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OCEANS PAST INITIATIVE

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From the Yucatan to the Arctic

Our latest edition covers a wide swathe of latitudes with Ilse Alejandra Martinez's work with fisheries in the Yucatan Peninsula up to Emily Ruiz Puerta's work with walrus ivory trade in the Canadian Arctic. We also have several highlights from recent publications and a plethora of conferences on the horizon.

Rachel M. Winter, *OPN Editor*
Winterthur Museum, Gardens & Library, Winterthur, DE, United States†

EARLY CAREER RESEARCHER SPOTLIGHT

This edition's ECR spotlight is highlighting the OPI's own **Ilse Alejandra Martinez**, a PhD candidate in the School of Environmental Studies at the **University of Victoria** in **Canada**. *~RMW*

Introduction to Ilse's background and research: I like to describe my research as gossiping with fishers to learn about the past to try to inform management for a more sustainable and just future. My regular field season involves travelling around the Yucatan Peninsula interviewing fishers, sometimes doing participatory mapping, and if it's the end of a project, a community event to present the final products of my research. I work mostly with shark and ray fishers, but I find all fisheries interesting, especially what these fisheries represent for local people.

I have learned so many fascinating things about how fishing was done in the past, from going fishing at night to take advantage of bioluminescence to tying buoys to nurse shark tails to know where the rocks or caves were, which meant good fishing. Whenever I listen to elder fishers' descriptions of marine ecosystems, they seem otherworldly and magical to me. It motivates me to keep working for a future where the younger generations can enjoy healthy oceans.

I am currently a PhD candidate at the School of Environmental Studies at the University of Victoria in Canada. In the future I would like to research those species that are gradually becoming the "Ghost of the Yucatan Peninsula", species that only live in the memory of the eldest fishers and the younger generations think of them more like a myth than their biocultural heritage. Some of these species include sawfishes, lemon sharks, hammerheads and manatees.

† Views expressed here are my own and do not necessarily reflect that of my employer
Each issue of Oceans Past News includes a feature article, either as an **Oceans Past Spotlight or as **10 Questions**. If you would like to be considered for either, or to nominate a colleague or mentee, please contact Rachel Winter at rachelwinter@palaeome.org.*

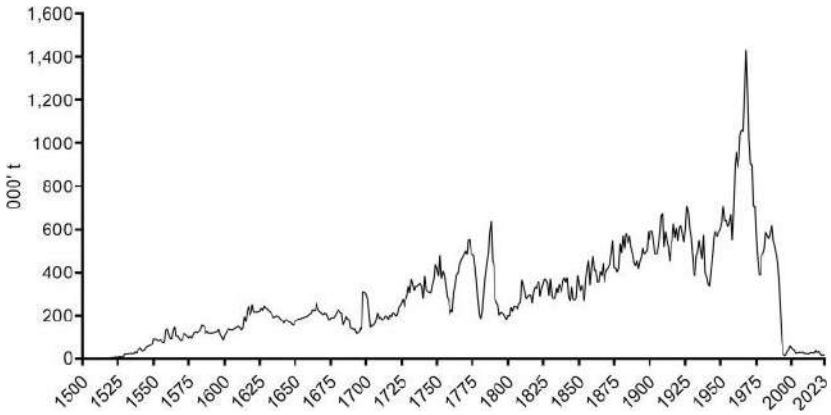
Our questions for Ilse

1. **What guided you towards your current research interests?** I wanted to research the impacts of climate change on shark fisheries in the Yucatan Peninsula, but my then Master's advisor asked me a really simple but meaningful question. “How can you understand the future if you don't know how the past looked like?”. This simple question blew my mind and has defined my research since then.
2. **How can senior researchers better support and mentor ECRs?** I think it is important that they encourage creativity. Science is becoming increasingly interdisciplinary, and people are doing amazing things that would have been frowned upon a few years back. It is important to have someone that encourages you to do research that fits you, what you like and what you enjoy, and that tells you it's not the end of the world if you fail, because failure can also be an opportunity.
3. **What is a practice or tradition in research that should be more widespread? (*E.g., supervisors getting mugs with student’s first paper printed on them)*** In one of my labs, whenever there was a new lab member, it didn't matter if it was a visiting scholar, we would go out as lab that week to ensure the new person felt included. We also celebrated people's birthdays once a month, and got together to have cake and sing happy birthday to the people that had birthdays that month. These were simple gestures, but made us feel part of a small community.

