5 The Return of Ancestral Hawaiian Remains Housed at the Duckworth Laboratory, the University of Cambridge

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Introduction

In February 2020, 20 Native Hawaiian iwi kūpuna (ancestral remains) were repatriated from the Duckworth Laboratory at the University of Cambridge. This was a historic repatriation. Despite requests from various First Nation claimants for over 20 years, previous to this case, only one Indigenous ancestral remain had been returned by the Duckworth – that of an Aboriginal person from Western Australia in 2016. Both returns shared the commonality that the decision to repatriate was heavily influenced by recognition that the original removal or export had been illegal.

This case is described in detail because of the role that craniometrics played in the claim process, both in terms of an initial report that appeared to cast doubt on the identity of the remains as Native Hawaiian (Lahr 2014) and subsequent historical research and scientific opinion (Fforde and Goodman 2018) that concluded differently. Beyond the specific context, this chapter raises questions about the utility of craniometrics and the way in which its results are communicated. It charts territory for First Nations presented by craniometric reports that may negatively influence repatriation claims and illustrates how historical research can support archival evidence in ways that do not only rely on finding additional information to increase provenance levels.

Background

The Duckworth collection was established in 1945 and is an integral part of the University of Cambridge's Leverhulme Centre for Evolutionary Studies. The Duckworth has one of the largest global collections of human remains in the UK. According to its website, it holds the remains[1] of about 18,000 individuals from around the world which were 'brought together largely by various Cambridge University Anatomy Professors in the 19th and early 20th centuries. The Duckworth also houses a number of sub-collections said to have been acquired either from external sources or from other departments within Cambridge University.' An early 1990s overview of the collection stated that it contained the following number of individuals: 'Europe (including Britain): 5330; Africa: 8901; North and South

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America: 338; Asia: 1486; Oceania: 638; total humans: 16693; non-human primates: 350. Total: 17043' (Foley 1992, p 54).

In the 19th century, the collection in the Anatomy Department was significant for its size and diversity, both of which greatly increased in the 1880s and 1890s through the efforts of the Anatomy Professor, Alexander Macalister. By the end of the century, the anthropological collection was perhaps the most significant in the UK. As W. L. H Duckworth himself described, 'the Collection is second to none in this country, and comprises more than one subsidiary collection e.g. the Thurnam and the Hutchinson collections, of very considerable magnitude' (1899 p 3).

In the past, the Duckworth has been a very significant institutional voice against repatriation. Both its previous Director, Professor Robert Foley and its subsequent Director, Dr. Marta Lahr, have publicly stated their opposition to repatriation.[2] The Duckworth's policies in this regard have been highly restrictive (for critique see Fforde, Ormond-Parker and Turnbull 2015 pp 41–44). Its 2002 policy was only willing to consider requests from biological descendants, requiring claimants to prove such connections (Lahr 2002). By 2008 the Duckworth's repatriation policy had developed slightly in response to the publication of the UK Government's *Guidance for the Care of Human Remains in Museums* (Department of Culture, Media and Sport 2005) to include 'serious consideration' of claims made,

> by a source community which displays a biological and cultural continuity with the remains in question, and where, after taking any relevant independent advice on questions which they formulate as needing an answer to help them make a decision, it is in their view likely that the cultural and religious importance of the human remains to the community making the claim outweighs any other public benefit.
>
> (Duckworth Laboratory Policy on Human Remains, 2008/2011 p 2012)

Contextual information in the 2008 policy stressed the significance and value of the study of human remains and the scientific importance of global collections. It also provides insight into ~~the~~ Director's views on repatriation claims and results, both of which also ~~underpin~~ the Duckworth's commitment to retention of human remains:

> The pressure for repatriation comes as part of a justifiable anger on the part of indigenous communities about the way they were and, to some extent, still are treated; as such, the repatriation of anthropological collections of human remains has become a symbol for social justice. However, history shows that what, at any one time, might seem to a particular group of people a justifiable reason for the destruction of information (whether in the form of heretic books or giant Buddah [sic] statues) is later regretted. A case could be made that no one generation should have the right to preclude future generations from access to information. It is the case that there already are descendants of indigenous communities who, contrary to the present trend, actively want to learn from the human remains of their own ancestors. Therefore, although decried as relics of a colonial world (which to some extent they are), in our

> current increasingly multi-cultural, multi-ethnic and globally mobile world, these anthropological collections of human remains are a true archive of humanity's past.
>
> (Lahr 2008 p 7)

Against this institutional policy setting, and with the knowledge that the collection was one of the largest in Britain, Indigenous peoples and their supporters from a variety of locales including Hawai'i approached the Duckworth for information about its holdings of human remains and to commence repatriation discussions.

Hawai'i and Cambridge – Repatriation Developments

For over 25 years, repatriation efforts for Native Hawaiians were led and conducted by the organisation Hui Mālama I Nā Kūpuna O Hawai'i Nei (Group Caring for Hawaiian Ancestors – hereafter Hui Mālama). In January 2015, at the direction of the group's founder, the organisation was formally dissolved. Its mission to restore awareness of the responsibility to care for the ancestral remains, possessions, and place of interment to the conscience of the Hawaiian people was deemed successful as families returned to their proper role as caretakers of their ancestral remains. However, the necessity to track down stolen ancestral remains and possessions which were removed to locales the world over continues. Former members of the Hui Mālama, including Edward Halealoha Ayau, now volunteer with the Office of Hawaiian Affairs (OHA), a frequent partner with Hui Mālama in repatriation over the years to carry repatriation efforts forward.

In June 2013, Hui Mālama and the OHA sent a letter to the Duckworth Laboratory enquiring about two Hawaiian iwi kūpuna (ancestral remains) included within the Duckworth's online database. The University responded in August that year that it held 19 additional individuals from Hawai'i. In March 2014, Edward Halealoha Ayau and Noelle Kahanu of Hui Mālama met with Dr. Jonathan Nicholls, then the University of Cambridge Registrary, and Dr. Marta Lahr, Director of the Duckworth Laboratory. They were later provided access to the remains for ceremonial and documentation purposes, producing an inventory (Ayau and Kahanu 2014).

At the March 2014 meeting it became clear to Ayau and Kahanu that the Cambridge representatives believed archival evidence to be inherently unreliable and that the Hawaiian origins of the remains could not be assumed, even though they were documented as such in the Duckworth's own catalogue. Following enquiries by the Hawaiian delegation on how to proceed with a repatriation claim, the issue of craniometric examination arose for the purposes of confirming Hawaiian ethnicity. As the Natural History Museum in London had also used craniometrics (alongside historical research) and agreed to return all except eight of the Hawaiian remains in its collection (but see postscript and Chapter 4), Ayau suggested that a craniometric analysis could be undertaken at the Duckworth. The resulting report was produced by the Duckworth Director in 2014, titled: 'Remains in the Duckworth Collection originating from Hawaii'.

