



Review Article

Connections across the Coral Sea

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The absence of archaeological narratives in Australian museums reflects a complex post-colonial history of research and museology. In this context, *Connections across the Coral Sea* at the Queensland Museum (December 2021 to 9 July 2023), Brisbane, is a welcome contribution to the important mission of sharing the ancient Australian past with the public. This object-rich exhibition illuminates the lives of coastal peoples, as understood through the ‘Coral Sea Cultural Interaction Sphere’ hypothesis—that is, the idea that during the late Holocene, this was a region of substantial maritime-based exchange between mainland Aboriginal Australians inhabiting Cape York and the peoples of the south coast of Papua New Guinea and the Torres Strait Islands (see McNiven *et al.* 2004; Figure 1). The key archaeological content on display includes evidence from excavations on Lizard Island (Jiigurru) off the east coast of Cape York, short films on the Cultural Interaction Sphere hypothesis and how it has been investigated, and a 3D-printed stratigraphic section accompanied by an impressive interactive virtual stratigraphic section (Figure 2). Proponents of the Coral Sea Cultural Interaction Sphere hypothesis argue that, although groups shared ideas, they continued to maintain their individual identities, in many cases choosing not to adopt technologies used in other areas (e.g. the continued use of spear throwers in Australia versus bows and arrows in the Torres Strait Islands and Papua New Guinea).

The range of objects on show is impressive but the exhibition relies on ethnographic objects of the post-European contact period to support the argument for earlier cultural connections. It is, however, archaeological evidence that provides a deeper chronological perspective. Pottery, for example, makes its first appearance in the wider region in association with the Asian Lapita peoples, who migrated into northern and eastern parts of Papua New Guinea *c.* 3500 years ago (Summerhayes 2017). Lapita pottery features distinctive designs and its discovery at Caution Bay on Papua New Guinea’s south coast (McNiven *et al.* 2011) offers a new insight into the geographical range of the Lapita peoples. The exhibition uses Lapita pottery from New Britain to stand in for the Caution Bay material, comparing these sherds with those discovered on Lizard Island. The latter have been discussed at Australian conferences for some years now and finally having them on display is wonderful—but it is also apparent that this material bears no similarity to Lapita pottery. The possible long-distance connections articulated through pottery discussed in the exhibition reminded me of Glyn Daniels’ (1962) chapter ‘Diffusion and Distraction’ and its assessment of Australian anatomist Grafton Elliot Smith’s hyper-diffusion hypothesis. Certainly, pottery recovered at Lizard Island from a secure chronological context is an important discovery and presents an opportunity to test scientifically the proposed connection back to

