the International Committee. I was very impressed by all these scholars and particularly by my professor Elisabeth Schmid, who directed my PhD the same year. It was my first contact with the incipient ICAZ.

I am passionately interested in archaeozoology, so I have been very happy to see the increasing number of ICAZ members over the years, and it is particularly impressive to see a lot of young colleagues in the different international conferences in the USA, Canada and Europe. For me, it is very important to develop archaeozoology as a full member of the discipline of archaeology. Our field is not only an auxiliary (or accessory) science but an important component of archaeology as a study of humans in their environment, natural and also social.

The development of various working groups is also a sign of the vitality of archaeozoology, with the danger of an atomization of the various fields of research. As an example, I consider taphonomy as a technique of archaeozoology, and not a proper science. I was sometimes scared by some taphonomists, very strong in their own discipline but ignoring almost completely the anatomical differentiation between the species!

I am very confident for the future of archaeozoology, by way of ICAZ. The participation of a lot of young and enthusiastic scholars to the conferences and working groups is a good sign of the vitality of our discipline. I think that good developments are a guarantee of the quality of the research, and judgement by 'the peers' is a good evaluation of the research too. I think that a list of minimum requirements for a good archaeozoological research is important, such as the blueprint presented by Caroline Grigson in 1978 in the book of Brothwell, Thomas and Clutton-Brock: *Research Problems in Zooarchaeology*.



Louis Chaix, during a meeting in Paris in November 1985

I have a lot of nice memories, particularly of the international conferences. In Groningen, in 1974, I was particularly impressed by Joachim Boessneck, whom I have always considered an important contributor to archaeozoology, mainly in the field of osteometry. He was also a very good ornithologist and during the conference he was often absent to look at the birds of the North Sea.

The banquet in the Zoo of London during the conference in 1982 is a nice memory too. We were surrounded by various animals, such lions or monkeys, roaring and crying. We were seated around round tables with a very nice meal but with a single bottle of wine for 12 people! For French participants, it was not enough! And on the label of the bottle, it was inscribed: 'Drapeau Rouge', red wine from various countries of the European community!

I have a lot of other good memories, always of the pleasure of being with a lot of friends and dear colleagues: among them, unfortunately, many have left this planet to go to another world.

I think that the foundation of archaeozoology is a good knowledge of the animal bones. The first step of our discipline is determination. The subsequent construction of models is linked to this basic approach. Sometimes I feel discouraged by the presentation of wonderful and powerful models and when I ask the speaker the basis of this construction, they say that they have not yet began to study the material ... I think that archaeozoology must always be based on the bones, fortunately preserved in a lot of situations.



Charles Arthur Schwartz (1939-2017)

By László Bartosiewicz with contributions by Judith A. Rasson



Charlie Schwartz in Budapest, June 1980

The community of archaeozoologists, especially those working in south-east Europe, has lost a much-loved character, 'Charlie' Schwartz, who had been working in the region since the 1960s. A native of Beverly Hills (and once high-school classmate of the likes of Nancy Sinatra), he felt he really belonged in the Balkans. We will never know how many of his friends in his newly found home have been dreaming of living in California. However, he often said how homesick he felt there for the Balkans, eagerly waiting for the summer field seasons to return.

How did it all begin? One of the most valuable post-Second World War funding schemes by the USA, the Smithsonian Institution's Foreign Currency Program (FCP), enabled the completion of some key archaeological projects worldwide. These were funds owed to the US for post-war aid, and the countries included were supposed to discharge their debts by funding research. Marija Gimbutas of the University of California at Los Angeles (UCLA) had a grant administered by the Smithsonian in non-aligned (former) Yugoslavia. Her local partner institution was the Zemaljski Muzej in Sarajevo, Bosnia. The first season at the Neolithic site of Obre began in 1967, and the group of US graduate students recruited for the field, among others, included Charlie and one of us (J.A.R.).

This was the time when New Archaeology began entering the mainstream in the USA, and among the natural sciences

expertise in archaeozoology was also sought. At the time relatively few studied animal remains from archaeological sites in the USA. In the wake of the Cold War, the renowned Hungarian archaeozoologist Sándor Bökönyi (a founding member of ICAZ) toured the USA as a research fellow of the Ford Foundation. He met Gimbutas at UCLA, and was commissioned to work at her FCP projects in Yugoslavia. Given his interest in animal remains, Charlie was introduced to Bökönyi at Obre in the 1968 season and began helping record the bones as he identified them. This type of individual, hands-on tuition is probably the best way to learn animal remains.