The 2014 report made no reference to craniometry being contested as a method of determining ancestry. Although the report contains two statements that identify the remains as Native Hawaiian, one of which concludes the report,[3] the great majority of statements about identity communicate inconclusive, weak, or statistically unproven results, particularly in the report's conclusion.[4] For example:

> The results of the FORDISC analyses were largely inconclusive. Each of the 21 crania from the Duckworth were analysed independently twice, once using the USA Forensic Database, the other using the Howells' Global Database. For a Hawaiian individual, the closest biological reference population in the US Forensic Database would be the sample from Vietnam. However, only 5 of the 21 Duckworth crania were classified accordingly, and all with low probability/typicality values. The Howells' database includes a sample of Hawaiians from Mokapu, Oahu Island, as well as a sample of Moriori from the Chatham Islands. These two groups represented the expected biologically closest reference populations for the Hawaiians in the Duckworth. However, only 3 of the Duckworth crania were classified as Hawaiian, and 4 as Moriori, and all with low probability and/or typicality. *Therefore, in the context of global variation, most of the crania from the Duckworth are not typical Hawaiians, or even Polynesians.*
>
> (Lahr 2014 pp 23–24, italics added for emphasis)

Casting doubt on the provenance of remains that had been catalogued as Hawaiian by the Duckworth for over a century, for Hui Mālama, the craniometric report had potentially serious consequences. The Duckworth had been historically antireturn. Cambridge authorities in influential positions had expressed the opinion that archival information was unreliable, and on delivery of the craniometric report they emphasised its inconclusive findings. Hui Mālama therefore decided to source independent research and scientific opinion to assess the veracity of both the University's archival information and the craniometric report. To do so, OHA supported and partnered with the Pa'I Foundation, a non-profit 501(c)3[5] organisation whose mission is to preserve and perpetuate Hawaiian cultural traditions for future generations. The resulting report (Fforde and Goodman 2017) formed a component of OHA's successful repatriation claim.

The Craniometric Report

In this section we briefly describe the craniometric report (Lahr 2014). A history and critique of craniometry as a method of determining ancestry is provided in Chapters 3 and 4 of this volume which can be read as context to allow broader understanding and assessment of the use of craniometrics in this specific Cambridge case. Here we summarise the process employed by the Duckworth and highlight inherent issues, noting the effect of informed priors and discussing how the results were articulated. We focus, in particular, on the concerning and invalid inclusion of

remains that were identified as exhibiting artificial cranial deformation; these form 80% of the collection.

ForDisc was used in the craniometric analysis, a programme created by Stephen Ousley and Richard Jantz that is widely used in forensic anthropology to determine ancestry. Its ability to do so has attracted significant critique, and there are additional issues that can be identified in its scaffolding into repatriation practice (see Chapter 4).

The report (Lahr 2014) describes a staged process. The first set of analyses used the ForDisc comparative data set from the USA Forensic Database. This, however, does not contain any measurements of Hawaiian crania. Lahr asserts that the Hawaiian crania in the Duckworth collection would be 'expected to show greatest affinity to the Southeast Asian sample from Vietnam, followed by the Japanese and Chinese sample' (2014 p 10), although no information is provided as to why this is so. In the results, 5 out of 21 skulls classify most closely as 'Vietnamese', but other remains classified most closely as Guatemalan (5), African (1), Hispanic (4), Japanese (2), Amerindian (1), European (2), and Chinese (1) (Table 3, p 10). The way in which the identity of these populations are categorised is also relevant to the topic of this book. Rather than saying that the skulls in the Duckworth are statistically most similar in shape to skulls from a particular geographical area or population, instead a national/ethnic/racial identity is provided by ForDisc, without qualification or further description. From this first-stage analysis, the report concludes:

> The results of the FORDISC analyses are completely inconclusive. In the first set of analyses, only 5 out of 21 crania from the Duckworth were classified as Vietnamese (the biological probable nearest relative of Polynesians in the sample), and of these, only one classification was statistically strong.
>
> (Lahr 2014 p 11)

An alternative conclusion would be that the results fail to contradict the documentation. It could be that in comparison to a global data set, the lack of consistency in findings reflects the diversity of cranial shape within populations, and thus the inherent inability of the ForDisc programme, and others like it, to confidently determine ancestry. The diversity is thus to be expected and an accurate reflection of reality, rather than considered problematic.

When Lahr next compares results with a supplemented sample that includes Hawaiian crania and samples from Polynesia (Moriori and Easter Island) and Micronesia (Guam), none classify most closely as Vietnamese. Instead, 8 out of 21 classify most closely with the supplement samples (Hawaii (3); Moriori (4); Guam (1)), but the categories of Japan (north and south) (3), Egypt (1), Andaman (2), Hainan (1), Dogon (2), Philippines (3), and Norse (1) also figure (Table 4, p 11). The report notes weakness in the association, stating:

> In the second set of analyses, which included a Hawaiian reference population, only 7 of the 21 analyses performed resulted in classifications of one of the Duckworth crania with posterior probabilities >0.9, only two of which

> identified the individual as Hawaiian. Furthermore, the typicality statistics indicate that even in the case of these seven crania, the Duckworth remains were complete outliers, statistically different from all reference populations, displaying cranial dimensions outside 90% of the more typical crania of the predicted population of origin.
>
> (Lahr 2014 p 11)

As above, here Lahr argues that the results do not support the skulls as being Native Hawaiian, giving a burden of proof to a flawed methodology, rather than simply saying that the results do not provide evidence that the documentation is incorrect. Note here the importance of the concept of outliers, and see Chapters 3 and 6 for relevant discussion.

Next, the Duckworth crania were tested as to whether they could be 'confidently assigned to a Polynesian population in the context of other Pacific peoples' (Lahr 2014 pp 11–12), using a reference sample comprised solely of: Polynesia: 458 crania; Micronesia: 73; Melanesia: 176; and Australia: 253. Within this data set, the majority of Duckworth crania show closest affinity to Polynesia (Table 6, p 13). The report states, 'The results show that, amongst a universe of Pacific peoples, most of the Hawaiian crania in the Duckworth are predicted to be Polynesian (17/21)' (Lahr 2014 p 13). In this instance, the same effect of informed priors as explained in Chapter 4 is being employed, i.e. a reference sample is no longer global, but instead determined by the 'assumed' identity of the skull being tested. Note Konigsberg, Algee-Hewitt and Steadman's (2009) highly informative discussion about informed priors. The relevant point here, is that if each individual skull was compared to, for example, solely a European or African or Amerindian 'universe', what would have been the outcome, and how would this have been interpreted and weighted?

The same question can be asked of the next stage, in which the reference sample was further refined to include only Polynesian and Micronesians skulls, first for males and second for females. Note that accurate sex determination is only possible from assessment of the pelvis (and even this can be wrong), and there is difficulty with accurately sexing an individual solely from their skull. Note also the reliance by ForDisc on accurate determination of sex. No information was provided in the report as to how sex determination was achieved and no pelves are associated with these skulls. In the case of 'males', '6 out of 11 are classified as Hawaiian, 4 as from the Chatham Is., and one from Micronesia' (p 15). In the case of 'females', 'only 1 was classified as Hawaiian. The majority (6) were classified as Micronesian, 2 as Chatham Is., and 1 as Easter Is' (p 16). The one skull that did classify as 'Hawaiian' did so without strong typicality. Concluding this stage, the report states:

> The analyses above show that, once non-Pacific populations are excluded, most of the human crania in the Duckworth Collection labelled 'Hawaiian' are most likely to be Polynesian, although this cannot be demonstrated statistically. Among Polynesians, several of the male and one female crania are

> classified as Hawaiian, although again this is not demonstrable statistically. Furthermore, a few individuals are persistently classified as Micronesian.
>
> (Lahr 2014 p 16)

In a final section, Lahr further restricts the reference sample and explores the collections 'probability and typicality amongst Hawaiians' (pp 17–23), noting that 'few of the remains under investigation are morphologically typical Hawaiians, this section examines in greater detail the differences between the Duckworth sample and other remains from Hawaii' (p 17). The report finds from a series of analyses that, 'the discriminant functions derived from the above populations classify 19 of the 21 individuals from the Duckworth Collection as Hawaiians from Oahu Is., thus consistent with the catalogue information as to their provenance' (p 22). Again, Konigsberg et al.'s (2009) observations on informed priors are also relevant here.

