

Journal of Natural Science Collections

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The Natural Sciences Collections Association

The Natural Sciences Collections Association (NatSCA) is a UK based membership organisation and charity which is run by volunteers elected from the membership.

NatSCA's mission is to promote and support natural science collections, the institutions that house them and the people that work with them, in order to improve collections care, understanding, accessibility and enjoyment for all.

More information about NatSCA can be found online at: natsca.org

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NatSCA membership is open to anyone with an interest in natural science and/or collections that contain natural materials. There are many benefits of being a member, including; availability of bursaries, discounted annual conference rates, discounted training seminars and workshops, participation in the natural science collections community, friendly and helpful network for information and skill sharing and subscription to the *Journal of Natural Science Collections*.

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Journal of Natural Science Collections

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The *Journal of Natural Science Collections* is a place for those working with these collections to share projects and ways of working that will benefit the museum community. The Journal represents all areas of work with natural science collections, and includes articles about best practice and latest research across disciplines, including conservation, curatorial methods, learning, exhibitions, and outreach. Articles in the Journal should be relevant and accessible to all of our diverse membership. Submissions are peer reviewed, resulting in high quality articles.

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Front cover image: 'Black, Chinese and White labourers in a gold mine in South Africa', around 1910 Frank and Frances Carpenter Collection (Library of Congress), LOT 11356-39. Available at: www.loc.gov/pictures/resource/cph.3a40984/ [Accessed 29 April 2020].

Editorial

Welcome to this special Volume of the *Journal of Natural Science Collections*, which is dedicated to our online conference in November 2020, **Decolonising Natural Science Collections**. The conference focused on several projects from museums embedding decolonisation into their work, and is available to watch online for free here: www.natsca.org/natsca-decolonising. This special Volume includes four detailed papers from this conference.

Our first paper, An introduction to ally skills for natural history collections professionals, by **Phillips, Ye and Bledsoe**, introduces a framework for all staff in museums to implement positive change within the work place. This important paper highlights how small actions can make meaningful change to stop and prevent oppression in museums.

In the next paper, Decolonising Manchester Museum's mineral collection – a call to action, **Gelsthorpe** looks at the untold histories of Black and Indigenous peoples within mineral collections. Examining the localities of the mineral collections, Gelsthorpe identifies a large proportion of the specimens that came from the Empire, revealing new stories that can be told about these collections.

Middleton examines the history of one of Scarborough Museums Trust collectors, in his paper, The Harrison Collection: Addressing colonialism in the collection of a Victorian big game hunter. The research into the travels and collecting of Harrison revealed unsettling exploitation of Indigenous peoples of Africa.

The final paper in this volume, **Ashby** examines how Europeans write about and describe the unique mammals in Australia, in his paper, The political platypus and colonial koala – decolonising the way we talk about Australian animals. How Australian mammals are often described is often from a colonial view, conjecturing lowliness.

I would like to thank all the authors for their hard work on their papers for this special volume. And to all the reviewers who made the time to read through the papers and provide useful and constructive feedback.

We hope you enjoy this special volume, and the papers enable you to examine your collections in a new light.

Jan Freedman
Editor
December 2021

View from the Chair

Volume 9 of NatSCA's *Journal of Natural Science Collections* is dedicated to talks given at our 2020 virtual conference: 'Decolonising natural science collections'. This conference responded to an acceleration of work on decolonisation across the museum sector following the swell of Black Lives Matter protests against the murder of George Floyd. The volume is online only and open access from date of publication, as part of a commitment to supporting access to decolonisation resources.

For NatSCA and many of our community, our decolonising journey was catalysed by a talk given by Subhadra Das and Miranda Lowe at our conference in 2017. This was a provocation that revealed the significance of the colonial histories of natural science collections, which had for too long been whitewashed or erased. Das and Lowe's 2018 paper on this work '[Nature Read in Black and White](#)' has provided a foundation for decolonial approaches to interpreting natural history collections. The abstract for the paper has been viewed over 7,500 times to date – around 10 times more than NatSCA's most popular articles, illustrating wide interest and impact. Das and Lowe's research underlies much of the work presented at the 2020 conference and papers published here. We were grateful to welcome the authors as conference keynote speakers and to hear updates to their work.

NatSCA would like to thank the authors and reviewers of the papers presented in this volume for their contributions. We would also like to thank those presenters at the 2020 conference who have not been able to translate their presentations to papers at this challenging time when capacity for our sector is still low due to the Covid-19 pandemic. All presentations are available to [view online](#).

NatSCA is committed to continuing to support decolonial research and practice relating to natural science collections. We acknowledge that we are at an early stage of this journey and there is much work to be done in supporting spaces for conversation and training, and increasing representation of work by people from communities impacted by the legacies of colonisation. We also recognise we will make mistakes, but will reflect on and embed the learning from these. We have recently established an internal Decolonisation Working Group to help focus our next steps. If you have any comments or ideas for this, please do get in touch at chair@natsca.org.

Isla Gladstone
Chair, NatSCA
December 2021

An introduction to ally skills for natural history collections professionals

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Abstract

Natural science collections are, by their nature, collaborative and cumulative and benefit from the inclusion of diverse people with varied experiences and backgrounds. Yet many of us recognize that our workplaces, and STEM at large, are not welcoming to all, even after decades of efforts. It is increasingly clear that one of the challenges is that we lack training in turning our shared values into action. Allyship - the action-driven practice of leveraging privilege or power to make meaningful change in eradicating oppression - is one such strategy for implementing change. In this paper, we introduce allyship skills as a framework for actions to effect this change, discuss both preemptive and responsive allyship efforts, and share some simple daily actions you can take to get started.

Keywords: allyship, diversity, equity, inclusion

Introduction

This paper is for collections professionals and museum-affiliated scientists who strive to make natural history collections spaces more accessible, just, and inclusive through active allyship but may be overwhelmed and not quite sure where to start. We provide a brief overview of some current practices in diversity, equity, inclusivity, accessibility, and justice (DEIAJ) in academic spaces, and provide examples of how a history of colonial structure and inequity may manifest in collections-based work, and offer guidance on using both personal and institutional power to change existing systems that perpetuate

oppression. To do so, we draw from examples in museum and library collections and social sciences, our individual experiences as academics in natural history fields, and conversations with students and colleagues about decolonizing existing systems. We include collections-based examples here, but much of our guidance is general and applies across academia and in science, technology, engineering, and mathematics (STEM) disciplines.

As authors, we share a mutual goal of making academic and natural history spaces into inclusive environments for scientists and educators from all



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backgrounds. All three of us have received training to promote and teach active allyship practices and lead workshops at our respective institutions. While all of the authors identify as members of various groups, some of them underserved (e.g., women, the queer community), we do not represent all axes of diversity and, therefore, do not and cannot speak for everyone.

Oppressive systems and manifestations

Academic spaces were historically created for only a small segment of the global population, specifically white, wealthy, cis men (Lynch and Alberti, 2010; Cheryan and Markus, 2020). The systems built around academia and scholarship were not created to be accessible to everyone and were, in fact, actively exclusionary through explicit rules and regulations for the majority of these institutions' existence (Neklasen, 2019). More recently, academic spaces have changed policies that explicitly bar entry and participation, yet implicit barriers persist. These are the result of systemic inequalities created by controlling access to knowledge and other academic resources, as well as academic cultural practices that maintain racist and colonialist ideas (Allen, et al., 2000).

Specific to natural history museums, many specimens were acquired through colonial activities, with research and educational initiatives entangled in colonial/white supremacist, patriarchal, Judeo-Christian, and cis- and heteronormative ideals (Machin, 2008; Ashby, 2017; Colwell, 2017; Das and Lowe, 2018; Wade, 2021). A famous example is the mission of the HMS Beagle including surveys for the purpose of securing British Empire shipping routes and to aid in missionary work (Browne and Neve, 1989). In addition, European museums were first created to house the physical objects accrued during the work of colonizing and for entertaining and educating European citizens with these objects through a Eurocentric lens. Colonial mindsets and a colonial legacy are seen in a variety of modern topics related to natural history collections, including in collecting practices, research, conservation work, and education (Das and Lowe, 2018).

Systemic issues transitioning to individual actions

There have been conversations within STEM about the importance of diversity and inclusion and the practical and moral need for a more diverse workforce for decades (Miriti, 2020). However, despite a multitude of different efforts and programs, STEM fields remain majority white, male, cis- and heteronormative, and able-bodied,

especially in leadership roles (Estrada, et al., 2016; Rivers, 2017; Riegle-Crumb, et al., 2019). One reason for this is that institutional "diversity and inclusion" efforts largely focus on recruiting members from oppressed groups or workshops aimed at helping people from underrepresented groups "fit in" (Peña, et al., 2017). None of these efforts target existing systems of oppression. For real progress to be made, transformation is needed so that institutions work for all people. This transformation requires individuals to create and maintain inclusive spaces through the frameworks of decolonization ("the undoing of colonialism, which consists of one people extending their dominion over another"; Museums and Social Justice) and restorative justice ("an approach to repairing and addressing harm done within a community"; Jackson, 2021). (Miriti, 2020). For anyone new to these concepts, we recommend further reading on both restorative justice (Simpson, 2009; Karp and Schachter, 2018) and decolonization (Stein and De Oliveira Androtti, 2016; Das and Lowe, 2018). Also, The Strategic Plan (Karp and Schachter, 2018; Berry et al., 2020) created by the Change Now collective, a collaboration among five early-career Black physicists at Femi National Accelerator Laboratory, is an excellent example of concrete actions institutions can adapt to create a more inclusive work environment (Mervis, 2021).

Who should be responsible for changing academic institutions? Although the default is to expect individuals who need help to ask for change or accommodations, this assumption often does not reflect reality, particularly because members of oppressed groups who advocate for changes or accommodations are often punished for doing so (Pyke, 2018; Williams, 2019; Karami, et al., 2020). The result is that institutions remain largely unchanged because social and power dynamics maintain a status quo that preserves the existing hierarchy. Consequently, systemic change can only be achieved when people whose identities intersect with an enfranchised group (and thus have more privilege and more power; see Table 1) work to enact change--both directly and through redistributing power in ways that are inclusive of members of oppressed groups.

What is allyship?

Allyship is the practice whereby individuals leverage their privilege or power to make meaningful change in eradicating oppression (Patel, 2011). Similarly, an ally is a person who works to end oppression for and with oppressed communities other than their own. Here, we focus on allyship as a practice over ally as an identity;

Table 1. We acknowledge that there are many different perspectives on these topics and multiple fields of study where experts examine these issues in depth. Here we define how we are using key terminology throughout this paper.

* "Marginalized" inherently presents some people and groups as being in the "margins" of society; in fact, they are already present in society, but usually do not wield the same power as others. Thus, there is sometimes a preference to use "oppressed" or "underserved" to better capture the difference in power dynamics and avoid othering groups.
 ** We note that other terminology is discussed (e.g., accomplice, co-conspirator) as a way to better emphasize the actions, costs, and risks that are needed to enact change; however, we use "ally" here because of its familiarity and to emphasize that the actions of allyship are of primary importance, relative to any identity labels, self-assigned or otherwise.

Terminology	Definition
Accessibility	Equitable access to opportunities and resources regardless of human ability or experience.
Allyship	The practice whereby individuals leverage their privilege or power to make meaningful change in eradicating oppression for and with oppressed communities other than their own.
Diversity	The state of having people in a group who differ along race, gender, sexuality, age, disability, religion, class, caregiver status, etc.
Equity	Resources are allocated to give everyone equal access to opportunities.
Inclusion	Everyone in a group is valued, included, and respected, without discrimination or bias.
Justice	The dismantling of barriers to ensure that everyone leads a full and dignified life.
Intersectionality	The various combinations of one's social, cultural, and political identities creating unique modes of power and discrimination; the origins of this concept are rooted in Black Feminism (Crenshaw, 1989).
Marginalized person*	A member of a group that is the primary target of a system of oppression.
Oppression	A systemic inequality that is present throughout society, that benefits people with more privilege and harms those with fewer privileges.
Power	The ability to influence what and how others value, believe, and behave.
Privilege	An unearned advantage conferred by society to some people, but not others.

because privilege (and, subsequently, oppression) is both contextual and intersectional, we *all have the ability to be allies in different situations* (see Table 2). Unequivocally, engaging in allyship requires 1) understanding one's own power and privilege and 2) intentional and active work to use one's power and privilege to achieve equity, inclusion, and justice (Kim, 2019).

Allyship takes many forms. We divide allyship actions into two overarching categories: **preemptive** and **responsive**. The goal of preemptive allyship is to create and maintain inclusive spaces through practices that explicitly convey shared values and that facilitate everyone's ability to participate. These actions help to reduce harm before it can occur. Responsive allyship, on the other hand, focuses on responding to incidents (e.g., speech or behavior) and mitigating the resulting harm and potential for ongoing harm or escalation. While not mutually exclusive

(preemptive allyship reduces the need for responsive allyship), we find these descriptions useful for categorizing various approaches and strategies.

Preemptive allyship

Many spaces and environments are historically preferential to certain groups (e.g., naturalists were originally wealthy white gentlemen with free time). Because members of oppressed groups who speak up to request changes or accommodations face repercussions for doing so, those with power and privilege need to be proactive in making existing spaces more inclusive (Pyke, 2018; Williams, 2019; Karami, *et al.*, 2020). Thus, preemptive allyship involves cultivating inclusive spaces and using awareness of biases (implicit and otherwise) to establish norms of behavior with explicit policies and specific activities.

Table 2: Power and privilege. This table is intended to guide readers to consider the ways in which their identity may confer power and/or privilege to take allyship action. It is not an exhaustive list. As a reminder, power and privilege are both contextual and intersectional - some sources may apply in one situation but not others, or in one circumstance but not another.

For some of these sources, it may be difficult to recognize if it applies to you. One guideline is that if you haven't experienced systemic oppression for **not** having that privilege, you probably have that privilege. You can also have part of a privilege - privilege is rarely all or nothing. Some sources may also be the product of both personal effort and systemic advantages; for example obtaining a degree requires the opportunity to participate in an degree-conferring system and work to complete.

Adapted from handout from Frameshift Consulting: <https://files.frameshiftconsulting.com/Ally%20Skills%20Workshop%20handout%20-%20Letter.pdf>.

Sources of privilege	Sources of power and/or privilege
Part of the enfranchised ethnic and/or racial group Male Masculine (in speech, behavior, or appearance) Cisgender (you identify as the gender assigned to you at birth) Straight Not disabled A legal resident or citizen Speak in the language or accent associated with high(er) status Neither "too young" nor "too old" Certain height/size/shape Not a mother Not a caregiver From an upper- or middle-class family High caste	Educated Technically experienced Wealthy (compared to peers) Limited financial obligations/restrictions Any position in a hierarchy that is not the bottom of the hierarchy (e.g. management position) Professor, teacher, supervisor, teaching assistant, etc. Parent or family leader Widely recognized as an expert Large audience (social media following, fans, etc.) Access to media (reporters, TV shows, editors, etc.) Respected by powerful people

Codes of Conduct

Clear guidelines on language use and behavior are important for establishing shared values in both physical and online spaces (e.g., conference, classroom, mailing list). Codes of Conduct are effective tools for documenting these group norms and should include: describing behaviors that are expected (e.g., constructive and actionable feedback) and excluded (e.g., humor based on racial or gender stereotypes are not allowed), proactive inclusion measures, and a clear system for reporting and enforcement (Nitsch, et al., 2005; Emery, et al., 2021). It is important to be aware that some common features of Codes of Conduct can - intentionally or unintentionally - reinforce systems of oppression. For example, a requirement for "professional" appearance and behavior without explicitly defining "professional" can gatekeep personal identities by requiring everyone to conform to the sociocultural identities of groups that hold power (e.g., some hairstyles associated with the Black community have been listed as "unprofessional").

