

NEWSLETTER
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OCEANS PAST INITIATIVE

Catching up and looking forward

Where to begin? It is truly an honour to be bringing you all the Oceans Past News and be following in Emily Klein's footsteps after she has produced this incredible resource since its inception in 2016. The last issue was from over a year ago, so as you can imagine we indeed have got quite some catching up to do. This issue showcases the enticing profile of Dr. Erin Dillon (she works largely on shark dermal denticles), numerous publications encompassing taxa ranging from whales to sea turtles, and many exciting events to look forward to on the horizon.

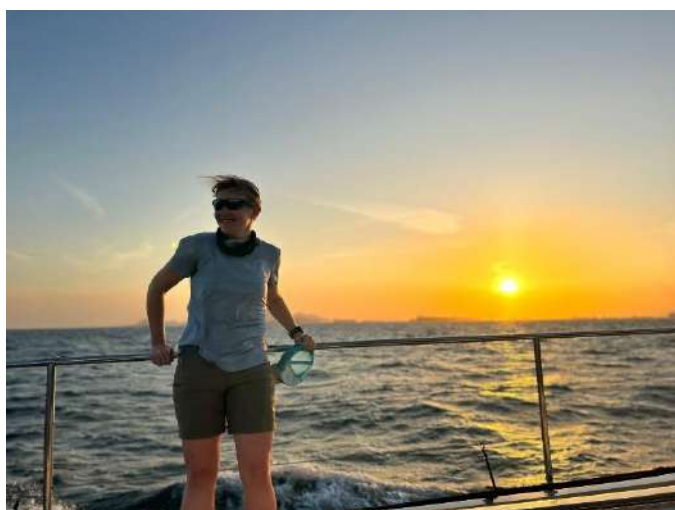
Something I had noted while taking over from Emily, is how she kept a piece of herself and her humanity in these introduction sections. And I think this is something we should all be doing more generally. We don't operate in a silo and it's hard to perfectly compartmentalize our work from what is happening in the rest of the world. So I hope that we maintain an awareness, compassion, and connection to the world and humanity around us, no matter how far afield.



Rachel M. Winter, OPN Editor

OCEANS PAST SPOTLIGHT*

10 Questions: Erin Dillon, PhD
(Smithsonian Tropical Research Institute)



Q1. First – a brief introduction: can you describe your research as it pertains to the past in two sentences or less? Many shark populations have declined substantially over the last half century due to fishing and habitat degradation, but empirical baselines that precede these impacts are limited. To address this gap, my research explores the patterns and ecological

consequences of millennial-scale change in shark communities on coral reefs using fossil shark scales (dermal denticles).

Q2. Why do you find research on the past important? The past tells us stories that can reveal how ecosystems fared under previous environmental conditions, contextualize recent ecological change, and make predictions about future scenarios. It not only helps us understand long-term natural variability and trajectories of change but can provide guidance for how to manage and restore ecosystems moving forward.

Q3. Was there a person or event that had a particular influence on your commitment to studying history and historical ecosystems? My first introduction to historical ecology was a seminar that I attended as an undergraduate student. During the seminar, Dr. Loren McClenachan shared her work using historical photographs from the Florida Keys to document the loss of large trophy fish since the 1950s. That was an “aha” moment for me when I realized that I could

combine my interests in ecology, history, and conservation. I pivoted from studying just modern ecology to thinking more about ecology through time, and the rest was history.

Q4. What advice would you give those who want to engage in historical work or collaborate with our community?

I think clear communication is key. When working across disciplinary boundaries, it can be helpful to first discuss each discipline's approaches, biases, and jargon. These conversations can serve as a basis for pairing datasets with complementary strengths and weaknesses, as historical records often portray environmental change through different lenses or over different scales. Combining diverse sources of information is one of the advantages of historical ecology, but laying this collaborative groundwork is a valuable step to delimit the boundaries of interpretation and set expectations early in a project.