In the conclusion, the report on a number of occasions reiterates the inconclusive nature of the results. The presence of artificial deformation is provided as the reason why 'a statistical assessment of biological ethnic affinity based on cranial shape is impossible' (p 25). The report does not, however, explain why, given such impossibility, any statistical analysis was undertaken at all, nor guide the reader to ignore the dominant 'inconclusive' theme of all the previous analyses. Finally, and again managing to cast doubt about Hawaiian ancestry, the report concludes:

> The extensive analyses to identify the population of origin of the remains labelled 'Hawaiian' in the Duckworth Collection presented *here are largely inconclusive at a statistical level,* a fact probably related to the intentional shaping of most of the sample, although the Pacific origin of part of the sample can be demonstrated statistically to some extent. On the basis of a restricted analysis *that assumes* either a Hawaiian or Maori origin of the remains, all except 2 of the crania have greater affinity to people from Oahu Island (where they are supposed to originate) than elsewhere, while cranium DC5001 is almost certainly from New Zealand instead.
>
> (Lahr 2014 p 25, our emphasis)

Doubt and Artificial Cranial Deformation

The report aimed, 'to identify, statistically, the probability that the human remains catalogued as "Hawaiian" in the Duckworth Collection are indeed from Hawaii' (Lahr 2014 p 23). The report proceeds with no acknowledgement of (or engagement with) significant existing scientific critique of the statistical method. As shown in the quotes provided above (and in the relevant endnotes to this chapter), the dominant message throughout the report is that results as to Hawaiian origin are inconclusive, statistically weak, or cannot be statistically proven. Statements to this effect are common and substantially outweigh those that support Hawaiian ancestry. Although there is a section at the start of the report (pp 2–3) that describes

the archival information and associated collectors, no evidence is provided as to why this information should be deemed inaccurate. Even in the concluding paragraph which reports on the results of comparison between the Duckworth remains and a population of exclusively Hawaiian origin, the use of the word 'assuming' qualifies the findings: 'The results indicate that, *once assuming* the crania could be only either Hawaiian or Maori, all but 2 are classified as Hawaiian from the island of Oahu' (Lahr 2014 pp 24–25, our emphasis). There are two particularly important points to note in assessing this dominant message. First, it should be understood in terms of the general and theoretical critiques of ForDisc and other similar packages as reliable tools for determining ancestry. In short, craniometric variation within groups is so great as to call into question specific designations. Second, ~~and of most concern, is that~~ the results of the statistical analysis are completely invalidated because the great majority of the remains have been deformed, thus profoundly skewing metric information.

Early on in the report, in a section describing 'basic anatomical information' (pp 4–5), it is identified that 17 out of 21 (80%) of the skulls show artificial cranial deformation (Lahr 2014, Table 2a,b, pp 4–5). Because of this, all of them should have been automatically removed from the study as the presence of this feature invalidates use of ForDisc or any other discriminant function analysis. Instead, it is only after all analyses had been undertaken and indecisive results expressed, that cranial deformation is first suggested (p 20) and then, in the conclusion, stated (p 24), as the reason for what is claimed as statistically inconclusive outcomes.[6] However, to say that the outcomes are statistically inconclusive is misleading. Instead they are meaningless because the great majority of skulls being examined should have been withdrawn from the study. To use meaningless results to cast doubt on Hawaiian origin is particularly concerning when undertaken by an institution historically opposed to repatriation, and which at the time of the Hawaiian claim, had a policy that was heavily dependent upon the strength of claimant connection to the remains in question.

Put another way, throughout the report, results were consistently expressed in a manner that cast doubt on the origin of the remains as Hawaiian, a result that would be of benefit to the Duckworth. Rather than recognising that to proceed with 80% of the skulls for analysis would be an inappropriate use of ForDisc and acknowledging that the presence of such deformation affirmed Hawaiian identity because it was 'a known cultural practice in some of the islands' populations in ethnographic times' (Lahr 2014 p 24), inclusion of these skulls in the overall analysis, and the way in which results were articulated, acted to do the opposite.

Artificial cranial deformation is a traditional cultural practice in Hawai'i. There is not a large amount of information about this practice, however it has been observed in archaeological contexts (Snow 1974 pp 31–35) and is described in some historical literature (Stokes 1921; Turner 1884; Wagner 1937). Turner's (1884) account of skulls collected in the Sandwich Islands by *HMS Challenger* notes that those provided by William Lowthian Green (and see below) showed evidence of 'flattening' that it was possible, 'had been assisted by artificial pressure applied during infancy' (Turner 1884 p 63).

In 1920, John Stokes (Curator of Ethnology at the Bernice Pauahi Bishop Museum) reported that the practice had fallen into disuse 'some years ago' (1920 p 489) and, having spoken with many Hawaiians about this custom, noted that knowledge that it had occurred was not lost but few were acquainted with the methods. Snow offers further accounts reported to him in 1951 (1974 pp 33–34), and both Stokes (1920) and Snow (1974) quote from an 1838 publication which describes this practice. Stokes notes that, 'the moulded head was said to have been the form admired by the chiefs' (1920 p 491). Snow describes an account by an Hawaiian lady who reported that it was a practice performed by 'all classes' (1974 p 33), but also proposes its common usage in the elites (1974 p 34). From this limited amount of information, it would appear that while not restricted to the elite, artificial deformation in Hawai'i may have been practised particularly by the 'chiefly classes'. Certainly, it is uncontestable that artificial cranial deformation was a cultural practice in Hawaii.

For all the above reasons, the 2014 craniometric report should not be seen as refuting or even challenging the Duckworth's own archival information. Rather, in just its identification of deformation in the majority of crania, it can be taken as affirming the historical documentation.

In tandem with the scientific assessment of the craniometric report, the results of which are summarised above, historical research was undertaken as part of the work for the P'ai Foundation to see if additional information could be obtained about the known collectors and their activities in Hawaii. The historical research focused on deepening understanding of the individuals involved in the acquisition of the human remains listed in the Duckworth documentation as Native Hawaiian. This research sought both to uncover any additional information about the provenance and acquisition pathway of these ancestral remains, but also to assess whether there was any evidence to support a conclusion that the men who collected them may have been mistaken (wittingly or unwittingly) in identifying the remains as Native Hawaiian. The results are given in some detail here to illustrate the type of historical research deployed in repatriation practice, and what it can reveal about the remains in question.

The Collectors

Within the Duckworth's documentation, the skulls of 21 individuals were listed as Native Hawaiian. All except one (which also had 'Maori' written on the side) had associated donor information.[7] Two had been part of the John Thurnam collection, 17 were sent in total from two consignments to Cambridge by R.C.L. Perkins, and one had been sent by James Hepburn.