4. **What areas of research are you interested in exploring further?** There are so many things that I want to try, but most of them focus on working with the communities to co-develop management or conservation actions. I think marine historical ecology has the potential to bring together different generations and promote intergenerational knowledge exchange. I would love to focus more on community-led research where local people take the lead and we just provide the tools to answer the questions they have.
5. **If you could recommend one paper/book/piece of media related to your research interests, what would it be and why?** That's a hard question, and I'm going to shamelessly self-promote and say that the documentary that I produced about the importance of shark and ray fisheries for the people of Campeche, Mexico. There is a lot of science behind it, but local fishers are the focus and it’s even narrated by local people. Our main goal was to get fishers to share their knowledge and their love for sharks and rays. A lot of people seem to perceive fishers as indifferent or even sometimes evil because they fish these species. In reality, they love these species, but we are all living the consequences of management decisions that were taken a long time ago, and probably were not as well-informed as they thought. I think our documentary does a good job at describing the complexity of shark and ray fisheries, and the importance of learning about the past.

Ilse’s aforementioned **documentary on shark and ray fisheries in the Yucatan** can be watched **here**! ~*RMW*

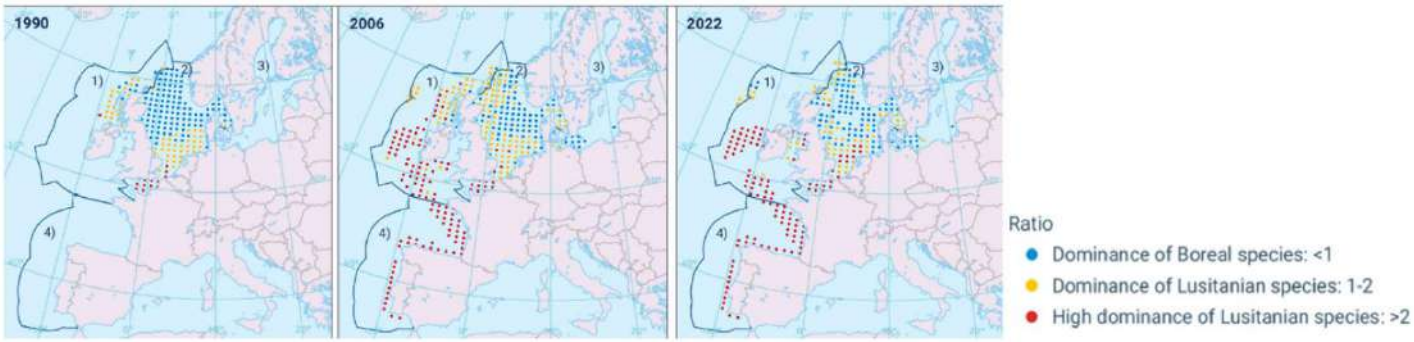
RESEARCH & OTHER NEWS



Reconstructed total catches of Atlantic cod for NAFO- Subareas 2,3,4, 1508–2023 (Hayes et al. 2025).

In 2024, Canada lifted a 30-year moratorium on what was once the world's largest single-species fishery: the Newfoundland cod fishery. Our new study presents the most comprehensive reconstruction of cod catches in Newfoundland from 1508 to 2023, offering vital insights into the fishery's rise and fall. The findings reveal how centuries of relatively stable catches gave way to dramatic decline in the 20th century—raising important questions about the sustainability of renewed fishing efforts and the critical role of historical data in guiding future management.

