Pacific Circle Newsletter

4,7 (3 December 2023)

Book Reviews

Erika Jones, *The Challenger Expedition: Exploring the Ocean's Depths*. London: Royal Museums Greenwich, 2022. 224 pp. US$37.50 (paper), ISBN 978-1-906367-97-8.

Reviewed by Anne M. Ricculli (Morris Museum)
Published on H-Sci-Med-Tech (November 2023)
Commissioned by Penelope K. Hardy

Erika Jones is curator of navigation and oceanography at Royal Museums Greenwich (UK), and her current volume is a richly illustrated and meticulously researched archival study of the records of the HMS _Challenger_. The author argues that while the structure of the British Empire enabled this ambitious project to proceed as charged, existing and impromptu scientific networks were critical to the success of the voyage's mission to collect, process, interrogate, and document the rich global oceanic resources accumulated during the years 1872-76. _The _Challenger_ Expedition: Exploring the Ocean's Depths_ offers photographs, illustrations, and contemporary narratives that reveal to today's readers the staff and crew's responses to multiple and unanticipated contingencies that shaped the outcome of the project. The legacy of the _Challenger_ expedition for twenty-first-century ocean research, Jones asserts, is most apparent in the 1895 publication of the two concluding volumes of the naturalists' multipart report, in which a new editorial staff expanded the publication scope to include international and commercial deep-sea survey samples.

Understanding the impact of this and other responses to change is crucial to our present-day appreciation of the scale of the four-year circumnavigation and subsequent post-voyage data analysis, which produced a global profile of the ocean environment.

Jones is not the first scholar to evaluate the HMS _Challenger _and its indelible legacy on marine science in the 150 years since its launch. Most recently, Doug Macdougall's _Endless Novelties of Extraordinary Interest: The Voyage of H.M.S. _Challenger_ and the Birth of Modern Oceanography_ (2019) and _Full Fathom 5000: The Expedition of the HMS _Challenger_ and the Strange Animals It Found in the Deep Sea_ (2022) by Graham Bell frame the voyage as the process of discovery and exploration. Jones's contribution is the presentation of what she terms "an ocean story with key terrestrial elements" (p. 11). Sea and land narratives intersect through the author's exploration of six discrete objects. Deftly shifting from broad-view perspectives to detailed case studies, and back again, this object-based investigation offers evidence of the ways in which the built environment--including Royal Navy bases, newly constructed train lines, museum laboratories, and printers' workshops--functioned to support the activities onboard the repurposed, steam-powered exploratory vessel.

The first chapter, "The Nineteenth-Century Drive to Explore the Deep Sea," sets the stage for the _Challenger_ Expedition with an overview of nearly fifty years of vessel-based data collection. Ocean geographic mapping provides one unifying structure to this inventory. Jones outlines explorations to the Northwest Passage and South Magnetic Pole, and Pacific voyages in the Northern and Southern Hemispheres, designed to aid commercial and military maritime transit. Additional themes include technological advances that aided the collection of biotic and abiotic specimens and supported naval wartime communications. The author presents this chronology of ocean voyages in order to assert that despite a half-century of British, French, and American military, scientific, and commercial investigations, debates remained concerning the extent to which marine life existed in extreme environments of depth, light, and temperature.

The HMS _Challenger_ expedition was proposed during the early 1870s in response to international interest in deep ocean regions, and the Royal Navy refitted the military vessel for scientific exploration, as Antony Adler has noted, in a manner that provided space for marine study while at sea.[1] In chapter 2, "From Warship to Research Vessel: HMS _Challenger_," Jones introduces the ship itself as the first object. Compelling contemporary photographs from the archives of the National Maritime Museum, Greenwich, London, animate these spaces with images capturing life aboard the _Challenger_--including group portraits of the ship's musical band with members drawn from naval and science teams paired with images of the coal stokers--and richly underscore the collaborations and cooperation required on a personal level to accomplish the project mission to acquire knowledge of the deep ocean regions and secure British scientific prestige.