John Thurnam

John Thurnam (1810–1873) was a British psychiatrist and ethnologist with an interest in craniology (e.g. Davis and Thurnam 1865). He explored British barrows and in his later years compiled a collection of crania and antiquities. The former

were given to the Cambridge Anatomy Department and the latter to the British Museum. Joseph Barnard Davis (1801–1881) is a significant figure in the history of craniology and cranial collections of the 19th century (Davis 1867, 1885, Parker 2020). A medical doctor, he devoted extensive amount of time, energy, and money to the acquisition of human remains from around the world. His collection, housed at his home in Shelton, Staffordshire, was among the largest at that time. In 1881, it was sold to the Royal College of Surgeons of England (RCS).[8]

Barnard Davis presented two Native Hawaiian remains to John Thurnam on 24 August 1860, both of which had been provided to him by William Lowthian Green (1819–1890), an adventurer, businessmen, and later prominent public official in Hawai'i (Nellist 1925).[9] Green is responsible for sending a large quantity of Hawaiian Ancestral Remains to the UK, the majority of which he provided to Barnard Davis. He also sent four to the University of Edinburgh (Turner 1884). Green also sent remains of other Polynesian peoples to Barnard Davis, and it is possible that he sent them to other collectors as well. For the Cambridge case, it was important to understand the nature of Green's collecting activities in order to help evaluate whether there was any reason to assume the remains he obtained were not Native Hawaiian. i.e.– was he acquiring them himself and thus was sure of their provenance? Were specific locations provided? Was any additional information provided (such as details of burial place, burial practice, etc.) to help identify the burial places as those of Native Hawaiians?

Green sent Barnard Davis remains from the Hawaiian Islands in four consignments. Apart from three individuals sent from the Island of Hawai'i, all were from Oahu. In surviving documentation from Green to Barnard Davis, specific provenance was available for a number of these individuals. The documentation indicated that Green was actively collecting remains, that they had been taken from Native Hawaiian burial grounds (and not European cemeteries), and that he was clear to point out, in two cases where he did not know (or could not remember) the provenance, that he had 'no doubt they were native skulls' (Green 1856). Like other collectors, Green was careful to assure recipients of the *bona fide* identity of human remains, as this was of great importance for craniologists of the day. Turner's (1884) publication provided additional evidence that Green was collecting the remains himself from known Native Hawaiian places of internment (Turner 1884 p 62). There was, therefore, nothing in the historical documentation that provided any reason to doubt the Hawaiian ancestry of the two remains associated with the collection of John Thurnam.

R.C.L. Perkins (1886–1955)

The Duckworth housed 17 skulls supplied by R.C.L. Perkins. Three were listed in its manuscript catalogue as coming from a 'burying place' on Oahu, and the remaining 14 simply described as being from 'Oahu'. Part of the series was donated in 1894, with the remaining thirteen received in 1902/1903.[10]

Robert Cyril Layton Perkins was a British entomologist, naturalist, and ornithologist. Working for the Sandwich Islands Committee, between 1892 and 1901,

he conducted three fieldtrips to the Hawaiian Islands to collect and study land fauna, researching the collections in Cambridge in between times. The results of his work were published in *Fauna Hawaiiensis* (edited by David Sharp) in 1899. Perkins continued to collect in Hawai'i after 1901, working firstly for the Agricultural Department of the Hawaiian Islands and then as Director of the Hawaiian Sugar Plantation Association's insect department, before returning to the UK in 1909 in ill-health.

Anita Manning (1986) and, in particular, Neil Evenhuis (2007) have undertaken extensive studies on the work and collecting of R.C.L. Perkins. Of particular relevance is Manning's 'Chronology Of R.C.L. Perkins' Fieldwork and Travel in The Hawaiian Islands, 1892–1901' (1986 pp 32–39) and Evenhuis' 2007 description and publication of Perkins' journals and manuscript material in *Barefoot on lava. The journals and correspondence of naturalist R.C.L. Perkins in Hawai'i, 1892–1901.* In their extensive examination of Perkins' archival material, neither had located any information relating to his acquisition of human remains.[11] However, Evenhuis interviewed Perkins' grandson in the early 2000s, eliciting the information that R.C.L. Perkins had collected human remains on O'ahu at the base of Nu'uanu Pali (see below).

Perkins' Work in the Hawaiian Islands

Prompted by increasing interest in the zoology of Hawai'i, in 1890 the British Association for the Advancement of Science (BAAS) appointed a committee to 'report on the present state of our knowledge of the zoology of the Sandwich Islands and to take steps to investigate ascertained deficiencies in [our knowledge of the] fauna' (BAAS 1891 in Manning 1986 p 2). The Sandwich Islands Committee quickly decided that the only way to fulfill its remit was to send a naturalist to the islands to 'explore their natural history as thoroughly as may be found possible and to transmit the objects obtained to this country to be examined and reported upon by competent authorities' (Sharp 1890 in Manning 1986 p 3). Additional funds were received from the Royal Society and the new collaboration was formalised in the 'Royal Society and British Association Joint Committee for the Zoology of the Sandwich Islands', known as the Joint Committee which, over the next two decades, raised funds for the work of the collector and provided guidance as to his activities.

Perkins successfully applied for the position of collector and by March 1892 had arrived in Hawai'i. His first period of fieldwork lasted until 1894, after which he returned to the UK. He returned to Hawai'i in March of 1895 and commenced his second period of collecting that lasted until May 1897. Back in the UK, between May 1897 and mid-1899, Perkins 'supervised the preparation of the insect collection, helped Sharp distribute specimens to specialists to study, and studied material in his own specialty, Hymenoptera' (Manning 1986 p 19). In 1899 he returned to Hawai'i for his third field trip which lasted until 1901 in which, 'With the exception of a few short trips to Maui and Hawai'i, he was almost constantly at work on O'ahu' (Manning 1986 p 20). In 1901, with his marriage to Zoe Atkinson and the

Committee's failure to receive further funding, Perkins finished six years of collecting for the Joint Committee.

Perkins' Journals

While collecting for the Committee, Perkins kept notes and journals. Extensive searches by Perkins' researchers Manning and Evenhuis failed to locate any of the original journals, with the exception of one that is now in the Zoological Society of London archives and covers May–June 1893 while he was on Molokai. Perkins describes destroying original diaries after preparing the introduction to *Fauna Hawaiiensis* as well as others being left in his father's house and not recovered. However, in 1936, he was persuaded to make copies of all surviving journals and notes and lodge them with the Bishop Museum Library in Honolulu. Evenhuis provides a summary of what type of information is found in this archive, noting that the journals were written very much as 'a business report to a client of how the funds were being spent' and were not intended as 'a travelogue nor to be written for a general audience' (Evenhuis 2007 p 56).

Evenhuis' analysis makes it less surprising that the journals contain no mention of Perkins' acquisition of human remains. He was not contracted to collect human remains and thus a journal serving as a business report might be unlikely to contain a record of items obtained beyond contract scope. Entries are not systematic in their coverage and, for O'ahu in particular, there are significant gaps in the documentation (Evenhuis 2007 p 55). Nonetheless, the journal copies are of value because they record that Perkins visited the area in which his skull collecting activity is reported to have occurred and in the relevant time period.