Land or territory acknowledgements

Starting group gatherings with a land or territorial acknowledgement recognizes the colonial nature of collections and academic spaces. This action reminds everyone that indigenous people and nations exist and that both institutions and people continue to benefit from historical injustices. Indigenous groups have noted that, while important, these acknowledgements alone are performative actions (Asher et al., 2018). Therefore, we encourage using these events as springboards for further education or action, which can include discussions of historical background, calls for reparations, or restorative justice, as in the following example (<https://osf.io/yh3w/wiki/Land%20Acknowledgment/>):

The Living Data Project (LDP) is a collaborative effort by researchers at institutions across Canada. We collectively acknowledge that we live and work on the traditional, treaty, and unceded territories of many Indigenous peoples, including Coast Salish, Syilx (Okanagan), Niitsitapii

(Blackfoot Confederacy), *nêhiyawak* (Cree), *Anihšīnāpēk* (Saulteaux), Métis, Attawandaron, Mississaugas, *Kanien'kehá : ka* (Mohawk), and Haudenosaunee (Iroquois). The LDP brings together instructors and students from many different places with distinct Indigenous traditions and colonial histories. We encourage participants to seek more information about the traditional territories on which they live: <https://native-land.ca>.

Sharing pronouns

Sharing pronouns is a preemptive allyship action that identifies the space as welcoming of everyone's gender identity. It also establishes expectations that people will be referred to by what they want. Specific recommendations for pronoun sharing include:

- Make the sharing of pronouns optional - some individuals may not be ready or feel safe to share their pronouns in the current setting.
- Refer to pronouns as "pronouns" or "personal pronouns" -the term "preferred pronouns" has been weaponized by those who claim that being asked to use someone's "preferred" pronouns is an infringement of free speech.
- Remember that gender is not a binary; pronouns can include "they/them/theirs" and "ze/hir/hirs", among others - be prepared to respond firmly about respecting everyone's pronouns if someone reacts negatively.
- Establish a clear policy for using "they/them" or the person's name when someone's pronouns are unknown and that it is ok to ask for someone's pronouns instead of assuming pronouns based on appearance.
- Simple language: If you forget or are unsure of someone's pronouns, you can ask to be reminded. It is better to ask than to refer to someone with the wrong pronouns. This exercise is important to help everyone in this room participate and avoid unintentionally disrespecting each other, so please take it seriously and listen carefully.

Accessibility measures

Accessibility measures are necessary to ensure that everyone's ability to participate does not *require* anyone to seek out additional resources or accommodations. For example, screen-readers are a type of assistive technology used by people who are blind or have visual impairments. To work correctly, screen-readers, documents, and websites should have clear page layout and design, clearly identify elements through use of headings and alternative text ("alt-text") descriptions of images, and have

search and find capabilities (Slatin, 2001; Singleton and Neuber, 2020).

In addition, many accessibility measures improve experiences for everyone, not just for those with disabilities. For example, captioning services are a common accommodation for the deaf or hard-of-hearing but also benefit many more groups, including English-language learners, listeners who use a lower audio volume setting, and those with auditory processing disorders. It can also help to create a written record of meetings that is helpful for asynchronous participants.

Language usage

Understanding and using the recommended terminology for different groups is important for clear communications and countering stereotype threat—the fear that people will conform to (negative) stereotypes about a group. For example, the concepts of sex chromosomes, "sex" as a social construct, and gender identity, are not interchangeable. There are critical differences between these concepts that are important when discussing topics such as reproductive biology or data involving human subjects. A list of the most important terms and definitions are provided in a handout from Frameshift Consulting: <https://files.frameshiftconsulting.com/Ally%20Skills%20Workshop%20handout%20-%20Letter.pdf>.

The purpose of these recommendations for language are to improve the inclusivity of a space. For example, "lame" is commonly used to refer to something inferior or unpopular; however, we discourage usage of this word because the association of a physical impairment with negative connotations is harmful to people with disabilities.

Responsive allyship

Cultivating an inclusive environment also entails enforcement of boundaries and responding to situations as they arise. It is our experience that many academics avoid conflict, especially about matters that are not their primary research subject area. Therefore, in order to respond in a positive and timely manner, it is important to be prepared. We provide general guidelines in this section, along with resources for further training and practice.

First, it is important to recognize different types of situations and realize that you will not always be present when an incident occurs. In general, many incidents are unreported, so it is much more likely that an incident report is indicative of a pattern of issues than someone making a false report (Nitsch, et al., 2005; Weiser, 2017). It is important to take

reports seriously and to provide empathy to the person who is reporting a violation or problem. Harassers will push boundaries gradually over time, relying on the predisposition towards civility or being defended by those who have had only positive interactions with the harasser, and are thus able to remain in a space.

Identifying incidents

When someone says or does something that gives you pause but does not appear to be a clear violation of a Code of Conduct, it could be a microaggression. A good habit to practice is to interrogate the language or the action and isolate the issue to identify both the harms and the target(s) of the oppression. You may wish to refer to the definitions in Table 1 and ask yourself these questions:

- What systems of oppression are at work in this scenario?
- What privileges or power would be helpful to act as an ally?
- What are some ways to respond?

Responding to incidents

Responding to an incident or situation should focus on setting boundaries and expectations for behavior. In other words, concentrate on an offender's actions and their impacts on marginalized groups rather than their intent. Offenders (especially repeat offenders) can still be excluded from a space, but it should be clear that this is done to ensure the safety of a space and not as a value judgment on the individual.

Guidance for responding:

- Be firm and direct about the problematic behavior. Remember to focus on the impacts rather than intentions.
- Avoid criticizing the offender through humor and/or personal comments. This type of response does not address the behavior and its harm; instead it can harm others by insulting personal qualities such as visual appearance, hygiene, etc.
- Simple responses can be effective for interrupting and preventing ongoing harm. (e.g., "Yikes!", "We don't do/say that here.")
- Similarly, redirecting a conversation to focus on workplace goals can be a less confrontational way of stopping problematic behavior in the moment. (e.g., "Let's focus on making the primary message of this presentation clearer.")
- Alternatively, reframing the action from the lens of systemic prejudice can be educational

for a person or group. (e.g., "Asking for a native English speaker reinforces the wrong idea that non-English speakers are not welcome and does not address any actionable issues in communication.")

- In some settings, you may want to make your point and move on rather than engage someone who may be debating in bad faith. Remember, your goal is to *enforce consequences for actions and establish boundaries, not to convince everyone that you are right.*

Example incident and response:

At a meeting to evaluate faculty candidates (or seminar speakers, grad students, etc.), someone says, "It's great to hire more Latinx people, but let's not lower the bar." Before you can reply, someone else says, "Oh yes, we'll be careful not to lower the bar" (<https://docs.google.com/presentation/d/1ApXtF-9gQEE9XFH7LEAlxcF0W4HP0z-8WXDWul2KHZs/export/pdf>).

These utterances may give you pause, yet it may not be immediately clear as to *why* they are problematic. Again, develop a habit of interrogating the language to isolate the issue and identify both the harms and the targets of oppression. Here, the core problem is the discussion of a "lower bar" for applicants in association with an ethnic group. This phrasing implies that members of that group are held to a lower standard compared to members of other groups, and that members of that group have fewer qualifications. One possible response is to remind everyone that the applicants should be judged based on their qualifications and that any expectation that a group has a "lower bar" is problematic.

A more in-depth response could reframe the discussion and explore the assumption that assessment is purely meritocratic. For example, one relevant finding is that members of marginalized groups are often held to a higher standard (i.e., "men are judged for potential, women are judged for performance"; Player, *et al.*, 2019) and are more likely to engage in mentorship and other activities that are valued but which are not reflected in common metrics (Davies *et al.*, 2021). Discussion of these issues as an entry into revising evaluations could be a pathway towards systemic change for the organization. Furthermore, one does not need to be an expert to initiate this change! There are many advocacy groups who already provide specific guidance - allyship also includes finding and implementing these practices (e.g., Inclusive Hiring Practices: <https://projectinclude.org/hiring>).

Accountability

A key part of allyship is responding appropriately when your mistakes are pointed out. By definition, allyship requires active involvement, and it is very likely you will make mistakes and have those mistakes be pointed out and/or criticized. Rather than letting the fear of mistakes and criticism prevent you from acting, accept that mistakes will happen and prepare ahead of time by learning to respond appropriately.

When your speech or actions have caused harm, it is necessary to apologize for the impacts and avoid defending your intentions. We recommend these three steps:

- Acknowledge *what* you did.
- Thank the person for pointing out your mistake.
- Commit to doing better (and following through).

Although being corrected or called out is never an enjoyable experience, explaining your intentions will create a situation where your own errors or emotions are now the focus of conversation. This may cause other people to feel obliged to make *you* feel better! Instead, focus on corrective actions and mitigating harm in a public setting. And do reach out to your friends, family, therapist, etc., as necessary on your own time, to address your feelings.

Microallyship

As you consider allyship actions to address oppression at your institution, here are some simple daily actions you can take to get started. These tips come from a presentation given originally by Neha Batra entitled "Microallyship: micro servicing your team's culture" (2019). We also find them useful as different perspectives for evaluating allyship actions.

Amplify.

Leverage your own social and professional networks to amplify the voices of members of oppressed groups.

People with power and privilege are better connected to other people with power and privilege. Because so much of academic advancement depends on peers (e.g., publication, invitations, tenure and promotion), members of oppressed groups can face more challenges as a result of reduced access to these networks. To counter this, consider using your social capital to promote members of oppressed groups by sharing their work, nominating them for awards, or inviting them as reviewers and panelists, etc. In particular, when members of oppressed groups

are asked to talk about DEIAJ topics, they may not be offered the same honoraria as other speakers. If you are in a position of power, you can request that honoraria policies be standardized. Even seemingly small activities can help, such as re-sharing content on social media from activists of oppressed groups rather than trying to recapitulate the same ideas in your own words.

Attribute.

Ensure that credit for ideas, concepts, and work is given to the appropriate person or group.

The contributions from members of oppressed groups are often overlooked or mistakenly credited to other people or groups with prestige and status (e.g., the "Matthew/Matilda Effect"; Rossiter, 1993). To combat this, you need to ensure that credit is properly assigned for work, especially in your area of expertise. For example, women staffers in the Obama administration established a practice of repeating, and providing attribution for, key points made by other women (Landsbaum, 2016). This tactic prevented others from - intentionally or unintentionally - claiming an idea as their own. In collections, creating and maintaining documentation and records to assign credit to every staff member, student, and volunteer who contributes is a way of making sure that the work of every individual is correctly acknowledged.

Volunteer.

Do your share of service tasks that are overwhelmingly done by members of oppressed groups.

Members of oppressed groups often end up doing service tasks that should be equitably distributed - taking notes, cleaning shared spaces, organizing workplace social activities - while simultaneously being perceived as taking up more time and space than they actually do (Cutler and Scott, 1990). To combat this in your own spaces, establish general rules for meetings to ensure that everyone has the opportunity to give input and that "office house-work" tasks are shared among all members of the team. For example, establish a rotation schedule for taking minutes rather than asking for people to volunteer.

Educate.

Self-educate to understand your own points of privilege and power as well as to understand oppression and how to counteract it.

It is tempting for the would-be ally to ask the nearest member of an oppressed group how they can be a better ally. We recommend against this course of action (Niemann, 2016). It is not the job of your colleagues to educate you on oppression or their personal experiences. Instead, do your

own research and follow diverse news sources to build your awareness of issues and actions already being implemented by leaders from marginalized groups. You may also want to advocate that your organization sponsors educational initiatives that everyone can participate in. Also, be aware that terminology and practices are often in flux. A phrase or practice that may have been acceptable at one time may no longer be appropriate a few years later. Recognizing that this change is common and being ready to learn (and apologize when you make a mistake) are important aspects of allyship.

Ask.

Before acting, ask how you can best support someone. One popular slogan in disability and other activism communities is "nothing about us without us" (Charlton, 1998). This slogan refers to the practice of ensuring that members of an oppressed group be given agency to comment or decide on actions which affect them. For microallyship, this philosophy translates to checking in with individuals or groups before taking corrective actions. This practice is important, because retaliation is more likely to occur against members of oppressed groups than allies who speak up about oppression, so consent is necessary before taking actions that could result in further harm. Furthermore, if a member of the oppressed group chooses to address the incident, step back and support them as best you can. Do not take over the situation unless asked or specifically given permission. In addition, many groups already exist that are doing good work. Before taking an action or starting a new committee, ask yourself if you might be reinventing the wheel or if it would be better to redirect resources and energy to existing activists.

Conclusions

We conclude with a reminder of the primary and most critical message that allyship is about actions and not intent. Although it is tempting to believe that good intentions are enough to create a just environment, this passive approach misses the reality of systemic inequality. Commonplace practices that appear neutral or beneficial at first glance are sometimes revealed to be exclusionary upon deeper inspection through the lens of oppressive systems. Allyship also requires introspection on such facets, to update our mindsets, and enable action to address the implicit and explicit biases that persist in the field of natural history collections, our institutions, and society broadly. We write this as a practical introductory guide for actions you can take, some on a daily basis, to improve DEIAJ in the spaces where you have privilege and power.

*What is true is already so.
Owning up to it doesn't make it worse.
Not being open about it doesn't make it go away.
And because it's true, it is what is there to be interacted with.
Anything untrue isn't there to be lived.
People can stand what is true,
for they are already enduring it.*
- Eugene Gendlin

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Decolonising Manchester Museum's mineral collection – a call to action

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Abstract

The history of Black and Indigenous peoples, and the role of empire in most museum natural history collections is largely unresearched and not acknowledged in displays. This study analyses the reach of empire in Manchester Museum's mineral collection, uncovers colonial stories, and exposes structural racism in the museum sector. New data analysis of the mineral collection reveals that 24% of the collection comes from countries that were previously colonised. 50% of the Museum's minerals from the British Empire are Australian, of which 33% came from the Imperial Institute. A new mineral display gave opportunity for focussed contextual research into South African gold ore and Sierra Leone diamonds. Archive photographs from the early 1900s are used in the display to tell the story of the people who mined the Museum's South African gold ore specimens. Recent research and the Museum's Sierra Leone diamond are used to tell the story of diamond mining today and the colonial legacy. Institutional approaches, whereby time and resources are not committed to researching colonial histories and complex colonial stories, mean that these histories are not researched and do not get past exhibition editing process, meaning this practice continues. This paper is a call to action to change this.

Keywords: Minerals, Manchester, Decolonisation, Empire, Gold, Diamonds, South Africa, Sierra Leone

Introduction

"We, collectively as museum professionals need to better acknowledge past wrongs for what they are, and tell the whole story of science." (Das and Lowe, 2018: p.11). This paper is an attempt to address this and take the first steps in decolonising Manchester Museum's mineral collection. This research aims to begin to reveal the true extent of the role of empire in the Museum's mineral collection, uncover hidden stories and identify potential structural racism in the museum sector.

Manchester Museum is part of the University of Manchester and has a collection of over 4.5 million

objects. The collection has evolved through time, with different roles and influences. The original collection was put together as a gentleman's cabinet of curiosities by John Leigh Philips (1761-1814). It continued to be a status symbol and a source of enjoyment for the learned in Manchester as it became the core of the Museum of the Manchester Natural History Society collection in the 1820s. By the 1830s it had broadened its audience to 'provide cultural and educational opportunities for the 'lower orders' of society' (Alberti, 2009: p.17). The Natural History Society's collection was subsequently joined by that of the



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Manchester Geological Society to make a combined museum. In the late 1860s, after difficulties experienced by the societies that ran the museum, the collections and assets were transferred to Owen's College (the forerunner of the University of Manchester). A new museum building was constructed at the University and the Museum's educational remit was broadened to include teaching university students.

Manchester Museum's collection has mostly arisen from gifts, transfers (for example from Salford Museum and the Imperial Institute) and some active collecting. Substantial gifts of collections in the early years of the museum coincided with the height of the British Empire and the collection inevitably reflects this. 'It may not have been initiated by the nature and culture of empire, but the Manchester Museum was certainly consolidated by colonial material' (Alberti, 2009: p.94).

There is undoubtedly a new momentum towards decolonising museums, highlighted for example in the report 'The Restitution of African Cultural Heritage. Towards a new Relational Ethics' (Sarr and Savoy 2018, also known as the 'Macron Report') and the National Trust's statement 'Addressing the histories of slavery and colonialism at the National Trust' (The National Trust, 2020). Some museums such as New Zealand's Te Papa (Henare, 2004) have been changing their approach to their colonial past for some time, embedding biculturalism and sharing power with *Māori people at all levels*.