The Smithsonian FCP scheme included several sites in former Yugoslavia. Equipped with his newly acquired knowledge, Charlie wrote his Ma thesis on *The vertebrate fauna from the Neolithic Site, Rug Bair, Macedonia, Yugoslavia: an ecological perspective* in 1973. Gimbutas was the chair of his Ma committee, and the work was edited into a chapter in her book *Neolithic Macedonia* (Los Angeles: University of California Press, 1976). Charlie carried on with his archaeozoological studies at the Institute of Archaeology, University of London, where Don Brothwell was freshly appointed a senior lecturer in zooarchaeology in 1974. Charlie wrote an MPhil thesis on *Biological variations in Balkan Neolithic cattle* (1979). In 1978 he attended the Third International Conference of ICAZ in Szczecin, Poland, and his paper *Variations in Balkan Neolithic cattle* was published in the proceedings (Szczecin: Akademia Rolnicza w Szczecinie, 1979).

Charlie carried on working at various sites in former Yugoslavia and Hungary. In 1988 he was granted the degree Candidate of Science (the Hungarian equivalent of PhD) by the Archaeological Institute of the Hungarian Academy of Sciences for his work *Beginnings of cattle keeping as a human occupation in the Neolithic period in the Balkan Peninsula*.

As a result of the highly competitive employment situation at UCLA, Charlie found work as a substitute teacher at Fairfax High School, Los Angeles. He specialized in science instruction for students with special needs. His heartfelt empathy, flamboyant style and outgoing personality made him extremely popular among the young. During a visit to California, one of us (L.B.) had the privilege of attending some of his classes, where he would jokingly yell and swear at

unruly teenagers in their four–five respective mother tongues, cleverly orchestrating chaos, rather than enforcing order. A week later I saw one of the boys on CBS news as a junior mathematician member of a prestigious cancer research unit.

Not having children of his own, Charlie devoted a lot of time, energy and not least love to these youngsters. On Thursday 21 January 1993, he was returning essay papers to students when a 15-year-old boy was fidgeting with a loaded .357 Magnum handgun hidden under his desk. The gun accidentally went off and the bullet killed a fellow student while heavily injuring another. In recognition of the devotion and bravery with which Charlie supported his students in this tragic situation, the school board granted him a permanent position – the first ever in his life.

Another, even broader tragedy that overshadowed his life was the 1991 outbreak of violent conflicts in the territory of the former Yugoslavia that lasted for a decade. They did not simply disrupt his research and hurt his deeply pacifist

conviction: war also separated him from much loved friends, Serbians, Bosnians and Croats alike.

In the early 1990s Bökönyi entrusted Charlie with the analysis of animal bones from the late Neolithic tell and vast adjacent horizontal settlement at Polgár–Csőszhalom, Hungary. He also began working at the large late Neolithic settlement at Nebelivka, Ukraine, excavated by John Chapman (Durham University, UK). With the slow consolidation in the former Yugoslav republics, Charlie began returning to Serbia as well. However, international research there has not regained the momentum of the pre-war years.

We have lost a very special person with a big heart and love for life, a true child of the 1960s. Those who worked with him could tell cheerful stories endlessly. As a close friend pointed out, “his green principles were stronger than his sense of business – and that was no bad thing”. The legacy he has left behind will inspire the next generation of archaeozoologists to carry on working.

Mariana De Nigris

By Vivian Scheinsohn

I think it is not risky to assume that most of the ICAZ newsletter readers consider that, as Kent Flannery said, (zoo) archaeology “is still the most fun you can have with your pants on”. For me (should I said us?) our profession is a source of joy in many respects. And it should be so, since I do not know any single archaeologist that has studied archaeology by parental mandate. On the contrary, most of us have devoted ourselves to (zoo) archaeology against our parent’s will. If we choose this profession, it is because we enjoy it. In addition, we have a series of bonuses in our profession. Among them, my favourites are to know exotic places (check), to travel by unusual vehicles (check), and to know nice and interesting people (check). It is for this last item that I am especially grateful to my profession because it gave me the opportunity to know Mariana De Nigris.

