

PORT MACQUARIE ARCHAEOLOGY FUND PORT MACQUARIE GOVERNMENT HOUSE

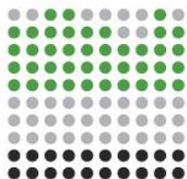
CONSOLIDATED FINAL EXCAVATION REPORT VOLUME 1, APPENDIX 4.8: SHELL REPORT

March 2019



Selected oyster shells from Context 167/#132. Scale 100mm.

REPORT TO
HERITAGE COUNCIL OF NEW SOUTH WALES



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LOWE**
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PREAMBLE

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APPENDIX 4.8: SHELL REPORT

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ABSTRACT

This short report outlines the results of an archaeological analysis of shell material recovered from First Government House in Port Macquarie. Shells were sorted into component species according to excavation context and were measured according to weight, length, MNI and NISP. The analysis revealed that oysters, limpets, turban, tritons, pipi, whelk, tun and volutes were the most commonly occurring shells. All of the shells identified may be collected from shallow water or sand, littoral or intertidal areas, or rocky shores, and the majority of those recovered also retained much of their colour. It was thus concluded that the shells were live collected, most likely by the residents of the House, possibly for consumption, decoration and/or use as fill.

1.0 INTRODUCTION TO SHORT REPORT

The following short report was commissioned by Archaeology and Heritage Pty Ltd. The aim of this study was to analyse the shell material recovered from historic First Government House in Port Macquarie (PMGH) in 2001, and to provide an interpretation as to its deposition in the House.

2.0 ANALYTICAL METHOD

All of the shell material recovered from the 2001 excavation of PMGH was analysed in this study. Analysis initially involved identification and separation of the component shell species from each context bag (see Table 1 for a list and description of contexts and components).¹ As clay still adhered to many of the shells, each was washed in water and the clay removed and sieved through 1mm mesh.

Following sorting, each component feature from each context was bagged separately and labelled (with scientific name and common name for shell species), although only shell material was measured and analysed for this report. Apart from these names, the habitat and location for each shell, and whether it was a bivalve or gastropod, were also recorded.

Qualitative measurements taken for shell components included state of intactness and extent of colouring preserved on the shells. Quantitative measurements taken for shell components included Minimum Number of Individuals (MNI), Number of Identified Specimens (NISP), maximum lengths of intact species, and total weight of each species from each context. Lengths and weights were recorded to one decimal place.

Weight was one measure used to identify differences in component frequencies, but by itself it is not the most accurate indicator for this as some shell species are thicker and larger (and hence heavier individually) than others. NISP is another useful feature for identifying differences, but as some species are more fragile than others, individuals are more likely to break into more pieces and hence skew the results. MNI was therefore the predominant measure used for determining differences in shell species frequencies. MNI was identified by a specific feature on each shell: for bivalves, the attaching hinge, and particularly whether it was the left or right side of the valve, or the base or lid of an oyster (hence the side with the most specimens made up the MNI); and for gastropods, the internal spire.

3.0 RESULTS

As previously mentioned, all recovered material was identified and separated into components according to context bag (see Table 1 for a list and description of contexts and components, and see Appendix A for specific analytical tables).² Sieving of the attached clay revealed mainly shell grit and non-artefactual stone (from contexts 23, 26, 33, 94, 108, 130 and 149) as well as some small charcoal (26, 41 and 94), bone (1, 33, 41, 63 and 108) and glass (33, 41 and 108) fragments, and a small piece of fibro (context 33). However, as previously mentioned, this material was not analysed further.

¹ Note: Table 1 was not included in the 2006 Report.

² Note: Appendix A was not included in the 2006 Report.

Component shell species were oysters (*Saccostrea glomerata* and *Dendostrea sandvichensis*), limpets (*Cellana tramoserica*, *C. radiata*, *Scutus antipodes*, *C. solida*, *Diodora jukesii* and *Patelloida nigrosulcata*), turban shells (*Turbo torquatus* and *T. undulatus*), tritons (*Cabestana spengleri*, *Ranella australasia* and *Cymatium parthenopeum*), pipi (*Donax deltoides*), Hercules club whelk (*Pyrazus ebininus*), tun shell (*Tonna allium*), volutes (*Amoria zebra* and *A. undulata*), top shells (*Austrocochlea constricta*, *A. concamerata*, *Trochus hanleyanus*, *Phasianotrochus eximius*, *Pleuroploca australasia* and *Bankivia fasciata*), cockle (*Anadara trapezia*), snails (sea/freshwater species such as *Nerita atramentosa*, *Polinices incei* and *P. sordidus*, and land snails such as *Figuladra sp.* and *Trachiopsis mucosa*), small gastropods (*Austroginella muscaria* and *Nassarius pauperatus*), cone shell (*Conus magus*), barnacle (*Balanus variegates*), clam (*Glycymeris striatularis*), periwinkles (*Velacumantus australis* and *Bembicium nanum*), dosinia (*Dosinia caerulea*), mactra shells (*Mactra contraria* and *M. rufescens*), wedge shell (*Donax cuneatus*), abalones (*Haliotis ruber* and *H. emmae*), cowry (*Cypraca helvola*), mussels (including *Trichomya hirsutus*), drupe (*Morula granulata*), Iru shell (*Irus crenatus*), slipper shell (*Crepidulidae*) and tellins (*Tellina foliacea* and *T. lilium*).