Family History and Nu'uanu Pali

In the early 2000s, Evenhuis visited Perkins' grandson in the UK (now deceased) and was told stories about the collector, including that he had removed many human skulls in O'ahu from the base of a cliff (*Pali* in Hawaiian) in the Nu'uanu valley. The grandson reported that he had eventually donated them, although thought this was to the Pitt Rivers Museum at Oxford University. Oxford University had two museums and a department acquiring human remains for anthropological purposes during the period in question: the Pitt Rivers Museum, the Oxford University Museum, and the Anatomy Department. A check through the historical catalogues of each of entity produces no mention of Hawaiian skulls donated by Perkins. Indeed, although Perkins had a long-term association with E B Poulton of Oxford University Museum, a donation of skulls to Oxford would have been surprising given the strength of Perkins' collecting connection to the University of Cambridge, the fact that it had its own, actively collecting anthropological collection within its Anatomy Department and that he was in close contact with its Professor of Comparative Anatomy, Alfred Newton, and Curator of the Cambridge Museum of Zoology, David Sharp.

Nu'uanu Pali is a windward cliff at the head of the Nu'uanu valley on O'ahu. Almost 1,000 ft in height, it forms a section of the Ko'olau mountain range. It is the site of the famous Battle of Nu'uanu of May 1795 that played a pivotal role in the final days of King Kamehameha I's wars to unify the Hawaiian islands. His army fought that of O'ahu's defenders, led by Kalanikūpule, in the Nu'uanu valley who were gradually trapped above the cliff. Hundreds of Kalanikūpule's warriors were either pushed or jumped over the cliff, meeting their deaths below.

In 1897, the firm of Wilson and Whitehouse was awarded a contract to construct a new road up the Pali. Building commenced in May 1897 and was completed by January 1898. During construction, over 800 skulls and other remains were located at the base of the cliff, being the remains of those who had fallen to their deaths just a century before. According to accounts, these remains were buried in rubble as the cliff was repeatedly dynamited to build the road. The discovery of multiple remains during the road construction is frequently repeated in descriptions of the Pali and the history associated with it.[12] In Krauss' 1994 biography of John Wilson (of Wilson and Whitehouse), he described being told of the discovery of the remains by Wilson himself:

> A Hawaiian gang under a daredevil named Joe Puni did this dangerous work … which would set historic preservationists' teeth on edge these days because he covered with rubble the burial ground of an epic battle. It was on the Pali in 1795 that Kamehameha the Great had defeated the chief of O'ahu to seize control of nearly the entire island chain. Johnny said later that he found eight hundred skulls and the bones of defeated warriors, thrown over the cliff during the battle, still moldering at the bottom. Rock blasted from the cliffs obliterated this historic, natural cemetery. In l897 everyone applauded Johnny's ingenuity.
>
> (Krauss 1984 p 58)

Newspaper accounts provide some evidence that human remains had been found at Nu'uanu Pali before the road construction. For example, on 13 February 1907, *The Pacific Commercial Advertiser* reported:

> HAWAIIAN TEETH IN NEW YORK. The teeth of the skeletons of mammals last much longer than the rest of the bones. A Kamaaina in relating local events told the Paradise that two New York dentists came to Honolulu in 1867 and prospected about the base of Nuuanu Pali for teeth. It was there that a thousand or more of Oahu's warriors in 1795 met their death before the conquering army of Kamehameha I. The enterprising surgeons found enough sound and perfect grinders among the remains of the savages to fill a trunk. Then they went to Waialae and excavated a burying ground, adding more store to their stock of discoveries. As these tourists came for business, not for pleasure, they soon sailed for the Coast. When they reached New York, they were enabled to furnish their clientele with a quality of teeth that was not as artificial as supposed.

Hui Mālama had also previously repatriated human remains provenanced to the base of Nu'uanu Pali: from the Field Museum in 1991 and a private residence in Pennsylvania in 2017. If this was the site of collection, Perkins would have had to acquire remains from Nu'uanu Pali before or during the road construction (1897–1898). Although there are no journal entries or notes provided by Perkins for the period of the road construction, they do place him in the vicinity before, and while, the road was being built (Manning 1986 pp 32–39).

Although the first series of remains donated by Perkins (in 1894) do not exhibit any artificial cranial deformation, all of those donated in the second series (in 1903) do. Because cranial deformation was not practiced by every Hawaiian, the discovery of its presence in all the individuals in the second series is intriguing. It suggests that either (1) Perkins was particularly interested in skulls with this characteristic, and/or (2) he had been specifically asked to provide this type of skull and/or, (3) he collected them from a locality(ies) in which only individuals with this characteristic were to be found, perhaps associated with the same family or with elites more generally. As noted above, Snow (1974) and Stokes (1921) both identified that cranial deformation, while not restricted to elites, may have been particularly common in the chiefly classes. According to Jerry Walker, a recognised Master of Lua (Hawaiian Fighting Arts) and a historian specifically regarding the Battle of Nu'uanu Pali, about 75% of the army at Nu'uanu Pali were elites (Walker pers. comm. 27 December 2017).

There is little or no reason to question that the human remains obtained by Perkins's were Native Hawaiian. As a professional collector and scientist, with a track record in acquiring large numbers of floral specimens for the University of Cambridge, he would have been aware of the necessity of being accurate and is very unlikely to have knowingly attributed a wrong identity to the remains he sent. In addition, the family history that R.C.L. Perkins took human remains from the base of Nu'uanu Pali, the placement of Perkins in the vicinity and time of the road construction, and the dominance of the artificial deformation characteristic within the Perkins collection, all support the Duckworth catalogue's description of these human remains as Native Hawaiian.

Hepburn Collection

The Duckworth contained a single individual associated with the 'Hepburn Collection'. The donor was James Hepburn[13] whose collection was given to the University of Cambridge Museum of Zoology in October 1870 by his relatives, after his death the year before. Three early 20th-century articles were published about James Hepburn in ornithology journals. Taken together, they provide a good account of his life and his extensive collecting of bird specimens, mainly in the American Northwest (Kinnear 1931; Larrison 1947; Swarth 1926;).

Hepburn was born in London in 1811 and educated at Trinity College in Cambridge, graduating with a BA in 1835 and a Masters in 1838. He then studied law in London and in 1842 was called to the Bar. In 1851 he moved to California as the manager of a company formed to mine gold quartz in the California valley, but the

firm ceased operations three years later. He began studying the natural history of the West coast shortly after his arrival and commenced his bird collecting in 1852. In 1860 he moved from San Francisco to Victoria in British Columbia where he died in 1869. According to Larrison (1947 p 249):

> The main part of Hepburn's collection of specimens was intact in San Francisco when he died, though some few items had been sent either to the Smithsonian Institution or to individual friends. There was no provision in his will regarding the disposition of this material, but his relatives, knowing that he had expressed a wish that they should go to Cambridge, presented them to that University in October, 1870. Dr. J. W. Clarke, superintendent of the University Zoological Museum, acknowledged this accession as one of unusual importance in a special report, February 8, 1871.