The _Challenger _scientists and naval teams modified or repurposed objects to conduct their collection tasks more efficiently. Here, too, Jones integrates archival photographs and maps to craft a cultural history that demonstrates the relevance of "often-hidden work, technologies and people" in a manner of interest to scholars and students alike (p. 11). The newly designed Baillie Sounding Machine, constructed at drydocks and delivered to the vessel via Royal Mail steamships, provided essential sounding depth data critical to the mapping of proposed telegraph cable routes. The quotidian specimen bottle acquired new significance in light of the magnitude of dredged marine animals--five thousand containers, each requiring five gallons of alcohol preservative were sorted, labeled, and transported to Scotland for processing. Jones examines the extent to which handwritten labels on one of many surviving _Challenger _collection containers, with its well-preserved bivalve clam specimen, played a critical role in discussions regarding the distribution of marine life around the globe. The final three objects in Jones's analysis offer historical context for the process of data collection and, critically, the distribution of the resulting data. Photographs taken on the vessel and at various ports-of-call document the untold and otherwise undocumented participation of individuals throughout the global voyage.

The fate of post-voyage sea urchin specimens illustrates international collaboration and compromise during the arduous task of sorting and classifying marine life. The post-expedition _Challenger_ publication history spanned two decades, and the cooperation of countless individuals produced volumes which, Jones asserts, came to "define oceanography as a new scientific field" as they endeavored to produce a profile of the ocean floor (p. 10).

Using six objects in conjunction with detailed archival documents from the National Maritime Museum, Jones offers a compelling portrait of the _Challenger_ as an innovative investigation of the ocean environment. Yet the value of the book is the promise that still more stories can be told about the voyage and its role in the history of oceanography. _The _Challenger_ Expedition: Exploring the Ocean's Depths_ attests to the merits of preserving and situating museum objects in historical context. This project would have benefited from a more straightforward acknowledgement within the body of the text of her research process and skillful integration of rich and varied source documents. Readers who mine the author's footnotes, note accession numbers, and track archival folder numbers will encounter multiple opportunities for continued study and avenues for investigation. Jones asserts, in the context of international conversations occurring at the outset of the _Challenger _report project, that "what science knew was limited by the small number of species discovered so far," and this observation holds equally true for the extent of HMS _Challenger_ archival documentation analyzed in preparation for the 150th anniversary of the voyage (p. 177). _The _Challenger_ Expedition: Exploring the Ocean's Depths_ is a catalyst and an invitation to investigate primary source documents to understand how the field of oceanography developed at the intersection of marine and terrestrial environments, and why.

Note

[1]. Antony Adler, "The Ship as Laboratory: Making Space for Field Science at Sea," _Journal of the History of Biology _47, no. 3 (2014): 333-62.

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Reviews. November, 2023.
URL: https://urldefense.com/v3/__https://www.h-net.org/reviews/showrev.php?id=58780__;!!PvDODwlR4mBZyAb0!TdojjxrpWH9x9va94eHqXjkSBgUfbQxt-w7dTCTMlXnvZpBZ7_cHdEyHAYmyNIbNKJv3yTIKjN9NPl-lUmqDPw$

New and Forthcoming Books and Chapters

A Few Acres of Ice

Environment, Sovereignty, and "Grandeur" in the French Antarctic

BY JANET MARTIN-NIELSEN

CORNELL UNIVERSITY PRESS, 2023

- PAPERBACK **US$31.95**
- EBOOK **US $20.99**
- HARDCOVER **US$125.00**

A Few Acres of Ice is an in-depth study of France's complex relationship with the Antarctic, from the search for Terra Australis by French navigators in the sixteenth century to France's role today as one of seven states laying claim to part of the white continent. Janet Martin-Nielsen focuses on environment, sovereignty, and science to reveal not only the political, commercial, and religious challenges of exploration but also the interaction between environmental concerns in polar regions and the geopolitical realities of the twenty-first century.

Martin-Nielsen details how France has worked (and at times not worked) to perform sovereignty in Terre Adélie, from the territory's integration into France's colonial empire to France's integral role in making the environment matter in Antarctic politics. As a result, *A Few Acres of Ice* sheds light on how Terre Adeìlie has altered human perceptions and been constructed by human agency since (and even before) its discovery.

Anaïs Maurer, *The Ocean on Fire, Pacific Stories from Nuclear Survivors and Climate Activists*, Duke University Press, 2023

https://www.dukeupress.edu/the-ocean-on-fire

Featured Journal

Volume 74 (16) 2023

Managing biological, economic and social trade-offs in the Australian Southern and Eastern Scalefish and Shark Fishery

Florence Briton, Olivier Thébaud, Claire Macher, Caleb Gardner and Lorne Richard Little

This work demonstrates an operational eco-viability approach to an Australian multi-species fishery, the Australian Southern and Eastern Scalefish and Shark Fishery, characterised by technical and economic interactions among harvested stocks. Biological, economic and social trade-offs are highlighted in relation to the distribution of benefits among vessel owners, fishing crews and consumers. We show that maximising economic returns conflicts with social benefits including those to consumers.

