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## Announcements

### Annual PalaeoSIG Meeting

Two items of note:

1. The Festival of Ecology programme is currently being finalised so look out for news of sessions in the coming weeks. We don't yet know what palaeoecology content it will include but hope to see your work featured! There is still time to register: <https://www.britishecologicalsociety.org/events/festival-of-ecology/>
2. At the annual meeting there will be a PalaeoSIG chat channel to talk palaeoecology throughout the meeting, and we will have a society social – Althea and Jane have some ideas, but any suggestions for fun things to do with other palaeoecologists through a video chat very welcome!

### PalaeoSIG Blog

We've been publishing (almost) weekly accessible summaries produced during our virtual science communication and writing workshop, with the help of committee members and SIG volunteers. If you've missed them, take a look – <https://palaeosigbes.wordpress.com/>. They usually go live on a Wednesday and we tweet each one, tagging the summary author if they're on Twitter and including links to the original papers and authors. We hope these will be a useful resource for sharing work in our field, in teaching or simply to inform those in other disciplines.

Despite our somewhat low-key approach to running and publicising the blog, we have had over 2000 views of the site, and our busiest ever day was 14th October, so we are slowly building visibility and interest.

### ViPs (Virtual Palaeoscience) Update

ViPs (Virtual Palaeoscience), the community-led project working to collate and create shared virtual teaching resources for palaeosciences both as a short-term COVID-19 response and for longer-term enhancement of learning, accessibility and outreach, held a second workshop in August 2020 and will have a third in December this year, focused on lessons learnt from the first few months of widespread blended learning. The project has released a spreadsheet listing over 350 resources, is working on an updated version of the "CoPol" virtual pollen counting



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practical software (which will be platform-independent and include a wider variety of palaeo-proxies), and will soon be looking for a range of experts to record short “guest lectures” on their favourite method, habitat or region or about some aspect of their research. We’re particularly keen to have a diverse range of speakers for these guest lectures as a way of improving the visibility of diverse voices to undergraduate students without imposing a huge burden on those individuals!

You can access the spreadsheet, sign up for our mailing list and new newsletter, or find out about other ways to get involved at our website: <https://virtualpalaeoscience.wordpress.com>

## PalaeoSIG 2021 Events

In spring next year, we plan to run a virtual workshop on Data manipulation and statistical analysis in Palaeoecology: A masterclass in R. This will be aimed at intermediate R users. It will include problem-solving demonstrations from experienced palaeo-users and hands-on time to try out their code on your data. We’ll provide more information on the speakers and themes once the details are confirmed.

## Yorkshire Palaeo Group Update

Yorkshire palaeo group had its autumn meeting on 21st October, hosted by Bradford University. Even though we all had to sit at home and miss the post-talks pints and curries, it was a very welcome opportunity for a bit of palaeo-socialising and some really exciting science updates, attended by over 30 people. The meeting opened with Ambrose Baker seeking a collaborator for the pursuit of past megaherbivores. Phil Murgatroyd gave an overview of the scope of the Europe’s Lost Frontiers project, which should have been ending next month (6 month COVID-19 extension now in place for this five year, 2.5M Euro project) and some of the findings and unexpected outcomes, before Simon Fitch told us about the archaeological survey of Brown Bank which was part of the same project (and showed some fascinating research at sea photographs). Kirsty High shared her current project and the conversations she’s been having with archaeologists about the preservation and deterioration of organic material in waterlogged environments, before we returned to the Lost Frontiers to hear about Tabitha Kabora’s work simulating landscape inundation of Doggerland and James Walker’s efforts to trace the Storegga tsunami in the southern North Sea. We finished with a brief update from the ViPs project (see elsewhere in this newsletter).

The next meeting will be in Spring 2021, hosted by Simon Hutchinson from Salford University – and hopefully NEXT summer our planned seaside visit for ice cream, fish and chips and some fantastic sediments will be able to happen!