Read the associated paper here: Hayes, P., Holm, P., & Nicholls, J. (2025). ***500 years of the once largest fishery in the world: A comprehensive catch reconstruction for the Newfoundland cod fishery (1508–2023)****. Fisheries Research, 285(107325), 107325. https://doi.org/10.1016/j.fishres.2025.107325. ~RMW*



Temporal development of the ratio of the number of Lusitanian species to the number of Boreal species (years 1990/2006/2022) in European regions north of the Strait of Gibraltar. EU marine regions: (1) Celtic Seas. (2) Greater North Sea (including Kattegat and the English Channel). (3) Baltic Sea. (4) Bay of Biscay and the Iberian Coast. Reference data: ©EuroGeographics, ©FAO (UN), ©TurkStat. Source: European Commission-Eurostat/GISCO.

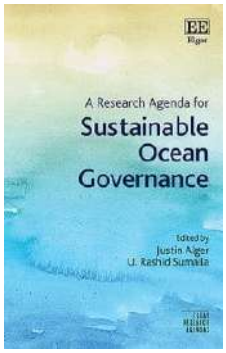
Another new paper to read with summaries provided below in both Spanish and English: Pérez-Rubín, Juan; Pérez-Rubín, Elena. 2025. "**Historical Review of Research on Fisheries vs. Climate Changes and Proposals for the Future in a Global Warming Context**". J. Mar. Sci. Eng., 13, 260. https://doi.org/10.3390/jmse13020260.

(***ES***) Este artículo presenta una amplia revisión histórica multidisciplinar de las investigaciones internacionales sobre pesca y cambios climáticos, centradas en los mares atlánticos del sur de Europa y las regiones conectadas de África. Se incluye la presentación y documentación de las tres hipótesis principales sobre el calentamiento global en el siglo XXI. 1) El origen "Antropogénico" (la opinión dominante en la comunidad científica, pero no unánime); 2) El origen "Natural" (debido a la variabilidad solar natural, que se ha demostrado que ha afectado cíclicamente a varias pesquerías a escala de siglos); y 3) La posición "Ecléctica-equidistante" defendida por otro sector de la comunidad científica (para estos expertos, la mayor parte del calentamiento global desde la década de 1980 se explica por una combinación del patrón climático "El Niño-ENSO", la actividad solar, los aerosoles volcánicos y los efectos antropogénicos). Estas tres hipótesis se tienen que tener en cuenta en una revisión bibliográfica imparcial y rigurosa,

ya que cada una de ellas está respaldada por científicos igualmente prestigiosos que publican artículos revisados por pares en acreditadas revistas internacionales.

(***EN***) This article presents a broad multidisciplinary historical review of international research activities on fisheries and climate changes, focused in Southern European Atlantic Seas and connecting regions of Africa. The presentation and documentation of the three main hypotheses on Global Warming in the 21st century are included. 1) The 'Anthropogenic' origin (the dominant opinion in the scientific community, but not unanimous); 2) The "Natural" origin (due to natural solar variability, which has been shown to have cyclically affected several fisheries on the scale of centuries); and 3) The 'eclectic-equidistant' position defended by another section of the scientific community (for these proponents most of the global warming since the 1980s is explained by a combination of the 'El Niño-ENSO' climate pattern, solar activity, volcanic aerosols, and anthropogenic effects). These three hypotheses are taken into account in an impartial and rigorous literature review, as they are each supported by equally prestigious authors, with publication records in reputable international peer-reviewed journals.

Recently published book. ***A Research Agenda for Sustainable Ocean Governance,*** edited by Justin Alger, School of Social and Political Sciences, University of Melbourne, Australia and U. Rashid Sumaila, Institute for the Oceans and Fisheries and the School of Public Policy and Global Affairs, University of British Columbia, Canada. Link to the book provided here.