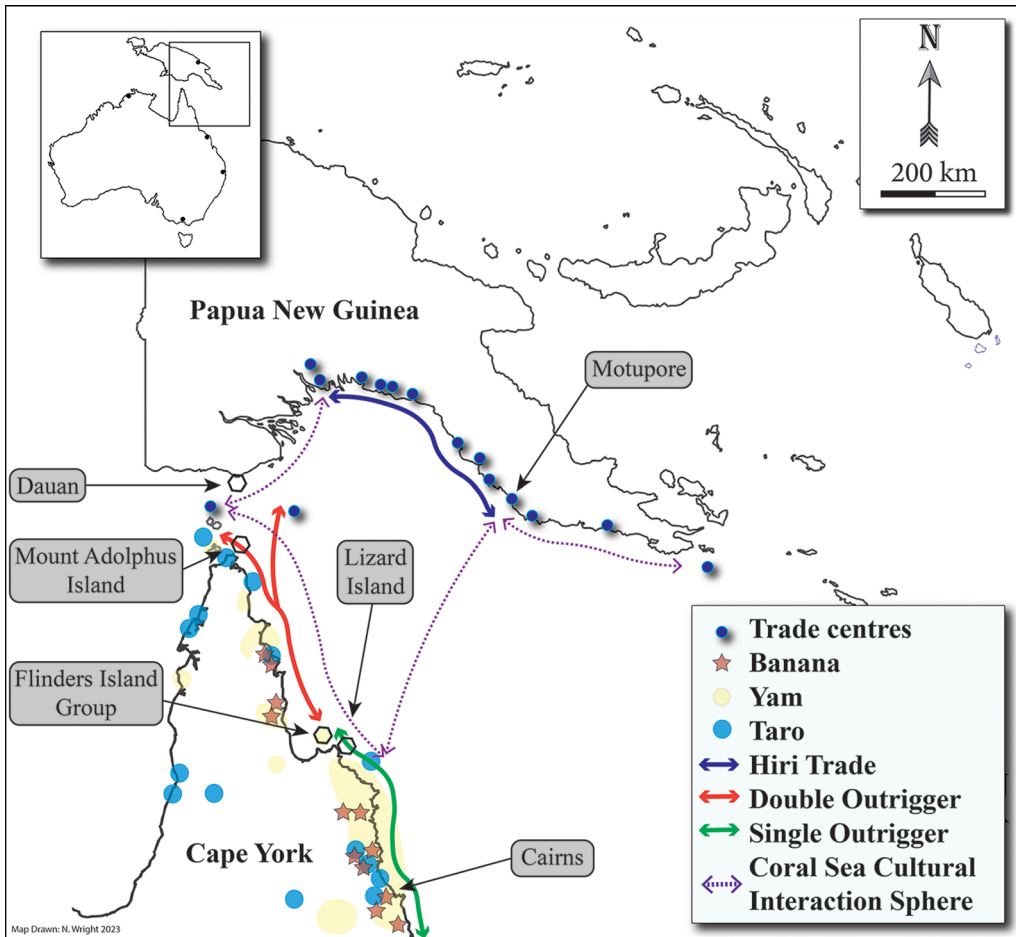


Figure 1. The Coral Sea and Torres Strait region between Papua New Guinea and Cape York, with an overview of the distribution of known cultivars and locations of key trade centres. The Hiri trade network is highlighted, as well as the known extent of outrigger canoe technology along the Australian east coast (adapted from Wasef *et al.* 2021) (map by N. Wright).

Papua New Guinea, but the research incorporated into the exhibition identifies the geochemical composition of the sherds as likely to be of local provenance.

Whether pots represent people is an age-old theme in archaeology. The value of new methods, such as aDNA, for investigating this question has been highlighted most spectacularly with the discovery revealed through hundreds of ancient genomes that the arrival of the Beaker complex in Britain was accompanied by a 90 per cent population turnover (Armit & Reich 2021). While not raised in the exhibition, McNiven and colleagues (2011) have previously argued that cultural diffusion across the Torres Strait Islands and Cape York may have been accompanied by the flow of genes—a hypothesis recently tested but unsupported by aDNA analysis (Wasef *et al.* 2021). But could the putative dotted line that links Lizard Island to Caution Bay support a connection through down-the-line diffusion with no gene flow? Possibly, but the



Figure 2. An interactive stratigraphic section provides an excellent opportunity to investigate the evidence from the Jijuru excavations (photograph by M.C. Westaway).

archaeological evidence on display provides no support for this argument. Could the sherds, instead, reflect local innovation? Possibly, but this option is also not explored.

These observations raise an important consideration for curators responsible for delivering exhibitions that seek to reconstruct large-scale regional prehistory. Should these exhibitions focus on the interpretations advanced by individuals or a single research team, or should they take a broader perspective, drawing on a diversity of scholarship to bring more academic debate into the museum context? By searching for and incorporating a wider range of evidence, *Connections across the Coral Sea* could have presented a more nuanced exploration of ancient Coral Sea connections. What, for example, is the potential significance of the thick, coarse earthenware pottery fragments from Ngiangu situated in the Kaurareg Archipelago (Brady *et al.* 2013)? If the Aboriginal inhabitants of this site, and of Lizard Island, used pottery, might Aboriginal pottery use have been more common than we believe?