Decolonisation has focussed on ethnography collections and more recently, museums have taken

the first steps that go some way to redress their colonial past (including Manchester Museum, who repatriated human remains in 2003 and secret, sacred and ceremonial objects in 2019). Many historic specimens in natural history collections were transported on trade and slave ships, and were a legacy of attempts to map, tame and exploit the British Empire (Ratcliff, 2016; Das and Lowe, 2018).

Manchester Museum's collection of over 20,000 minerals (Appendix I) provides an opportunity to investigate some of the hidden stories of Black and Indigenous peoples and the role of the British Empire in shaping the collection.

In-depth analysis of Manchester Museum's mineral collection

Most museums in the western world could uncover backstories showing how individual objects were acquired as a result of empire building, but does the collection in part represent evidence of a concerted effort to map the resources of empire? Every mineral specimen in Manchester Museum's collection has a comprehensive catalogue record, though it is worth noting that the documentation does not include the role of Black and Indigenous peoples anywhere in the collection.

24% of the mineral collection is from countries who were part of British or other European empires when acquired (Figure 1), just over a third are from other countries and 41% are from the UK and Ireland. Comparable data for similar collections has not yet been published, so staff at other museums were contacted for details. Leeds and Sheffield Museums, The Royal Albert Memorial

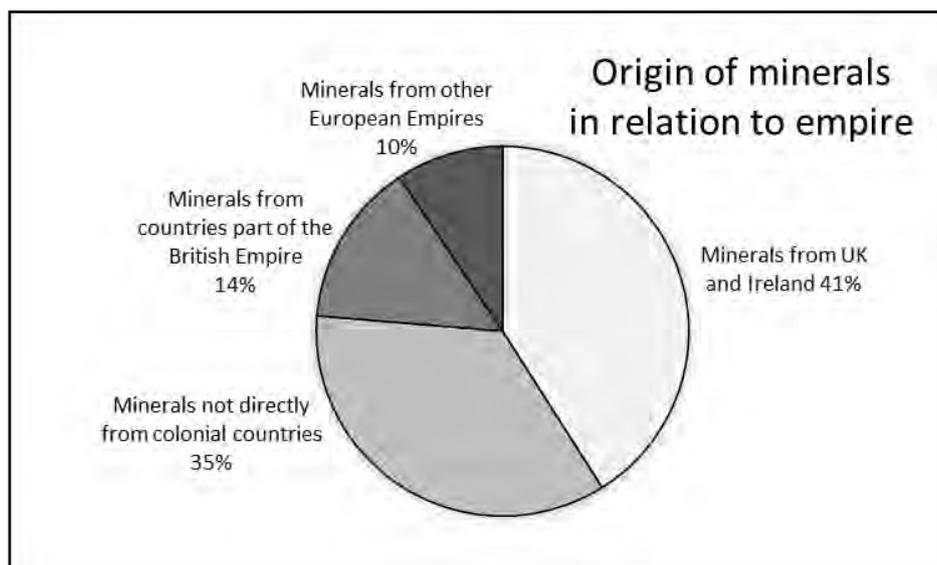


Figure 1. The percent of mineral specimens collected at Manchester Museum, from the UK and Ireland, countries of different former empires and elsewhere.

Museum, Exeter and the Sedgwick Museum either did not have the specimen data or were unable to undertake the data analysis. Staff at Bristol Museum supplied the following data: of the 13,191 minerals in the collection (of which 4051 have no locality data), 17% are from countries who were part of British or other European empires when acquired and 63% are from the UK and Ireland.

A third of the minerals from former European empires (excluding British Empire countries), are from Chile (Figure 2.A). Approximately ten percent come each from the Faroe Islands (55 of the 149 specimens were collected by Caroline Birley), Mexico, Brazil and Bolivia respectively. The remaining 26% of the collection comes from 33 other countries.

Fifty percent of the minerals from countries of the former British Empire at Manchester Museum, are from Australia (Figure 2.B). A further 20% come from Canada, 8% from India and 7% from New Zealand. 29 other countries, formerly part of the British Empire are represented in the collection.

The particularly high number of minerals from Australia compared to other British Empire countries, begs the question why? For example, did a collector have a particular work, or personal interest in Australia and focussed their collecting there, did they have particular interest in a mineral associated with Australia, such as opal, or were particular minerals coming in abundance from Australia at the time?

Of the 910 Australian minerals in the collection at Manchester Museum (Figure 3 and Appendix II), 33% were given by the Imperial Institute (accessioned in 1914), 14 % by David I. Green (Keeper, then Curator of Mineralogy at Manchester Museum 1992-2010, specimens primarily collected himself), 9% by Henry Francis Harwood and the rest donated by 63 other donors or the donor was not recorded.

The Imperial Institute was founded in 1887 to commemorate Queen Victoria's jubilee. The main idea behind the Institute was for it to be 'a centre and clearing house for information investigation and exhibition of the natural resources of empire' (Furse, 1926). In specific reference to minerals, its work was described as '(a) intelligence and publications, (b) laboratory investigations, and (c) legal'. The Imperial Mineral Resources Bureau was amalgamated with the Imperial Institute in 1925 and The Imperial Institute became the Commonwealth Institute in 1958 (Louis, 1917; Wintle, 2013).

The transfer of minerals from the Imperial Institute to Manchester Museum was probably part of the Institute's efforts to reframe the collection and a shift from the original colonial objectives. 'It was against the backdrop of these political and economic negotiations that the Imperial Institute reinvented its purpose and forged its future' (Wintle, 2013: p.187). Staff began to talk about the political change in their displays and were encouraged to share curatorial power with people from the

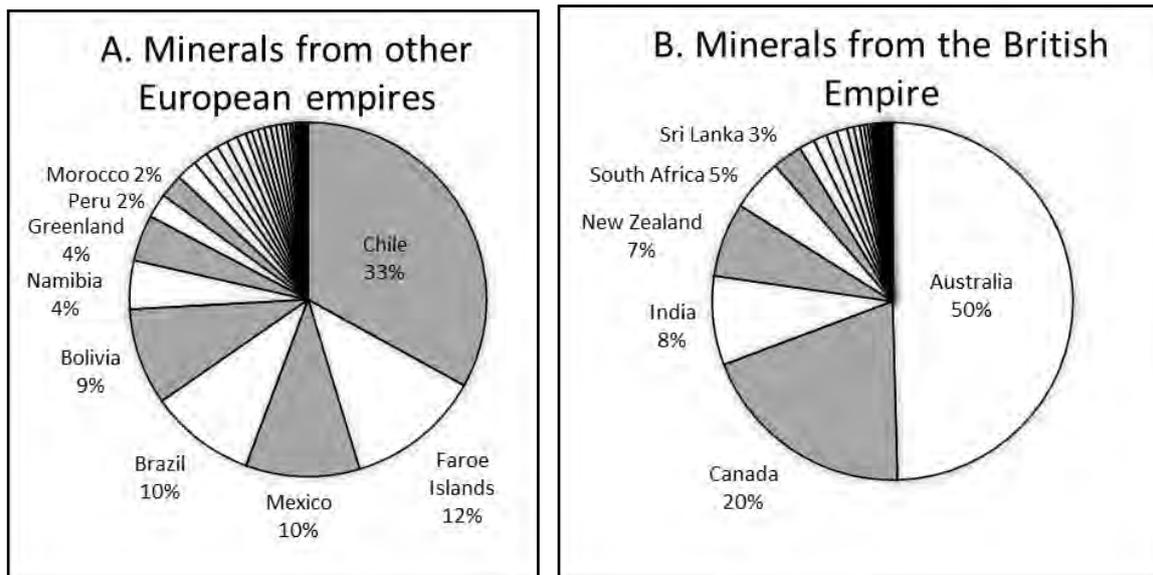


Figure 2. A. The percent of minerals at Manchester Museum, from countries of former European Empires in the collection, excluding British Empire countries. B. The percent of minerals from countries from the former British Empire. Only countries which account for 2% or more of the collection are labelled (see Appendix I for full list).

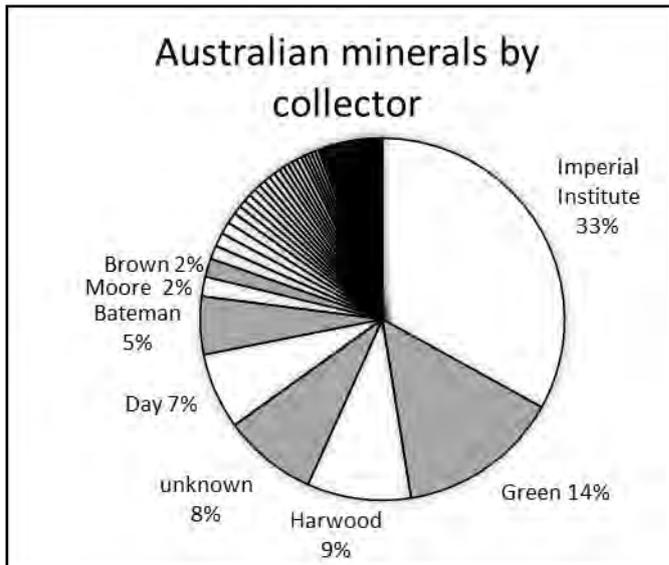


Figure 3. The percent of Australian minerals at Manchester Museum, from different collectors. Only countries which account for 2% or more of the collection are labelled (see Appendix II for full list).

countries they were displaying. It is worth noting that the Institute continued to collect ethnographic objects from across the British Empire and Commonwealth during this time (Wintle, 2013: p.187).

The Museum's Australian mineral specimens represent a broad range of 170 different mineral species (Appendix III). 26% of specimens are ore samples, 8% cassiterite (tin oxide) and 6% galena (lead sulphate), all other minerals represent 2% or less of the total collection. 193 (82%) of the 234 ore samples came from the Imperial Institute.

Uncovering the history of gold and diamonds for display

Manchester Museum reinterpreted some of its minerals in a gallery and online public display in February 2020. This was an opportunity to undertake new research and take a decolonial approach.

The history of South African gold mining

The Museum's collection contains 75 minerals from South Africa, fifteen of which are gold. None of them have been on display for at least 25 years, some of them not at all. The Museum has never previously told the story of the people who mined the gold now in the collection. It was decided to focus on specimens from the Crown Mines (Figure 4) and Robinson Mine (Figure 5) as they had good locality data and illustrate both gold mining and processing. Although the specimens were catalogued at different times, they were probably both collected in the early 1900s and accessioned during the retrospective documentation projects.

South African gold mining and processing in the early 1900s, was labour intensive (Table 1). The majority of the workforce were Black African migrant workers (described as 'Natives' in Table 1), who were housed in barracks at the mines away from their home 'reserves' (Scott, 1951: p.575).



Figure 4. Gold ore specimen from South Reef, Crown Mines, South Africa (MANCH-N.2446), donated by J. G. Spencer, accessioned 1950. © Manchester Museum, University of Manchester.



Figure 5. 'Crushed auriferous Quartz-rock (a) before (b) after Cyanide process' Robinson Mine (MANCH-N.2117 and MANCH-N.2118), donated by R. Harrison, accessioned 1914. © Manchester Museum, University of Manchester.

White workers took the skilled supervisory roles, with opportunities for advancement, high wages, and relatively good living conditions; Black workers were left with the unskilled roles that paid an eighth of White salaries and suffered harsh living conditions (Thompson, 2000). The Black African workers came from a wide range of backgrounds such as Indigenous Khoisan people and enslaved people from Indonesia, Madagascar and tropical Africa, though the majority of miners were from the Sul de Save, Mozambique (van Onselen, 2019: p.41).

The annual reports of the South Africa Chamber of Mines (a South African mining industry employer organisation), show that in the first 30 years for the twentieth century a total of 93,000 African miners died of disease on the Witwatersrand gold

field and 15,000 miners died during work-related accidents (Smith, 1993). Silicosis (silica-dust induced scarring of the lungs) and Tuberculosis were commonplace (Katz, 1994).

By 1908, 12% of the Rand Gold Mines workers were indentured Chinese people. Strong opposition to their presence from the White community meant there was compulsory repatriation after three years of labour. Between 1904 and 1910, over 63,000 Chinese miners were brought in to work on South African gold mines (Yap and Leong Man, 1996).

The racial mix of South African gold miners was high-profile in British newspapers in the early 1900s (e.g. The Manchester Guardian, 1904). The 'Chinese labour question', also referred to as

Table 1. 'Average number of employees on the Rand Gold Mines*
* Compiled from annual reports of the Witwatersrand Native Labour Association 1898-1948 and of the Transvaal Chamber of Mines.' (Reproduced from Scott, 1951: p.575.)

	1898	1908	1918	1928	1938	1948
Europeans	9000	17,593	22,632	21,341	38,021	36,403
Natives	88,411	140,304	179,276	194,538	298,552	271,399
Chinese	-	21,027	-	-	-	-
All races	97,411	178,924	201,908	215,879	336,573	307,802

'Chinese Slavery', played an important part in the defeat of the Conservatives in the landslide victory for the Liberals in 1906. Many voters objected to poor treatment of the Chinese labourers and suggested that white emigration of the British unemployed to South Africa could have filled these jobs instead (Taylor, 2005).

Using photographs contemporary to the collection

One of the challenges of putting together a museum display, is that space is limited and most visitors do not want to read text-heavy labels. Complex and uncomfortable stories can be difficult to tell, so it was decided that photographs would be a powerful approach to tell the story of how the gold was acquired. Contemporary photographs of gold mining at Crown Mine (Figure 6), gold processing at Robinson Mine (Figure 7) and gold mine labourers (Figure 8) were found in the United States Library of Congress archive. There was no interpretation of these photographs beyond the descriptive catalogue information.

'Gold mining at Crown Mine' (Figure 6) shows four miners shovelling gold-bearing rocks (following being broken up by an air-drill), a fifth holding a light. They are tightly packed amongst wooden props holding up the roof, though this was not unusual in miners at the time. The miners' safety

was probably not a high priority, with only one of the five wearing a protective hard hat, the others wear cloth ones. There is no hearing protection or protection from breathing in the mine-dust. The effects of the heat from being deep underground and manual labour are clear to see, with two of the miners having removed their upper clothing.

The 'Quartz Sorting Table, Robinson Deep Mine, Johannesburg, South Africa' (Figure 7) shows African migrant workers selecting pieces of the newly mined gold-bearing quartz conglomerate. They have no safety equipment, not even gloves to protect their hands on the jagged rocks, still a characteristic of the rocks in the collection today. After this, the ore underwent crushing, heating, extraction using a cyanide solvent and electrolysis. Central to the photograph is a white European overseer. He has a hat with a brim, probably more expensive to buy which may reflect a higher income.

Figures 6 and 7 form part of the collection of The Keystone View Company, who produced lantern slides and stereographs as educational resources for American elementary schools between 1892 and 1972. They were highly regarded and widely used (Getchell, 1912). All of the photographers were anonymised by the company (Gleason, 2018).

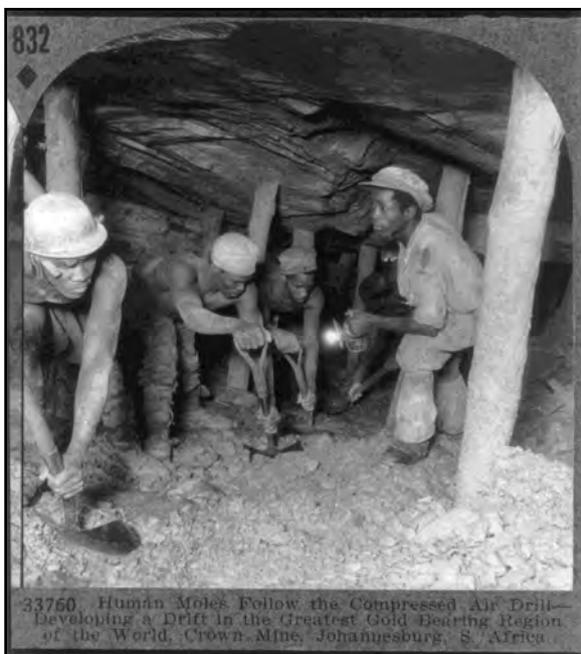


Figure 6. 'Human moles follow the compressed air drill - developing a drift in the greatest gold bearing region of the world, Crown Mine, Johannesburg, S. Africa', about 1910. Original copyright, The Keystone View Company No. 33760, now in the public domain. Available at: <<http://hdl.loc.gov/loc.pnp/cph.3b09058>> [Accessed 29 April 2020].