Q5. Do you believe the past can help with solving contemporary environmental/social problems, and if so, what is one area we can provide insight on?

Definitely! Paleo and historical data from the recent past—including the Quaternary fossil record, archaeological data, and historical archives—can reconstruct ecological baselines before extensive human impact, quantify historical variability, and disentangle the rates and drivers of biotic change over human timescales. Over longer timescales, the deep-time geological record can be leveraged to estimate extinction risk and anticipate species' responses to future climatic conditions that have yet to be experienced in the instrumental record. Collectively, these data can help inform more appropriate conservation targets and priorities. At the same time, it's important to keep in mind that while the past can bring a lot to the table, it's just one tool in our conservation problem-solving toolbox.



Q6. When you do assess our current environmental and societal challenges, what gives you hope? I'm inspired by people from different sectors working together toward conservation action. The environmental challenges we face do not occur in a vacuum, so creative solutions can arise from collaborations between the biological and social sciences, economics, policy, and environmental justice, among other areas. Seeing these communities come together to tackle complex conservation issues gives me hope.

Q7. What knowledge would you like to pass on to the next generation, of the public or of scientists?

I strive to instill excitement for asking questions and curiosity about Earth's history.

Q8. What field of research – besides the one you are working in – do you consider most exciting?

Two fields immediately come to mind, which excite me for different reasons. First, isotope geochemistry has seen some really incredible methodological developments in recent years that have advanced our understanding of the trophic ecology of ancient animals. Second, social-ecological systems research resonates with me because it's changing the landscape of how we study human interactions with ecosystems and how we approach the human dimensions of conservation.

Q9. What are you reading at the moment?

I recently started reading *All We Can Save*. It's an anthology of essays, poetry, and art by women climate leaders, edited by Ayana Elizabeth Johnson and Katharine Wilkinson. Previously, I was reading *The Tipping Point* by Malcolm Gladwell, which dives into the psychology of social tipping points—how little behavioral shifts by individuals under the right circumstances can spark big societal changes.

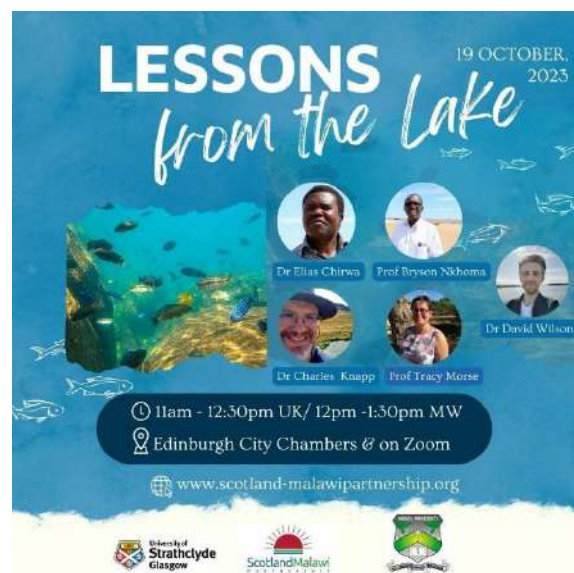


Q10. What is a critical but perhaps under-acknowledged question we as a community should be asking?

I think an important question that we should pose (to conservation practitioners) is: “What are your needs?” If we aspire to increase the conservation relevance of our work, we could frame it in terms of known conservation needs. For example, research questions could be inspired by overlap between conservation priorities and available records. This process could begin by investing in partnerships with resource managers to build trust, and it could result in co-produced research that targets specific conservation or restoration goals.