Abstract | Full Text | PDF (1.2 MB) Open Access Article

Sewage-derived nitrogen dispersal and N-fixation in Port Phillip Bay in south-eastern Australia

Gregory D. Parry and Kerry P. Black

The ecological footprint of the Western (sewage) Treatment Plant (WTP) and sites where nitrogen fixation is important in Port Phillip Bay, in south-eastern Australia, were determined using nitrogen isotope ratios (δN). Measurements in four intertidal species and two species deployed throughout the bay showed that δN was elevated for all species adjacent to WTP and along the north-western shoreline of Port Phillip Bay and for ~10–15 km offshore, whereas nitrogen fixation contributed significantly to the available N in two geographically isolated seagrass-dominated bays.

Abstract | Full Text | PDF (3.8 MB) Open Access Article

Ontogenetic habitat partitioning among four shark species within a nursery ground

Daniel P. Crear, Cassidy D. Peterson, Jeremy M. Higgs, Jill M. Hendon and Eric R. Hoffmayer

Immature sharks use specific areas and environmental conditions that allow them to easily find food and avoid larger predators. The distribution and abundance of four coastal shark species were determined using survey data in the Mississippi Sound. Often the younger individuals and smaller species were distributed together, while avoiding areas of mature sharks.

Abstract | Full Text | PDF (5.2 MB)

Early life-history characteristics of *Conger* leptocephali in the western South Pacific

Aya Takeuchi, Mari Kuroki, Michael J. Miller, John J. Pogonoski, Tsuguo Otake and Akinori Takasuka

The possible spawning areas of eel species were found in the western South Pacific and there was a clear growth-rate difference between and larvae there. These findings help unravel the enigmatic

life histories of the genus in the South Pacific, which may be similar to other ocean regions. Further studies about the life histories of the Anguilliformes including will contribute to understanding evolution of migration and spawning ecologies in these eels.
Abstract | Full Text | PDF (2.1 MB)

Search for the vulnerable giants: the presence of giant guitarfish and wedgefish in the Karimunjawa National Park and adjacent waters

Faqih Akbar Alghozali, Muhammad Wiralaga Dwi Gustianto, Ashma Hanifah, Maula Nadia, Widyastuti , Nauvan Prabhu, Lufni Fauzil Adhim, Khansa Alifa Nurhaliza, Hollie Booth, Muhammad Ichsan, Andhika Prasetyo, Nesha Ichida and Mahardika Rizqi Himawan

Giant guitarfish and wedgefish are highly exploited throughout their distribution because of their highly valued fins in the international market. This research assessed the presence and relative abundance of giant guitarfish and wedgefish species in Karimunjawa National Park (KJNP) and adjacent waters. The presence and relative abundace of the two target species, and , were low in the study area. Their presence during the study was not affected by sites, zonation or depth. This study is the first to provide information on the urgency of managing those species in KJNP.
Abstract | Full Text | PDF (1.3 MB) Open Access Article

Corrigendum to: Search for the vulnerable giants: the presence of giant guitarfish and wedgefish in the Karimunjawa National Park and adjacent waters

Faqih Akbar Alghozali, Muhammad Wiralaga Dwi Gustianto, Ashma Hanifah, Maula Nadia, Widyastuti , Nauvan Prabhu, Lufni Fauzil Adhim, Khansa Alifa Nurhaliza, Hollie Booth, Muhammad Ichsan, Andhika Prasetyo, Nesha Ichida and Mahardika Rizqi Himawan

Abstract Open Access Article

New and Forthcoming Articles

B. Niveditha, A. P. Ranjith, and D. R. Priyadarsanan, "A new species of *Aphanogmus* Thomson (Hymenoptera: Ceraphronidae) parasitising predatory cecidomyiids in mite-induced galls of *Pongamia pinnata* in India, *Journal of Natural History* 57: 41-144 (2023), 1963-1971

- https://doi.org/10.1080/00222933.2023.2279237

ABSTRACT

Abstract

Ceraphronidae is one of the small, commonly collected families of parasitoid Hymenoptera. *Aphanogmus cecidovorus* Ranjith sp. n. is described here as a parasitoid of the acarivorus cecidomyiid *Microdiplosis pongamiae* Mani. This is the first host–parasitoid association of *Aphanogmus* parasitising an acarivorus cecidomyiid reported from outside the Nearctic and Palaearctic regions. The new species is described and compared with related species and those with a similar association. Taxonomic placement of the new species and host–parasitoid association are commented on briefly.

