

Codesigned Archaeological Research in the Alligator Rivers Region, Northern Territory, Australia

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ABSTRACT

In much of the Western world, collaborative research undertaken by settler archaeologists readily lends itself, at least in part, to a continuation of the colonial project. Yet, against this backdrop, Australia's First Nations' peoples continue to work with researchers and to drive systemic change in research practice. Community-engaged archaeology, defined here as codeveloped studies of ancestral places (following Schaepe et al. 2017), is directed to improving relationships between Indigenous peoples and archaeologists. Even so, the practice of archaeology with and for nonsettler communities remains underdeveloped with regard to institutional priorities and funding agency bureaucracies. Here, we (Mirarr Traditional Owners, Mirarr employees, and settler archaeologist researchers) reflect on these issues as part of our ongoing research on the ochres and bim (rock art) of the well-known Madjedbebe rockshelter in the Alligator Rivers region, Northern Territory, Australia.

Keywords: Australia, Indigenous archaeology, partnership, codesign, governance, decolonization

En gran parte del mundo occidental, la investigación colaborativa llevada a cabo por arqueólogos colonizadores se presta fácilmente, al menos en parte, a continuar con el proyecto colonial. Sin embargo, en este contexto, los pueblos de las Primeras Naciones de Australia siguen trabajando con investigadores e impulsando un cambio sistémico en la práctica de la investigación. La arqueología comprometida con la comunidad, definida aquí como estudios de lugares ancestrales co-desarrollados (según Schaepe et al. 2017), está dirigida a mejorar las relaciones entre los pueblos indígenas y los arqueólogos. Aun así, la práctica de la arqueología con y para comunidades no colonizadoras sigue subdesarrollada en cuanto a las prioridades institucionales y las burocracias de las agencias de financiamiento. Aquí, nosotros (los Propietarios Tradicionales Mirarr, los empleados Mirarr y los investigadores arqueólogos colonizadores) reflexionamos sobre estos temas como parte de nuestra investigación en curso sobre los ochres y el *bim* (arte rupestre) del conocido refugio rocoso Madjedbebe en la región de los Alligator Rivers, Territorio del Norte, Australia.

Palabras clave: Australia, arqueología Indígena, asociación, co-diseño, gobernanza, descolonización

Despite, or perhaps because of, its highly contentious status as a settler nation, Australian researchers have been at the vanguard of movements to “decolonize” archaeological practice (e.g., Davidson et al. 1989; Lilley 2005; Smith and Wobst 2005). Putting aside the degree to which this is possible given the overt “Whiteness” (Mate and Ulm 2021) and inherent nature of the discipline, many local practitioners now routinely adopt a highly consultative approach to Indigenous-related research. Projects are often codesigned, and they increasingly aim to provide outcomes that will directly benefit Aboriginal¹ communities rather than merely generating new scientific knowledge, in a form of “archaeology as service.” Here, we outline ongoing developments with the aspiration of First Nations–led research while freely acknowledging that, for now, the development of accountable

research practices is ongoing (after Fitzpatrick 2019, 2021; see also Doering et al. 2022).

We acknowledge that archaeology (and by extension, commercial applications thereof, such as cultural heritage management² [CHM]) has its roots in racism and colonial violence with an exploitative history that—regardless of practitioners’ intent—remains inherent in some of the methods and theories still in use (Fitzpatrick 2019, 2021; Smith 2021). In this context, and under the governance structures of nonnative bureaucracies, archaeologists work within a set of colonialist epistemes that irreconcilably embed an inequitable relationship between First Nations communities and settler practitioners (Schneider and Hayes 2020; see also Huntley and Wallis 2023; Langton and Mazel 2008, 2012).

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The Alligator Rivers region of the Northern Territory (NT) amply demonstrates this exploitative history. For nearly a century, this region has drawn researchers with the prospect of exploring the history of human occupation of the Australian continent, enhanced by an abundance of traditional knowledge of the world's "longest living culture" (Clarkson et al. 2017; Roberts et al. 1990a, 1994; Schrire 1982). There has been a noticeable shift from research initially being conducted on or about *Bininj* (Aboriginal people) and their lands, to research being conducted *with* the assistance of *Bininj*, to the most recent phase during which *Bininj* are proactively determining which researchers they will support to work alongside them and what research they want pursued in their Country (i.e., participatory design; Simonsen and Robertsen 2012). These developments have occurred within increasingly complex and politically charged frameworks. In this article, we note some of the benefits of community-driven research while exploring some of the systemic challenges that still exist and that make research codesign difficult to achieve. This is achieved through reference to a case study: that of the Mirarr people, whose clan estate includes land and waters within the World Heritage-listed Kakadu National Park (KNP) and two mining development areas within the Park (Figure 1).

SETTING THE SCENE: LAND RIGHTS, MINING, LEGISLATION, AND GUNDJEIHMİ ABORIGINAL CORPORATION

In the mid-twentieth century, the Alligator Rivers region was largely still under the control of the Crown and sparsely populated by *Bininj* and *Balanda* (non-*Bininj*). Uranium was discovered at Coronation Hill in 1953; in Mirarr *kunred* ("Country," the term used by *Bininj* to describe their homeland territories), the Ranger deposit was discovered in 1969, and the Jabiluka deposit in 1971 (Graetz 2015). At this time, the price of uranium was soaring, and the Australian government saw an opportunity to create a possible windfall—estimated at \$1.5 billion in 1973 dollars—for the local economy (Commonwealth Government 1977:7). The defined uranium province of the Alligator Rivers region (established under the [Environment Protection \[Alligator Rivers Region\] Act 1978](#)) subsequently became the flash point for the competing priorities of environmental and heritage conservation, Indigenous land rights, and national economic development (O'Sullivan 2021).

In May 1972, the Alligator Rivers Region Environmental Fact-Finding Study was commissioned by the Department of the NT (in cooperation with the mining industry) to explore the opportunities for uranium mining. But other social issues in Australia at that time potentially stood in the way—specifically, (1) plans to create a national park in the region (O'Brien 2003) and (2) the Woodward Royal Commission, designed to formally investigate the recognition of land rights in the NT (Woodward 1973, 1974). Either initiative might have precluded mineral resource extractive industries being established in the Alligator Rivers region. The issue came to a head in late 1974 when the Japanese and Australian governments released a joint press statement that recorded the commitment by Australia to supply uranium to Japan (Commonwealth Government 1974), thereby affirming that mining would proceed regardless of any other outcomes.