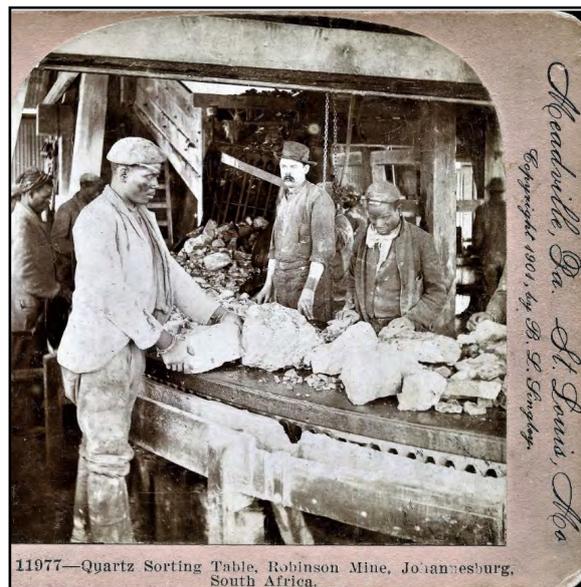


Figure 7. 'The 'Quartz Sorting Table' Robinson Mine, Johannesburg, South Africa', 1901. Original copyright, The Keystone View Company No. 11977, now in the public domain. Available at: <www.mindat.org/photo-879926.html> [Accessed 29 April 2020].



Figure 8. 'Black, Chinese and White labourers in a gold mine in South Africa', around 1910 Frank and Frances Carpenter Collection (Library of Congress), LOT 11356-39. Available at: <www.loc.gov/pictures/resource/cph.3a40984/> [Accessed 29 April 2020].

The third photograph used to tell the story of the South African gold mining (Figure 8), is from the Frank and Frances Carpenter collection at the United States Library of Congress archive. The photographs were produced and gathered by Frank G. Carpenter (1855-1924) and his daughter Frances (1890-1972) to illustrate his writings on travel and world geography (Library of Congress, 2010). The photograph shows ten gold miners at the end of a mine tunnel next to two mine carts (called a cocopans in South Africa), on narrow-gauge rails. Five of the miners (on the back row) are Chinese, three of which proudly show their long plaited hair worn in a queue. One of these miners is holding a wooden-handled tool, probably a shovel. The two miners on the right are Black migrant Africans, both wear hats, one with a brim. The three White European miners on the front row, have moustaches, one is smoking a pipe, another a cigarette, probably reflecting the cultural norms of the time.

In contrast to the other photographs, this one is posed with the men not working. Everyone is facing the camera looking relatively relaxed, rather than undertaking work. It is not clear exactly what their roles are in the mine, how these might split along

racial lines, or how representative they are of other miners.

The Sierra Leone Diamond

Sierra Leone diamonds are found near the surface. The diamonds eroded out of their kimberlite host rock in the Yengema- Koidu and Tonga areas of eastern Sierra Leone and deposited in river gravels in the Bafi-Sewa and Moa river systems (Hubbard, 1983). The alluvial deposits formed relatively soft conglomerate. The geological setting means that it is possible for small-scale diamond miners to dig shallow holes in the ground to find the diamonds.

In contrast, most economic diamond mining in Africa today extracts the diamonds from hard, igneous kimberlite host rock. Kimberlite forms under extremely high pressure in volcanic pipes deep underground (Keith, 1978). The mines follow the near-vertical pipes down underground in search of the diamonds (e.g. the De Beers Jwaneng diamond mine, Botswana is 625 metres deep) and as a result are owned by large corporations, who are able to fund these large-scale operations, usually in partnership with government.



Figure 9. Diamond in conglomerate host-rock from Sierra Leone (MANCH-N.19336.69), R. A. Howie collection. © Manchester Museum, University of Manchester.

Manchester Museum acquired its Sierra Leone diamond in 2013 (Figure 9). The specimen was part of the personal collection of Robert Andrew Howie (1923-2012), previously kept in a china cabinet in his living room. Howie was a mineralogist (Bridges, 2012) and co-author of the widely used student textbook 'An introduction to the Rock Forming Minerals' (Deer, Howie and Zussman, 1992). Manchester Museum acquired the collection of 650 minerals from his sons after their father's death. Most of Howie's minerals, though high quality had little associated information and his sons were not

able to provide further details; so through a process of curation and identification of the collection, it was a matter of trying to piece together information from what clues were available.

The Sierra Leone diamond was in a box with a hand-written label 'DIAMOND in conglomerate Sierra Leone purchased ex. W.T.G. collⁿ 1952' (Figure 10). After several internet searches, it became obvious that 'W.T.G.' was short for William Thomas Gordon (Figure 11); a palaeontologist based at King's College, London who was also a respected diamond expert, called upon by Hatton Garden diamond dealers to authenticate their diamonds (Campbell Smith, 1952 and Woolridge, 1951). Gordon travelled widely, so he may have acquired the diamond himself on a visit to the country, though the details of those who mined it were most likely never recorded. It must have been collected between 1930, when diamonds were first discovered in Sierra Leone (Frost, 2012) and 1950 sometime before his death. Gordon published on Sierra Leone diamonds in 1945, it is not known if he specifically chose it, but the article was printed in the journal the 'Bulletin of the Imperial Institute' was part of the infrastructure of the British Empire (Furse, 1926).

In 1935, a diamond mining monopoly was granted by the British colonial authorities to the Sierra Leone Selections Trust Ltd (SLST), incorporated in London (Frost, 2012: p.34). The SLST were required to pay £7000 a year in rent and a 27.5% tax on profits, but were exempt from all other taxes such as export tax. The remaining profits were split between the UK government and SLST. In 1955, the SLST's operations were reduced to 450 square miles with the rest of the rights coming under government control, allowing artisan small-scale diamond mining to begin. Sierra Leone gained independence from Britain in 1961 and in 1970, the SLST amalgamated with the government mining

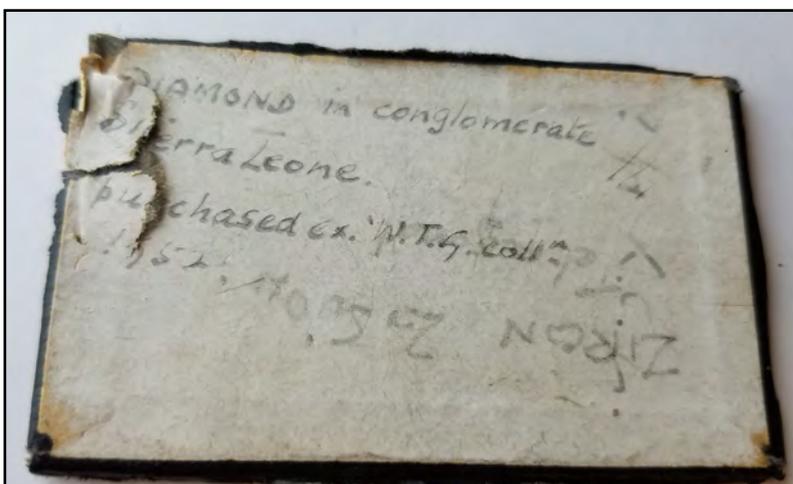


Figure 10. Hand-written label with the Sierra Leone diamond. © Manchester Museum, University of Manchester.



Figure 11. Professor W. T. Gordon (right) with Professor P. G. H. Boswell, (left) and I. S. Double on a field excursion about 1927. © University of Liverpool Library (reference D4/112).

division to recoup more tax. The SLST was compensated for the amalgamation with £2.55 million of government bonds (Frost, 2012: p.53).

Three years after independence, the Sierra Leone government took out a loan from International Monetary Fund (IMF) of USD \$10 million to develop its infrastructure (Bhatia et al, 1969). The loan was subject to strict conditions with payments linked to specific goals based on foreign reserves. These links, amongst other things, forced the country to devalue its currency in 1967 after Britain devalued the pound, reducing expenditure on infrastructure.

Development in Sierra Leone has been hindered over the decades by poor governance, corruption, a reliance on foreign investment, and payment of the IMF loan (Frost, 2012). It descended into Civil war in 1991 and diamonds were a key battleground (Frost 2012: Chapter 2). Many of the problems remain today ‘...and despite having an abundance of mineral wealth, the story of Sierra Leone has been a continuous cycle of debt and aid...’ (Frost 2012, p.178).

The Museum’s new mineral display provided the opportunity to illustrate its Sierra Leone diamond with recent research on corruption in the mining industry and the continuing colonial legacy. Contemporary research, images and video (Hilson and Maconachie, 2019 and Maconachie and Wharf, 2019) were used to tell the first-hand story of the exploitation of small-scale diamond miners in Sierra Leone (Figure 12). This is the first time this story has been told in a UK museum.

Diamond mining is Sierra Leone’s most lucrative export industry, with an annual production of up to \$USD 250 million (Maconachie and Wharf, 2019). Due to poor governance and corruption, only a fraction of this wealth returns to the people who mine the diamonds. The miners are only paid by their ‘supporters’ if they find diamonds, leading to a highly unequal relationship.

Manchester Museum’s display not only tells this story, but the interpretation prompts people to question where diamonds are from before they buy them. It is hoped to survey visitors about their response to the display at a future date.



Figure 12. Diamond mining in Sierra Leone. © Roy Maconachie, Centre for Development Studies, University of Bath.

Discussion

This research shows that the role of Black people, Chinese people and Indigenous communities played a key role in the formation of what is now Manchester Museum's mineral collection. Until now, these stories have either been unresearched or not acknowledged. Significant parts of the mineral collection are directly or indirectly a result of the activities of empire. The exclusion of these narratives through not dedicating time and resources to researching colonial histories and complex colonial stories, and editing them out during the exhibition development process, fosters the status quo and constitutes structural racism in the museum sector.

Museum mineral collections have not been analysed in this way before. This paper is a call to action to other museums to do the same, establish methods, challenge racism in the sector, share and develop their collections and engage with new audiences.

Why has this research not happened before?

There are a few practical reasons why this research has not happened before and other reasons that reflect racism in the museum sector and wider society.

It is only relatively recently that Manchester Museum finished documenting its mineral collection. Documentation work is often lower priority than exhibition and public engagement work, particularly in regional museums, as the benefits are usually indirect. It is only possible to uncover these stories and undertake this kind of data analysis with a full collection data set.

Under normal circumstances, it is difficult to dedicate time to do this research. Developing Manchester's new mineral display and the subsequent COVID19 lockdown in 2020, provided the opportunity to undertake this research.

There is undoubtedly a new appetite to uncover these kinds of stories. The Black Lives Matter movement has challenged society to be much more honest and transparent about its past and its racist practice, both in the past and present. Museums are no exception to this.

There are a number of pioneering examples exploring the decolonisation of museums (as discussed in the introduction to this paper), but with the exception of Das and Lowe (2018), few publications have looked at natural science collections, or specifically minerals. Natural science

specimens were collected to provide scientific data, with their context having little relevance beyond the presence or absence of a specimen at a particular time and place. If the story of their collection is told, it is usually about the white male collectors. There has been a disconnect between scientific natural history specimens and most of the people involved in collecting them. This fosters racism, as described by Das and Lowe (2018: p.14) '...this absence – particularly in relation to colonial histories – perpetuates structural racism within modern society by whitewashing a history where science, racism, and colonial power were inherently entwined. This misrepresentation of the past is problematic because it alienates non-white audiences.'

These stories are often difficult to tell and difficult to hear. They are stories of racism, abuse and exploitation, some of which continue to this day in the form of exploitation of people in mining operations and generational trauma. In Manchester Museum's new mineral display for example, it was decided to primarily tell these story through images rather than text. The limitations of this medium mean the details are lost, which are often the complex hard to find stories of the disempowered victims and labourers, such as the miners revealed above. The exhibition design process inevitably involves editing stories and cutting some stories altogether. Simple stories that can be quickly grasped by the public, are usually the ones that make it through the editorial process, usually stories of science and White men. This structural racism across the museum sector perpetuates the status quo, as it excludes stories of Black and Indigenous history from museum displays.

Minerals and Empire

The lure of valuable mineral deposits is a powerful motivation to colonise a country. Much of the historical wealth of Britain (and many other European countries) at home and abroad is fundamentally rooted in the land and the exploitation of people in order to convert that land into wealth. Mineral resources not only provided the raw materials for building and powering the railways, shipping and industry of empire, but provided a quick turnaround from the sale of government mineral claims to foreign investors.

Manchester Museum's mineral collection, to a significant extent, reflects the economic activity of empire, in distribution and what was of value to empire builders. This seems comparable to data from Bristol Museum, but more work is needed.

Manchester Museum has never explicitly aimed to collect the mineral resources of empire, but has done so by proxy. The distribution of country of origin of the minerals also reflects the geology of where the minerals were found, but even if it isn't always the initial reason for colonising a country it provides a strong motivation to exploit it.

Lack of resources dedicated to collecting has meant the collection is dominated by gifts, for example from H. F. Harwood, or transfers from, for example the Imperial Institute (Figure 3). The colonial context of the mineral collections is an inherited legacy and has not been researched or told through an exhibition before. The remit of Manchester Museum, since moving to the University has been public and university student education and research (Eagar and Preece, 1977). The Imperial Institute specimens for example have been used for this purpose since their transfer, in contrast to their original reason for collection (which was 'investigation and exhibition of the natural resources of empire' (Furse, 1926).

In contrast to most other museums, The Museum of Practical Geology was more open about their desire to map the resources of empire. The Museum of Practical Geology, now part of the Natural History Museum, London, was one of the oldest single science museums. It had a mission to illustrate 'the mineral wealth of the kingdom and colonies, displayed models of mining machinery, and analysed ores, metals and building stone for government departments' (Stafford, 1984).

There is an ever-growing demand for minerals whether it is gold and diamonds, or for the vast array of other chemical elements that are used in machines, industry and electronic devices. Museums need to tell the stories of Black and other Indigenous communities involved in their mining and the impact of mining on their ancestral land. Exploring who was involved and at what cost is a vital part of why people should care.

The role of objects and data in decolonisation

There is something special about interacting with real objects. Experiencing an object through either observing it in a museum display or through handling it, gives a direct connection to a subject matter or history that cannot be replicated elsewhere. For example, the gold ore specimen from South Africa (Figure 4) gives a direct insight into the experience of the miners who extracted the gold ore (Figure 6) and the people involved in sorting it (Figure 7). The sharp edges of the broken rocks must have caused regular injuries to workers' unprotected hands. The gold ore specimen

brings the black and white photographs to life through engaging other senses. It brings the experience to the present, rather than a far-off historic episode that happened to other people in a distant country. In short, museum objects can be a powerful way to encourage empathy.

The Sierra Leone diamond specimen (Figure 9) is still embedded in the rock in which it was found. When this specimen is seen from different angles, white pebbles can be identified in the rock matrix. These are essential clues to the sedimentary nature of the diamond deposit and the near surface setting. The geological setting is key to understanding the context of the exploitation of the miners today. Much of the impact of this narrative would be lost without clues from the real specimen.

One of the challenges of decolonising collections is that information is often missing or incomplete. However, research into both the Museum's gold ore and the Sierra Leone diamond has shown that even with limited information, it is possible to construct an object history and uncover clues to the missing role of Indigenous peoples. Lack of information about an object makes it much harder to represent a story accurately, but it is not a reason to avoid looking for the stories of empire and the people involved.

The data associated with natural history specimens is often as valuable as the object itself. The record of something at a particular time and place can be invaluable in for example, discovering long forgotten mineral resources, or making informed decisions about landscape management and conservation. Widely sharing this information, making a difference here and now, should be seen as an integral part of museum decolonisation.