NOTES FROM THE FIELD

Emily Ruiz Puerta, a postdoctoral researcher with the **University of Groningen**'s Arctic Centre shares with us an overview of her work on **historic walrus ivory exploitation** and ongoing collaborative work with Arctic indigenous communities ~*RMW*:

My research integrates archaeology, biomolecular analysis, and anthropology to explore walrus populations across the Arctic Circle. During my PhD, I have focused on Atlantic walrus populations, examining how Arctic and European cultures have shaped this species from a genetic and cultural perspective. To achieve this, I have extracted ancient DNA and isotopic data from zooarchaeological remains dating back as far as 10,000 years. I combine this with experimental archaeology to better understand how far Norse Vikings ventured into the North Atlantic in search of walrus ivory—often referred to as "white gold." Currently, I am collaborating with Arctic Indigenous communities, particularly in Iglulik, in the Canadian Arctic. Together, we investigate how climate change is impacting traditional practices such as walrus hunting and ivory carving. Through this work, I aim not only to study genetic and cultural continuity but also to emphasize the importance of respectful collaboration. Protecting Indigenous heritage and knowledge is essential when working with ancient DNA, and I advocate for inclusive, community-led research practices that empower local voices and preserve traditions for future generations.

RECENT PUBLICATIONS

Campana SE, Hambrecht G, Misarti N, Moshfeka H, Efird M, Schaal SM, Ólafsdóttir GÁ, Edvardsson R, Júlíusson ÁD, Hjörleifsson E, Feeley FJ, Cesario G, & Palsdóttir LB. (2025). **Mortality drives production dynamics of Atlantic cod**

through 1100 years of commercial fishing. *Science Advances*, *11*(6), eadt4782. https://doi.org/10.1126/sciadv.adt4782

Eriksen EF, Andrews AJ, Nielsen SV, Persson P, Malca E, Onar V, Aniceti V, Piquès G, Piattoni F, Fontani F, Wiech M, Ferter K, Kersten O, Ferrari G, Cariani A, Tinti F, Cilli E, Atmore LM, & Star B. (2025). **Five millennia of mitonuclear discordance in Atlantic bluefin tuna identified using ancient DNA**. *Heredity*, *134*(3–4), 175–185. https://doi.org/10.1038/s41437-025-00745-1

Guo X, Gao Y, Yang Q, Liu H, Sun L, Yang L, Xie Z. (2024). **1500-year reconstruction of Circumpolar Deep Water intrusion and its impact on southern elephant seal populations in King George Island, West Antarctic Peninsula**. *Palaeogeography, Palaeoclimatology, Palaeoecology*, *643*(112192), 112192. https://doi.org/10.1016/j.palaeo.2024.112192

ANNOUNCEMENTS: CONFERENCES and WORKSHOPS

Upcoming conference. The "**Advancing the Blue Economy Through Gender Equality**" conference is taking place between the **19th – 21st of May 2025** in **Malmö, Sweden** and will encompass panels and discussions surrounding topics including Safety at Sea & Environmental Protection, Human Rights & Well-being, and the Blue Economy. Further information can be found on the conference website.

Upcoming conference. **2025 Ecosystem Studies of the Subarctic and Arctic Seas (ESSAS) Open Science Meeting** will be held in **Tokyo, Japan** between **24th - 26th** of **June 2025** at the **National Institute of Polar Research**. Twelve sessions, including "Historical ecology of the Subarctic and Arctic Seas: perspectives from archaeology and history," and a workshop are planned. Additional details, including a list of all of the sessions, can be found on the conference website.

Upcoming conference. The **Back to the Future: Zooarchaeological Isotope Approaches to Modern Questions** will take place between **25th – 28th June 2025** in **Reading, United Kingdom**. This conference is organised by the International Council for ArchaeoZoology (ICAZ)'s Stable Isotope Working Group. For additional details you can visit the conference website.