RESEARCH & OTHER NEWS

Upcoming hybrid event: Fishing (in) the Past to Inform the Future: Lessons from Lake Malawi and Mbenji Island. Explore the history of fisheries management in Lake Malawi and what lessons this can teach for sustainable fishing futures in Malawi and beyond. The “Lessons from Lake Malawi” project is an interdisciplinary collaboration between researchers from **Mzuzu University** and the **University of Strathclyde**. The event will feature short presentations by different project members from Mzuzu University and the University of Strathclyde covering distinctive aspects of the project: archival research, oral histories, environmental sampling, and fisheries analysis. This event takes place on **Thursday 19th October** from **11:00-12:30 (UK time); 12:00-13:30 (Malawi time)** in the Edinburgh City Chambers and virtually on Zoom. Additional details and registration (which is free!) can be found here: <https://www.scotland-malawipartnership.org/events/fishing-in-the-past-to-inform-the-future-lessons-from-lake-malawi-and-mbenji-island>



We invite you to participate in an "Expert Review" for Trinity College Dublin's European Research Council-funded **4OCEANS** project. This initiative seeks to evaluate the significance of marine life for human societies over the past two millennia. Your expertise is crucial to our research. If you would like to participate, we have provided a short online form (which is a part one of the survey) that asks about your field and level of expertise and confirm your consent to participate <https://arcg.is/yKDaD0>. For inquiries, reach out to (jobbove@tcd.ie) or (ludlowf@tcd.ie). Your insights will help chart the history of marine exploitation globally.

Humans and Aquatic Animals in Early Modern America and Africa (2023, Amsterdam University Press) authored by **Cristina Brito** of **NOVA University Lisbon**. “This book deals with peoples’ practices, perceptions, emotions and feelings towards aquatic animals, their ecosystems and nature on the early modern Atlantic coasts by addressing exploitation, use, fear, empathy, otherness, and indifference in the relationships established with aquatic

environments and resources by Indigenous Peoples and Europeans. It focuses on large aquatic fauna, especially manatees (but also sharks, sea turtles, seals, and others) as they were hunted, consumed, venerated, conceptualised, and recorded by different societies across the early colonial Americas and West Africa. Through a cross-cultural approach drawing on concepts and analytical methods from marine environmental history, the blue humanities and animal studies, this book addresses more-than-human systems where ecologies, geographies, cosmogonies, and cultures are an entangled web of interdependencies.” ~Brito (2023)

[Special Issue of *Quaternary Research*](#) entitled ‘**Paleoecology of Subarctic and Arctic Seas**’ edited by Ben Fitzhugh and Nicole Misarti hosts a plethora of papers to devour. Please see a list of the papers below:

Misarti N & Fitzhugh B. 2022. **Introduction to the PaleoEcology of Subarctic and Arctic Seas (PESAS)**. Pp 1-4. [doi:10.1017/qua.2022.36](https://doi.org/10.1017/qua.2022.36)

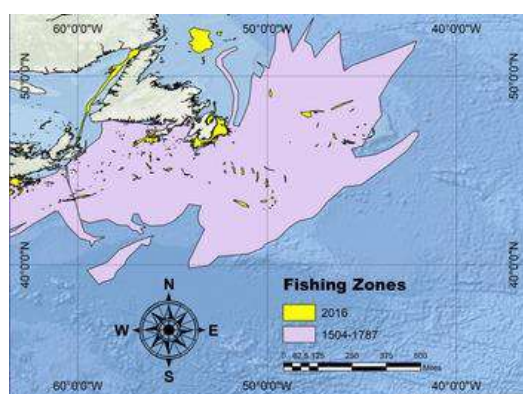
Keighley X, Tange Olsen M & Jordan P. 2022. **Integrating cultural and biological perspectives on long-term human-walrus (*Odobenus rosmarus rosmarus*) interactions across the North Atlantic**. Pp 5-25. [doi:10.1017/qua.2018.150](https://doi.org/10.1017/qua.2018.150)

Clark CT, Horstmann L, de Vernal A, Jensen AM and Misarti N. 2022. **Pacific walrus diet across 4000 years of changing sea ice conditions**. Pp. 26-42. [doi:10.1017/qua.2018.140](https://doi.org/10.1017/qua.2018.140)