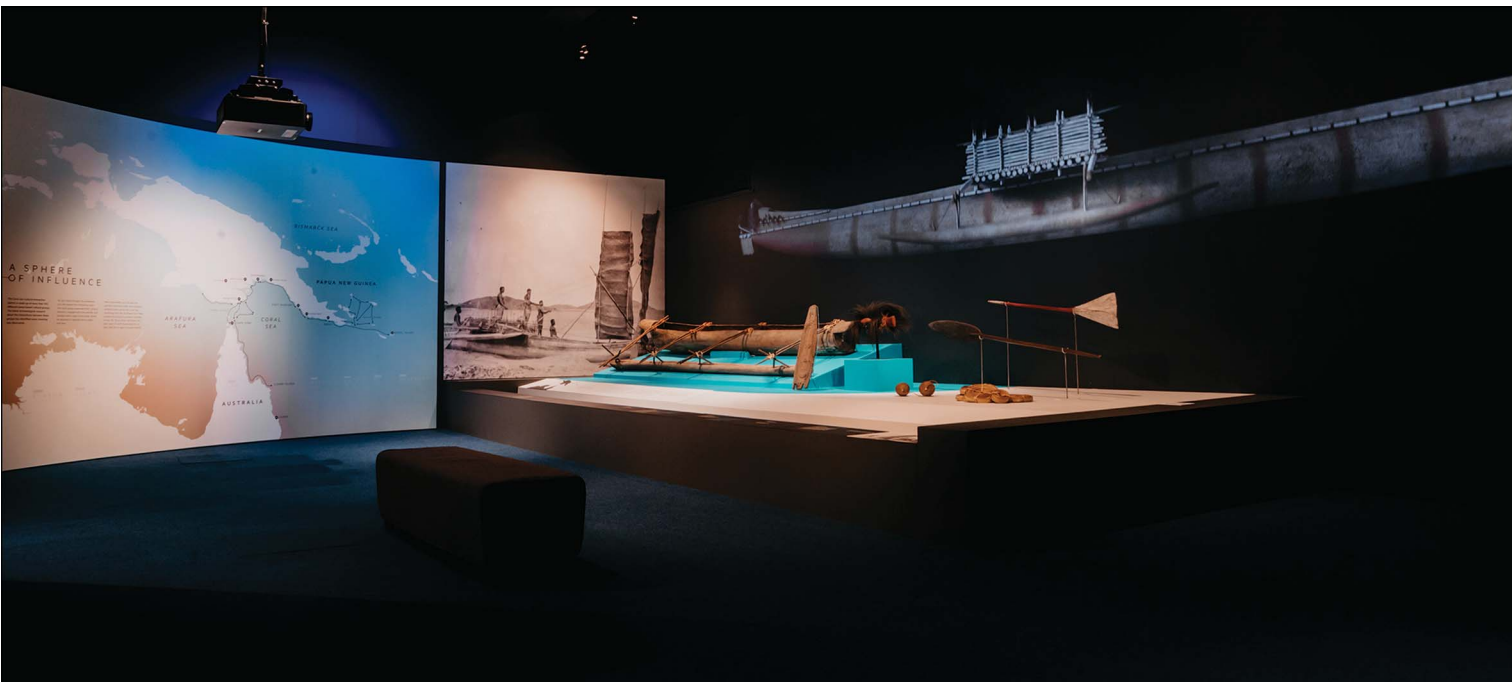
Similarly, research highlighting the presence of the cultivars banana, yam and taro in Cape York, and their possible early connection to Papua New Guinea, would broaden the range of evidence (Denham *et al.* 2009). More recent archaeobotanical research has determined that

agriculture was established in the West Torres Strait Islands by 2145 BP (Williams *et al.* 2020); wider application of the methods used in that study could greatly assist in the identification of connections across the region. For instance, ethnographic accounts of Aboriginal-occupied islands in the Torres Strait prior to European settlement indicate that Aboriginal people often reverted to plant cultivation when marine resources were sparse or unreliable, such as during very dry periods (Harris 2006). It would be worthwhile to establish whether plants were also exploited on Cape York islands when marine resources were stressed, as it is possible that cultivars may have been dispersed into Cape York via exchange throughout the Holocene, and long before the arrival of Lapita peoples. The excavations at Lizard Island did not use methods suitable for the recovery of archaeobotanical evidence and, unsurprisingly, concluded that island subsistence depended almost entirely on a marine-based economy. Integrated archaeobotanical work will be critical for future research in this region.

Recent archaeological and aDNA research undertaken in the Flinders Island group, located north of Lizard Island (Figure 1), have demonstrated genetic connections between the inhabitants of these islands and people from Central Queensland, but not with Torres Strait Islanders (Wasef *et al.* 2021); these results raise questions about cultural exchange and trade between southern Aboriginal language groups. Excavations have provided evidence for island occupation in excess of 6000 years (Wright *et al.* 2023), pre-dating the arrival of Lapita peoples in the north by some 3000 years. The results of strontium isotope analysis highlight the complex mortuary processes that interlinked the local region (Adams *et al.* 2021), revealing an established seafaring society that even provided for the return of the dead by sea to their place of birth.

