



NEW ZEALAND  
ARCHAEOLOGICAL  
ASSOCIATION

## ARCHAEOLOGY IN NEW ZEALAND



This document is made available by The New Zealand  
Archaeological Association under the Creative Commons  
Attribution-NonCommercial-ShareAlike 4.0 International License.

To view a copy of this license, visit  
<http://creativecommons.org/licenses/by-nc-sa/4.0/>.

HOW BIG IS A MOA EGG?

Beverley McCulloch  
Canterbury Museum

Some weeks ago I found myself involved in measuring the capacity of ratite eggs, including those of moas, for a display I was preparing in Canterbury Museum. Part of this work was the estimation (for comparative purposes) of the capacity of the largest moa egg known, that from the Fyffe moa hunter site at Kaikoura. Its dimensions, as given by Dell and Falla in their 1972 paper, are 240 mm by 178 mm (9½ by 7") and I had no reason to doubt that this was correct as the paper was written after the original egg was obtained by National Museum in the 1960s - it having been in England for almost a century.

A week or two later Canterbury Museum was fortunate to be loaned the original egg by National Museum to put on temporary display with the material more recently obtained from the Fyffe site. As part of my examination of this spectacular egg I measured it - more out of curiosity than anything else - and sure enough it was, as Dell and Falla stated, 240 mm by 178 mm. So far - so good.

Then, quite by chance, it was drawn to my attention during a discussion, that Oliver (1949) gave the measurements of the Fyffe egg as 253 mm by 178 mm (10" by 7"). Oliver did not actually see the egg - it was still in limbo in England at that time - but he cited the source of his measurements as Rowley (1878) and Owen (1879), and in such a way as to suggest that both these gentlemen had given the same dimensions for the egg.

Out of curiosity, and because the discrepancy seemed quite a lot, more than a centimetre, I decided to have a look at the original publications and this is where the fun started.

Rowley, who actually owned the egg and had it in his possession when he wrote the article, does not make it clear whether he actually measured it. He first quotes the original vendors' description and measurements, 10" by 7" (253 mm by 178 mm); this, converted, is clearly the source of Oliver's information. Rowley then goes on to quote the Times newspaper, that the egg was 9" x 7" (228 mm x 178 mm), and to complicate matters further, he published a lithograph of the egg at "Natural Size" which measures a little over 10" (255 mm) by 7 1/8" (180 mm).

Well, we all know what the media are like, and the vendors might not have worried too much about accuracy, and illustrations

can be distorted in printing, but I was still a little surprised. After all, Rowley actually had the egg, and after all the thing did disappear completely from sight for a long time! What if the one returned to National Museum wasn't the original Fyffe egg at all?

So I fished out Owen's Memoirs, two volumes (originally Haast's own personal copies), hoping that if he gave the same measurements it could be shown that he had never actually measured the egg and was perhaps quoting Rowley. However, a quick look in Volume I indicated that Owen had indeed seen and closely examined the egg, describing it in some detail, and including the measurements 10" by 7½" (253 mm by 190 mm). This was a new one - so far the sizes given had varied really only in length, the diameter had been fairly consistent at about 7". But here was the great Richard Owen citing a diameter of 7½". I relaxed a little (but not much) when I measured Owen's 'Natural Size' lithograph in Volume II. Here the egg was indeed 10" in length but back to the standard 7" across; on the other hand this was clearly the same illustration used by Rowley. Perhaps the 7½" was a misprint, but there was still that pretty consistent extra half inch of length to account for. I was already mentally composing a letter to the director of National Museum - "Dear Dr Yaldwyn, You know the moa egg from Fyffes which you obtained some years ago. Well, something funny has cropped up ...". But relieve was in sight.

While I was mulling the problem over I picked up Owen's Memoirs to return them to the library, and out of the back of one volume dropped an offprint of an 1865 publication by James Hector on the moa remains at the New Zealand Exhibition in Dunedin that year.

I knew the Fyffe egg had been at that exhibition - and I knew it was the Fyffe egg - we even have Fyffe's original correspondence relating to sending the egg off to Dunedin, in the Museum archives.

And yes, Hector did describe the egg - and gave its measurements, 9½" by 7" or 240 mm by 178 mm, which are precisely the measurements of the egg held at National Museum. Trust a geologist! So whatever Rowley, and the great Sir Richard Owen may, or may not, have measured, it seems likely that the National Museum's egg is indeed the original from Fyffes. Thank goodness! But I must say those measurements of Owen's make me wonder more than a little about the accuracy of some of his anatomical work.

Footnote: For the curious, the estimated capacity of the Fyffe egg is approximately 4302 cubic centimetres, or about 90 No. 6

hens' eggs. This can be compared with the Museum's larger Aepyornis egg with a capacity (measured by displacement as well as calculation) of 9720 cubic centimetres or 204 hens' eggs!

References

- |                               |      |  |
|-------------------------------|------|--|
| Dell, R.K., and<br>R.A. Falla | 1972 | The Kaikoura moa egg. <u>Dominion<br/>Museum Records in Ethnology</u> ,<br>2:97-104.                                     |
| Oliver, W.R.B.                | 1949 | The Moas of New Zealand and Australia. <u>Dominion Museum Bulletin</u> , 15.   |
| Owen, R.                      | 1879 | <u>Memoirs of the Extinct Wingless<br/>Birds of New Zealand</u> . (2 vols.).<br>London, J. van Voorst.                   |
| Rowley, G.D.                  | 1878 | Remarks on the extinct gigantic<br>birds of Madagascar and New Zealand.<br><u>Ornithological Miscellany</u> , 3:237-247. |