The Cambridge Museum of Zoology has a large archive related to the Hepburn collection.[14] This includes Hepburn's own catalogues and notebooks which contain very detailed descriptions of his bird and egg collection, extensive notes on bird species, and some lists detailing exchanges with private individuals and, at least, the Smithsonian Institution. The archive also contains documentation relating to how Hepburn's collection came to be at Cambridge University – these are referred to in the archive as 'histories'. It is in the 'histories' that reference to his collection of human remains can be found, appearing in two places. First, in a copy of a letter from J.W. Clarke to F. Beresford Wright (one of Hepburn's legatees) on 4 December 1870 which contains a brief description of the collection, including that it contained '14 human skulls'.[15] Second, in a special report written by J.W. Clarke to the University Senate on 15 February 1871 about the collection, which increases the amount of human remains to 28, presumably because a full inspection of the collection resulted in more human remains being found.[16]

From Clarke's report and the extensive manuscript catalogues and notebooks of bird skins and eggs that accompanied the collection, it is clear that Hepburn was extremely methodical and detailed in his collection description and management. His catalogues, for example, contain detailed descriptions of the bird skins and eggs with, often, an account of where he found them. There is little reason to assume that such meticulousness would not also have extended to his non-bird collections, including those of human remains.

Hawaiian Legislation Protecting Places of Sepulchre

Historical research into the collectors did not provide any reasonable grounds to doubt that they supplied Native Hawaiian remains to Cambridge. Historical research then moved to locate any evidence of Native Hawaiian or colonial law, traditions, or practices relating to the protection of burial sites and thus to assess whether the removal of remains from Hawai`i to Cambridge could be assessed as licit/legal or illicit/illegal in the historical context.

Understanding the contemporary Hawaiian legal context was important for any repatriation submission to the University of Cambridge. The only previous known repatriation of human remains from the Duckworth had occurred in 2016 and had involved an Indigenous Australian whose remains had been exported illegally from Western Australia.[17] A review of 19th-century Hawaiian law revealed relevant legislation enacted in 1860. On 24 August of that year, King Kamehameha IV passed legislation to protect burial places, with significant consequences for those found guilty. It is not yet known whether he did so in response to the actions of collectors, but it seems likely given the quantity of Native Hawaiian remains known to have been collected for the US and overseas institutions by that time. The law reads:

> **AN ACT FOR THE PROTECTION OF PLACES OF SEPULTURE [sic].**
>
> Be it enacted, by the King, the Nobles and Representatives of the Hawaiian Islands, in Legislative Council assembled:
>
> Section 1. If any person, not having the legal right to do so, shall willfully dig up, disinter, remove or convey away any human body from any burial place, or shall knowingly aid in such disinterment, removal, or conveying away, every such offender and every person accessory thereto, either before or after the fact, shall be punished by imprisonment at hard labor for not more than two years, or by fine not exceeding one thousand dollars.
> Section 2. This law shall take effect from and after the date of its passage.
>
> Approved this day 24 August A D 1860. KAMEHAMEHA
> (Kaahumanu)[18]

Any collecting of remains after 24 August 1860 would therefore have been illegal under Hawaiian law. The Provisional Government which overthrew the Hawaiian Kingdom in 1893 kept the existing statutory framework in place. Hawai'i was made a territory of the USA in 1898 and a State in 1959. There is no repeal of this law, and in 1909 it was amended as:

> ACT 26. AN ACT T) AMEND SECTION 3196 OF THE REVISED LAWS OF HAWAII, PERTAINING TO OFFENSES AGAINST THE RIGHT OF SEPULTURE. Be it Enacted by the Legislature of the Territory of Hawaii: SECTION I. Section 3196 of the Revised Laws of Hawaii is hereby amended so as to read as follows: "Section 3196. Punishment. The right of human sepulture is sacred, and shall not be disturbed except as provided by law. If any person, not having any legal right to do so, shall willfully dig up, disinter, disturb, scatter, remove or convey away any human body, or the remains or bones, or any of the remains or bones thereof, from any cemetery, burial place, mausoleum, cave or vault, where the same has been legally interred or deposited, or shall willfully break, disturb, scatter or remove the coffin, casket or burial clothes in which such body or remains shall have been interred

> or deposited, either in whole or in part, whether such cemetery, burial place, mausoleum, cave or vault be public or private property, or shall knowingly aid in such act as aforesaid, the person so offending, and all persons accessory thereto, either before or after the fact, shall be punished by imprisonment at hard labor for not more than 2 years, or by a fine not exceeding $1,000.00." SECTION 2. This Act shall take effect upon its approval. Approved this 18th day of March, A. D. 1909. WALTER F. FREAR. Governor of the Territory of Hawaii.[19]

Absent any evidence of permissions, the acquisition of Native Hawaiian remains by Perkins must therefore be seen as illegal, as would possibly the collecting of the Native Hawaiian remain by Hepburn – although the date of this event is not known. It is of course the case that traditional law would have made collecting illicit prior to 1860 also.

Repatriation Decisions at Cambridge

The OHA submitted a repatriation claim to the University of Cambridge in January 2019. The claim was considered by the University's Human Remains Advisory Panel (HRAP), whose remit is to 'give advice and make recommendations to the University Council regarding claims for the transfer of stewardship of human remains held in the University's collections.' In its recommendations (November 2019), the panel was satisfied as to the identification of the remains as Native Hawaiian (supported by separate submissions from the OHA and Dr. Lahr) and received confirmation from the US Department of the Interior that there were no competing claimants. In deciding whether to support the claim or not, the panel noted that it had:

> concluded in relation to a previous claim for repatriation that the University ought not to retain remains which were obtained in circumstances which were tainted with illegality (even if the University itself had not acted unlawfully in receiving the remains), unless there is an overwhelming scientific or educational case for their retention.
>
> (-Human Remains Advisory Panel [HRAP] 2019 p 2)

It viewed the 17 skulls sent by Perkins as clearly an 'indefensible breach of applicable local law' (HRAP 2019 p 2). It noted the difficulty in concluding decisively for the remaining three individuals but took the view that, 'it would not be appropriate, in the particular circumstances of this case to treat that later category of remains differently from those other remains of identical Native Hawaiian origin with which they are housed' (HRAP 2019 p 3). In terms of scientific, education, and historical value, the report noted Dr. Lahr's advice that the 'scientific information they preserve is limited' and thus they concluded, 'the scientific case for retention is not overwhelming'. HRAP respected the OHA's contention that it was not the duty of Native Hawaiian's 'to further the knowledge and understanding of

humanity by exposing the remains of their ancestors to scientific investigation'. In taking all of these factors into account, the panel recommended that they Native Hawaiian remains were 'transferred unconditionally to the stewardship of the OHA'. Shortly thereafter (25 November 2019), the University of Cambridge Council unanimously approved the report and recommendations of the Human Remains Advisory Panel. Ayau travelled to Cambridge to meet with Cambridge Registrary Emma Rampton on that same day to receive the historic news in person and to be in a position to address any last-minute requests for clarification that may have arisen.

While HRAP's decision was heavily influenced by proof of the breach of local law, and OHA knew that proof of illegality was important for the claim because of the previous Australian precedent, it is important to note that this was not the basis of the OHA's submission. The submission benefitted from the ability to refer to the King Kamehameha IV's legislation but its absence would not have fundamentally changed OHA's view or approach. The King's legislation reflected – in Western legal terms – traditional, pre-existing cultural prohibitions against disturbing the dead that themselves are an expression of Hawaiian spiritual beliefs and family obligations to care for the deceased. It is these expressions of Hawaiian humanity that form the basis of Hawaiian repatriation claims.