West CF, Etnier MA, Barbeaux S, Partlow MA and Orlov AM. 2022. **Size distribution of Pacific cod (*Gadus macrocephalus*) in the North Pacific Ocean over 6 millennia**. Pp. 43-63. [doi:10.1017/qua.2020.7](https://doi.org/10.1017/qua.2020.7)

Hambrecht G, Feeley F, Smiarowski K, Hicks M, Harrison R, Brewington S, Cesario G & Gibbons K. 2022. **A millennium of Icelandic archaeological fish data examined against marine climate records**. Pp. 64–80. [doi:10.1017/qua.2019.35](https://doi.org/10.1017/qua.2019.35)

Edvardsson R, Patterson WP, Bárðarson H, Timsic S & Ólafsdóttir GA. 2022. **Change in Atlantic cod migrations and adaptability of early land-based fishers to severe climate variation in the North Atlantic**. Pp. 81–91. [doi:10.1017/qua.2018.147](https://doi.org/10.1017/qua.2018.147)



(**Left**; Fig. 3 from Holm et al. 2022) Contraction of Northwest Atlantic fishery, 1504–1787 versus 2016. Conglomerated historic fishing areas are indicated by purple. Yellow indicates a snapshot of 2016 fishing areas. (**Right**; Fig. 5 from Holm et al. 2022) Lucas van Valckenborch (1535–1597), *Meat and Fish Market (Winter)*, ca. 1595.

Holm P, Ludlow F, Scherer C, Travis C, Allaire B, Brito C, Hayes PW, Matthews JA, Rankin KJ, Breen RJ, Legg R, Loughheed K & Nicholls J. 2022. **The North Atlantic Fish Revolution (ca. AD). 1500**. Pp. 92–106. [doi:10.1017/qua.2018.153](https://doi.org/10.1017/qua.2018.153)

Jørgensen EK, Pesonen P & Tallavaara M. 2022. **Climatic changes cause synchronous population dynamics and adaptive strategies among coastal hunter-gatherers in Holocene northern Europe.** Pp. 107–22. [doi:10.1017/qua.2019.86](https://doi.org/10.1017/qua.2019.86)

Fitzhugh B, Brown WA, Misarti N, Takase K & Tremayne AH. 2022. **Human Paleodemography and Paleoecology of the North Pacific Rim from the Mid to Late Holocene.** Pp. 123–49. [doi:10.1017/qua.2022.35](https://doi.org/10.1017/qua.2022.35)

Khasanov BF, Fitzhugh B, Nakamura T, Okuno M, Hatfield V, Krylovich OA, Vasyukov D, West DL, Zendler E, Savinetsky AB. 2022. **New data and synthesis of ΔR estimates from the northern Pacific Ocean.** Pp. 150–60. [doi:10.1017/qua.2020.27](https://doi.org/10.1017/qua.2020.27)

Nagashima K, Addison J, Irino T, Omori T, Yoshimura K & Harada N. 2022. **Aleutian Low variability for the last 7500 years and its relation to the Westerly Jet.** Pp. 161–79. [doi:10.1017/qua.2020.116](https://doi.org/10.1017/qua.2020.116)

Brice C, de Vernal A, Ivanova E, van Bellen S and Van Nieuwenhove N. 2022. **Palynological evidence of sea-surface conditions in the Barents Sea off northeast Svalbard during the postglacial period.** Pp. 180–94. [doi:10.1017/qua.2020.2](https://doi.org/10.1017/qua.2020.2)

RECENT PUBLICATIONS

Brito C. (2023). ***Humans and aquatic animals in early modern America and Africa.*** Amsterdam University Press.