In 1975, a separate inquiry was commissioned to consider the situation of mining and the creation of a national park. The subsequent reports, known as the "Fox Reports," recommended that (1) Aboriginal people be granted freehold ownership of their traditional lands, subject to a national park being created, and (2) uranium mining proceed, despite clear Aboriginal opposition (Fox et al. 1976, 1977). On August 30, 1978, the grant of freehold title over a large part of the Alligator Rivers region was made to the Kakadu Aboriginal Land Trust under the [Aboriginal Land Rights \(NT\) Act 1976](#), followed two months later by the signing of an agreement to mine at Ranger, along with another agreement for a 100-year lease of KNP to the Australian Government (O'Sullivan 2021:11). The Ranger uranium mine commenced operation in 1980, and the Gundjeihmi Aboriginal Corporation (GAC) was formed in 1995 to manage production-based payments from it (O'Brien 2014). The inherent tensions of the situation were perpetuated by plans to develop the Jabiluka uranium deposit in the late 1990s, resulting in a global campaign to oppose the development on both environmental and heritage grounds. Throughout the campaign, GAC represented the Mirarr traditional owners, led by senior elder Yvonne Margarula and then CEO Jacqui Katona.

Parallel to the above events was the passing of legislation pertaining specifically to the protection of Aboriginal cultural heritage, separate from and beyond the Land Rights Act. In the NT, the key acts that form the framework within which researchers (and developers) operate are the Aboriginal Sacred Sites Act 1989 (for "sacred"—often intangible—sites) and the Heritage Act 2011 (for archaeological sites).

It was against this background that systematic and sustained archaeological research in the Alligator Rivers region commenced. In briefly considering the history of such research, we demonstrate the shifting dynamics of researchers and First Nations people over nearly 50 years.

ARCHAEOLOGICAL RESEARCH IN THE ALLIGATOR RIVERS REGION

The Alligator Rivers area is . . . blanketed with the claims of universities and research workers who took no part in the anti-uranium struggle but are now its beneficiaries [Allen 1981:40].

Although anthropologists such as Baldwin Spencer (1914) had been drawn to the Alligator Rivers region from the late nineteenth century, it was not until the mid-twentieth century that the first "archaeological" research was undertaken. McCarthy and Setzler (1960) carried out excavations of rockshelters around Gunbalanya in the 1940s as part of the joint American-Australian Expedition to Arnhem Land. Concentrating primarily on establishing lithic typologies, their research was very much undertaken in the tradition of Western knowledge generation, and they showed little recognition of *Bininj* as the owners of their heritage or as having any role to play in research per se other than as "informants" or "subjects." Members of this research team were also responsible for robbing *Bininj* graves and sending skeletal remains primarily to the Smithsonian's US National Museum of Natural History, to the great dismay of locals (Thomas 2011:21).

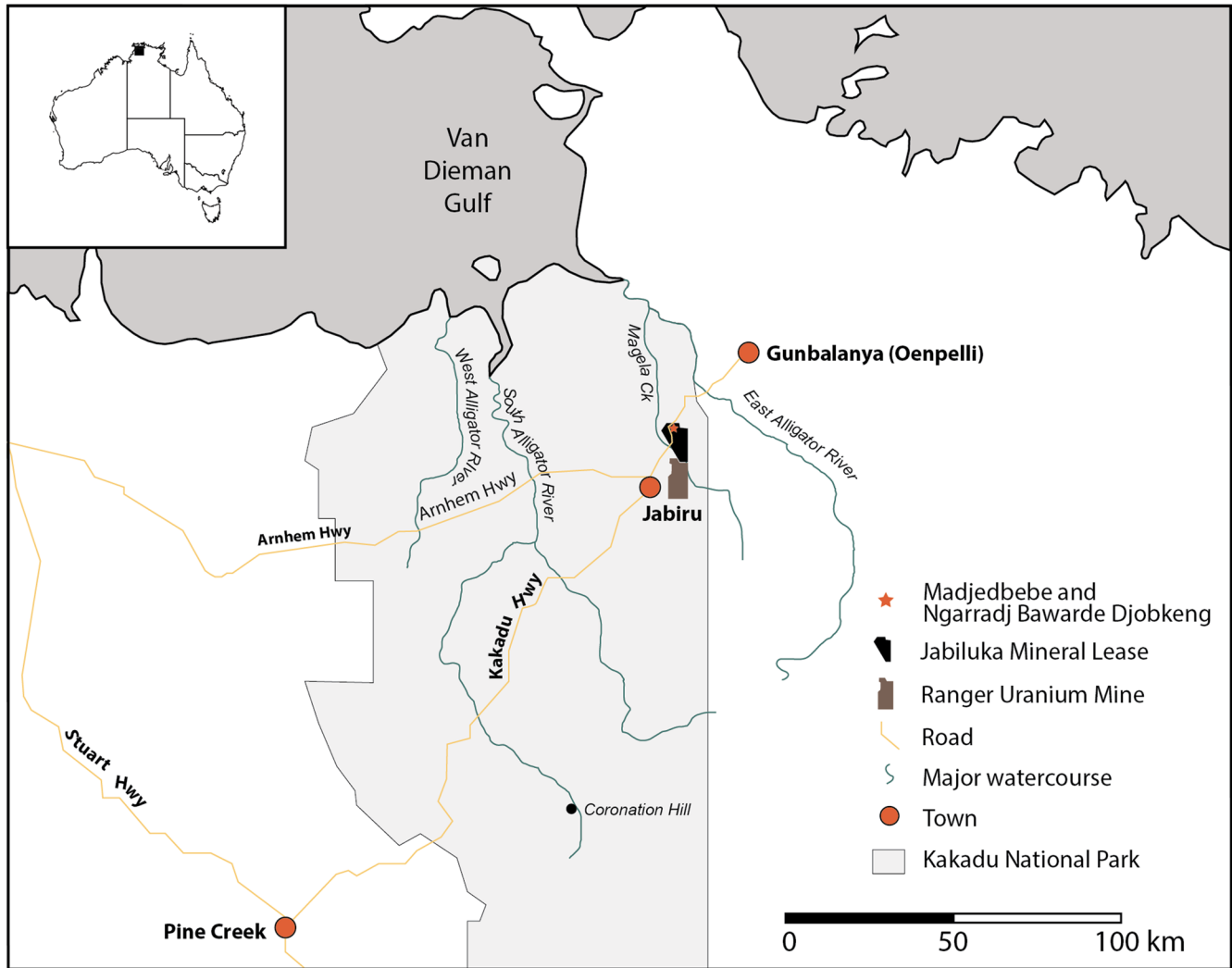


FIGURE 1. Map showing the location of the study area and key places mentioned in the text.