Jack Ashby, "How collections and reputation were built out of Tasmanian violence: thylacines (*Thylacinus cynocephalus*) and Aboriginal remains from

Morton Allport (1830–1878),” *Archives of Natural History* 50:2 (2023)

Please note: This paper includes details of racial violence. Aboriginal and Torres Strait Islander people are advised that this paper contains names of individuals who are now deceased.

Abstract

Through European colonization, First Nations peoples were subjected to systematic and violent actions to dispossess them of their land and sovereignty. In Tasmania, this involved government-sponsored bounties as well as militaristic and diplomatic efforts to remove Indigenous peoples from the landscape.

At the same time, and using similar rhetoric, thylacines (*Thylacinus cynocephalus* (Harris, 1808)) suffered similarly from settler colonists. Thylacines (also known as Tasmanian tigers or Tasmanian wolves) were the largest marsupial carnivores of modern times, but became extinct in the twentieth century. There are several parallels between the treatment and representation of thylacines and Indigenous Tasmanian people, and how their remains were traded. This allows for analysis of how the environmental and human costs of the colonial project were enmeshed with practices of natural history.

A central figure in the export of both thylacines and Indigenous remains from Tasmania was Morton Allport (1830–1878). This paper shows that Allport actively built his scientific reputation by exchanging specimens for honours. It asks whether this was a widespread model for other colonial figures who may have used specimen-based philanthropy to develop a form of soft power through associations with respected institutions such as learned societies, universities and museums. Figures like Allport played the role of a type of colonial settler-intermediary, valued for providing privileged access to specimens to the metropole.

Allport also worked to augment scientific work in Tasmania and the economic reputation of the colony, demonstrating that the development of social networks and scientific reputations of colonial figures were entwined with the status and success of the colonies themselves.

Diana L. Ahmad, “Travelers’ Observations of Land and Sea Creatures on Their Journeys to the South Seas, 1880s-1910s,” *Hawaiian Journal of History* 57 (2023), 43-63

10.1353/hjh.2023.a913603

Miller Kawanamo, Kipiro Damas, Tiberius Jimbo, Riccardo Testolin, and Michele De Sanctis, “Effect of Logging on the Structure, Diversity, and Tree Species

Composition of the Forests of New Guinea," *Case Studies in the Environment* 7:1 (2023)
DOI: 10.1525/cse.2023.2102883

Kane Fleury, Emma Burns, Marcus Richards, Kevin Norton, Stephen Read, Rachel Wesley, R. Ewan Fordyce and Klaus Wilcken, "The Moa Footprints from the Pliocene—Early Pleistocene of Kyeburn, Otago, New Zealand," *Journal of the Royal Society of New Zealand Special Issue: Fossil Vertebrates from Southern Zealandia*, 1-23. DOI: 10.1080/03036758.2023.2264789

Virtual Issue - History, Philosophy and Social Studies of Science:

Highlights from Past AAHPSSS Conferences

This **Historical Records of Australian Science** virtual issue has been curated in support of the 2023 conference of the Australasian Association for the History, Philosophy and Social Studies of Science, affectionately known as AAHPSSS. Dating back to 1966, AAHPSSS is one of the oldest academic associations in Australia.

First up in this issue is an article by Libby Robin, based on her Dyason Lecture from 2021. This lecture is AAHPSSS' signature annual event, named in honour of Diana 'Ding' Dyason, foundation President of the society.

The 2023 conference was hosted by the University of Sydney, one of Australia's leading History and Philosophy of Science departments. Daniela Helbig and Maureen O'Malley's article delves into the history of our discipline at this institution.

Nuclear concerns have been the subject of much conversation at recent AAHPSSS conferences, including at the 2023 meeting. Darren Holden's article on the history of the USA's nuclear weapons program touches on these issues, including Australian involvement and ideals of transparency.

The issue of this scientific ideal of openness – important for the metaresearchers at AAHPSSS – is also central to Terry Kass' account of Robert Hamilton Mathews.

There is much recent interest in the flows of colonial science especially between India and Australia. Sara Maroske's article is an important contribution to this literature.