Mariana had a PhD in archaeology from Universidad de Buenos Aires (2003) and Licenciada en Ciencias Antropológicas from the same university (1994). She was a researcher at Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET – National Council of Scientific and Technical Research) working at the Instituto Nacional de Antropología y Pensamiento Latinoamericano (INAPL –



Mariana De Nigris in the field, 2006

National Institute of Anthropology and Latin American Thought) and a teacher at the Universidad de Buenos Aires.

Her research work was focused on Patagonia. On one side, she studied consumption patterns of aboriginal hunter-gatherers. Her PhD thesis, directed by Guillermo Mengoni and known in Spanish as *El consumo en grupos cazadores recolectores. Un ejemplo zooarqueológico de Patagonia meridional* (Consumption in hunter-gatherers. A zooarchaeological example from southern Patagonia),

published in 2004 by the Sociedad Argentina de Antropología Press, is remembered as setting the standard at that time on how to carry out zooarchaeological research. But she also studied consumption patterns of the first Spaniards in Patagonia. She was a passionate teacher: many Argentinean zooarchaeologists can be counted as her disciples. Her students remember Mariana as a generous and devoted person. She participated in several professional institutions, contributing to the organization of many scientific meetings and was an active member of ICAZ. Probably many of you have met her at zooarchaeological and archaeological conferences.

It is always difficult to write an obituary. It is not my first time and yet it is still sad. Sooner or later, we all have to face our own mortality. This is something that, as archaeologists, we know very well. Mariana De Nigris passed away on 4 October 2017. She left us with her lessons as a professional and as a human being. But also with her last lesson: a grand way of dealing with her illness, ultimately with her mortality. She showed us her path, a path made of bravery, resistance and fight.

Call for book proposals

Archaeobiology

Research at the ancient interface of the natural and social worlds

Contributed by Sarah Witcher Kansa (skansa@alexandriaarchive.org)

Archaeobiology is a peer-reviewed monograph series featuring research on biological remains from archaeological sites. Contributions are invited from all archaeological subdisciplines that deal with the interpretation and analysis of human interaction with plants and animals throughout history and prehistory. While the series focuses on all aspects of zooarchaeology and palaeoethnobotany, it also draws on human osteology, interaction with the landscape, ancient textiles and archaeogenetics. The geographic scope of the series is global, and cross-disciplinary topics are especially encouraged. Volumes may have one or multiple authors, or may be edited collections of articles by different specialists working on related topics. The series also plans to offer a repository for digital materials that supplement and enrich the printed publications, such as images, spreadsheets and databases.

For information and guidelines on proposing a topic for the series please contact the series editor, Sarah Witcher Kansa, by email at: skansa@alexandriaarchive.org.

<http://www.lockwoodpress.com/archaeobiology.html>



ICAZ PUBLICATIONS & NEW BOOKS

Compiled by Idoia Grau Sologestoa, Assistant Editor



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/icaaz>. The complete list of publications submitted to recent Newsletters is also visible on the ICAZ website: <https://alexandriaarchive.org/icaaz/publications-zooarch>.

More than 100 new publications were submitted by ICAZ members for 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 in zooarchaeology!

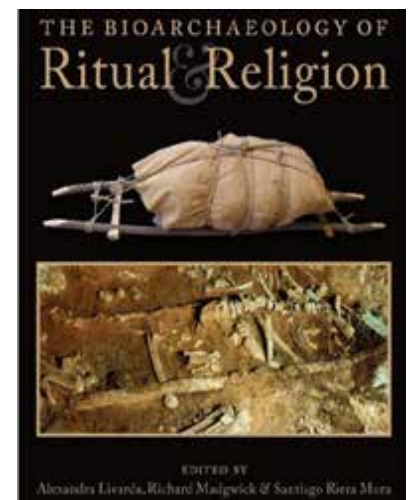
The Bioarchaeology of Ritual and Religion

Edited by Livarda, A., Madgwick, R., Riera Mora, S.

