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September 24, 2007

Dear Dr Burnett

Report by Phillip Endicott on human remains from New Zealand held in the British Museum

You asked if I would comment on Phillip Endicott's report on the scientific value of the human remains from New Zealand. It is a very thorough and informative report, focused on the genetic value of human remains for answering important questions about the history, adaptation, and demography of people in the region, and especially their links within the region. Endicott's report provides a very helpful set of background information about the use of genetics in anthropology and archaeology, the role of ancient DNA, and why the field is important more generally.

Although not structured in this way, his report basically falls into three themes – the value of work on human remains; the importance of understanding Polynesian history, demography, adaptation and health; and the value of the particular remains in the British Museum. I shall organize my comments around these three themes.

1. General value of work on human remains.

Endicott's report provides a well-argued case for the value of human remains in anthropology, archaeology, genetics, and a range of other disciplines. This is largely uncontested, and was a major part of the thinking behind the DCMS Working Party's development of its code of practice. Indeed, I think if anything he underplays the value as he restricts his comments to the extraction of ancient DNA, and to a lesser extent, work using isotopes. There is still a major scientific value from both the macroscopic and microscopic study of the morphology of remains (i.e. anatomical studies). Indeed, to some extent such work has become more significant as we enter a phase where we are particularly interested in the relationship between the genotype and the phenotype (i.e. the relationship between our genetic code and what we actually look like, a relationship that is important for biology and also not straightforward). At the microscopic level, work on life history and development is also central. In addition, while Endicott emphasized, rightly, the

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importance of research in human population genetics, other parts of the biological sciences are also relevant. In summary, work on human remains across a range of sciences, not just population genetics, is probably more active now than for many years.

2. The significance of Polynesian remains, especially New Zealand

To some extent it can be argued that all human remains are of equal value because they throw light on different aspects of human diversity and history. However, it also the case that remains can vary in importance according to such factors as rarity, age, and, in particular, their relationship to particular questions and issues. These might be related to the distribution of disease, such as was the case with the work on yaws among Australian and Melanesian remains, or to specific historical questions. The Pacific is a region that has attracted considerable attention due to the complex pattern of human diversity (Polynesian, Melanesian, Australian), and to the very distinctive process by which Polynesia was colonized. Endicott's report provides useful information on this. Remains from New Zealand are critical to this process, as the islands were among the last and most distant to be colonized. Remains from New Zealand can contribute to this research in a number of ways. Certainly ancient DNA would be key of this in the context of the region, as would the study of morphometrics. Endicott's report shows that there is already quite a lot known about the peopling of New Zealand, although, as he makes clear, there are outstanding questions to be resolved (especially the timing of the colonization, its scale, and whether it consisted o more than one event).

3. British Museum holdings

How critical the potential for research may be would depend upon the actual remains themselves. As far as I can tell from the report, there are 7 preserved heads, and 9 other anatomical elements. I have not seen the material, and the report provides little detailed description. I infer that the heads have hair (some or all is unclear), and I do not know whether they also have skin. There is not anatomical description of the non-skull material. I am also unclear of the provenance of the material in more precise terms. These are important considerations as the scientific value, in the various approaches from genetics, to isotopes, the microscopic history to morphometrics, does to some extent depend upon context. As the report stands it is difficult for me to evaluate this except in the most general manner. Some comments that might help others who are familiar with the material to evaluate Endicott's report are:

- If the heads have hair and skin, then this may be a problem for any morphometrics done traditionally, however, CT scanning would be a noninvasive way around this.
- If the context (i.e. location and date, especially with ethnic affiliation) is known then this would make the material more important, either by providing information about a single community, or else giving insights into within-island variation.

I found this part of the report, while indicating the importance of the remains, did not provide enough contextual information to evaluate the BM material in particular, rather than New Zealand human remains more generally. My advice would be perhaps to provide more information in the report on the link between context and the very full discussion of the regional issues which the report provides.

In summary, I would say that Endicott's report provides a substantial statement for the value of Polynesian human remains for anthropology and the life sciences. I would say that if anything he has understated the value in terms of the range of techniques and approaches that can be applied. More importantly, perhaps, is that for a full evaluation of the case for the scientific value of the remains to be carried out it would be necessary for a report to show more of a link between the general case and the actual remains in the BM.

Finally, I realize that for the Trustees to be able to make a decision about repatriation, it is necessary for the report to be more closely keyed to the British Museum's policy statement on human remains, and the criteria set out there for both retention and repatriation. Endicott's brief did not include the case for repatriation, but my reading of his report suggests that these remains do have a public benefit (5.2) in terms of being a record of the varied ways of life in the past (5.2.1), and can help advance knowledge, particularly in terms of genetics and other markers of population history (5.2.2).

I hope these comments are of assistance to you. Please do not hesitate to get in touch with me should you require any further information, or if you feel it would be helpful for me to see the material.

Yours sincerely

A handwritten signature in cursive script, appearing to read "Robert Foley". The signature is written in dark ink and is positioned above the typed name and title.

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