The role of photographs in decolonisation

Photographs are probably the quickest way to encourage empathy from museum visitors. Figures 6 and 7 give a sense of danger and hardship, not only through the risks of underground mining, but also the likely harsh treatment by the White overseer of the Black African workers at the sorting table. Assaults by White miners on African workers were commonplace (Smith, 1993: p.55) and were meant to be reported, but rarely were for fear of reprisals. In comparison, it is harder to gain an understanding of what the lives of the people featured in Figure 8 were like. Their work is implied through the mine tunnel setting, carts, tools and clothing, but there is little evidence beyond that. There are clear limitations of what can be gained from a staged photograph.

It is tempting to take the Keystone View Company images at face value and assume the images show an accurate representation of the lives of the people photographed. This is probably only partly true, but to what extent are they documentary photographs and what extent are they entertainment? The Keystone View Company was a commercial organisation, selling mainly stereographs (Gleason, 2018). The photographs had a dual educational and entertainment role and were chosen as a result of customer choice and a sales agent's pitch (Gleason, 2018: Chapter 5). The company would have chosen photogenic subjects that would have sold more copies as 'unlike other photographic companies, their company's primary focus was sales rather than photography' (Gleason, 2018: p.234). There would have been an inevitable unconscious bias. Images that showed what their clients wanted or expected to see, (such as the 'Human Moles' in Figure 6) would have been more popular and profitable.

The decision by the Keystone View Company to anonymise their photographers (as many other photography companies do), writes them out of history. There is a striking parallel with museum documentation, which almost universally anonymises the collectors beyond a named patron (though this sometimes happens before specimens enter the museum). This practice continues in many museums today, misses an opportunity to tell a more detailed history and can put some people off donating objects.

Diamonds and Sierra Leone

Diamonds are strongly linked to the development of colonialism, particularly in the British Empire. The most dominant diamond company by far, is De Beers. Originally set up by the British 'arch-imperialist' Cecil Rhodes (Maylam, 2002) in 1880, De Beers has acted as a cartel controlling the market, more or less ever since (Spar, 2006).

It is easy to assume that the diamond market is fuelled by people's desire to own something innately beautiful, enduring and rare, but it's mostly a result of De Beers' efforts to restrict supply and manage demand. For hundreds of years, diamonds were the preserve of royalty. In the late 1800s the sheer number of diamonds flowing out of African mines threatened their scarcity, a key driver in the demand (Spar, 2006: p.198). De Beers and its syndicate were able to acquire and stockpile the stones, releasing them slowly to inflate prices (Spar, 2006: p.198).

In parallel to controlling the supply, De Beers has been staggeringly successful in managing demand.

They arguably invented the now ubiquitous tradition of diamond engagement rings (Bringing, 1990). In the 1938, De Beers hired the advertising agency N. W. Ayer who managed to align diamonds with love and marriage in people's minds. Diamond engagement rings had previously only played a part in about 10% of marriage proposals in America. Their 'A diamond is forever' slogan was launched in 1948 which suggested a diamond, like your relationship, is eternal. They had managed to persuade men that a diamond (and how much you spent on it) was an expression of love and persuade women that they were an essential part of a romantic relationship. By 1965, diamonds rings were part of 80% of proposals.

The demand for Sierra Leone diamonds and consequences for the diamond miners has several influences, but much of it is a direct result of De Beers' domination and manipulation of the market.

Decolonisation

The term decolonisation has been around for many decades and originally referred to the withdrawal of colonial powers from the countries they had occupied (Thornton, 1963). H. G. Wells described the British public's knowledge and feelings about the British Empire: 'The British people themselves, the British democracy, had always been indifferent to the future of the British Empire, mainly because they knew so little about its past and so little about its present' (Thornton, 1963: p.7).

Museums and society have changed much since his comments, but it can be argued that most members of the public still know little about role of the British Empire (Haydn, 2019). The concern about this lack of knowledge and representation is reflected in the recent Black Lives Matter protests and calls to decolonise school and university curricula (Williams, 2017 and Atkinson *et al.*, 2018).

Many people who don't visit museums, particularly those from ethnic minority and/or socioeconomic disadvantaged backgrounds, are alienated by 'spaces or practices that reflect dominant values of Whiteness and class privilege' (Dawson, 2018: p. 13). The role of Black and Indigenous peoples, and those who were not wealthy, are generally not acknowledged. This is where museums need to change their approach.

The implications of decolonisation for Indigenous peoples are clear 'the survival of peoples, cultures and languages; the struggle to become self-determining the need to take back control of our

destinies' (Smith, 2012: p. 143). Museums can play a central role in the methodologies identified by Smith (Smith, 2012, chapter 8): 'Remembering', 'Intervening' and 'Returning' amongst others.

For museums, decolonisation should mean stepping back, looking at what and who we value and how the museum and collections have been shaped by colonising forces. The challenge is how to refresh museum stories using different narratives and approaches. Decolonising is about being open and honest about the impact on and role of people in the past and present, particularly Black and Indigenous peoples. Decolonisation is not limited to repatriation and goes beyond ethnography collections.

Limitations and further research

This research only goes so far and aside from a lack of associated information, is limited by a lack of community involvement. The next stage of bringing new meaning and voices to our collections is to develop partnerships with source communities and diaspora in the UK. We need to develop a shared sense of ownership and share power.

Outcomes from these partnerships could include: enriching collections and displays with Indigenous perspectives; giving back data to help develop conservation programmes; proactively explore repatriation where it is wanted (though the general consensus is that it is unlikely there will be repatriation requests for geological material).

Conclusion

This research has shown that 24% of Manchester Museum's mineral collection is closely connected to empire. The history of Black and Indigenous peoples runs through much of our collection, but particularly in natural history collections, is largely unresearched and not acknowledged in displays. Institutional approaches, whereby time and resources are not committed to researching colonial histories and complex colonial stories do not get past exhibition editing process; means that this practice continues. This is structural racism and museums need to be proactive in addressing this in order to break from primarily reactionary practices related to decolonisation.

There are enormous opportunities to develop this research through fostering partnerships with source communities around the world. These partnerships could bring new meanings, a shared understanding of the ongoing impact of empire and repatriation of data, and where wanted repatriation of objects. In short, decolonising museums is the

right thing to do and will put museums in a good position to help bring cohesion to society and develop understanding between cultures. This paper is a call to action.

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Appendix I: Country of origin and number of mineral specimens from each country within Manchester Museum's mineral collection.

Country	Number	Country	Number	Country	Number
Afghanistan	3	Greece	38	Pakistan	10
Algeria	6	Greenland	51	Paraguay	1
Anguilla	2	Guadeloupe	1	Peru	27
Antarctica	1	Guatemala	1	Philippines	3
Antigua and Barbuda	3	Guinea	1	Poland	36
Argentina	23	Guyana	4	Portugal	17
Armenia	1	Honduras	1	Reunion	1
Australia	910	Hungary	84	Romania	93
Austria	200	Iceland	35	Russia	143
Bahamas	2	India	148	Saint Helena	3
Belgium	62	Indonesia	12	Saudi Arabia	3
Bermuda	1	Iran	14	Serbia	1
Bolivia	107	Iraq	1	Serbia	1
Bosnia	1	Israel	1	Sierra Leone	5
Brazil	117	Italy	400	Slovakia	65
Cameroon	1	Jamaica	2	South Africa	87
Canada	361	Japan	17	Spain	168
Cape Verde Islands	1	Kazakhstan	12	Sri Lanka	49
Chile	401	Kenya	3	St Lucia	1
China	23	Kuwait	1	Sweden	175
Colombia	12	Madagascar	16	Switzerland	184
Congo	7	Malawi	6	Syria	1
Croatia	3	Malaysia	10	Tanzania	14
Cuba	3	Mexico	125	Thailand	2
Czech Republic	206	Montserrat	1	Trinidad	4
Denmark	2	Morocco	26	Tunisia	7
Desolation Islands	1	Mozambique	2	Turkey	10
Dominican Republic	1	Myanmar	7	Uganda	22
Egypt	18	Namibia	54	UK & Ireland	5289
Estonia	1	Netherlands	2	United States	1169
Falkland Islands	1	New Caledonia	7	Uruguay	7
Faroe Islands	149	New Guinea	1	Venezuela	6
Fiji	1	New Zealand	123	Virgin Islands	1
Finland	13	Nicaragua	1	Zaire	4
France	130	Nigeria	11	Zambia	26
French Polynesia	5	Norway	714	Zimbabwe	17
Germany	520	Oman	1	Total with locality:	12885
				Un-located:	7222
				Total:	20107

Appendix II: Details of who Manchester Museum's Australian minerals were acquired from and number of specimens.

Australian mineral donor	No. of Specimens	Australian mineral donor	No. of Specimens	Australian mineral donor	No. of Specimens
Alderson, Don	1	University of Manchester Geology Department	1	Moore, M.	16
Altrincham Museum	9	Grant	4	Museum of Victoria	10
Axon, Howard	4	Green, David I.	131	Nathan, Victor	6
Barstow, Richard W.	1	Greenway, B.	11	Nudds, John	1
Bateman, Thomas	47	Greybill, P.	1	Ogle-Skan, J. F.	2
Bell, W.	5	Harrison	3	Parkinson	1
Beyer, B. D	6	Harwood, Henry F.	84	Platt, S. S.	1
Birley, Caroline	5	Haywood, J.	2	Prince, W. D.	3
Boyd-Dawkins, W. B. D.	7	Henshall, H.	2	Roscoe, Henry, E.	1
Briggs, H.	2	Holmes, F. A.	1	Royle	2
Brown	15	Hopper, Christine M.	2	Sanders	1
Butler, Henry F.	5	Hopwood, A. T.	4	Seward, Terry	1
Buxton Museum	2	Hunt, Kathleen]	2	Stirrup, Mark	5
Cain, W. D.	2	Imperial Institute	301	Swindells, Rupert	1
Consolidated Beryllium Ltd	1	Jack, R.	1	Thornton, Jocelyn	2
Cook, W.	2	Jewson, Chris	2	Tuscon Mineral Show	1
Critchley, Harry	3	Johnson, T.	1	Unknown	76
Day, Bernie & Marge	62	Jowett, F. P.	1	Watson, D. M. S.	3
Dermot, Henry	2	Leech, J. J.	3	Wilde, George	4
Donner	5	Lind	1	Williams, Peter	1
Foote, A. E.	1	Lucas, B. R.	2	Wood, J.	6
Forbes, David	4	Lythe Minerals	2	Total:	910
Fraut	11	Melland	2		

Appendix III: The number of Australian minerals at Manchester Museum, by scientific name. NB. The 234 specimens are identified as 'ore samples' and come from seventeen different donors (four specimens do not record the donor). 154 of these specimens came from the Imperial Institute.

Australian Mineral	No.	Australian Mineral	No.	Australian Mineral	No.	Australian Mineral	No.
Actinolite	5	Cobaltaustinite	1	Lavendulan	1	Saleeite	1
Adamite	2	Copper	11	Lepidolite	1	Sampleite	2
Agardite	1	Cornetite	2	Leucophosphite	1	Scheelite	2
Albite	2	Coronadite	4	Levyne	2	Schumacherite	1
Alunite	3	Corundum	4	Libethenite	2	Segnitite	2
Analcime	6	Covellite	1	Linarite	1	Serpentine	1
Andalusite	1	Cowlesite	3	Magnetite	3	Siderite	1
Anglesite	7	Crocoite	6	Malachite	16	Sieleckiite	1
Antimony	1	Cuprite	9	Manganpyrosmalite	1	Silver	7
Antlerite	1	Cyanotrichite	2	Margarite	1	Simpsonite	2
Apatite	2	Cyrilovite	2	Mesolite	4	Smithsonite	18
Aragonite	2	Davidite	4	Meteorite	6	Spangolite	1
Artificial	4	Decrespignyite	2	Miargyrite	1	Stannite	6
Atacamite	5	Dolomite	1	Mimetite	2	Stellerite	2
Austinite	2	Dravite	2	Molybdenite	10	Sternbergite	2
Azurite	13	Dyscrasite	1	Monazite	5	Stibiotantalite	2
Barite	5	Erythrite	1	Mrazekite	1	Stibnite	10
Bavenite	1	Fergusonite	2	Namibite	1	Stichtite	3
Bayldonite	2	Ferrierite	3	Nantokite	6	Stilbite	1
Beryl	2	Ferrimolybdite	4	Newberyite	2	Stillwellite	1
Beudantite	4	Fluellite	2	Olivenite	1	Sylvanite	1
Bismuth	3	Fluorapatite	1	Opal	22	Tektite	3
Bismuthinite	1	Fluorite	1	Ore sample	79	Tetrahedrite	2
Bismutite	1	Galena	55	Ore sample Antimony	2	Thomsonite	8
Bornite	3	Garnet	3	Ore sample Bismuth	1	Torbernite	5
Brianyoungite	1	Garnierite	1	Ore sample Copper	14	Tourmaline	3
Brochantite	3	Gartrellite	1	Ore sample Gold	70	Tridymite	1
Cacoxenite	2	Gerhardtite	1	Ore sample Silver	26	Tsumcorite	1
Calcite	7	Gmelinite	5	Ore sample Silver/ Lead	5	Tsumebite	1
Carminite	5	Goethite	19	Ore sample Tin	37	Turquoise	3
Carnotite	2	Gold	20	Orthoclase	2	Ulrichite	3
Cassiterite	69	Gonnardite	2	Peisleyite	1	Variscite	1
Cerussite	9	Gypsum	2	Perhamite	1	Wavellite	6
Chabazite	5	Hedenbergite	1	Phillipsite	1	Widgiemool- thalite	1
Chalcoaluminite	1	Hedyphane	1	Pseudomalachite	2	Willemite	2
Chalcocite	1	Hematite	6	Pyrrargyrite	1	Wulfenite	6
Chalcopyrite	6	Hentschelite	1	Pyrite	4	Yttrotantalite	2
Chalcosiderite	7	Heulandite	5	Pyromorphite	19	Zircon	4
Chlorargyrite	8	Hydrocarbon	2	Quartz	18	Total:	910
Chrysocolla	2	Hydrozincite	1	Rhodochrosite	1		
Cinnabar	1	Iodargyrite	3	Rhodonite	1		
Claringbullite	1	Kaolinite	1	Rosasite	2		
Clinoclase	1	Kleemanite	1	Rutile	4		

The Harrison Collection: Addressing colonialism in the collections of a Victorian big game hunter

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Abstract

Scarborough Museums Trust holds the archive of a big game hunter James Jonathan Harrison (1857-1923) comprising of not only hunting trophies, but also a large number of photographs and nine hunting diaries. Shortly after his death, his collection was donated to Scarborough Corporation, where for many years it was displayed in the upper rooms of the library before eventually making its way to the town's Natural History Museum when it opened in 1952. The photographs and diaries give a unique insight into his privileged lifestyle and insatiable appetite for shooting. In 2022 the museum is planning an exhibition based around Harrison's photography which will address a number of difficult issues regarding not only the slaughter of hundreds of animals but also the exploitation of the indigenous peoples of Africa and especially the Congo. In 1904/5 Harrison brought six Mbuti, or Bambuti, people from the former 'Congo Free State', which at the time was ruled by King Leopold II of the Belgians, and toured them around UK Music Halls for nearly three years before returning them home. Historically, the popular media has told this story in a cheery, anecdotal way with only cursory, or apologetic regard for the clearly exploitative nature of the venture. Through the planned exhibition, this aspect of the narrative will be retold in a way which helps people think more about how selective interpretation of collections can perpetuate racism and that exploring these topics does not 'rewrite history'.

Keywords: Racism; Human zoos; Mbuti; Bambuti; Congo; decolonial approaches; hunting; natural history; museum interpretation; museum ethics; social justice

Introduction

Whilst the colonial origins of archaeological and ethnographic material has been subject to scrutiny for many years, it's only recently that the colonial and exploitative origins of some natural science collections have been explored (Das and Lowe, 2018). In that light Scarborough Museums Trust decided to re-examine one of its less explored collections, The Harrison Collection. A collection of trophy heads, various taxidermy, hunting diaries, phonographic recordings and several hundred photographs from his travels around the world amassed by James Jonathan Harrison (1857-1923), a Victorian/Edwardian big game hunter. He

was often criticised by his peers for his undisciplined collecting style (Powell-Cotton, 1902). Powell-Cotton parted ways with him during one trip through Ethiopia after Harrison had shot five small elephants in one day:

The net result of our hunt was, that H. killed five elephants, and W. and B. one each, while I had also seen two drop. As none of the natives here eat the flesh, it seemed a pity to have killed so many for the sake of such small ivory, and I was sorry I had taken part in the hunt.