Upcoming conference(s). The 4th **Crossing the Paleontological-Ecological Gap** (CPEG) meeting and 3rd **Conservation Paleobiology Symposium** will be held jointly, from **July 27th to August 1st 2025**, at the **University of Zurich**. The CPEG meeting aims to bring palaeontologists and ecologists together to share ideas, data and methods in research areas that are studied by both, but typically independently (e.g., community and population ecology, food web dynamics, extinction mechanisms and conservation). On this occasion, the meeting will be merged with the 3rd Conservation Paleobiology Symposium to promote the application of palaeobiological and ecological records to the conservation, management, and restoration of biodiversity. Additional details can be found on the joint event's website.

Upcoming conference. The **International Society for Biomolecular Archaeology** will have their 11th biannual meeting in **Turin, Italy** this coming summer from the **26th – 29th August 2025**. There will be a session exploring biomolecular archaeology in the context of "**Environmental change, sustainability, and ancient ecosystems"**, where showcases from coastal archaeology are welcomed. Early bird registration closes **07th May 2025**, further details can be found on the conference website.

Upcoming conference and call for papers. **The Built Ocean** is the theme for **the EAHN (European Architectural History Network) 2025 Thematic Conference** taking place in **Porto, Portugal** on **September 10-13, 2025**. EAHN Porto 2025 will be hosted by the research project **Fishing Architecture** at the Faculty of Architecture of the University of Porto. Architects require solid ground on which to base their practice, yet oceans have always been a key element shaping the history of architecture and the built environment. This themed conference aims to shift the focus of architectural history from the land to the sea. It will address the planet's bodies of salt water either as areas of increasing urbanization (through the building of structures such as underwater cables, oil rigs, windmills, etc.), as connectors between space and cultures (navigation routes for people and resources, transported in the form of knowledge, labour, and materials), or as an ecosystem functioning, in connection with the land, as an essential life-support system (defining climatic patterns, providing resources from food to raw materials, and securing services from carbon sequestration to large-scale habitats). The **conference aims** to bring together scholars representing a wide range of interdisciplinary knowledge and sets out to cover a broad chronological scope, from deep history and archaeological sources to more recent accounts of ecological decline and potential futures. *Where is the architecture of the sea? To what extent does the built environment impact saltwater landscapes? What reciprocal impacts do seascapes have on the built environment?*

Registration opens in **April 2025**.

For further details, please see the conference website: www.thebuiltocean.com or email: **fish@arq.up.pt**

Upcoming conference. The **11th World Conference on Ecological Restoration (SER2025)** will take place **30th September – 04th October 2025** in **Denver, Colorado, United States**. SER's World Conference is an exciting and inspiring biennial gathering of global experts in ecological restoration, making the 11th World Conference on Ecological Restoration (SER2025) the premier venue for those interested in being active members of the global restoration community. More information can be located on the conference website.

Upcoming conference. Representatives of the UNESCO Oceans decade project "Indigenous People, Traditional Ecological Knowledge, and Climate Change: The Iconic Underwater Cultural Heritage of Stone Tidal Weirs" will be hosting a session at the **8th International Congress for Underwater Archaeology** (IKUWA 8) being hosted in **Oostende, Belgium** from **October 13th – 17th 2025**. More information can be found on the conference website.

Upcoming conference and call for papers. The International Council for ArchaeoZoology (ICAZ)'s Ancient Genomics, Proteomics, Morphometrics Working Group will have their next meeting in **Copenhagen, Denmark** between the **14th – 17th of October 2025**. The conference theme is: "Exploring the Past, Informing the Future: Two Decades of Interdisciplinary Approaches in Archaeozoology" and will include a session of particular relevance to this community that is focused on marine fauna (especially fish). Find additional details on the conference website.

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** (info@oceanspast.org).

NEW!: If you have **news or an event to share with the wider OPI community,** please get in touch with us (info@oceanspast.org) and we would be happy to share your content on our social media platforms.

*The next Oceans Past News will be out in July 2025. We **warmly welcome submissions** through June 2025.*

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 X: **@oceans_past** and Bluesky: **@oceanspast.bsky.social***