A lull followed, but it was perhaps inevitable that the mid-1960s saw the beginning of sustained archaeological research in the Alligator Rivers region: as a result of the then newly formed vehicle access tracks associated with mineral exploration, rock art sites became easily accessible to *Balanda* for the first time. Carmel Schrire (1972, 1982, 1984; White 1967a, 1967b, 1967c, 1971; White and Peterson 1969) commenced her doctoral research, implementing an ethnographic approach that presupposed the rights of *Bininj* over their own cultural heritage. She made extensive use of “the verbal reports of local Aboriginal information,” relying heavily on “Aboriginal informants to guide us to ‘old living places’” and for “interpreting the archaeological remains,” as well as using local *Bininj* men as laborers (White 1967a:7, 17, 49). Her publications alerted an international audience to the remarkably long history of human occupation in the region and heralded in more sustained research designed to inform government decision-making processes around the establishment of the proposed national park. Importantly, though, although dedicating her dissertation to Frank Gananggu and acknowledging many other *Bininj* as having assisted with her research, she afforded *Bininj* little agency in terms of the research design or control.

After lobbying by prominent archaeologist John Mulvaney, who had recently written the first major synthesis of Australian pre-history (Mulvaney 1969), Kamminga and Allen (1973) were commissioned by the then Federal Department of the Interior and the Minerals Council to produce one of the “fact finding” reports about the archaeological sites of the region.³ Although Kamminga and Allen worked with *Bininj* from Gunbalanya, the latter had little say in where the work would be undertaken or what sites should be recorded. However, in a national first, they were paid wages at award rates—a practice rarely repeated in future projects.

As discussed by Levitus (2015:80), the changing political framework at this time “instigated a change in their [i.e., *Bininj*] formal status from a passive, uninformed and disregarded population of onlookers to a central interest group whose participation in the affairs of the area had to be elicited.” Yet, although acknowledging “the increasing power of Aboriginal community to decide whether research is acceptable to them,” Allen (1978:21) noted that “Aboriginal control, at present, is restricted to the passive role of granting or denying access to sites or communities.” Haynes

(2009:162) recounted *Bininj* often being surprised, confused, embarrassed, and hesitant about these newly granted powers.

Such hesitation was not apparent, however, when the Gunbalanya Council voted against allowing Kamminga and Allen to investigate the western sector of the Arnhem Land Reserve (Allen 1978:22). This adamant refusal was likely a result of the earlier grave robbing undertaken by the American-Australian Expedition team members. Despite this rebuff, after 12 months of negotiation, Allen and Barton (1989; Barton 1979) were granted permission to carry out excavations at the Ngarradj Bawarde Djobkeng (also termed Ngarradj Warde Djobkeng) rockshelter (on the northwest margin of the Mirarr clan estate) in 1977.

Allen (1978:22) noted that although he had previously employed *Bininj* as “informants, guides and as wage labourers to assist with test excavations,” he did not like doing so because the “‘master/servant’ relationship prevented much useful contact.” To address the issue during the Ngarradj Bawarde Djobkeng project, Allen (1978:22–23) offered *Bininj* a deal whereby, in return for field assistance, he would provide training and experience, along with a field allowance. Although he saw the initiative as a “qualified success,” with several Indigenous people from other Australian states participating alongside some senior *Bininj* men from Gunbalanya, no other local *Bininj* partook, being already “fully involved in outstation, school or council work” (Allen 1978:24). In hindsight, it is likely that their lack of input into the project design and aims also precluded *Bininj* fully embracing the opportunity, in addition to their not fully seeing any utility of the research—either as individuals or as a community.

In the 1980s, the Australian Parks and Wildlife Service, responsible for managing KNP, awarded a follow-up consultancy to researcher Rhys Jones to produce information to inform the “management of archaeological sites within Kakadu” (Ovington in Jones 1985:iii). Jones (1985:vi) noted that “before any fieldwork could be planned, it was essential that the opinions of the Aborigines of the region be canvassed, our plans fully discussed with them (altered if necessary to meet their reasonable wishes), and if possible, their permission for the work obtained” (emphasis added). He visited KNP and met with key *Bininj*, noting that some of these people became field team members during the subsequent work, including Mirarr elder Toby Gangali. Yet, there was still little serious input from *Bininj* into the research design—indeed, the project had been conceptualized by park management and researchers, and the wording in Jones (1985) suggested that it would have proceeded regardless of *Bininj* wishes. In concluding his report, Jones (1985:299–304) offered recommendations for archaeological site management in KNP; it is telling that this chapter was sole authored, with *Bininj* relegated to nameless contributors whose aspirations for the protection of their own heritage were best left to, and conveyed by, a White researcher.

As numerous rock art researchers began working in the park (see May et al. [2015] and Taçon [2022] for near-complete lists)—many, arguably, with their key concerns being sharing knowledge with global audiences (rather than local communities) and their own careers—important governance shifts were afoot. As additional land claims were being recognized across the NT, *Bininj* began forming their own incorporated bodies, no longer solely relying on representation through the Northern Land Council. This heralded in greater requirements for researchers to codesign programs with *Bininj*.

GAC COMMUNITY LEADERSHIP

In the last decade, GAC has implemented social enterprises and taken direct responsibility for heritage site identification and protection in Mirarr *kunred*, broadening their mission beyond financial governance and lobbying (Masterson 2010:9). Ironically, capacity for such initiatives is in part made possible through the payments received from the Ranger mine. A core development has been the establishment of a ranger team, the members of which actively participate in cultural heritage surveys and management activities. Ranger team members form a corpus of *Bininj* who can also participate in GAC Board-approved research projects.