2017 Oxford: Oxbow Books

ISBN 9781785708282

The *Bioarchaeology of Ritual and Religion* is the first volume dedicated to exploring ritual and religious practice in past societies from a variety of 'environmental' remains. Building on recent debates surrounding, for instance, performance, materiality and the false dichotomy between ritualistic and secular behaviour, this book investigates notions of ritual and religion through the lens of perishable material culture. Research centring on bioarchaeological evidence and drawing on methods from archaeological science has traditionally focused on functional questions surrounding environment and economy. However, recent years have seen an increased recognition of the under-exploited potential for scientific data to provide detailed information relating to ritual and religious practice. This volume explores the diverse roles of plant, animal and other organic remains in ritual and religion, as foods, offerings, sensory or healing mediums, grave goods, and worked artefacts. It also provides insights into how archaeological science can shed light on the reconstruction of ritual processes and the framing of rituals. The 14 papers showcase current and new approaches in the investigation of bioarchaeological evidence for elucidating complex social issues and worldviews. The case studies are intentionally broad, encompassing a range of sub-disciplines of bioarchaeology, including archaeobotany, anthracology, palynology, micromorphology, geoarchaeology, zooarchaeology (including avian and worked bone studies), archaeomalacology and organic residue analysis. The temporal and geographical coverage is equally wide, extending across Europe from the Mediterranean and Aegean to the Baltic and North Atlantic regions and from the Mesolithic to the medieval period. The volume also includes a discursive paper by Professor Brian Hayden, who suggests a different interpretative framework of archaeological contexts and rituals.



<https://www.oxbowbooks.com/oxbow/the-bioarchaeology-of-ritual-and-religion.html>



L'artisanat de l'os à l'époque gallo-romaine. De l'ostéologie à l'archéologie expérimentale

Barbier, M.

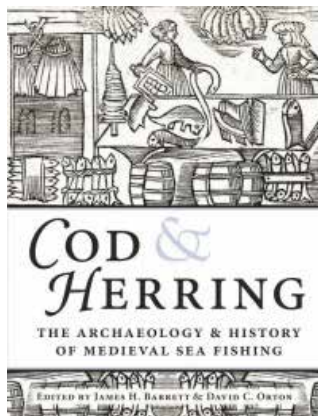
2016 Oxford: Archaeopress. Series: Archaeopress Roman Archaeology 16

Printed ISBN 9781784914219. Epublication ISBN 9781784914226

The transfer, in 1981, of the town museum collections in Sens (Yonne) to the old Archbishop's palace required great discretion and an underground passage was planned between the two buildings. Preventive archaeological excavations unearthed 22 Gallo-Roman bone combs, as well as a further 17 pieces when the excavation area was expanded. This exceptional concentration of bone artefacts incited the author to start on an experimental search at a time when bone artefacts were not of much interest among specialists. However, it was extremely adventurous to piece together a bone-worker production line and create a never before archaeologically discovered appliance used in Roman times. Obviously, the first reproductions have been directed towards combs. Those replicas pointed towards the material constraints, but also defined the constructions of necessary tools to take slabs off and conceive objects.

Moreover, the matrix origin – small-sized compact bone – explained why bone workers used to juxtapose elements to get suitable surfaces. Various complications during free-hand denture sawing led them to perfect another operating system, plausible and more reliable. A logical follow-up would have been to extend the experimental investigations, perhaps not to all the bone artefacts, but to a typical class of them, in order to complete reconstructions of the equipment and suggest a general bone worker's workshop arrangement.

<http://www.archaeopress.com/Public/displayProductDetail.asp?id=%7B1021C933-605E-46BE-AA8C-4838E443BEC6%7D>



Cod and Herring. The Archaeology and History of Medieval Sea Fishing

Edited by Barrett, J.H., Orton, D.C.

2016 Oxford: Oxbow Books

ISBN 9781785702396

Quests for cod, herring and other sea fish had profound impacts on medieval Europe. This interdisciplinary book combines history, archaeology and zooarchaeology to discover the chronology, causes and consequences of these fisheries. It cross-cuts traditional temporal and geographical boundaries, ranging from the Migration Period through the Middle Ages into early modern times, and from Iceland to Estonia, Arctic Norway to Belgium. It addresses evidence for human impacts on aquatic ecosystems in some instances and for a negligible medieval footprint on superabundant marine species in others (in contrast with industrial fisheries of the 19th–21st centuries). The book explores both incremental and punctuated changes in marine fishing, providing a unique perspective on the rhythm of Europe's environmental, demographic, political and social history. The 21 chapters – by experts in their respective fields – cover a range of regions and methodological approaches, but come together to tell a coherent story of long-term change. Regional differences are clear, yet communities of the North Atlantic Ocean and the Baltic, North and Irish Seas also followed trajectories with many resonances. Ultimately they were linked by a pan-European trade network that turned preserved fish into wine, grain and cloth. At the close of the Middle Ages this nascent global network crossed the Atlantic, but its earlier implications were no less pivotal for those who harvested the sea or profited from its abundance.