(Powell-Cotton, 1902)



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They parted company shortly after this.

One of the key things we want to explore through the reinterpretation of this collection is how Britain's colonial past is so embedded in museum collections, that even relatively small local museums can hold collections with a dark legacy. The Museums Association actively encourages this approach and have issued the following statement:

"We unreservedly support initiatives to decolonise museums and their collections. Decolonisation is not simply the relocation of a statue or an object; it is a long-term process that seeks to recognise the integral role of empire in museums – from their creation to the present day. Decolonisation requires a reappraisal of our institutions and their history and an effort to address colonial structures and approaches to all areas of museum work."

(The Museums Association, 2020)

Several other organisations have already laid the groundwork for such projects. Recent works such as "Legacies of colonial violence in natural history collections" (Ashby & Machin, 2021) and the work Manchester Museum have undertaken in exploring the colonial origins of aspects of their geological collections (Gelsthorpe, 2021) have formed a solid framework for smaller collections to work towards. Popular exhibitions that have taken a decolonial approach such as the Grant Museums 'Displays of Power; A Natural History of Empire' show also there is a public interest in this work. The aim of our collections review is not only to reconsider the narratives but to prepare an exhibition with the Harrison collection at the heart of it. This article examines Harrison's relationships with the peoples he encountered, particularly

examining his relationship with the Mbuti people of the Congo.

Background and collection

Harrison was born on the 8th July 1857 in Selby, Yorkshire into a land-owning family who soon settled in Brandesburton, East Yorkshire (Figure 1). As was expected of his class, he attended Harrow, and then Oxford. He became an officer in the local militia on his return to Yorkshire and was a justice of the peace and was concerned with the dozen farms he owned. His private income allowed him to finance a number of hunting trips around the world.

Harrison's diaries provide some information regarding his travels. Though not complete, further information can be gathered from his photographs and a notebook listing the sizes of his 'best' trophy species. His first international hunting expedition seems to have been a trip to South America in 1885, followed in 1889 by a three month visit to South Africa, and a hunting expedition to North America the following year. In late 1891 he embarked on a hunting trip to India, by way of Egypt, returning home via Japan and North America. From 1896 all his expeditions were to Africa. The many trophies he collected were displayed in his home, Brandesburton Hall which he would regularly open up to visitors as well as giving illustrated talks on his expeditions.

Following Harrison's death in 1923 his large collection of game heads, taxidermy, photos, weapons and nine diaries came into the possession of Scarborough Council. It was donated by his widow on the provision that the trophies would all be on permanent display. The collection had

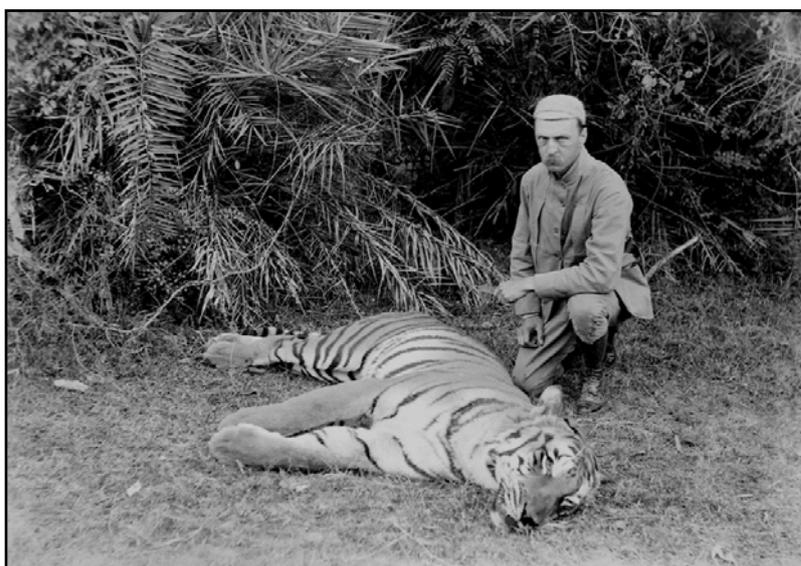


Figure 1. James Jonathan Harrison (1857-1923) Photograph of Harrison with a tiger taken in central India, January 1892. Scarborough Museums Trust.

initially been offered to Hull Museums, but they lacked the space to display them and it seemed a similar offer had been made to the Natural History Museum, London as can be seen in this extract from the Yorkshire Post and Leeds Intelligencer - Friday 13 July 1923:

“Mrs. Harrison's Gift to Scarborough.

A Scarborough correspondent tells that there is great satisfaction among the townspeople with regard the gift of Mrs. Harrison. The collection of birds, animal heads, curios, and weapons, which she has just presented to the Corporation was made her husband, the late Lieut.-Col. Harrison, during his big game expeditions in Central Africa, and is unique of its kind. It is an open secret that the authorities of the South Kensington Museum envy Scarborough Mrs. Harrison's gift. The collection might have gone to them, but there were conditions attaching to with which they were unable to comply. Mrs. Harrison, who lives Brandesburton Hall, Beverley, is American lady.”

(S, E.G., 1923)

The collection was displayed initially in rooms above the library until the 1940s. During this time it suffered much neglect. Many of the mounts were subject to damage and were destroyed or disposed of. What is currently left is a fraction of the former collection and with little to no data attached, practically everything having been removed from its display cases. With a little detective work, a number of orphaned specimens have been identified and can now confidently be attributed them to this collection (Table 1). These specimens eventually formed some of the base for

Scarborough's Woodend Natural History Museum which opened in 1952 until its closure in 2006.

Hunting for Science

Harrison was primarily a big game hunter, and appears to have used scientific collecting and exploration as a justification and to seek funds. In 1899 he proposed a trip through the Howash Valley to Lake Rudolf in what is now Ethiopia. This was described at the time as being primarily a survey of the area although he conceded that it was “at the same time combining a sporting trip in which attention was to be directed to the beasts and the birds of the countries visited” (Harrison, 1901). A secret side to this trip was the aim of planting the Union Jack at the north of Lake Rudolf to re-establish the disputed border territory with British East Africa (Imperato, 1998).

In a review (Anon 1900) of Kirby's published account of their trip to Mozambique (Kirby 1899), the Ibis records the following “*Although Mr. Kirby's volume, as will be evident from its title, relates chiefly to his sporting adventures when in pursuit of the larger mammals, frequent allusions to birds will be found in it. His companion, Mr. James J. Harrison, seems to have collected bird-skins, but we are not aware that these have ever been examined by a competent ornithologist.*” Perhaps humiliated by this comment Harrison sent the skins from his most recent expedition to William Robert Ogilvie-Grant who was, at the time, temporarily in charge of the ornithological section of the Natural History Museum, London. Amongst the collection was recognised a new species of finch-lark, which

Table 1. List of species that can confidently be attributed to the Harrison Collection.

Species	Common name	'Locality'	Date
<i>Tragelaphus scriptus</i> (Pallas 1766)	Bush buck	Abyssinia, Ethiopia	1899
<i>Gazella granti</i> (Brooke, 1872)	Grant's gazelle (Trophy head)	Lake Rudolph, Kenya	1900
<i>Duiker</i> sp.	(Trophy head)		
<i>Gazella thomsonii</i> (Günther, 1884)	Thomson's gazelle (Trophy head)	East Africa,	1909
<i>Gazella thomsonii</i>	Thomson's gazelle (Trophy head)	Lake Rudolph, Kenya	1900
<i>Colobus guereza</i> Rüppell, 1835	Guereza or white mantled colobus		
<i>Litocranius walleri</i> (Brooke, 1879)	Gerenuk	Lake Rudolph, Kenya	1900
<i>Hylarnus harrisoni</i> (Ogilvie-Grant, 1900)	Harrison's pygmy antelope (Holotype)		
<i>Ourebia ourebi</i> Zimmerman, 1783	Oribi (Trophy head)	Abyssinia, Ethiopia	1899



Figure 2. Frederick Vaughan Kirkby, Mozambique, 1896. Photograph by J.J. Harrison. Scarborough Museums Trust.

Ogilvie-Grant named *Pyrrhulauda harrisoni* Ogilvie-Grant, 1900, this is now considered a sub-species of the chestnut-headed sparrow-lark *Eremopterix signatus harrisoni* (Ogilvie-Grant, 1900). This was published in *The Ibis* with an introduction by Harrison (Ogilvie-Grant, 1900).

Rarity seemed important and led him in 1904 to the Congo in search of Okapi, *Okapia johnstoni* Sclater, 1901. Okapi were a newly discovered species by Europeans, only described in Western knowledge systems 3 years earlier from skins and a skull sent to London by Sir Harry Johnston, British special commissioner in Uganda in whose honour it was named.

During his 1904 trip he encountered the Mbuti people of the Ituri forest and following his return to the UK was encouraged by friends who saw his photographs to consider bringing some individuals

back to England, and for another attempt at securing an Okapi, which had eluded him on the previous visit. The Mbuti are a hunter gatherer group of forest people and are one of the oldest indigenous people of the Congo region of Africa (Figure 3). Their average height is notably smaller than Europeans, which led to them being referred to as 'pygmies'.

Harrison arrived back in the UK in early June 1905 with six Mbuti; four men and two women ranging in age from 18 to 31, who were exhibited at the London Hippodrome for nearly 3 months before touring the UK and Germany for the following two years. Although ostensibly an educational display, for part of their visit they were accompanied by William Hoffman, who had been Stanley's servant during his 1887-1889 journeys through Africa, and gave an introduction to their way of life. Hoffman was a brilliant linguist and



Figure 3. The Congolese people in 'Native dress' taken in the grounds of Brandesburton Hall by J.J. Harrison. Scarborough Museums Trust.



Figure 4. Classified advertisement in *The Era*, 7 April 1906. British Newspaper Archive.

had been employed by the Force Publique in the Congo in the 1890s. However, this was clearly a novelty act, as can be seen in a cutting from *The Era* (Anon 1906), on the 7th April 1906 looking for engagements, where they are advertised between two performing dog troupes (Figure 4).

The public exhibition of Africans in the UK was well established by the time Harrison had started his tour. From the touring of Sarah Baartman beginning in 1810, Africans could regularly be seen on show both in London and in touring fairs and exhibitions. Often displayed in 'native dress' the paying public were keen to see the inhabitants of this newly explored country, and the more 'exotic' the better. From 'Farini's Friendly Zulus' in 1879 to the 'Assuan Village' at the 1903 Earls Court Exhibition, the entire length of the continent was on show.

It was into this atmosphere that the six Congolese began a near 3 year tour of the United Kingdom exhibited as little more than novelties in their 'native' dress and singing songs. At the same time as this was happening in the UK, a now more famous Congolian was being displayed in America. On the 8th September 1906 visitors to the Bronx Zoo would have seen Ota Benga in a cage in the monkey house. The story of Ota Benga is a sad one, clouded by racial anthropology, eugenics and social darwinism and eventually led to him taking his own life.

During their time in the UK, the six were subjected to an in-depth study at the Royal Anthropological Institute by Sir Harry Johnston (of Okapi fame, and one of the key players in the Scramble for Africa) and the study was intended for publication, although it is yet to be found. The party set sail from Hull aboard the cargo ship the Hindoo in November 1907, leaving on the 17th arriving in Mombasa on Christmas Eve and finally reaching their home again on the 21st January 1908.

Conclusions

From the work so far done, it is apparent that even small regional museums have collections seeped in a colonial past and historical interpretations are no longer suitable. In some cases, these are unintentionally racist through outdated language and a lack of recognition of the input of the indigenous communities involved. There has been some academic research into this story (Green 1999), but as this was carried out over 20 years ago, and the emphasis was in the context of black entertainers in the European music hall, it only looks at a small part of the story. Scarborough Museums Trust are currently working with a local historian Gifty Burrows, who ran the Africans in Yorkshire Project and are looking at ways to create a narrative that not only questions the imperialistic colonial attitudes of the time, but also looks at the after affects that are still being felt today. The planned exhibition is still in its infancy and will be guided by the findings of our collaborative work with Gifty Burrows who is reaching out to British Congolese to get their invaluable input into this discussion. As well as the named people, who were effectively enslaved and toured for the entertainment of privileged European audiences, there are hundreds of anonymous faces in the photographic collection, without whom none of Harrison's collecting expeditions would have been possible. It's now time for their contributions to be recognised.

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The political platypus and colonial koala – decolonising the way we talk about Australian animals

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Abstract

Australian mammals are generally considered fondly, however there are particular trends in the way that they are represented in museums and other educational settings which inadvertently perpetuate a colonial view of these species by inferring relative inferiority. These tropes include describing species as 'weird and wonderful', 'strange', 'peculiar' and primitive; using often unhelpful comparisons with placental mammals; implying that convergent evolution is directional; the ways that placental-derived names deny Australian mammals an individuality; and the notion that 'everything in Australia is trying to kill you'. While these practices appear harmless, they risk devaluing and othering Australian wildlife. This paper traces the origins of these habits among early colonial accounts of Australia, and concludes that value judgements continue to be applied to Australian species, unlike animals from elsewhere. These subconscious suggestions that Australian animals are inferior have inevitable impact on the ability to lobby for their conservation; and were intertwined with political arguments for the British invasion and colonisation of Australia, which has had profound impacts on Indigenous Australians.

Keywords: Decolonisation; decolonial approaches; marsupials; monotremes; Australia; history of science; museum interpretation; taxonomy; public engagement; Indigenous Australia

Introduction

Decolonisation involves breaking down systemic hierarchies where European narratives have typically been elevated in the extent to which importance is placed upon them, and how much visibility they are afforded (Ashby and Machin, 2021) (for a wider discussion on decolonial research practices, see for example Smith, 2012). For good reason, decolonisation in museums is most commonly applied to human stories, often by highlighting how colonised people's (among others) contributions have been side-lined in order to promote European achievements (e.g. Ashby, 2020); or by being honest about the ways that

museum collections were put together as a product of empire (e.g. Das and Lowe, 2018) and much of the rest of this volume). However, the aim of this paper is to take a decolonial approach to explore whether European colonial narratives are also present in how we typically talk about some animals today, specifically Australian mammals.

In 1770, when James Cook landed on the east coast of what became known as Australia – and took possession of it for Great Britain – it fundamentally changed the political, social and natural worlds. This act was carried out on an



island which was part of the lands of Kaurareg (who hold native title today), Gudang Yadhaykenu, Ankamuthi and other Indigenous groups. Cook named it Possession Island, although it already had names including Bedanug and Tuidin.

The animals that the expedition encountered, described and exported would profoundly change the West's experience and understanding of zoology. This paper questions the ways in which Australian animals have been represented and described since the settlers and explorers of the seventeenth, eighteenth and nineteenth centuries arrived from Europe. As dramatic as it sounds, the ultimate question is whether – and how – the zoological and socio-historical stories of marsupials, platypuses, echidnas and other Australian animals may intertwine to have severe impacts on both global politics and conservation biology. The underlying assertion is that those early descriptions started a trend by which Australian wildlife is regularly denigrated through hierarchical language; and that museums risk being accidentally complicit in maintaining this practice today.

Museums create and utilise various platforms intended to engage audiences with the natural world, but which often use this questionable language, including in gallery text (labels and guides) and audio-visual interpretation, website content, publications, engagement activities (written resources and spoken content in events and films) and social media. Thankfully, these are in the museums' control, and so it is in museums' hands to decrease the incidence of this pejorative language and its effects. These suggestions could apply equally to any providers of information relating to Australian mammals.