The Return[20]

On 29 February 2020, in an unprecedented move, the University of Cambridge, an 800-year old confederation of departments, schools, faculties, and colleges, respectfully handed over the remains of 20 'Ōiwi (Hawaiians) from Nu'uanu, Wai'alae and Honolulu on the island of O'ahu to the OHA and community supporters. For Native Hawaiians, this marked a historical moment in the decade-long effort to return home these particular iwi kupūna.

During a moving hand-over ceremony held at the Duckworth Laboratory with Cambridge officials in attendance, Ayau stated:

> Today we recognize and celebrate aloha, our love for 'ohana or family, which is one of the greatest loves of all. It always starts with a request, a request to make our family whole again. We honor you, the leaders of Cambridge University for your courage to help us heal our kaumaha, our traumatic pain caused by the separation and our innate desire to seek to return the ancestors to their moeloa, their eternal sleep after more than a century of being disturbed.[21]

In a powerful statement of humanity and reconciliation, Professor Stephen J. Toope, Vice-Chancellor of the University of Cambridge stated,

> Today's ceremony cannot possibly repair the hurt caused by the extraction of the iwi but it is a necessary and long delayed act of justice. It is a sign of our deepest respect for your kūpuna. It is a sign of our deepest respect for your culture. It's a sign of our deepest respect for you. And I am grateful for the

> opportunity you have given us to repair the damage caused by some of our own ancestors. To your kūpuna I say: I am sorry that your voyage home has been so long interrupted, but I hope that you may now travel back in peace.[22]

For Native Hawaiians, the enormity of the healing power of Professor Toope's statement could not be overstated. It brought a fitting end to a journey fraught with European colonialism and privilege. Specifically, when Ayau and Kahanu had met with Cambridge officials in 2014, the then Registrary stated that the human material from Hawai'i was the lawful property of the University of Cambridge. At the time, Halealoha had responded saying how this statement was an excellent example of 'intellectual savagery' because the Registrary had used his intellect to deny Hawaiians their humanity by dehumanising their ancestors. In contrast, Professor Toope's statement rehumanised the ancestors and, in doing so, Native Hawaiians. This was felt as a powerful form of healing through repatriation.

In the larger scheme, maintaining the kuleana (duty; responsibility; privilege) to care for the iwi kūpuna (ancestral bones) is a profound expression of Hawaiian cultural identity. For Native Hawaiians, in death, the ancestors yearn to be part of the 'ohana (family) again. Hawaiians believe that by uttering their ancestors' names, by requesting their assistance to provide strength, courage, and focused thoughts; by placing them in a position of responsibility to support the 'ohana (family) once again – **they live on**. Everlasting life is not a new concept, it is a time-honoured Hawaiian family practice. However, many have forgotten this, or had it beaten out of their native conscience, but it survived through ancestral memories and Native Hawaiians are better for it, as we continue to restore our ancestral foundation through repatriation and reburial.

The iwi kūpuna arrived home on the night of 1 March 2020 welcomed by the moon and under the protection of the delegation sent to escort them home that included Mehanaokalā Hind, Keoki Pescaia, Noelle Kahanu, Mana Caceres, and Edward Halealoha Ayau. The OHA then undertook to identify lineal and cultural descendants with the support of the O'ahu Island Burial Council and engaged in consultations with appropriate State agencies regarding plans for reburial. As Ayau later commented:

> Humanity benefits every time human beings agree to restore dignity to the deceased whose remains were removed without consent, which is to say, when we collectively embrace and celebrate 'ohana (family).[23]

Postscript

Following the repatriation from the University of Cambridge, Ayau presented the Natural History Museum (NHM) in London with information that cast doubt on the decision by this institution to withhold, largely on the basis of craniometric results, eight ancestral remains from its repatriation of 145 individuals to Hawaii in 2013. In March 2022, the NHM undertook a review of remains labelled 'Hawaii' in its

collections following the 2013 return. In the intervening years, three additional remains had been located that were documented as from Hawaii. As a distinct difference from its provenancing research ~~undertaking~~ almost ten years previously, this review did not include any craniometrics analysis. As of August 2022, this institution has agreed to return individuals, retaining two – one recorded as originating from the Nicobar islands and one identified as coming from Hawaii but of being a Chinese individual. Of the three individuals located in the institution since the 2013 return, one is represented only by a mandible. Research by the NHM located that this remain belonged to a cranium that had stayed in the Wellcome Trust collection (housed by the Science Museum) in a past transfer. The cranium had been previously repatriated to Hawaii. Good archive management (supported by the Return, Reconcile, Renew (RRR) network and the RRR Digital Archive of repatriation information (www.returnreconcilerenew.info)) – meant that it was a straightforward process to confirm that the cranium exhibited the same museum number as the mandible at the NHM. These skeletal elements ~~will be~~ united ~~once~~ the mandible ~~is~~ repatriated to Hawaii. This case reminds repatriation practitioners of the importance of understanding the context in which craniometrics is used and its problems, of revisiting prior decisions made by institutions on the basis of craniometrics, of the likelihood of more ancestral remains being located at an institution, of the issues caused by separation of skeletal elements (whether within or between institutions), and of the importance of good archive management in the repatriation process.

It is possible that the Hawaiian repatriation experience contributed to what may be a new approach by the Duckworth collection to repatriation. It's website currently states:

> The Duckworth Laboratory follows the *Guidance for the Care of Human Remains in Museums* from the Department of Culture, Media and Sport (DCMS) published in October 2005, which sets out a series of recommendations on best practice regarding human remains in museum and university collections in the UK, and complements the provisions of the Human Tissue Act 2004 on the care of human remains older than 100 years. The Duckworth Laboratory is also guided by the Code of Ethics and Code of Practice of the British Association of Biological Anthropology and Osteoarchaeology (BABAO), as well as the United Nations Declaration on the Rights of Indigenous Peoples adopted in 2007.[24]