<https://www.oxbowbooks.com/oxbow/cod-and-herring.html>

Bones and Identity. Zooarchaeological Approaches to Reconstructing Social and Cultural Landscapes in Southwest Asia

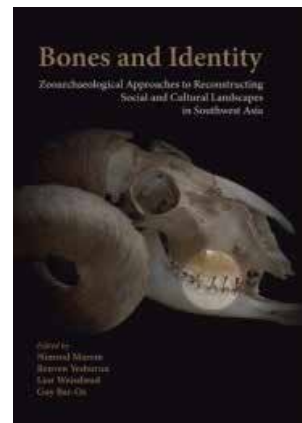
Edited by Nimrod, M., Yeshurun, R., Weissbrod, L., Bar-Oz, G.

2016 Oxford: Oxbow Books

ISBN 9781785701726

Seventeen papers demonstrate how zooarchaeologists engage with questions of identity through culinary references, livestock husbandry practices and land use. Contributions combine hitherto unpublished zooarchaeological data from regions straddling a wide geographic expanse between Greece in the West and India in the East and spanning a time range from the latest part of the Palaeolithic to the Middle Ages. The vitality of a hands-on approach to data presentation and interpretation carried out primarily at the level of the individual site – the arena of research providing the bread and butter of zooarchaeological work conducted in southwest Asia – is demonstrated. Among the themes explored are shifting identities of late hunter-gatherers through interactions with settled agrarian societies; the management of camp sites by early complex hunter-gatherers; processes of assimilation of Roman culinary practices among Egyptian elites; and the propagation of medieval pilgrim identity through the use of seashell insignia. A wealth of new data is discussed and a wide variety of applications of analytical approaches are applied to particular case studies within the framework of social and contextual zooarchaeology. The volume constitutes the proceedings of the 11th meeting of the ICAZ working group - Archaeozoology of Southwestern Asia and Adjacent Areas (ASWA[AA]).

<https://www.oxbowbooks.com/oxbow/bones-and-identity.html>



God, Man and Domesticated Animals: The Birth of Shepherds and their Descendants in the Ancient Near East

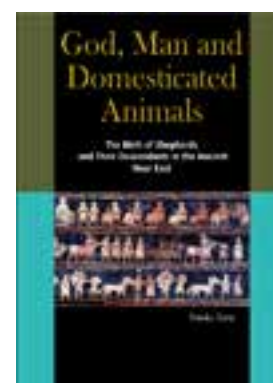
Tani, Y.

2017 Kyoto: Kyoto University Press

ISBN 9784814000869

This book is a fascinating exploration into how European attitudes that measure human achievements according to the extent of control over nature is a cultural and historical product of the ancient Middle Eastern and Mediterranean world. The subject matter is the emergence of domestication, the history and role of shepherds, and the Bible. The book comprises two parts. Drawing on fieldwork spanning more than four decades, Part I looks at the domestication process of sheep and goats and the emergence of the profession of shepherd. Here the author analyses the intervention techniques involved in the domestication process using Foucault's concept of 'pastoral power'. Part II focuses on how God's pronouncements concerning animals in the Old Testament came to take unique forms in the ancient Middle East reflecting the relationships between city-states' ruling chiefs as large herd owners and local pastoralists as entrusted shepherds pivoting around domesticated animal life.

<http://www.kyoto-up.or.jp/book.php?id=2173&lang=en>



RECENT PUBLICATIONS ON SHEEP AND GOAT DISTINCTION

Davis, S.J.M. (2017) 'Towards a metrical distinction between sheep and goat astragali', in *Economic Zooarchaeology: Studies in Hunting, Herding and Early Agriculture*. Rowley-Conwy, P., Serjeantson, D., Halstead, P. (eds). Oxford: Oxbow Books. <https://www.oxbowbooks.com/oxbow/economic-zooarchaeology.html>

Salvagno, L., Albarella, U. (2017) 'A morphometric system to distinguish sheep and goat postcranial bones', *PLOS ONE*, 16(3). doi: <https://doi.org/10.1371/journal.pone.0178543>

Zedda, M. et al. (2017) 'Differences in femoral morphology between sheep (*Ovis aries*) and goat (*Capra hircus*): macroscopic and microscopic observations', *Zoomorphology*, 136(1), 145–158. doi: <https://doi.org/10.1007/s00435-016-0329-4>