Under these widened responsibilities there have been several major research investments by Mirarr, two undertaken specifically with an eye to the political significance of anticipated findings. The first was the Mirarr Gunwarddebim project, carried out over five years and led by Sally May, which was designed to document *bim* in the Mirarr clan estate, especially the Jabiluka mineral lease (Figure 2). Although originally designed to train Mirarr people in site recording, this aim was not realized. The major outcomes of this research were the construction of an online site database, primarily designed for research purposes, academic outputs (e.g., Hayward 2016; Johnston 2018; Marshall 2019; Miller 2016), and a small number of unpublished reports to GAC (May 2018; Skitmore et al. 2015). GAC subsequently took over direct control of the database and refocused it for the purposes of management, and it also engaged its own in-house cultural heritage advisor (LW) to provide cultural heritage training for *Bininj*, among other responsibilities (Figures 3 and 4).

The second research program recently supported by GAC was the re-excavation of Madjedbebe (formerly Malakunanja II), a rockshelter located on the Jabiluka mineral lease. Initially reported in Kamminga and Allen (1973), this site had drawn great attention in the 1990s when then newly developed thermoluminescence (TL) dating techniques were applied, revealing that the lower levels of the site were approximately 50,000 years old (Roberts et al. 1990a). Given that this was considerably older than any other known site in Australia at the time, debate proliferated around the validity of these dates (e.g., Allen and O’Connell 2003; Bowdler 1990, 1991; Hiscock 1990; Roberts et al. 1990b). Mirarr elders recognized the political and legal significance of having Western scientists confirm such early dates through refined optically stimulated luminescence techniques. Accordingly, in the 2010s, GAC supported another excavation at the site, funded by the Australian Research Council (ARC) with substantial GAC in-kind support. These later excavations indicated the commencement of human occupation at Madjedbebe around 65,000 years ago (Clarkson et al. 2017). Following debate (e.g., Bowdler 2017; Clarkson et al. 2018; Smith et al. 2020; Veth 2017; Williams et al. 2021; Wood 2017), public discourse in Australia has strongly adopted the findings from Madjedbebe, and the 65,000-year date is now routinely cited as the basis for the world’s “longest continuous culture” in parliamentary documents, policy documents, government statements, and across the media. A multitude of specialist studies were forthcoming from this project—although, under current arrangements, researchers now seek direct approval from GAC to work on materials excavated from Madjedbebe (e.g., Crough-Heaton 2021; Langley 2021; Langley et al. 2023; Litster 2022; and see the case



FIGURE 2. Researcher team working in the Mirarr estate. (Photograph by Matthew Abbott.)

study below), rather than obtaining access via the lead researcher, as was formerly the case (Basiaco 2018; Carah 2017; Cox 2013; Florin 2013, 2020; Florin et al. 2020, 2021; Hayes 2015; Hayes et al. 2021, 2022; Lowe 2014; Marwick et al. 2017; McNeil 2016; Moody 2016; Woo 2020).

A third major research initiative was also recently completed that focused on *djenj* (fish; Disspain et al. 2019; Wallis and Disspain 2019). Although this project facilitated interpretation of the archaeological otolith (fish ear stones) assemblage from Madjedbebe, it was codesigned with community members as a form of “archaeology of service,” with other core outcomes. These included teaching *Bininj* children and rangers about Western fish and water research techniques to improve their employment opportunities; to allow senior *Bininj* people to share Traditional Ecological Knowledge with children, rangers, and researchers; and to produce teaching resources for the local school (Figure 5).

Free, Prior, and Informed Consent

As a result of increasing experience in research engagement informed by the three research initiatives described above, GAC has now developed and implemented an internal “Expression of Interest” (EOI) process. Centred on the principle of “free, prior, and informed consent” (FPIC), GAC’s EOI process reflects broader developments in the Indigenous community sector’s relationship with the research community. It requires researchers to not only

provide an outline of their research interest but also consider how *Bininj* will be involved and what community benefits will arise from the works. This explicitly enforces the principles of the United Nations Declaration on the Rights of Indigenous Peoples (United Nations 2007; see also United Nations 2021) and is in line with Australian ethical research guidelines and recommendations (Australian Institute of Aboriginal and Torres Strait Islander Studies [AIATSIS] 2020; Joint Standing Committee on Northern Australia 2021; Woodward et al. 2020). Research projects must now provide tangible and intangible benefits to the Mirarr. These might take the form of opportunities for direct and indirect employment; repatriation of legacy knowledge and materials; assistance with future projects; joint publications and outputs; individuals developing new skills via informal and formal training; equipment that the community can retain after researchers have left; political support, spending time on *kunred*; facilitating intergenerational knowledge sharing; input into local school programs; community travel (such as through conference attendance; or opportunities to visit research facilities); opportunities for *Bininj* to build wider networks beyond the local community; self-determination; and personal and community pride. This is a marked change from tokenistic approvals, such as letters of support obtained from unrepresented individuals and generalist claims about the benefit of providing new knowledge about the Indigenous past.

A critical element of the GAC EOI process is that it requires researchers to obtain in-principle support from the community



FIGURE 3. Djurrubu ranger team working in the Mirarr estate: (left to right) Malcolm Nango, Cusiak Nango, Lynley Wallis, Martin Liddy, Allio Djandjul, and Clarrie Nadjamerrek. (Photograph by Mia Dardengo.)

from the outset—instead of their seeking community support once they have funding in hand. We note that other Aboriginal organizations around Australia, such as Butchulla Aboriginal Corporation and Gummingurru Aboriginal Corporation in Queensland and the Murujuga Aboriginal Corporation in Western Australia, have enacted similar policies. Approaching communities after funding has been secured—which sometimes still happens—places undue pressure on communities to proffer consent for projects simply because the money is already in place. Internationally, not all funding bodies require letters of support to be submitted alongside grant applications, although they may be considered as supplementary material. In recent years, the ARC has changed its policy around this, and researchers more broadly now need to demonstrate that they have in-principle support from relevant First Nations organizations for any proposed research. But this “demonstration” still often comes merely in the form of an assertion by the researcher that support is in place, rather than a requirement that a letter of support be a formal component of the application.