Such early dates for island use suggest that sea-going societies were established in coastal regions of Cape York well before the arrival of Lapita peoples. Indeed, watercraft capable of several days at sea were needed to colonise Australia during the Pleistocene, evidence for pelagic fishing on Timor 42 000 years ago (O'Connor *et al.* 2011) and for complex obsidian trade networks at the terminal Pleistocene in Wallacea (Maloney *et al.* 2018), all lend support to the idea that sea-going craft were part of the Oceania seascape from the Late Pleistocene onwards. If such technological advances were present in the Late Pleistocene, is it then reasonable to suggest that watercraft with outriggers in Sahul pre-date the arrival of Lapita peoples?

Over the decades, we have seen the development of sophisticated analytical techniques to interrogate the connections between different classes of artefacts. Maritime technology is a prominent feature of the exhibition, and while many craft share traits, such as outriggers, closer inspection suggests that the differences between vessels far outweigh the similarities. Watercraft are designed for varied purposes leading to diverse forms, as dramatically demonstrated by comparing the digital reconstruction of a war canoe from the Torres Strait Islands with an outrigger canoe from Yarrabah (Figure 3), to the model of a Papua New Guinea sailing vessel (the latter is a Gawa Island boat from outside the Coral Sea Cultural Interaction Sphere, presumably used as a stand-in vessel for the distinctive crab claw-sail Lakoita boats characteristic of the Hiri trade). A more quantitative comparison would provide greater insight for understanding the diversity, complexity and origins of these boats, and their societal contexts. Rogers and Ehrlich's (2008) pioneering cladistic approach to Polynesian canoes is one example of an appropriate analysis for understanding the relationship between watercraft. Adopting a more sophisticated methodology for comparing different classes of maritime vessels would quantify if the variation in outrigger form is more likely connected with



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Figure 3. A 3D reconstruction of a Torres Strait canoe compared with a much smaller Aboriginal outrigger canoe from Yarrabah, Cape York (photograph © Queensland Museum).

adaptation to distinct social and economic activities, or stands as an example of the diffusion of marine technology following the arrival of Lapita peoples.

A further question to consider is that by looking for inspiration from the north, do we run the risk of ignoring local Aboriginal innovation in Cape York? The archaeology of east Cape York is different from the Torres Strait, with much evidence for local innovation and adaptation, including, for example, the permanent colonisation of rainforests (Cosgrove 1996). Networks operating across the Cape were probably far more closely focused on adjacent coastal and island communities than on long-distance influence from the north, as demonstrated by the Flinders Island genetic and isotopic research noted above. One important social difference between groups across the wider region that is not addressed in the exhibition, but apparent both archaeologically and ethnographically, is organised warfare. The presence in the Torres Strait Islands of trophy skull houses dedicated to the storage of decorated heads collected as the spoils of warfare (David & Ash 2008) and villages located in strategic locations for defence (David 2008) are just two of the clearly conflict-related signatures that distinguish these societies from Aboriginal groups. The general absence of practices that can be labelled as ‘warfare’ among Aboriginal groups indicates that they were able to maintain their individual identities, social structures and economies, even when connected to peoples with very different identities and cultures.

Archaeological exhibitions should engage with the diversity of research to challenge the ways we think about the past; they can also offer the possibility to evaluate the evidence that is employed to reconstruct archaeological accounts. In this instance, having artefacts assembled in an exhibition space where they can be compared provides the opportunity to re-evaluate claims about connections that were first aired in the pioneering late nineteenth-century research of Alfred Haddon (Haddon & Hornell 1937). The exhibition does not provide a convincing archaeological case to support the Coral Sea Cultural Interaction Sphere hypothesis, and, after seeing the distinct differences between some of the key ethnographic objects, particularly those linked with maritime technologies, I felt that the idea of an interaction sphere may not be well supported by ethnohistorical evidence either.

Bruce Pascoe’s *Dark Emu* (2014), with over 300 000 sales, has revealed a desire amongst the Australian public for greater dialogue and understanding around Australia’s prehistory. *Connections across the Coral Sea* is an important addition to this evolving narrative, even if no convincing archaeological evidence is presented to support the exhibition’s claim for cultural movement, interaction and exchange extending south into the Cape York region. A well-developed multidisciplinary approach to future archaeological investigations across this region will, in due course, allow a fuller and more critical evaluation of this hypothesis.