RECENT PUBLICATIONS ON FISH REMAINS

Barrett, J.H., Orton, D.C. (eds) (2016) *Cod and Herring. The Archaeology and History of Medieval Sea Fishing*. Oxford: Oxbow Books. <https://www.oxbowbooks.com/oxbow/cod-and-herring.html>

Fradkin, A., Lõugas, L. (eds) (2016) A fish story or history? Evidence from the past. The 17th biennial meeting of the Fish Remains Working Group (FRWG) held at Tallinn University, Estonia, September 2013. *Environmental Archaeology* 21(2), 103–192. <http://www.tandfonline.com/toc/yenv20/21/2>

Cannon, D.Y. (1987) *Marine Fish Osteology: A Guide for Archaeologists*. British Columbia: Simon Fraser University. Is now freely available in PDF! <http://archpress.lib.sfu.ca/index.php/archpress/catalog/book/49>

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ICAZ CALENDAR

2018

17-19 JANUARY 2018

Understanding Zooarchaeology I

Short course

University of Sheffield, United Kingdom

Email: zooarch-shortcourse@sheffield.ac.uk

Internet: www.shef.ac.uk/archaeology/research/zooarchaeology-lab/short-course

1-4 FEBRUARY 2018

Animals in Funeral and Ritual Context

Meeting of the Roman Period Working Group (RPWG)

Basel, Switzerland

Email: sabine.deschler@UNIBAS.CH

Internet: ipna.unibas.ch/rpwg/index.html

21 APRIL 2018

Pests of Society

Association for Environmental Archaeology (AEA) Spring Conference

Birmingham, United Kingdom

Email: Zoe.Hazell@HistoricEngland.org.uk

Internet: envarch.net/events/51/aea-spring-2018

4-9 JUNE 2018

Human Subsistence and Settlement Patterns during the Late-Glacial and Early Holocene: Insights from Bones

Session at the 18th UISPP congress

Paris, France

Internet: uispp2018.sciencesconf.org

8-11 JUNE 2018

9th Meeting of the ICAZ Bird Working Group (BWG)

University of Sheffield, UK

Email: bwg2018@sheffield.ac.uk

Internet: alexandriaarchive.org/icaaz/workbird

27-29 JUNE 2018

Postgraduate ZooArchaeology Forum (PZAF)

Palermo, Sicily, Italy

Email: pzaf2018@gmail.com

Internet: www.pzaf.org

12 JULY 2018

Exploring the Transatlantic History of the Turkey (*Meleagris gallopavo*) Through Archaeological Evidence

Workshop

University of York, United Kingdom

Email: aurelie.manin@york.co.uk

15-20 JULY 2018

The South American Megafauna in Europe

The Diverse Faces Between Human and Animal Relations: The Important Records from Zooarchaeology and Ethnozoology in the Americas

Sessions at the 56th International Congress of Americanists (ICA)

Salamanca, Spain

Email: magenta7800@HOTMAIL.COM, anqueiroz@hotmail.com

Internet: ica2018.es

16-19 JULY 2018

History of the British Fauna: Wild and Domestic

Vertebrates

Short course

University of Sheffield, United Kingdom

Email: zooarch-shortcourse@sheffield.ac.uk

Internet: https://www.sheffield.ac.uk/archaeology/news/short_course_2018-1.754755

2-7 SEPTEMBER 2018

13th ICAZ International Conference, Ankara, Turkey

Middle East Technical University (METU), Ankara, Turkey

Email: general@icaaz2018ankara.com

Internet: www.icaaz2018ankara.com

21-23 NOVEMBER 2018

4th Encuentro Latinoamericano de Arqueozoología (IV ELAZ)

Río Gallegos, Santa Cruz, Argentina

Email: cuarto.elaz@gmail.com

2019

EARLY/MID 2019

14th Meeting of the Archaeology of Southwest Asia and Adjacent Areas Working Group (FRWG)

Barcelona, Spain

26-30 AUGUST 2019

20th Meeting of the Fish Remains Working Group (FRWG)

Portland, Oregon, USA

Email: virginia@pdx.edu

LATER 2019

13th Meeting of the Worked Bone Research Group

Montreal, Canada

Email: Christian Gates St-Pierre (University of Montreal), christian.gates-st-pierre@umontreal.ca