Acknowledgements

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Notes

1 Including blood samples, hair bundles, single bones, complete skeletons, mummies, and decorated skulls (http://www.human-evol.cam.ac.uk/duckworth-lab.html).
2 See, for example, Foley (2003) and https://www.sciencemediacentre.org/scientists-respond-to-report-on-collections-of-human-remains-2/ (accessed 9 July 2021); http://news.bbc.co.uk/2/hi/science/nature/3032657.stm (accessed 9 July 2021); https://www.abc.net.au/worldtoday/content/2003/s912848.htm (accessed 9 July 2021).
3 Examples where the report (Lahr 2014) supports Hawaiian identification are limited. They are, first: 'The discriminant functions derived from the above populations classify 19 of the 21 individuals from the Duckworth Collection as Hawaiians from Oahu Is., thus consistent with the catalogue information as to their provenance' (Lahr 2014: 22); and second: 'The results indicate that, once assuming the crania could be only either Hawaiian or Maori, all but 2 are classified as Hawaiian from the island of Oahu (rather than Maui or Kauai or New Zealand), 1 has an inconclusive classification (DC4590), while the unprovenanced/possibly Maori skull (DC5001) is indeed identified as Maori' (Lahr 2014 p 25); and last: 'On the basis of a restricted analysis that assumes either a Hawaiian or Maori origin of the remains, all except 2 of the crania have greater affinity to people from Oahu Island (where they are supposed to originate) than elsewhere, while cranium DC5001 is almost certainly from New Zealand instead.'
4 Instances in which the report finds results as to Hawaiian ancestry inconclusive, weak, or statistically unproven are common. Examples include 'In the second set of analyses, which included a Hawaiian reference population, only 7 of the 21 analyses performed resulted in classifications of one of the Duckworth crania with posterior probabilities >0.9, only two of which identified the individual as Hawaiian' (p 11); 'The four crania that were not classified as Polynesian show a moderate to low probability of b eing Micronesian in the first place, and an even lower probability of being Polynesian' (p 13); 'most of the human crania in the Duckworth Collection labelled "Hawaiian" are most likely to be Polynesian, although this cannot be demonstrated statistically. Among Polynesians, several of the male and one female crania are classified as Hawaiian, although again this is not demonstrable statistically' (p 16); 'Given that few of the remains under investigation are morphologically typical Hawaiians' (p 17); 'The results of the FORDISC analyses were largely inconclusive' (p 23); 'Therefore, in the context of global variation, most of the crania from the Duckworth are not typical Hawaiians, or even Polynesians' (p 24); 'These analyses classified most of the Duckworth remains as Polynesian, although several were grouped with Micronesian crania. Most importantly, the majority of the crania were classified with low probabilities and/or typicality, so the results remained statistically inconclusive' (p 24); 'A comparison based on the inclusion of only Polynesian (including Hawaiian) and Micronesian crania also obtained relatively inconclusive results. The majority of the crania were classified as either Micronesian or from the Chatham Is., with only 7 of the 21 Duckworth crania identified as Hawaiian (mostly males). However, as in the previous analyses, the classifications achieved are, for the majority, statistically weak' (p 24).
5 http://www.paifoundation.org/archives/about.html (accessed 9 July 2021).
6 The report's first reference to the influence of artificial deformation on results is: 'The emerging pattern clearly shows that almost all of the crania from the Duckworth that cluster separately from the rest of the Hawaiians are those visually identified as having some level of artificial cranial shaping. The latter is probably the main explanation for why most of the Discriminant Analyses performed were statistically inconclusive' (p 20); the second is in the conclusion and reads: 'A review of the morphology of the Hawaiian sample in the Duckworth Collection indicates that artificial cranial deformation (a known cultural practice in some of the islands' populations in ethnographic times), is responsible for altering the shape of most of the skulls to the extent that a

statistical assessment of biological ethnic affinity based on cranial shape is impossible' (p. 24). The last is in the final paragraph of the conclusion and acts to weaken the strength of the subsequent statement that finds the remains to be Hawaiian: 'The extensive analyses to identify the population of origin of the remains labelled "Hawaiian" in the Duckworth Collection presented here are largely inconclusive at a statistical level, a fact probably related to the intentional shaping of most of the sample, although the Pacific origin of part of the sample can be demonstrated statistically to some extent. On the basis of a restricted analysis that assumes either a Hawaiian or Maori origin of the remains, all except 2 of the crania have greater affinity to people from Oahu Island (where they are supposed to originate) than elsewhere, while cranium DC5001 is almost certainly from New Zealand instead' (p 25).

7 Additional two mandibles were grouped with the Hawaiian ancestral remains; one with the skull ascribed 'Maori'. According to Lahr (2014: 5 – Table 2b), the mandibles do not belong to the skulls they have been associated with; whether they were collected in the same places is not known.

8 The RCS received a direct hit by a German bomb in 1941 and a section of the museum's contents were destroyed. The majority of what survived were transferred to the Natural History Museum in London after the war. What remained of Barnard Davis' collection sent to the RCS is thus now in the NHM or has been repatriated. Ancestral Remains from Hawai'i were repatriated by the NHM to Hui Mālama in 2012. This return included remains that had once been in the Barnard Davis collection, over 100 of which had been sent to him by W.L. Green.

9 The Story of Hawaii and Its Builders. Published by *Honolulu Star Bulletin*, Ltd., Territory of Hawai'i, 1925. Edited by George F. Nellist. http://files.usgwarchives.net/hi/statewide/bios/green25bs.txt (accessed 16 August 2017).

10 The later arrival is referred to both by Macalister (1903) and Duckworth (1904). The former writing 'The Museum has been increased by the purchase and donation of a number of crania, the most important of which are the following: … Thirteen Sandwich Island crania presented by R.C.L. Perkins esq …'.

11 Manning observed that she certainly would have remembered any such information because one of her responsibilities at the Bishop Museum was repatriation oversight (Manning pers. Comm. 1 September 2017).

12 For example, Jervis (1982): The Notches of Nuuanu Pali; Hallowed Ground: Nu'uanu Pali, O'ahu, Hawai'i (http://www.historynet.com/hallowed-ground-nuuanu-pali-oahu-hawaii.htm); Burl Burlingame Pali Ponderings: Over the Pali and through the tunnel to a Wat Dat-o-rama *Honolulu Star Bulletin Features; The Island Call* (October 1953), Reproduced in Sterling and Summers (1982).

13 Thank you to Honor Keeler for helping to identify this individual.

14 We are indebted to Ann Charlton, archivist at the Cambridge University Museum of Zoology, for sending scans of the Hepburn archive.

15 Copy of letter from J.W. Clark to F. Beresford Wright, 4 December 1870. Held in the Archives of the Cambridge University Museum of Zoology, J. Hepburn, histories file. V1.280.1–3.

16 The Special Report is housed in the Archives of the Cambridge University Museum of Zoology, J. Hepburn histories file: V1. 285.1–3.

17 For information about the 1911 and 1913 proclamations in Australia which prohibited the export of Indigenous human remains, see Fforde et al. (2020).

18 *Law of his Majesty King Kamehameha IV, King of the Hawaiian Islands, Passed by the Nobles and Representatives, at their Session, 1860*. Honolulu: Printed by Order of the Government. P. 21. See also: *The Penal Code of Hawaiian Kingdom, compiled from the Penal Code of 1850, and the various penal enactments since made pursuant to the Legislative Assembly, 2 June 1868.* Published by Authority. Printed at the Government Press, Honolulu, Oahu, 1869, p. 162.

19 https://babel.hathitrust.org/cgi/pt?id=uc1.a0004688925;view=1up;seq=7 at page 32 (accessed 25 December 2017).
20 In recognition of its importance and high significance for Native Hawaiians, this concluding section is authored solely by Edward Halealoha Ayau.
21 https://video.search.yahoo.com/search/video?fr=mcafee&ei=UTF-8&p=OHA+Cambridge+video&type=E211US978G0#id=0&vid=34827373396966debec3ccdb0f08682d&action=click, at 3:10 (accessed 9 August 2022).
22 https://video.search.yahoo.com/search/video?fr=mcafee&ei=UTF-8&p=OHA+Cambridge+video&type=E211US978G0#id=0&vid=34827373396966debec3ccdb0f08682d&action=click, at 11:11 (accessed 9 August 2022).
23 Group of Native Hawaiians to bring home iwi kūpuna housed at English institution for over a century, https://www.oha.org/news/group-of-native-hawaiians-to-bring-home-iwi-kupuna-housed-at-english-institution-for-over-a-century/ (accessed 9 August 2022).
24 https://www.arch.cam.ac.uk/institutes-and-facilities-overview/duckworth-laboratory (accessed 23 March 2023).

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