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Conferences and Meetings

CFP: Paper proposals on Oceans HSTM for the 2025 ICHST in Ōtepoti Dunedin, New Zealand: "Peoples, Places, Exchanges, and Circulation"

The International Commission for the History of Oceanography (ICHO) is seeking paper proposals to join its sessions at the 2025 International Congress of History of Science and Technology to be held 29 June - 5 July 2025 in Ōtepoti Dunedin, New Zealand (for details, see: https://www.ichst2025.org/).

Hybrid sessions permitting remote participation will be possible.

Proposals should address some aspect of the history of ocean science and/or technology (broadly construed) in conversation with the conference theme Peoples, Places, Exchanges, and Circulation, explained below.

Please submit proposed abstracts by Friday, March 1, 2024 via this form. Questions? Contact Penelope Hardy (phardy@uwlax.edu).

Conference theme: Peoples, Places, Exchanges, and Circulation.

One of the most important trends in the field of the history of science, technology, and medicine has been a move towards more integrated, expansive, and connected histories that seek to include the participation of the entire world. Our Congress theme strives to further this development and to link different disciplines and perspectives. We also want to provide an opportunity for Indigenous voices, particularly those of Māori, to be heard.

The Congress theme emphasizes the importance of situating local knowledge and practices in specific contexts as well as local or regional history of science, technology, and medicine in a global context. What difference does a global perspective make for local, national, and regional studies in the history of science, technology, and medicine? How are local and global contexts related? How do local histories change if they are analyzed using a different scale of analysis, for example a regional or global framework?

The theme, however, also stresses the importance of circulation or back-and-forth movement across borders involving encounters and exchanges. We seek contributions that explore

movement or flow between regions, cultures, or societies, specifically the circulation, exchange, and transit of knowledge, techniques, texts, peoples, and material objects. How has this interaction resulted in new configurations in the history of science, technology, and medicine? Nevertheless, circulation does not mean that flows are always smooth.

Exchange and circulation involve local actors, who, in some cases have played an important role as go-betweens or mediators between different knowledge systems, but also as mediators between producers and consumers around the world.

We particularly welcome contributions that explore the historical role of Indigenous peoples in the history of science, technology, and medicine.

Overall, our theme stresses inclusive histories exploring peoples, places, exchanges, and circulation in the history of science, technology, and medicine from around the world.

Contact Information

Questions? Contact Penelope Hardy (phardy@uwlax.edu).

[DHST] 27th ICHST 2025

The organizing committee invites you to submit a Symposia to be considered for presentation at the conference in Ōtepoti Dunedin, 29 June - 5 July 2025.

We invite Symposia submissions on any topic in the history of science, technology and medicine, but we especially encourage proposals that address aspects of the conference theme, across all periods, and from a variety of methodological and historiographical approaches.

Symposia proposal submissions will close on _Monday 1 April 2024_.

The theme of the 27th ICHST is “*Peoples, Places, Exchanges, and Circulation*."

For more information and to download your symposia proposal template, please visit the *conference website.* <https://urldefense.com/v3/__https://www.ichst2025.org/call-for-symposia-proposals__;!!PvDODwlR4mBZyAb0!UbPYrA8K1FsndPvV1SSaG-8gWAHPi90eMNDhtuoZtFCy0L04q-2QIbHmu186RMLCI5hjkqsQlkBDubm5me0$ >

KEY DATES

Call for submission of symposia proposals Now open
Deadline for submission of symposia proposals 1 April 2024
Call for stand-alone papers opens 1 April 2024
Registration opens 11 July 2024
Deadline for submission of stand-alone paper proposals From 1 October 2024
Deadline for submission of paper abstracts within symposia From 1 November 2024
Early bird registration closes 3 April 2025
Program released online From 1 May 2025
Final date for registration 1 May 2025
Congress opens 29 June 2025

https://urldefense.com/v3/__http://www.ichst2025.org__;!!PvDODwlR4mBZyAb0!UbPYrA8K1FsndPvV1SSaG-8gWAHPi90eMNDhtuoZtFCy0L04q-2QIbHmu186RMLCI5hjkqsQlkBDZCMHL2U$ <https://urldefense.com/v3/__https://www.ichst2025.org/__;!!PvDODwlR4mBZyAb0!UbPYrA8K1FsndPvV1SSaG-8gWAHPi90eMNDhtuoZtFCy0L04q-2QIbHmu186RMLCI5hjkqsQlkBD-OUuXcY$ >