ONGOING CHALLENGES FOR EQUAL PARTICIPATION IN RESEARCH

Despite the increasingly positive state of research in Mirarr *kunred*, barriers remain to sincerely advancing “Indigenous based

research approaches for the benefit of Indigenous Peoples” (Doering et al. 2022:2) and for First Nations’ peoples to engage with researchers on an equal footing. We describe some of these below with the hope that awareness will increase the generation of innovative solutions, focusing especially on some of the structural issues that we see could be addressed in the near future. We do not, however, present a list of solutions or recommendations, which one reviewer of this article implored us to do. Every Aboriginal community has different experiences, histories, ideas, and recommendations for what might work best for it. There is no “one size fits all” recommendation we can make for many of the issues raised below. Furthermore, asking Indigenous people to come up with solutions for problems they did not create but that have been thrust on them is anathema. The onus is on researchers to do the heavy lifting in this space.

Joint Authorship

A meaningful and symbolically important change in Australian research is occurring in terms of joint authorship, a phenomenon rarely seen 20 years ago but now common (see AIATSIS 2020; Australian Research Council [ARC] 2022; Bawaka Country et al. 2022; Committee on Publication Ethics 2022; International Committee of Medical Journal Editors 2022). Researchers must first present their findings to the Mirarr community, in a culturally appropriate form (such as a visual presentation), before they are revealed to a global academic audience; similar approaches are seen internationally, such as in Canada (e.g., Rahemtulla 2020).



FIGURE 4. Djurrubu rangers doing training in stone artifact identification: (left to right) Lynley Wallis, Craig Djandomerr, Jacob Baird, Amroh Djandomerr, Axel Nadjamerrek, and Brian Whitehurst. (Photograph by Mia Dardengo.).

In line with this, researchers must include Mirarr coauthors on articles as a tangible expression of the partnership approach to research, instead of Mirarr being “subjects” or “informants” (both offensive terms to the community), although this does not come without its own challenges, as we discuss below. This article itself is a case in point. Two researchers (JH and BMac) approached GAC with information about the special issue, suggesting that they would like to submit an article and providing a title and abstract for consideration. Upon discussion, GAC staff and community members (i.e., the other listed authors) thought that an article led by White researchers external to GAC was antithetical to the way in which GAC now chooses to “do business” with researchers. For this reason, the article authorship, order of authors, content, and focus was substantially altered to better serve the needs of GAC and the Mirarr people. Future publication requests may not always result in a similar outcome, given that some articles are, of course, better led by researchers working in academic institutions. But it is valuable to seize opportunities when identified for community members and representatives to play a greater role as authors.

Yet, many international journals still do not provide (1) an easy means by which to list entities (rather than individuals), such as Aboriginal corporations, as coauthors; or (2) an opportunity for listing people who lack email addresses as coauthors. The latter can be problematic for many *Bininj* in the NT who may not have email addresses and where less than 50% of people can access the internet in their own homes, a figure that increases with remoteness (Australian Bureau of Statistics 2022; see also Thomas et al. 2018).

Of additional concern are the open-access provisions of journals in Australia and New Zealand that came into effect on January 1, 2022. The Wiley Council of Australian University Librarians (CAUL) agreement allows the corresponding author of a member of a requisite university or museum to qualify for free open access. However, the CAUL agreement does not provide any provision for corresponding authors who belong to Indigenous organizations to be afforded the same privilege. This seems to be a powerful example of how Indigenous researchers are not treated as equals in the publication process.

A related problem is that journals routinely contact all individual authors to ensure that they are actively involved in the publication process. Although designed to ensure that authorship is legitimate, this can be perceived as “humbugging,” in *Bininj* parlance: many *Bininj* would rather use a single point of contact and liaise through a single trusted individual (often their prescribed body corporate [PBC] organization [see below]) rather than being individually contacted by an unknown-to-them journal editor. As we describe in more detail below, community organizations have been set up with at least a partial desire to ensure that individuals are not required to carry the burden of decision-making or engagement alone, and individualizing authorship can sometimes undermine this.

Authority and Transparency

Most major funding bodies have stringent regulations around eligibility requirements, although structural changes facilitating First Nations autonomy in grant administration are beginning to



FIGURE 5. Djurrubu rangers taking part in the Djenj Project. (Photograph by Shannon Nango. Reproduced with permission of GAC.)

take place in some colonial settings (see, for example, National Science Foundation [NSF] 2023; Social Sciences and Humanities Research Council of Canada 2023a, 2023b). In Australia, the ARC is the main body that funds archaeological research (whereas many state and federal government agencies provide funding for CHM programs). Under the majority of such schemes, Aboriginal corporations or individuals are not eligible to be grant applicants (Administering Organizations,⁴ see ARC 2022), thereby denying them the opportunity to be recognized as researcher partners in their own right. One exception is the ARC Linkage scheme, through which Aboriginal Organizations can coapply as Industry Partners; however, in order to do so, they are required to be partnered with university- or museum-based researchers and to contribute formal buy-in to the project in the form of cash or an equivalent in-kind contribution that they then are not permitted to administer. Many communities simply do not have the resources necessary to enter into or to oversee such arrangements.

Across Australia, First Nations Peoples are developing capacity that allows for more culturally representative decisionmaking around consent and access to Indigenous Cultural and Intellectual Property (ICIP; see Janke 2005, 2018), largely through the development of PBCs resulting from successful Native Title processes. In some states (such as Victoria), a system of registered cultural heritage bodies also provides for increased capacity, which is

essential to genuine engagement. It is no longer legitimate for a large research institution, advised by lawyers and supported by large administrative bodies, to treat an agreement or letter of support obtained from individuals who have not received external advice or support as equating to FPIC. The imbalance of power in contract negotiations is reminiscent of nineteenth-century ethnography: simply using the language of Indigenous participation is no substitute for representation by a dedicated advisory body. GAC is an exception to the general situation in the Alligator Rivers region; more commonly, institutional capacity is often haphazard and spread between land-care ranger groups, with limited access to specialist advice, and other traditional owner representative organizations that are managing a broad range of demands. It is incumbent on institutions to be aware of the transactional power imbalances that exist and for them to establish processes to better level the negotiation field.