Colonese AC, Brugere C, Ramires M, Clauzet M, Brandi R, Bandeira AM, Guedes L, Wiedemann M, Reyes-García V, Begossi A. (2023). **The Legacy of Pre-Columbian Fisheries to Food Security and Poverty Alleviation in the Modern Amazon.** In A. C. Colonese & R. G. Milheira (Eds.), *Historical Ecology and Landscape Archaeology in Lowland South America* (pp. 3–19). Springer International Publishing.

de Kock W, Mackie M, Ramsøe M, Allentoft ME, Broderick AC, Haywood JC, Godley BJ, Snape RTE, Bradshaw PJ, Genz H, von Tersch M, Dee MW, Palsbøll P J, Alexander M, Taurozzi AJ, Çakırlar C. (2023). **Threatened North African seagrass meadows have supported green turtle populations for millennia.** *Proceedings of the National Academy of Sciences of the United States of America*, 120(30), e2220747120. <https://doi.org/10.1073/pnas.2220747120>

Fitzhugh B. **Maritime Prehistory of Northeast Asia: Overview and Outlook.** Ch. 16 in, *Maritime Prehistory of Northeast Asia*, CassidyJ, Ponkratova I & Fitzhugh B (eds). Springer Nature Publications. doi.org/10.1007/978-981-19-1118-7_16

Fitzhugh B. 2022. **The Paleolithic of Maritime Northeast Asia and the Search for Maritime Beringians.** Ch. 15 in, *Maritime Prehistory of Northeast Asia*, CassidyJ, Ponkratova I & Fitzhugh B (eds). Springer Nature Publications. doi.org/10.1007/978-981-19-1118-7_15

Fossile T, Herbst DF, McGrath K, Toso A, Giannini PCF, Milheira RG, Gilson S-P, Ferreira J, Bandeira DdaR, Haimovici M, Ceretta B, Bender MG, Colonese AC. (2023). **Bridging archaeology and marine conservation in the Neotropics.** *PloS One*, 18(5), e0285951. <https://doi.org/10.1371/journal.pone.0285951>

Rubio-Cisneros NT, Martínez-Candelas IA, Ordaz-García D, Pérez-Jiménez JC, Jiménez-Cano NG, Glover JB, Montes-Ganzon BK, Ruiz-Ayma G, González-Rojas JI. 2023. **Interdisciplinary science and fishers' local ecological knowledge of sawfishes in the Yucatán Peninsula.** *Aquatic Conservation: Marine and Freshwater Ecosystems*, 33(9), 897–916. <https://doi.org/10.1002/aqc.3981>

Ruiz-Puerta EJ, Keighley X, Desjardins SPA, Gotfredsen AB, Pan SE, Star B, Boessenkool S, Barrett JH, McCarthy ML, Andersen LW, Born EW, Howse LR, Szpak P, Pálsson S, Malmquist HJ, Rufolo S, Jordan PD, Olsen MT. (2023). **Holocene deglaciation drove rapid genetic diversification of Atlantic walrus.** *Proceedings. Biological Sciences / The Royal Society*, 290(2007), 20231349. <https://doi.org/10.1098/rspb.2023.1349>

Salmen-Hartley J, McKechnie I, 2023. **An Examination of Indigenous Halibut Fishing Technology on the Northwest Coast of North America.** *Arctic Anthropology* 59(1):87–105. <https://doi.org/10.3368/aa.59.1.87> or for an open access preprint: <http://hdl.handle.net/1828/15429>

van den Hurk Y, Sikström F, Amkreutz L, Bleasdale M, Borvon A, Ephrem B, Fernández-Rodríguez C, Gibbs HMB, Jonsson L, Lehouck A, Cedeira JM, Meng S, Monge R, Moreno M, Nabais M, Nores C, Pis-Millán JA, Riddler I, Schmölcke U, ... Barrett JH. 2023. **The prelude to industrial whaling: identifying the targets of ancient European whaling using zooarchaeology and collagen mass-peptide fingerprinting.** *Royal Society Open Science*, 10(9), 230741. <https://doi.org/10.1098/rsos.230741>

Winter R, Desiderà E, Guidetti P, Vermeersch S, Demirel N, Çakırlar C. (2022). **Catch of the Day: Abundance and Size Data of Groupers (Epinephelidae) and Combers (Serranidae) from Middle to Late Holocene Levantine Archaeological Contexts.** *The Journal of Island and Coastal Archaeology*, 17(4). <https://doi.org/10.1080/15564894.2022.2138643>

West C, Anderson S, Gjesfjeld, Fitzhugh B. 2022. **Human Behavioral Ecology and the Complexities of Arctic Foodways.** In, *Human Behavior at the Coastal Margins: Theoretical Approaches to Past Coastal Adaptations*, Heather B. Thakar and Carola Flores Fernandez (eds.). University Press of Florida: Society and Ecology in Island and Coastal Archaeology Series.