The shell that occurred most frequently overall at this site was *S. glomerata*, having the overall greatest weight (24.4% of the total overall shell weight of 865.1g), MNI (74) and NISP (337) of all of the shells. In order of MNI, the next most frequent shells were *C. tramoserica* (18), *T. torquatus* (15), *C. spengleri* and *D. deltoides* (14 each), *P. ebininus* (13), *T. allium* (12), *A. zebra* (11), *T. mucosa* (10), *A. constricta* (9), *A. trapezia* and *C. radiata* (7 each), and *N. atramentosa* and *B. fasciata* (6 each). *R. australasia*, *C. magus* and *B. variegatus* all had an MNI of 5, *A. undulata* had 4, *G. striatularis*, *V. australis*, *B. nanum* and *T. hanleyanus* had 3, *M. contraria*, *P. incei*, *P. sordidus*, *A. concamerata* and *D. cuneatus* had 2, while all other species had an MNI of 1 (except for *H. emmae* which had an MNI of 0). Most of these shell species may be found in New South Wales, but those that are not usually found in this state are *C. radiata*, *C. magus*, *B. variegatus*, *T. hanleyanus*, *D. sandvichensis*, *C. solida*, *P. nigrosulcata*, *Crepidulidae*, *D. jukesii*, *T. foliacea*, *T. lilium* and *H. emmae*. All of the shells inhabit shallow water or sand in littoral or intertidal areas, or may be found on rocky shores, and the majority of the shells (88%) had either full or partial colouring. All of the maximum length measurements that were taken confirm that the shells are within the size range of the species to which they have been identified, and many are at the larger end of this range.

4.0 DISCUSSION OF RESULTS

As previously mentioned, most of the shells retained much of their colouring, suggesting that they were live collected (the loss of some of the full colouring likely resulting from their deposition at PMGH, for example, as fill). Further, all of the shells inhabit areas where it is fairly easy to collect them from the beach (of which Port Macquarie has 8), bays or estuaries (Hastings River estuary being located at Port Macquarie, for one), which lends credence to this theory that they were live collected. Their colouring may also suggest that some of these shells were collected for display or decoration.

Most of the shells were found in fill contexts, and as the majority were *S. glomerata*, it suggests that the shells in these contexts were brought in to use for this purpose of

fill, as Port Macquarie has a history of shell (notably oyster) collection for use in construction fill (particularly as limestone). However, it is likely that many of the shells were collected for consumption prior to use as fill, particularly the oyster, since most seem to have been live collected, and many are at the larger end of their size range. Post 1884 fill contexts refer to the time after the government house was derelict and abandoned and before guesthouses and motels were built on the site in the early 1900s. In these contexts, the frequency of shell types was similar to other fill contexts, although there was only a small amount of shell in total, suggesting perhaps that at this time less shell and more bricks and mortar were used for fill. The majority of shell found in drain contexts was also *S. glomerata*, suggesting that in this context deposition of the shells resulted from their consumption and discard. The other contexts where shells were found (apart from fill and drain contexts) were yellow/builders' sand (*S. glomerata* [with an MNI of 2] and *A. zebra* [1] were recovered), and "top deposit of site to east of back wall of house" (*S. glomerata* [19], *T. mucosa* [9] all from the clay inside one of the larger shells, *P. ebininus* [6], *D. deltoides* [4], *A. zebra* [4], *A. trapezia* [2] and *P. Australasia*, *N. pauperatus*, *D. cuneatus*, *T. torquatus*, *C. spengleri*, *T. allium*, *A. concamerata*, *M. rufenscens* and *Mytilidae* [all 1] were recovered). It is possible that the shells in these 2 contexts also derive from collection by the residents of the House, and in the second context only 72% of the shells retained some colouring, so it is possible that 28% of them were collected after being washed up dead on the beach, in which case they were likely brought for use as fill.

Of the total number of shells recovered, 9.6% were not native to NSW (an MNI of 27 foreign species compared with a total MNI of 282). Of these, 4 specimens (according to MNI) may be found on other shells and thus may have been brought to the area on these, leaving a total of 8.2% being foreign species. This is quite a small amount, so it is possible that these shells were collected from elsewhere in the country, either by the residents of the House when visiting other states, or by visitors to the House who left these shells for display or decoration.

In summary, based on the described analysis of these shells, it seems that they were mostly live collected (probably by the residents of the House for the most part, and a small amount by visitors), either for initial consumption (particularly the larger and more commercial species) and secondary use as fill, for display and decoration and secondary use as fill, or for immediate use as fill.

5.0 ACKNOWLEDGEMENTS

Many thanks to Dominique O'Brien for assisting with analysis and identification, and to Sean Ulm for providing advice, reference material and analytical equipment for use in the measurements.