Peer Review: Whose Peers?

Peer review systems can be criticized on many counts, one of which is that they privilege the power of elite researchers. There are problems in defining “excellence” and “peers,” a lack of transparency, misuse of confidential information, and conflicts of interest. Often, reviewers provide suggestions that stifle innovation (which further exacerbates issues of power balance) and generally

fail to provide evidence to support the efficacy of their suggestions (Hames 2008; Smith 2003). Expert peer reviewers for many grant bodies and academic publication venues (i.e., journals and book publishers) typically do not include First Nations researchers or representatives from Indigenous peak bodies. Expert peer review inevitably results in a bias toward “scholarly/scientific” rigor, without equal consideration of cultural safety or culturally appropriate aspects of research designs. By its very nature, peer review tends to reinforce existing power structures and research priorities (Smith 2003). This can be detrimental to the integrity of codesigned research projects. Representation of First Nations peoples with relevant expertise in review panels and Indigenous review boards is rare (Doering et al. 2022). Indeed, mechanisms for identifying and including relevant First Nations “stakeholders” for participation in expert reviews are lacking. We do not have solutions to these challenges (but see Street et al. 2008), but we note that acknowledging their existence is a critical first step in addressing them.

Ethics Approval Processes

Research institutions and funding bodies require researchers to conduct their activities ethically, underpinned by honesty and integrity. For research in Australia involving people, two key documents govern researcher behavior: the “[Australian Code for the Responsible Conduct of Research](#)” and the “[National Statement on Ethical Conduct in Human Research](#).” Other relevant guidelines include “Ethical Conduct in Research with Aboriginal and Torres Strait Islander Peoples and Communities” (National Health and Medical Research Council 2018) and the “AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research” (AIATSIS 2020). Although we do not refute the need for research to be undertaken in line with such guidelines, in practice, the ethics process often results in ethics committees requesting changes to agreements that had been already negotiated directly with Indigenous peoples. For example, this may then require Aboriginal organizations to take on time-consuming, formal supervisory roles that these organizations neither want nor require. Such issues are typically a consequence of committees consisting of individuals who are not members of the communities directly impacted by the research, but who are nonetheless concerned about ensuring that they are protecting these communities’ interests. There is no doubt that communities with limited capacity or experience in negotiations, particularly in the research realm, are protected by such ethics processes. However, others—particularly those with strong governance and capacity—too often can have their decisions overridden by ethics committees, thereby undermining their decision and agreement-making autonomy. Perhaps what is needed is a willingness for more authority and control to be ceded to capable and willing Indigenous organizations.

Time Frames

Funding agencies, research institutions, and researchers play important roles in constraining or enabling community-led projects (Doering et al. 2022). Whereas Western cultures predominantly recognize time as being linear, *Bininj* (as do most fisher-hunter-gatherer groups) regard time as “circular” and “multidimensional” (Elkin 1969; Morphy 1999; Strang 2015): events happen when they happen, and when they happen is when they are meant to happen. In terms of such a worldview, it is perhaps more useful to regard priorities as more important than time for *Bininj*. The implications of such an approach in the medical sector,

but equally applicable to the archaeological research arena, are well described by Janca and Bullen:

Although previously scheduled events (e.g., health or legal appointments) may be very important for the individual, they will be prioritised at a low level if family or community needs arise, no matter how adversely this may affect the individual involved [2003:S41].

The endeavors of most researchers are necessarily embedded in Western notions of time revolving around deadlines: for grant submissions, for signing agreements, for conducting research activities, for preparing and submitting academic articles, and for attending conferences, among other activities. In addition, there are imposed external pressures such as funding agency deadlines, often of less than five years (especially for small grants), which result in consequential impetus to produce timely outcomes from research (Doering et al. 2022). Tight time frames are especially pertinent in relation to research higher degree (RHD) students, who do not have the luxury of being able to accommodate lengthy negotiation and trust-building periods. In such instances, RHD research topics are increasingly needing to be embedded within larger programs where the broad parameters of the research have already been established. Obviously, this can have the effect of potentially stifling early career researcher (ECR) ambitions or innovations, or at least delaying them.

As discussed above, connectivity and digital literacy are often issues in remote Aboriginal communities; therefore, in-person consultation is valued and generally more productive than remote or virtual contact. It is often an exasperating experience for a researcher explaining to a funding institution that they were unable to secure the necessary signatures on a document or the data they were seeking because, despite their best efforts, no one turned up to a scheduled meeting. Although the institution typically regards this as “uninterest” on the part of the individuals and community, this is not necessarily the case,⁵ because such a belief fails to take into account the competing priorities of *Bininj*. Cultural activities, such as a death in the community / sorry business, food gathering, or dealing with pressing matters such as housing and health routinely take precedence over research commitments. Some degree of temporal flexibility and understanding is therefore required from institutions engaging in research partnerships with *Bininj*. This also has implications for funding from both researcher institutions and grant bodies, given that there needs to be recognition that researchers will almost always be required to visit communities on multiple occasions not only to carry out a research project but also to negotiate the terms of the project, and then to handle the specific contract negotiations, even before funding is awarded or available. Many institutions thankfully now provide internal funds to support such a “pre-research” phase.

Data and Indigenous Cultural Intellectual Property Rights

The Mirarr have developed their own knowledge management systems, including a digital database repository, access over which they maintain control, and researchers can make requests to access such information on a case-by-case basis. However, in many publicly funded research projects, it is a nonnegotiable requirement of the funding agreement that results be made

accessible to all. Although this is a reasonable request with respect to public monies, it is often at odds with the nature of Indigenous Knowledge (IK). As noted by Kaniki and Mphahlele (2002:13), “Owing to the nature of IK, not all of it can (or should) be managed like scientific knowledge.” All research publications and presentations relating to the Mirarr are now required to include a statement asserting Mirarr ICIP rights. This is designed to draw attention to the fact that Mirarr people own their own heritage, and it is not a public commodity to be drawn on without their express permission.