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## News from the Community

### HERCA: Human-Environment Relationships in pre-Columbian Amazonia

*From: Frank Mayle (Univ. Reading, UK) and Eduardo Neves (Univ. Sao Paulo, Brazil).*

The AHRC and FAPESP (Sao Paulo, Brazil) are jointly funding a large research project entitled ‘Human-Environment Relationships in pre-Columbian Amazonia (HERCA)’, 2019-2022.

This project is inter-disciplinary in nature, integrating palaeoecology, archaeology, geomorphology, palaeoclimatology, as well as museum studies. It seeks to understand the emergence and decline of complex human societies in SW Amazonia through the Holocene, in relation to climate change, European Contact, and differences in natural resource availability (forest cover, soil type, flood/drought risk) across space and time. The project is international in scope, involving a number of universities across the UK (Reading, Oxford), Europe (Bonn, Bern), Brazil (Sao Paulo, Manaus, Santarem, Porto Velho), and Bolivia (Santa Cruz, Trinidad, La Paz). Further details about this project can be found at: <https://research.reading.ac.uk/herca/>

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## Publications

### Recent Dissertations

Hagemans, Kim (2020) El Niño signatures in Tropical Andean ecosystems. PhD Thesis, Utrecht University. Promotors: F. Wagener-Cremer, H. Middelkoop. Co-promotors: T.H. Donders, W.D. Gosling.

*Abstract: The El Niño-Southern Oscillation (ENSO) in the tropical Pacific is the most prominent interannual climate variation in the world. El Niño episodes are characterized by a periodical increase in sea surface temperature (SSTs) along the western coast of tropical South America. The extreme rainfall associated with El Niño events cause catastrophic floods in Peru and Ecuador. Since the state of trade-wind intensity and SST's in the Pacific region determine the magnitude, duration and time-intervals of individual ENSO events, it is reasonable to expect that 21st century climate warming would alter ENSO behaviour. In order to understand the impact of climate warming on El Niño and to improve the prediction skill of climate model simulations, it is important to develop long-term ENSO records that extend empirical evidence of El Niño behaviour beyond the scope of instrumental records. In this thesis, biological proxies for climate change, in particular palynology, are introduced, tested and applied for the reconstruction of long-term development of El Niño on centennial, decadal and annual timescales. To this end, biological proxies in sediments from the Tropical Andean lake Laguna Pallcacocha is investigated. The results presented in this thesis illustrate that ENSO plays a key role in the landscape dynamics and species composition of montane forests of the Tropical Andes. Additionally, this thesis shows that land use intensification not only amplifies the impact of ENSO on landscape dynamics, it also results in catastrophic ecological shifts in Andean lakes and the high Andean grasslands. Furthermore, this thesis shows a unique approach to reconstruct the amplitude and frequency of El Niño events on near annual resolution ca. 6000 years ago when the ENSO system evolved into the system we know today.*

Link: <https://www.uu.nl/en/events/phd-defence-el-nino-signatures-in-tropical-andean-ecosystems>

### Recent Publications

From Simon Hutchinson: Recent fire regime in the southern boreal forests of western Siberia is unprecedented in the last five millennia. *Quaternary Science Reviews*, 244, 15 September 2020, 106495

<https://www.journals.elsevier.com/quaternary-science-reviews/news/promotional-access-to-invited-article-recent-fire-regime-in> (Promotional Access Link)

Colville, J.F., Beale, C.M., Forest, F., Altwegg, R., Huntley, B. & Cowling, R.M. (2020) Plant richness, turnover and evolutionary diversity track gradients of stability and ecological opportunity in a megadiversity centre. *Proceedings of the National Academy of Sciences*, 117, 20027-20037.

*Summary: This article uses palaeoclimate model simulation results to assess past climatic stability and past biome stability, and shows that these, and especially the latter, are stronger predictors of floristic richness patterns in the Cape Floristic Province than are measures of contemporary ecological productivity.*

Fordham, D.A., Jackson, S.T., Brown, S.C., Huntley, B., Brook, B.W., Dahl-Jensen, D., Thomas, M., Gilbert, P., Otto-Bliesner, B.L., Svensson, A., Theodoridis, S., Wilmshurst, J.M., Buettel, J.C., Canteri, E., McDowell, M., Orlando, L., Pilowsky, J., Rahbek, C. & Nogues-Bravo, D. (2020) Using paleo-archives to safeguard biodiversity under climate change. *Science*, 369(1072), doi: 10.1126/science.abc5654.