ANNOUNCEMENTS: CONFERENCES

Call for abstracts and conference announcement. This is a call for abstracts and a save the date for **Oceans Past X: Historical perspectives on human-ocean interactions: Deep understandings for informing ocean futures.** This conference will take place between **25-28 June 2024** and be hosted by the **University of Exeter** on their Penryn campus in **Cornwall, United Kingdom**. Abstract submission opened in September and will remain open until the **15th of January 2024**.

Oceans Past brings together scholars and practitioners interested in documenting and understanding changes in marine systems and human maritime interactions in past decades, centuries and millennia. The 10th Oceans Past Conference will enable continued scholarly networking and international exchange towards a fuller understanding of the past, the present, and potential future trajectories of our marine ecosystems and the human communities that interact with these. Please see the conference abstract submission and additional details: <https://oceanspast.org/opx.php>

Conference call: Oceans Past 2024

Historical perspectives on human-ocean interactions:
Deep understandings for informing ocean futures
25-28 June 2024, Cornwall, UK

Conference themes

- Physical and biological drivers in marine ecosystems and populations - historical 'baselines' to long-term dynamics
- Scales of (un)sustainable marine harvesting through time
- Multidisciplinary perspectives on social and ecological consequences of change
- Trajectories and repercussions of management interventions on marine social-ecological systems through time
- Lessons from the past for management of coastal zones and high seas
- How the sea has changed us / how we have changed the sea: human maritime experience in literature, story, song, and art

LOCATION: University of Exeter's Cornwall campus, Penryn

ABSTRACTS OPEN FROM SEPTEMBER 2023

Registration discounts available for OPI members, researchers from LDCs and early career researchers; A limited number of early career travel awards available courtesy of ICES sponsorship!

Oceans Past Initiative: A global network for marine historical research

For information & membership options see www.oceanspast.org or E: info@oceanspast.org
Find us online at: [@oceans_past](https://twitter.com/oceans_past) [oceanspast](https://www.instagram.com/oceanspast) [Oceans Past Initiative](https://www.facebook.com/OceansPastInitiative)

Fourth World Congress of Environmental History will take place at the **University of Oulu, Finland** from **19 - 23 August, 2024**. The conference theme is "Transitions, Transformations and Transdisciplinarity: Histories beyond History", emphasizing both the arc of time and the importance of bringing diverse approaches to bear on contemporary problems. WCEH2024 will illuminate the value of historical understandings that go far beyond the discipline of history in treating environmental scholarship as an evolving practice, one that is created in conversation across multiple fields, concerns, and communities – and one that can help strategize the core challenges of transitions that lie ahead. The call for papers has already closed but early bird registration opens in November 2023. Additional details of the conference can be found on their website: <https://wceh2024.com/>



[CONTACT]

Oceans Past News is a quarterly newsletter that aspires to both unite and inform the worldwide community interested in historical perspectives of marine social-ecological systems by providing insight into the wide-ranging and excellent work being done and the resources available. If you would like to propose work for OPN in the future, please contact **Rachel Winter** (rachelwinter@palaeome.org).

*The next Oceans Past News will be out in January 2024. We **warmly welcome submissions** through December 2023.*

RESOURCES

The Oceans Past News Archive is available online: <https://oceanspast.org/newsletter.php>

More on the Oceans Past Initiative: <http://oceanspast.org>

OPI on Facebook: <https://www.facebook.com/groups/122288493384/> and Twitter: [@oceans_past](https://twitter.com/oceans_past)