Contracts and Agreements

Systemic institutional issues in research funding and the embedded disadvantages for First Nations peoples are being discussed across the globe (e.g., Doering et al. 2022). Regarding funding contracts and agreements in the Australian context, there are several important considerations of relevance also for the global audience to which we wish to draw attention.

First, for most research grant schemes, unless the Indigenous partner is named on a grant application, contracts for research funding are between the institution to which the researcher(s) are attached (administering organizations) and the funding body, thereby precluding Indigenous parties from an equal and codified role in the agreement. One implication of this is that Indigenous organizations cannot be awarded funds from research grant bodies directly, and, as a further consequence, they cannot directly administer the funding for their staff involved in a project. This forces settler researchers into paternalistic roles in having to pay their peers and teachers for their involvement in joint research work. Encouragingly, positive notable exceptions have begun to emerge in the broader Oceanic region, such as the Marsden Scheme in New Zealand (Marsden Fund 2022).

Second, research contracts and agreements are typically drafted by the funding body or the university. Because of this, they are primarily designed to protect the rights of those institutions. There is an a priori assumption that Indigenous parties who may be asked to enter into such an agreement will have both capacity and resources to assess such documents. Rarely, however, is this the case. Consequently, Indigenous partners do not sign such documents on an equal footing; it is a “David and Goliath” scenario.

Research contracts and agreements usually contain standard clauses about publication and ownership of data. In Australia, these deeds typically state that publication of research results will be required and include wording to the effect that researchers may publish without explicit permission to do so. Invariably, these agreements treat “project data” (i.e., knowledge generated through the course of the research) as being “owned” by the research institution and then licensed to other parties (including the IK holders) to use it freely. Compounding this community marginalization, academic institutions’ primary measure of research project success—the generation of peer-reviewed publications—may well be incompatible with the values of First Nations partners, especially those who value safeguarding their ICIP (Schneider and Hayes 2020).

One of the strategies being employed by GAC is the development of a consistent GAC-led format for research agreements

rather than a multitude of university-led agreements, each requiring specific interpretation. Similar strategies have also been adopted by other progressive and research-experienced Aboriginal organizations such as the Butchulla Aboriginal Corporation. For this to be effectual, however, institutions must move beyond the expectation that their own agreements will be de rigueur.

Financial Constraints

Most Aboriginal communities have limited funding with which to address multiple, often “wicked,” problems. Those challenges often involve securing basic health care, housing, clean water, and education. Research that lacks direct benefit to communities often falls low on the list of priorities. Many groups simply lack the funding necessary to either directly or indirectly engage with research. Researchers often fail to recognize that simply *considering* a research request comes with a tangible monetary and temporal cost for community members, let alone the ongoing active involvement of the community should a project proceed. The need to pay people to attend meetings, review grant applications, and contribute to academic articles is often overlooked, although researchers themselves are paid to do these things by their university. To offset at least the costs involved in providing approval for articles to be submitted for publication, some Aboriginal communities elsewhere in Australia—such as the Banjima in Western Australia—have now implemented a “fee for service” approach, whereby the researcher pays the community for their review and approval of an article. Such an approach may sometimes meet with disapproval, with complaints that it is transactional and leads to the expectation that, if monies are paid, approvals should be forthcoming regardless of community concerns. Furthermore, most funding bodies do not include provision for such fees, so costs must be borne by the researcher. Although this can usually be accommodated within a well-funded research project or by a sympathetic research organization, it is often not feasible for a doctoral student or an ECR of limited means.

A CASE STUDY: RECENTLY COMMENCED OCHRE RESEARCH IN MIRARR KUNRED

The newly established Gundjeihmi Ochre Sourcing Project (GOSP), led by several of the authors (JH and BMac) around ochre procurement and use, exemplifies the changing nature of archaeological research in the Mirarr clan estate.

We freely acknowledge that although the aspiration of community-engaged archaeology is an invitation by First Nations peoples to jointly investigate their heritage (Schaepe et al. 2017), that was not the case for the GOSP. Rather, the settler practitioners who specialize in pigment provenance research approached the Mirarr, through GAC, to discuss their interest in a detailed study of the vast ochre assemblage recovered from Madjedbebe. As archaeological excavations are by nature destructive, the researchers’ rationale was to study the large ochre assemblage produced from recent re-excavation of the site to understand more about pigment use in the Alligator Rivers region and, by extension, investigate change and continuity in the old peoples’

deployment of ritual and artistic practices. In its conceptualization, JH and BMac consulted with GAC for several years (informally from ~2016, then more formally through the GAC Board from 2018). This work was not by initial Mirarr invitation *per se*, but it is being undertaken with FPIC.

The GOSP involved codeveloping a research design that included community input on the impacts to archaeological assemblages, incorporation of community interests in the research questions and timeline, clear understandings regarding ICIP and the dissemination of research outcomes, remuneration for Traditional Owners and GAC staff for time spent reviewing and contributing to research outputs, and a memorandum of understanding outlining mutual commitments to creating opportunities for community engagement and working with Mirarr representatives as directed by GAC. Prior to the submission of grant proposals to the ARC and the NSF, the research design was presented to the GAC Board of Directors and Mirarr community members for input and approval.

Agreement was reached about the appropriate way to conduct the research, which commenced with researchers characterizing the archaeological assemblage and then cointerpreting the results with community members, before potentially then seeking ochre sources across the landscape. Yet, in order to secure funding from the grant body, the researchers were required to (1) reverse the order of the agreed approach, (2) identify and characterize ochre sources across the landscape as a first stage, and (3) thereafter reapply for funding for a second stage to characterize the archaeological assemblage of interest. Effectively, the grant body required Indigenous partners to contribute their traditional knowledge without the benefit of their first being able to spend time together building a relationship with researchers. Relationship building is critical in First Nations research. It gives community leaders the opportunity to both decide if they feel sufficiently comfortable with the researchers for the project to continue to a second phase and fully understand the implications of their sharing traditional knowledge.