'Strange' creatures: describing Australian animals

It is fair to say that today, Australian mammals are generally considered affectionately by the world at large, and it is unusual to come across explicitly (i.e. deliberately) negative descriptions of them in popular accounts. On the surface, either in tone or language, most descriptions of these species – in fiction and non-fiction books, television programmes (including cartoons and factual programming), museums and news articles – appear to treat them enthusiastically. Nonetheless, there are certain prevalent tropes for how nature in Australia is represented to the wider world which have implicitly negative connotations. They are considered fondly but not fairly. It is extremely common to see phrases such as 'weird and wonderful', 'bizarre', 'strange' and 'peculiar' being used. One illustrative example is a recent

cover-story about platypuses in *BBC Wildlife* magazine which read, 'Stranger things // Up close with nature's weirdest mammal' (Vergnani, 2019). Elsewhere, *The New York Times*' coverage of a story relating to monotreme genomes described the platypus as 'a Frankencreature' (Giaino, 2021). Additionally, in a slightly different way, platypuses and echidnas – but also marsupials – are regularly described as 'primitive' (see below).

Whilst these are arguably playful and are not necessarily negative in their own right, they are value judgments, which subconsciously continue to reflect a colonial mindset from early European descriptions of Australia. To pick one characteristic – and caricaturistic – example, there is this 1846 poem from English cleric Richard Whately (1787-1863):

*There is a place in distant seas
Full of contrarities:
There, beasts have mallards' bills and
legs,
Have spurs like cocks, like hens lay eggs.
There parrots walk upon the ground,
And grass upon the trees is found;
...Swans are not white, but black as
soot.
There neither leaf, nor root, nor fruit
Will any Christian palate suit,
...There quadrupeds go on two feet,
And yet few quadrupeds so fleet;
There birds, although they cannot fly,
In swiftness with your greyhound vie.
With equal wonder you may see
The foxes fly from tree to tree;
And what they value most, so wary,
These foxes in their pockets carry.
...Now of what place could such
strange tales
Be told with truth save New South
Wales?*

(Whately, 1846, pub. 2009)

A result of over two centuries of such teasing treatment is that it is extremely easy – and indeed probable – for an unintentional view to develop of Australia as an evolutionary backwater: that it is a country full of wonderful but ultimately peculiar little oddities. They are thereby reduced to colonial curiosities. By othering them in this way, we can detect a clear hierarchical narrative: the subtle implication is that Australian animals are lesser than species from other parts of the world. Arguably no wildlife in any other major landmass in the world gets consistently described in this way.

What's notable is that while nineteenth-century literature regularly used purple prose and human social value judgements for species from across the world (see, for example hyenas being described as 'repulsive', 'disgusting', 'cowardly' and 'maniacal' in (Wood, 1865), arguably Australasia is the only continent whose animals continue to be treated in that way today.

'Weird and wonderful'

To briefly unpick some of the terms associated with Australian animals mentioned above, two examples from the BBC Natural History Unit and the Natural History Museum, London (NHM) are typical of the way museums and other institutions with pedagogic missions may use them (it is not my intention to single these organisations out unfairly; I highlight them as two of the UK's major windows onto the natural world). In the BBC's landmark *Seven Worlds, One Planet* series, the blurb describing the episode about Australia reads, 'Isolated for millions of years, the weird and wonderful animals marooned here are like nowhere else on Earth.' (BBC, 2019). Not only does this include the 'weird and wonderful' trope, but it introduces the commonly repeated notion that Australia is isolated, which similarly has the effect of othering the fauna. In truth, Australian wildlife cannot be considered 'marooned', given that half of its native mammalian fauna (a quarter are bats and a quarter are rodents) descends from relatively recent waves of colonisation from Asia (Van Dyck and Strahan, 2008), and for instance, three of the world's most numerous groups of birds (collectively making up the majority of the world's bird species) – songbirds, pigeons and parrots – first evolved in Australasia but subsequently dispersed out of it (Low, 2016).

Second, when promoting an online event, the NHM tweeted 'Join us from 1200BST tomorrow to learn all about mammals, from the peculiar platypus to the humble haster' (@NHM_London, 2020). Both of these instances appear innocuous, but what do they actually mean? It is easy to demonstrate that literally every animal on earth is weird or peculiar. From deer to ants, bees to rhinos, and bears to owls, every animal is strange, and yet why is it that Australian animals so consistently get these labels applied to them?

These tropes are used as they are intended to engage through encouraging excitement. The notion of oddness and weirdness can appear to be an easy way to pique audience interest without having to provide any specific information. Their use relies upon the pre-existing public assumption that Australian animals are bizarre – a notion

which is deeply rooted in Australia's colonial history – and helps to perpetuate it. I believe this idea is grounded in subconscious colonial framing in a way that denigrates these animals.

No malice is intended by the use of these terms (particularly as it is reasonable to assume that they are used in the spirit of attempting to garner enthusiasm for the natural world – which are key missions of museums and natural history broadcasters). We can trace the roots of how the trope developed to the earliest written descriptions of Australian animals by Europeans. In the 1790s, Watkin Tench, diarist of the founding British settlement at Port Jackson, wrote:

'We have killed she-kangaroos whose pouches contained young ones ... At its birth... the kangaroo is not so large as a half-grown mouse. ... This phenomenon is so striking and so contrary to the general laws of nature, that an opinion has been started that animal is brought forth not by the pudenda [genitalia], but descends from the belly into the pouch by one of the teats.'

(Tench, 1793)

Tench's suggestion that kangaroos gave birth directly through their nipples became common among the European colonists, and it was likely influenced by a questionable translation of a seventeenth-century Dutch account of tammar wallabies by Francisco Pelsaert on the Houtman Abrolhos islands off the Western Australian coast (Pelsaert, 1629, trans. 1994). Tench's suggestion that kangaroo reproduction was 'contrary to the general laws of nature' puts marsupials well and truly beyond the realms of normality, and into the alien. Despite his wording, Tench was not referring to natural 'laws', he was referring to his own notions of what nature should be like, which were the result of the society he was part of. This is an early demonstration of the wider point: Western or 'Old World' animals have acted as the zoological standard, and in not being perceived as conforming to that standard, it is implied that Australian species are inferior to it.

'Primitive'

If the 'weird and wonderful' trope is most common in light-hearted or popular descriptions of Australian mammals, there is another term that is often also found in authoritative or apparently scientific accounts, and that is to state or infer that they are 'primitive'. This descriptor is most typically associated with platypuses and echidnas – the egg-laying mammals, known as monotremes – but is also applied to marsupials. As an example from museum interpretation, at the time of my

most recent visit (June 2019), the Field Museum's displays of monotremes and marsupials were positioned under a banner which reads 'Early Mammals', even though the species on display are all extant. Again, I don't mean to single out the Field Museum as an outlying perpetuator of this problematic message. It is well acknowledged in museums that permanent displays can be the most challenging to find budget to regularly refresh, seeing as they do not directly generate income in the way that temporary exhibitions can. The Field Museum is undergoing a redevelopment of its Indigenous American displays with an aim to remove problematic messaging. It is hoped that the discourse in this paper will encourage museums with natural history collections to interrogate their own displays and interpretation for similar practices. Perhaps they could then argue that historic colonial-derived terminology in their displays deserve resources being allocated for their refreshment. Similar assertions can be found in the scientific literature, such as in a book (Lewis, 1996) about the blood-clotting adaptations of different groups of animals – platypuses featured along with wallabies, to which they are only distantly related, in a chapter titled 'Primitive Australian Mammals', without any justification for this hierarchical view of nature. No living complex species should ever be described as primitive (Ashby, 2017).

The ancestors of modern marsupials and modern placental mammals (the group which includes the majority of living mammals, including humans and all mammals found in Europe) diverged approximately 160 million years ago (Newton, et al., 2018). This means that the two groups are exactly the same age. As such, there can be no logical justification for describing marsupials as primitive or 'early', which means we must look for an illogical one. I suggest that it stems from a subconscious hierarchical view of nature which places humans and other mammals like us as superior to species that do things differently.

Whilst describing living monotremes as primitive is also scientifically inaccurate, it does likely stem from a common misunderstanding about evolution. Nonetheless it is reasonable to assume that in this instance, the misunderstanding is made more probable given the underlying attitudes to Australian mammals. While living species should never be described as such, individual *features* are often described as primitive. This is used as a shorthand to indicate that a certain characteristic in a certain species has been inherited from its ancestors without much modification. In monotremes, egg-laying is described as primitive as it is a feature

which they inherited from mammals' reptile-like ancestors. It is singled out because it has been lost in the other mammal groups – marsupials and placentals – but is retained in monotremes. From there, people incorrectly make the leap to describe the species as primitive. But birds lay eggs too, a feature they also inherited from their reptilian ancestors, dinosaurs. So why does egg-laying make platypuses primitive, whereas the term is never applied to birds? The fact that humans have legs is also a primitive trait, because we evolved it from our fishy ancestors. However, we aren't considered primitive for having legs. The notion of primitivity in monotremes is a human-centred value judgment without any scientific meaning. All species have primitive traits, but that does not make the species primitive.

This label is just another colonial undertone which can be traced back to countless historical accounts. Among them, arguably one of the most influential popularisers of natural history in Victorian Britain was John Gould. In the introduction to his 1863 work *The Mammals of Australia* he supposes that the species there are stuck in a lowlier form of development, 'I may ask, has creation been arrested in this strange land?' (Gould, 1863). Another widely disseminated book was Arthur Mee's *Popular Science* that claims that marsupials are 'a low type of small-brained animal approaching the reptile, and developed chiefly in Australia' (Mee, 1912). This notion that marsupials have small brains was so ingrained that nobody had thought to check whether it was true, until 2010, when no differences in brain-size were found between placental and marsupial mammal of equivalent body sizes, if primates were excluded from the comparison – a group that is characterised by unusually large brains. In fact, at smaller body sizes marsupials had relatively large brains compared to their placental counterparts (Weisbecker and Goswami, 2010). This suggests that marsupial science had been held up by unscientific prejudices against them.

Denying individuality through comparison

Aside from the specific pejorative words, it is common to see Australian animals, and particularly marsupials, described through comparisons with well-known placental mammals, even when those comparisons do not stand up to scrutiny. For example, quolls are smaller, spotted carnivorous relatives of the Tasmanian devil, from Australia and New Guinea. They are very commonly described as 'cat-like', despite the fact that they share few distinguishing features with cats – they have long pointed faces (cats' faces are short and round) and very short legs (cats have long legs),

with bright white spots against a solid dark background (if cats are spotted, they are dark spots against lighter backgrounds). Likewise, the small carnivorous marsupials such as antechinuses, planigales and dunnarts are said to be 'mouse-like'. These descriptions do not fit the natural history or appearance of the species in question.

Using familiar species to describe unfamiliar ones might be assumed to be a useful method of communicating what they look like in an accessible way (for example by describing ichthyosaurs as 'dolphin-like reptiles'). However, as well as considering whether the comparisons are accurate, we need to think about where this practice positions the animals in any perceived hierarchies, and whether the comparison has particular risk of creating misunderstandings. Constantly describing Australian mammals in terms of how they resemble mammals from the rest of the world could be argued to place them as secondary to them, effectively denying Australian animals an identity in their own right.

In any case, when the comparisons are inaccurate, they render the descriptions useless. All of the Europeans that encountered hopping marsupials before James Cook's visit in 1770 used Old-World species to explain what they saw. The first was in 1606, when the Spaniard Don Diego de Prado y Tovar described what was probably a dusky pademelon (a wallaby-relative) in New Guinea. He wrote that it was,

'in the shape of a dog smaller than a greyhound, with a bare and scaly tail like that of the snake, and his testicles hang from a nerve like a thin cord; they say that it was a castor [referring to a beaver], we ate it and it was like venison'.

(George, 1964)

Subsequent pre-Cook accounts are similarly broad in the number of species they use to describe marsupials, and as difficult to relate to the animals themselves (for other examples see Ashby, 2015). While Cook had read the accounts of these voyages, when he himself met kangaroos he – understandably – failed to realise he was seeing similar species to those explorers who had come before. This demonstrates that such comparisons are of limited value.

Nonetheless Cook continued the tradition in his own reports (as did Joseph Banks, whose diary entries describing the kangaroos over this period are almost identical). Here follow some entries

from Cook's diary (reproduced in Cash, C. G. (ed), c.1905):

'June 22nd, 1770.

Some of the people ... had seen an animal as large as a greyhound, of a slender make, a mouse colour, and extremely swift.'

June 24th.

I saw myself one of the animals ... It was of a light mouse colour, and in size and shape very much resembled a greyhound; it had a long tail also, which it carried like a greyhound; and I should have taken it for a wild dog, if instead of running, it had not leapt like a hare or a deer. Its legs were said to be very slender, and the print of its foot to be like that of a goat.'

8th July.

some of our men saw four animals of the same kind, two of which Mr. Banks' greyhound fairly chased ... These animals were observed not to run upon four legs, but to bound or hop forward on two.'

July 14th.

Mr. Gore ... had the good fortune to kill one of the animals ... In form it is most like the jerboa [hopping rodents], which it also resembles in its motion, but it greatly differs in size, the jerboa not being larger than a common rat, and this animal, when full grown, being as big as a sheep'.

Despite the fact that Banks said, 'To compare it to any European animal would be impossible as it has not the least resemblance of any one I have seen' (Banks, 1770), this brief excerpt compares kangaroos to a greyhound (three times, in shape, size and tail), a wild dog, a hare and a deer (in movement), a goat (in footprint), a mouse (in colour), a jerboa (in movement and shape) and a sheep (in size) (Ashby, 2012). Aside from the entry for July 8th, there is very little here that would allow a reader to recreate the image of a kangaroo in their mind's eye.

Naming

The legacies of this comparative habit are perhaps most evident today in some of the names that are used for these species. Their scientific names regularly deny their individuality:

- Koalas' scientific name is *Phascolarctos*: 'pouched bear'.

- Bandicoots' scientific name is *Perameles*: 'pouched badger'.
- *Phascogale* is a genus of small carnivorous marsupials, meaning 'pouched weasel'.
- Pademelons' (small kangaroo-relatives)
- scientific name is *Thylogale*, which also means 'pouched weasel'. This is particularly lazy as pademelons are five-kilo hopping marsupials, and do not resemble weasels at all.
- *Antechinus* means 'similar to a hedgehog', although none are spiny and are a fraction of the size of a hedgehog.
- Dasyures are New Guinean carnivores with the scientific name *Phascosorex*: 'pouched shrew'.
- Thylacines are named *Thylacinus cynocephalus*: 'pouch-like dog-head'.

(Note on thylacine etymology: *Thylacinus* is almost universally said to mean 'pouched dog' from the Greek *Thylakos* (pouch) and *Kyon* (dog); and so *Thylacinus cynocephalus* would mean 'pouched dog dog-head' (Strahan and Conder, 2007). However, thylacine-researcher Douglass Rovinsky noted (pers. com.) that in other names, '-inus' means 'like', for example *anatinus* means 'duck-like' in the platypus's name. We could think of no other times when a reference to dogs was spelt with an i as in -cinus rather than a y as in cynocephalus. There is no etymology given for the name in Temminck's original French publication which names the animal *Thylacinus* (Temminck, 1824). I suggest that *Thylacinus cynocephalus* directly translates to 'pouch-like dog-head'. Temminck had seen no female specimens and mentions the 'sac' into which the males' scrotum fits, so perhaps that is the pouch the name refers to, but this is just my conjecture.)

The habit of using Old World models as the standard for naming Australian species is not restricted to scientific names, but is prevalent in common names too. Museums can avoid these unhelpful comparisons and allow Australian mammals to be freed from attempts to fit them into European boxes by avoiding Eurocentric names, as well as inaccurate comparative descriptions themselves. This does not involve opting for obscure names, as many uniquely Australian names are widely in circulation. Thylacine is preferable to 'Tasmanian tiger' or 'marsupial wolf/hyena'; quoll is preferable to 'native cat' or 'tiger cat'; 'marsupial mouse' should be avoided for any of the small carnivorous marsupials (including dunnarts, mulgaras, ningauis, antechinuses, false antechinuses, dibblers, kultarrs, kalutas, kowaris and planigales); bettong and potoroo are preferable to 'rat kangaroo'; echidna is preferable to 'spiny anteater' and numbat is

preferable to 'banded anteater'. Many museums are already doing this, as anecdotally it appears more common to see the comparative names on historic display labels than on modern ones.