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References

- ADAMS, S. *et al.* 2021. Isotopic analyses of prehistoric human remains from the Flinders Group, Queensland, Australia, support an association between burial practices and status. *Archaeological and Anthropological Sciences* 13(7): 1–17. <https://doi.org/10.1007/s12520-021-01376-3>
- ARMIT, I. & D. REICH. 2021. The return of the Beaker folk? Rethinking migration and population change in British prehistory. *Antiquity* 95: 1464–77. <https://doi.org/10.15184/ajqy.2021.129>
- BRADY, L.M., W. DELANEY & R. ROBBINS. 2013. The Queensland Museum Expedition to Ngiangu (Booby Island): rock art, archaeology and inter-regional interaction in south-western Torres Strait. *Queensland Archaeological Research* 16: 93–120. <https://doi.org/10.25120/qar.16.2013.225>
- COSGROVE, R. 1996. Origin and development of Australian Aboriginal tropical rainforest culture: a reconsideration. *Antiquity* 70: 900–12. <https://doi.org/10.1017/S0003598X00084155>
- DANIELS, G. 1962. *The idea of prehistory*. London: Pelican.
- DAVID, B. 2008. The archaeology of defence on Mua. *Memoirs of the Queensland Museum, Culture* 4: 369–78.
- DAVID, B. & J. ASH. 2008. What do early European contact-period villages in Torres Strait look like? Archaeological implications. *Memoirs of the Queensland Museum, Culture* 4: 303–24.
- DENHAM, T., M. DONOHUE & S. BOOTH. 2009. Horticultural experimentation in northern Australia reconsidered. *Antiquity* 83: 634–48. <https://doi.org/10.1017/S0003598X00098884>
- HADDON, A.C. & J. HORNELL. 1937. *Canoes of Oceania, volume II: the canoes of Melanesia, Queensland and New Guinea* (Bishop Museum Special Publication 28). Honolulu (HI): Bishop Museum.
- HARRIS, D.R. 2006. The interplay of ethnographic and archaeological knowledge in the study of past human subsistence in the tropics. *Journal of the Royal Anthropological Institute* 12: S63–S78. <https://doi.org/10.1111/j.1467-9655.2006.00273.x>
- MALONEY, T.R., S. O'CONNOR & C. REEPMAYER. 2018. Specialised lithic technology of terminal Pleistocene maritime peoples of Wallacea. *Archaeological Research in Asia* 16: 78–87. <https://doi.org/10.1016/j.ara.2018.05.003>
- McNIVEN, I.J., F. VON GNIELINSKI & M. QUINNELL. 2004. Torres Strait and the origin of large stone axes from Kiwai Island, Fly River estuary (Papua New Guinea). *Memoirs of the Queensland Museum* 3: 271–89.
- McNIVEN, I.J. *et al.* 2011. New direction in human colonisation of the Pacific: Lapita settlement of south coast New Guinea. *Australian Archaeology* 72: 1–6. <https://doi.org/10.1080/03122417.2011.11690525>
- O'CONNOR, S., R. ONO & C. CLARKSON. 2011. Pelagic fishing at 42 000 years before the present and the maritime skills of modern humans. *Science* 334: 1117–21. <https://doi.org/10.1126/science.1207703>
- PASCOE, B. 2014. *Dark emu. Black seeds: agriculture or accident?* Broome: Magabala.
- ROGERS, D.S. & P.R. EHRLICH. 2008. Natural selection and cultural rates of change. *Proceedings of the National Academy of Sciences of the USA* 105: 3416–20. <https://doi.org/10.1073/pnas.0711802105>
- SUMMERHAYES, G. 2017. *Lapita interaction*. Canberra: ANH.
- WASEF, S. *et al.* 2021. A contextualised review of genomic evidence for gene flow events between Papuans and Indigenous Australians in Cape York, Queensland. *Quaternary International* 603: 22–30. <https://doi.org/10.1016/j.quaint.2021.02.011>
- WILLIAMS, R.N., D. WRIGHT, A. CROWTHER & T. DENHAM. 2020. Multidisciplinary evidence for early banana (*Musa* cvs.) cultivation on Mabuyag Island, Torres Strait. *Nature Ecology & Evolution* 4: 1342–50. <https://doi.org/10.1038/s41559-020-1278-3>
- WRIGHT, M., P. FAULKNER & M. WESTAWAY. 2023. Evaluating Mid- to Late Holocene economic intensification through analysis of a mollusk assemblage on the tropical North Australian coast, in H.B. Thakar & C.F. Fernandez (ed.) *Human behavioural ecology and coastal environments*: 199–228. Gainesville: University Press of Florida.