GOSP researchers are now conducting a pilot program on sources rather than focusing on an archaeological assemblage, as was originally co-planned when submitting the grant application. As far as we can ascertain, this request from the funding body was made at the suggestion of a US NSF review panelist who refused to acknowledge that provenance studies can be undertaken using an “assemblage-first” approach to sourcing (a long-established and scientifically sound framework in provenance research; e.g., Bishop and Neff 1989; Bishop et al. 1982; MacDonald et al. 2011; Weigand et al. 1977) and seemed to disregard that the sequence of research priorities was designed in accordance with the wishes of the Mirarr community. This suggests that there are reviewers or panelists enlisted by the NSF who lack expertise (or are willing to selectively ignore) fundamentals of archaeological science in research design. This painfully reinforces two glaring issues that continue to plague the NSF review panel system: (1) lack of qualified reviewers with adequate understanding of archaeological science methodologies (Dasgupta et al. 2019; Killick 2015; Killick and Goldberg 2009; Killick and Young 1997; Martín-Torres and Killick 2015) and (2) a lack of racial diversity and/or lack of experienced White scholars who work in partnership with Aboriginal communities on those review panels (Atalay 2012, 2019).

We are pleased to have secured funding support for the GOSP through international schemes. However, as an example of the embedded power imbalances in government-run grant schemes described earlier, we note that during the proposal submission and review process, GAC as an Indigenous organization could not hold a subaward of the NSF in its own right. This resulted in JH and BMac having to “pay” the community for their prenegotiated participation in the research, rather than GAC administering payments directly to their staff and community members. This is despite the inherent capacity of GAC as an incorporated body that routinely administers large sums of money with a large degree of regulatory financial oversight. Fortunately, changes to the NSF Proposal and Award Policies and Procedures Guide effective January 30, 2023, have revised eligibility requirements to allow Tribal governments to administer grant funds directly (NSF 2023:1–5), although this remains limited to the United States. This change at the NSF aligns with policy updates at the Social Sciences and Humanities Research Council of Canada (2023a, 2023b) that took effect in late 2022 and that permit Indigenous-run nonprofit organizations to apply for institutional eligibility to manage research proposal applications and funding. These long-overdue changes are welcome, given that they provide First Nation communities with autonomy over funding and allow them to participate as more equal partners.

As part of the accountability of settler archaeologists, in addition to several years of “yarning” (see Bessarab and Ng’Andu 2010) to obtain FPIC and codesign the project including funding applications, Mirarr will continue to inform the research process throughout the duration of the project by various mechanisms, such as by modifying aspects of the fieldwork/analysis plan as they deem necessary, by retaining editorial power over reports and publications, and through their ability to control access to materials and request repatriation of artifacts and remains at any time. In this way, the project aims to prioritize the needs of the community and redistribute control, giving Mirarr the agency to say no at any time, and without explanation, withdraw consent should they choose to do so.

CONCLUSION

Archaeology is an inherently colonial enterprise, whose practitioners in recent years have adopted a more critical and self-reflective approach. Accountable—and where possible, community-led—approaches to archaeological research will not erase the harm inflicted by the discipline as a tool of the colonial enterprise, but they can practically scaffold processes of healing by recognizing Aboriginal peoples’ primacy as research directors and decision-makers (Fitzpatrick 2021). Although the challenges remain substantive, the discipline has come a long way in a short time. More positive developments will no doubt follow as communities share their experiences and approaches—including via publications such as this—and as institutions reflect on how their own practices may require “decolonization” to provide greater opportunities to partner with Indigenous communities.

Acknowledgments

The language, images, and information contained in this publication include reference to Indigenous Knowledge, including traditional knowledge, traditional cultural expression, and references to biological resources (plants and animals) of the *Bininj*

people. The source Indigenous Knowledge is considered “Confidential Information”; traditional law and custom applies to it, and the Mirarr people assert copyright over it in addition to any copyright in the complete work. Any Mirarr-related language, images, and information are published with the consent of Gundjeihmi Aboriginal Corporation as the representative of the Mirarr people for the purposes of general education. No further use, and absolutely no commercial use, is authorized without the prior consent and agreement of the Mirarr people.

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Data Availability Statement

No original data were used.

Competing Interests

Wallis and O’Sullivan work on a contract basis for Gundjeihmi Aboriginal Corporation. Justin O’Brien is the CEO of Gundjeihmi Aboriginal Corporation. May Nango, Djaykuk Djandjomer, and Clarry Nadjamerrek are employed by Gundjeihmi Aboriginal Corporation. Wallis and Huntley have received funding in the past from the Australian Research Council. Huntley and MacDonald have received funding from the National Science Foundation.

NOTES

1. In this article we use “Indigenous,” “Aboriginal,” and First Nations to refer to original or native peoples in accordance with the United Nations Permanent Forum on Indigenous Issues; these terms are used to identify rather than define cultural groups (Huntley and Wallis 2023).
2. This term is preferentially used in Australia and is equivalent to cultural resource management (CRM) as used in North America. It emerged out of respect for Traditional Owners, who did not like their heritage being commodified as a “resource.”
3. Robert Edwards (1974) also completed a separate “fact finding” study specifically on the region’s *bim* (rock art) sites, following in the footsteps of Eric Brandl (e.g., 1968, 1972), who had begun documenting such sites. Based out of the Museum and Art Gallery of the Northern Territory, George Chaloupka (e.g., 1975, 1976) then commenced a long-term relationship working extremely closely with *Bininj*—especially Nipper Kabirriki—to record *bim*. This relationship, between two men from wildly different milieus, was arguably “the most important single conduit for lodging the cultural significance of the Kakadu landscape in the archive and representing it in the public domain” (Levitus 2015:88). The knowledge and experience Chaloupka gained allowed him to lend strong support to *Bininj* throughout the Fox Inquiry.

4. Non-university-based organizations eligible to administer ARC funding are limited and include research institutes (predominantly medical), academic academies and independent not-for-profit organizations partly funded by the Australian government (such as the Australian Academy of the Humanities), government-funded facilities such as museums, botanic gardens, the Australian Institute for Nuclear Science and Engineering, and subbranches of the Commonwealth Scientific and Industrial Research Organisation.
5. Sometimes, however, community members will avoid attending such meetings as a means of demonstrating their unwillingness to be involved. It is incumbent on the researcher to be sensitive to the underlying motivation for the nonappearance of a community member.

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