*Summary: This article argues for, and demonstrates, how those developing strategies for biodiversity conservation in the face of anthropogenic climatic change can learn from evidence relating to the responses*



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*of species and ecological systems to past rapid climatic warmings and intervals of warmer than 'present' global climate.*

McMichael CNH. 2020. Ecological legacies of past human activities in Amazonian forests. *New Phytologist* <https://doi.org/10.1111/nph.16888>

Shaw, H. and Whyte, I., 2020. Interpretation of the herbaceous pollen spectra in paleoecological reconstructions: A spatial extension of Indices of Association and determination of individual pollen source areas from binary data. *Review of Palaeobotany and Palynology*, p.104238.

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## Request for contributions to the PalaeoSIG Instagram



Link: [https://www.instagram.com/bes\\_palaeo/](https://www.instagram.com/bes_palaeo/)

We love to hear about ongoing projects and exciting experiences in the world of palaeoecology! If you would like to share memorable moments from a field trip or a day in the labs, we invite you to send us your photos and we will feature them on our new Instagram account @bes\_palaeo!

Here is a link to the google drive to add any images you would like posted on Instagram:  
<https://drive.google.com/drive/folders/1K-ebCUixT5o19Sd32j2GgZa97RjYJ?usp=sharing>

For more information please email *Dael Sassoon* at [dael.sassoon@manchester.ac.uk](mailto:dael.sassoon@manchester.ac.uk)

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## The way we are contacting you is changing!

GDPR regulations mean that the BES, including SIGs, have a legal responsibility to take due precautions with all personal data. What will this mean for you? Our regular emails, like this newsletter, will move onto MailChimp so you will see the email formatting change. We can continue to use Jiscmail as a forum for all members to share



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information, publications, projects, etc. We are waiting for confirmation on if/how we migrate the existing Jiscmail subscriber list to MailChimp in the hope that we don't need to ask for permission from each of the 188 list members.

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## About PalaeoSIG

Management of the SIG is based on a voluntary 'steering group' (listed here: <https://www.britishecologicalsociety.org/membership-community/special-interest-groups/palaeoecology-group/>) which will be joined on a 'per event' basis by members involved in organising meetings to ensure that we follow BES procedures while giving all members (tenured and ECR) an opportunity to be involved in proposing, planning and running meetings and workshops. So if you have an idea, get in touch with current co-secretaries M. Jane Bunting ([M.J.Bunting@hull.ac.uk](mailto:M.J.Bunting@hull.ac.uk)) or Althea Davies ([ald7@st-andrews.ac.uk](mailto:ald7@st-andrews.ac.uk)) to discuss it as the BES provides funding to support SIG events and workshops.

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## Keep in Touch!

We recognise that not all members are based in the UK, so you are welcome to use the mailing list and newsletter to share information about relevant organisations which hold their own meetings and may be interested in collaborating with the BES to organise meetings. To join the mailing list, send an email with the title 'Subscribe' to [BESPALAEOECOLOGY-REQUEST@jiscmail.ac.uk](mailto:BESPALAEOECOLOGY-REQUEST@jiscmail.ac.uk) or to co-secretary Althea Davies ([ald7@st-andrews.ac.uk](mailto:ald7@st-andrews.ac.uk)). If you are already subscribed, you can send messages to the PalaeoSIG mailing list using [BESPALAEOECOLOGY@JISMAIL.AC.UK](mailto:BESPALAEOECOLOGY@JISMAIL.AC.UK).

We have set up a 'Project' for the SIG on ResearchGate as a repository for these newsletters and to make them accessible to non-members. Follow the project to see updates.  
<https://www.researchgate.net/project/Palaeoecology-British-Ecological-Society-Special-Interest-Group>