Some of these have the benefit of being based on Indigenous words for the species, acknowledging the deep history that Aboriginal Australians have with their native fauna, and the role Indigenous knowledge played in knowledge-acquisition by Europeans (see Olsen and Russell, 2019). For example, 'quoll' derives from 'Je-Quoll' – a Guugu Yimithirr word for the animal, recorded in Joseph Banks' diary from the *Endeavour* voyage, along with 'kangaroo' (Banks, 1770). This was the first time that an Aboriginal Australian language is known to have been written down. Rakali is increasingly being used for *Hydromys chrysogaster* Geoffroy, 1804 in favour of 'Australian water rat' across all of Australia, but it should be noted that some common names derived from Indigenous words are only typically applied to individual animals from specific parts of the country, acknowledging that different species had different names in different languages (Van Dyck and Strahan, 2008; Menkhorst and Knight, 2004). For example, boodie and chuditch are names only applied to individuals of *Bettongia lesueur* (Quoy and Gaimard, 1824) and *Dasyurus geoffroii* Gould, 1841 respectively if they come from Western Australia – elsewhere the names burrowing bettong and western quoll are more commonly applied (but other Indigenous names are also in common circulation for these species in other parts of the country). Further positive steps in this area include a project by the Atlas of Living Australia to ethically map Indigenous names of plants and animals to scientific binomial names in its datasets (Duncan and Ashby, 2019). While Indigenous words have been incorporated in taxonomic names since the early days of Western taxonomy in Australia, it is encouraging to see recently described mammal species names derive from Aboriginal words. For example, the newly described species of extinct pig-footed bandicoot was named *Chaeropus yirratji* Travouillon, et al. 2019– yirratji being the Warlpiri word for the local species (Travouillon, et al., 2019).

The Australian Mammal Society published guidance on the use of common names (Strahan, 1980) recommending they be descriptive, pleasing to the ear and memorable, and reflect true relationships, while acknowledging the value of Aboriginal names. Others have since stated preferences for inclusion of words that correspond to the genus, to communicate relationships between species. For example, although the Aboriginal names Kakarratul for *Notoryctes caurinus* Thomas, 1920

and *Itjaritjari* for *Notoryctes typhlops* Stirling, 1889 are increasingly used, Jackson and Groves suggest northern marsupial mole and southern marsupial mole respectively (Jackson and Groves, 2015). While most of this guidance is not contradictory to the recommendations above, there are occasions like *Notoryctes* when museums may wish to decide for themselves between prioritising decolonising the names, or to communicate the relationship. This example is particularly fraught as it involves a comparative term to European moles, albeit a reasonably sensible one.

Convergent evolution

There are situations when marsupials and placentals do warrant close comparison, and that is in instances of convergent evolution – another topic that is regularly discussed in museum content. Convergent evolution is where similar features which perform similar functions evolve independently in different species on different branches of the tree of life. A prime example of this between marsupials and placentals is the extraordinary similarities between the adaptations of aye-eyes and striped possums. Aye-eyes are famously wood-pecking lemurs from Madagascar. They bite holes in tree branches with long, protruding, curved incisors, and use a remarkably elongated, single thin digit to hook beetle grubs out of these holes. Striped possum are marsupials from Australia and New Guinea which do precisely the same thing. They also have prominent, sharp, forward-pointing incisors for gouging holes, and a single long, skinny finger for hooking grubs. The only notable difference is that aye-eyes' third finger is the longest, whereas it is the fourth in striped possums. Striped possums also have the largest brain relative to body size of any marsupial, again showing a similarity with primates (Ashby, 2017).

Aye-eyes are well-known for their adaptations, thanks to regular features in natural history documentaries and in popular writing, whereas striped possums enjoy almost no limelight. It is not unreasonable to suggest that this imbalance is a result of placental chauvinism (*sensu* Paddle, 2000), but the key point relates to how convergences like this are commonly described. When placentals and marsupials have evolved similar features, it is typical for to hear, for example, that striped possums are 'marsupial versions' of aye-eyes. Likewise, thylacines are said to be 'marsupial versions' of wolves; *Notoryctes* are 'marsupial versions' of placental moles; and Tasmanian devils are 'marsupial versions' of hyenas. This phrase implies that marsupials have evolved *in order* to be like placental mammals; that one is the original and one is the cover version, and that's not how evolution

works. As in music, the cover version is never considered as good as the original. This implies a hierarchy which has no biological reality.

Everything is dangerous

Another common trope that paints an unreasonable picture of Australian wildlife is that everything there is dangerous (see for example an article in *The Huffington Post* entitled, 'Everything In Australia Wants To Kill You, In This Order' (Degnate, 2017) and the presenter of the BBC programme *Deadly 60*, Steve Backshall, describing Australia as the 'home of deadly' in *Australian Geographic* (Dineley, 2013). Museums may be tempted to reflect this notion in their content. Australia is certainly home to venomous organisms that pose a risk to humans, including snakes, spiders, jellyfishes, octopuses, ants, centipedes, stonefish, stingrays and even trees, plus sizeable crocodiles and sharks. However, this is not an unusual list for any coastal country outside of Europe. Further, very many other countries have several large land predators *in addition* to these, from big cats to bears; and massive herbivores which cause injuries to humans. As such, despite its reputation, one could argue that Australia is *less* dangerous than nearly every other continent. It is home to only some of the types of animals that people are often fearful of, whereas most other parts of the world have many more.

While the potency of the venom of some Australian snakes is extremely high, a report from Australia's governmental science body, CSIRO, outlined how the commonly stated notion that Australia contains the world's most dangerous snakes is inaccurate: there are very few human deaths from snake bites there each year, but tens of thousands across Asia, Africa and South America (Fender-Barnett, 2019). Much of the difference in fatalities is due to the differences in the likeliness of people encountering snakes, and the availability of medical interventions. Nonetheless the unique synonymy of Australia with killer creatures is noteworthy. In actuality, a study of the human toll of envenomation by animals in Australia between 2000 and 2013 found that stings from bees, hornets and wasps were responsible for more than twice the number of hospitalisations (12,351) as snakebites (6,123. NB. this figure also includes lizard bites). Beestings alone caused almost the same number of deaths (25) as snakes (27). Spiders caused no deaths (Welton, *et al.*, 2017). It is important to note that no native bee species in Australia have stings – these hospitalisations and deaths are caused by introduced European honeybees.

This commonplace attitude is just another form of colonial denigration; another unsubtle hint that Australia is uncivilised and primitive. Considering the above tropes together, it is clear that Australian wildlife is subtly and subconsciously written off as inferior, even within Australia itself.

These suggestions should not be dismissed as navel-gazing 'woke' complaints – the characterisations so far described have real-world impacts. All of these issues fundamentally devalue Australian fauna, with significant human and ecological consequences.

Discussion: the impact on extinction

Although it would likely be impossible to demonstrate cause-and-effect in Australia's case, it is reasonable to assume that species that are valued less do not enjoy the same prioritisation when it comes to environmental protection.

Albeit inadvertently, the pervasive language that creates an impression that Australian animals are inferior inevitably impacts their extinction-rates and conservation. It is harder to make the political arguments to conserve them because they have been devalued by negative stereotypes. Equally, a misguided assumption that they are in crisis *because of that alleged inferiority* also damages the urgency to protect them: they risk being incorrectly written-off as biologically determined to go extinct.

Australia has the worst mammal extinction rate of anywhere in the world. In the 233 years since Britain invaded Australia, more mammals have gone extinct there than anywhere else. At least 30 Australian species have been lost entirely (almost 10% of the entire mammalian fauna). Taking into account the terrestrial species listed as extinct by the International Union for the Conservation of Nature, who consider a species extinct once 60 years have passed since they were last seen, 37% of mammals that have gone extinct *anywhere* since 1788 were Australian (IUCN, 2021).

Since the first of those extinctions, probably in the 1840s, Australia has lost one to two species every decade, and that rate appears to be holding true in the twenty-first century so far (Woinarski, *et al.*, 2015). Of those species that do survive, many have been reduced to a minute fraction of their pre-European range. Prior to the 2019-2020 Australian bushfires – which are assumed will have increased the extinction risk of many others – 124 land mammal species were considered to be threatened with extinction in Australia, or near threatened (Legge, *et al.*, 2018).

Australia's nationwide environmental catastrophe of the last 200+ years has a number of drivers. At the top of the list are introduced carnivores that the Europeans brought with them. Cats were imported both as pets and for rodent control. Foxes were imported simply to be hunted. On top of that, habitat destruction, primarily for agriculture and industry, has taken place at a continental scale. Land clearing in Queensland alone – the state with the highest rate of loss of native vegetation – was estimated to kill 100 million native mammals, birds and reptiles each year (Cogger, *et al.*, 2003). Watercourses are diverted for irrigation as well (over half the waterways that feed the largest catchment in the country – the Murray-Darling basin – have disappeared since colonisation (Gammage, 2011), stripping precious water from ecosystems. Alongside this came the introduction of non-native pigs, cane toads and herbivores (sheep, cattle, goats, camels, donkeys, horses, deer, buffalo, rabbits and hares) for food, pest-control, sport hunting and transport, all of which have eaten, trampled, buried and pooped on native vegetation and soils to such a degree that few native animals can prosper alongside them. If plants manage to avoid the livestock themselves, these newcomers compress the soil so water runs off it more quickly, changing which plants can live there anyway. Plus, this modified land then holds less water, so droughts hit harder and are more difficult to break.

These are the direct drivers of extinction, however the overriding cause of this conservation emergency is that the Australian government has consistently failed to sufficiently protect its native wildlife. This was the conclusion of a ten-year review of Australia's Environment Protection and Biodiversity Conservation Act (Samuel, 2020) – the major piece of national legislation which supposedly safeguards species and ecosystems. The fantastic work that conservationists undertake in Australia is achieved against a backdrop of weak federal environmental protection. The review found the Act to be ineffective, and that very little had been done to enforce it over the twenty years since it has been in place. Essentially, it creates laborious and inconsistent processes for how to assess whether species or habitats are threatened, particularly by major industrial developments like coal, gas and mineral extraction. If species are found to be at risk, plans have only rarely been developed for how to help them recover, and the Act makes no requirement to do so.

The review found that environmental laws in Australia were rarely policed, and when they

were, the penalties for breaking them were minor. The combined fines issued to developers who failed to deliver the environmental safeguards they had committed to were lower over the course of a decade than the parking fines individual local authorities collected in a single year (Samuel, 2020).

Australia has no legislation on its statute books which obliges the government to actively protect its threatened species, and so it doesn't. Australia has powerful industrial lobbies – for mining and mineral extraction, and for farming. In the context of this paper, it is worth noting that these are all themselves clear legacies of colonialism. These special interests have far more political power than marsupials and monotremes.

I suggest that this is all tied-in to the way they are represented to the outside world, and within Australia itself. As long as people continue to incorrectly infer that Australian wildlife is merely a weird bunch of primitive curiosities; cute, but inevitably doomed to be outcompeted by a superior evolutionary force from the north, then conservation is unlikely to be prioritised. If we add to that the incorrect but popular idea that they are less intelligent, the ill-informed might suggest that they are 'too stupid to survive'. Australian mammals are devalued by the way they are represented in everyday language, museums, popular culture and scientific research, and this is having a catastrophic impact by inevitably contributing to the extinction crisis. There are clearly many factors that are involved in mitigating the impact of the extinction-drivers mentioned above, but accidentally perpetuating negative stereotypes isn't helping the situation. Seeking to reduce the use and impact of those stereotypes is one relatively simple contribution museums and other trusted sources of information could make.

Discussion: the impact on notions of *terra nullius*

Another impact of pejorative inferences about Australian wildlife are the consequences for the people of Australia. Since European invasion, not only have species gone extinct, but Aboriginal Australian peoples' relationships with their country have been fundamentally changed (Olsen and Russell, 2019). (Unlike the sanitised and euphemistic word 'settlement', using the word 'invasion' recognises that European colonisation of Australia was not a gentle process. Many thousands of people died violently, and others were dispossessed of their land and sovereignty (Gammage, 2011). Museums may wish to use this term as part of decolonial practice.)

Invasion, occupation and colonisation were justified through the notion of *terra nullius* – meaning 'nobody's land' – by which the colonial establishment argued that Australian Aboriginal people were too uncivilized to lay legal claim to their land, and as such they did not own it. (On this topic, museums should be careful to avoid the suggestion that Europeans 'discovered' Australia, or any of its species, given that Indigenous Australians arrived there at least 60,000 years ago.) Instead, the narrative became established that Indigenous Australians were primitive hunter-gatherers; that they successfully exploited natural resources by passively moving across the land, but not by actively managing it.

This assumption remains pervasive today, however two recent works – by Bruce Pascoe (Pascoe, 2018) and Bill Gammage (Gammage, 2011) – have synthesised the arguments that across many parts of Australia, people were not hunter-gatherers at the time of European invasion. Early colonial accounts describe large permanent settlements alongside complex agricultural systems, fish-farming, the use of crops and intricate land-management practices operating through decades-long cycles. It is not true to say that all Indigenous Australians were hunter-gatherers and museums today should avoid describing them as such.

I suggest that the perceived status of the people and the animals in Australia were fundamentally intertwined in the minds and the words of the colonisers. It served their political narrative to dismiss both people and animals as primitive and inferior, because it augmented the arguments to justify the invasion. By tying animals and Aboriginal people together in an alleged collective inferiority, it became easier to paint Australia as a primitive, degenerative backwater. Through their denigrative written descriptions, the imperial establishment created a hierarchy in which Europe was made to look superior to Australia in every respect – the people, the animals and the climate.

There has been over-writing of both Australian cultures and ecosystems; people and animals have been dispossessed of their land. While colonists replaced or sought to replace human communities as owners and occupiers, European Acclimatisation Societies methodically sought to replace the fauna and flora of the land with familiar species from home. These locally organised groups aimed to bring a sense of comforting suburban England to the colonies by introducing familiar British species. They were also driven by the notion that their new home was faunally impoverished, and that the European species they let loose would improve

the landscape, again reflecting the attitudes relating to what was happening with Australia's new and existing human inhabitants.

The environmental legacy of many of these introductions is the major contribution they make to the extinction crisis discussed above. And the human legacy of these historical attitudes remains. Aboriginal and Torres Strait Islander communities continue to be institutionally marginalised in modern society, and many believe that the structure of the Australian constitution continues to be systemically racist (Bond, 2017).

Conclusion – what does this mean for museums?

Since their earliest encounters with Australian mammals, Europeans have consistently denigrated them through pejorative descriptions. While animals from other parts of the world were also subject to human value judgements in historical literature (see e.g. Thomson, 2008), arguably nowhere else on earth continues to be treated in this way today. A fuller comparison contrasting European descriptions of other continents' fauna with accounts of Australian species over time would be instructive (and this is discussed at length in (Ashby, In press, 2022)). It is interesting to note that notions of 'nobility' are often applied to African and Asian mammals, such as elephants, lions and tigers, but such descriptors are never given to Australian mammals. Pejorative descriptions of Australian mammals have become subconscious and socially ingrained, yet it is easy to trace their roots among hierarchical colonial attitudes that were based on assumptions that European fauna was superior to animals found in colonised territories.

I have provided suggestions to help museums avoid practices that risk maintaining these hierarchies by othering Australian animals. Some are specific, such as omitting suggestions that these species are 'primitive', being careful not to imply direction in convergences, selecting less comparative descriptions and common names (when options exist), and by not describing Indigenous Australian societies as nomadic hunter-gatherers. Other suggestions are more general. Museums should be conscious of whether language they use to describe Australian mammals could imply a hierarchy in any way, or give the impression that some species are 'weird and wonderful', 'strange' or 'peculiar'. These risk inferring that they are just evolutionary oddities, curious things that are fun to look at but ultimately less valuable than animals from the other parts of the world.

In propagating these views, museums risk perpetuating the subconscious assumptions that placental mammals – and European wildlife in general – are the zoological standard, and that anything that does not closely comply with that standard is biologically determined to be inferior to it. This is not only bad science, but has real world consequences for environmental conservation and human social justice.

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