



A Landscape of Shell: A Non-Destructive Investigation of Stuart's Point's Middens



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INTRODUCTION

The largest and oldest midden complex on the East coast of Australia is in the Macleay Valley.^{1,2} In June 2022 a field school from the University of Queensland, working alongside the Ngambaa Custodians Aboriginal Corporation, surveyed part of it as the beginning of a new phase of investigation. This field school aimed to establish the extent and continuity of the middens at Stuart's Point, and to learn about its significance and cultural connections from the Traditional Owners.

ENVIRONMENT

- Stuart's point is made of aeolian dunes, part of a former offshore sand barrier island system.^{2,3,4,5} See map.
- Bordered by a silted-up estuary,^{1,4} now a resource-rich wetland⁶ habitat still used by the Ngambaa people.
- Midden is disturbed by wild dogs, bandicoots, bush turkeys, feral deer, cats, foxes and European land management practices.^{6,7}

Waitabout vine (*Similax australis*) *Ficus* sp. *Lantana* sp.



Dense Vegetation on Stuart's Point Midden

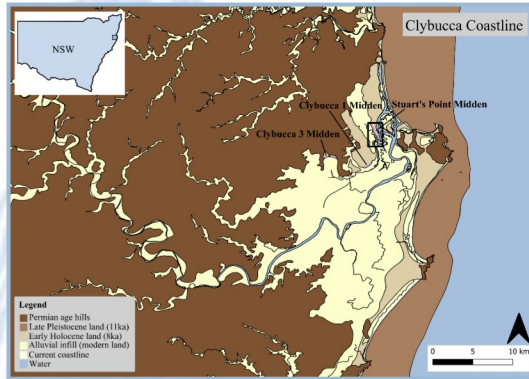
PREVIOUS RESEARCH

- First studied by the University of New England in the 1970s.
 - 1969: Undertook a field Survey and cleaned existing trenches.⁸
 - 1974 & 1975: Excavated hearths, lithics, bone and archaeobotanicals.⁹
 - 1976: radiocarbon dated to 9320±160 years old, 4000 years older than other samples in the region.¹⁰
- 1980s surveys found discontinuities in the midden from erosion and occupation of peaks over swales, but were hampered by *Lantana*.¹
- Transition from cockle to oyster dominance due to estuary infilling.¹



METHOD

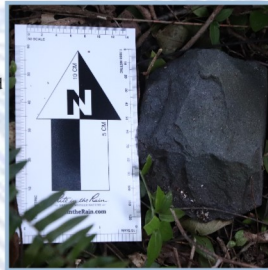
- Ground surveys of Stuart's Point, the first undertaken since the 1980s.¹
- Locs (exposures of more than 10 shells) logged using GPS.
- Four trench features and one mound surveyed with GPR measurements & shell counts taken. One taken on eroding riverbank.
- Dumpies and baseline mapping of sites were recorded.



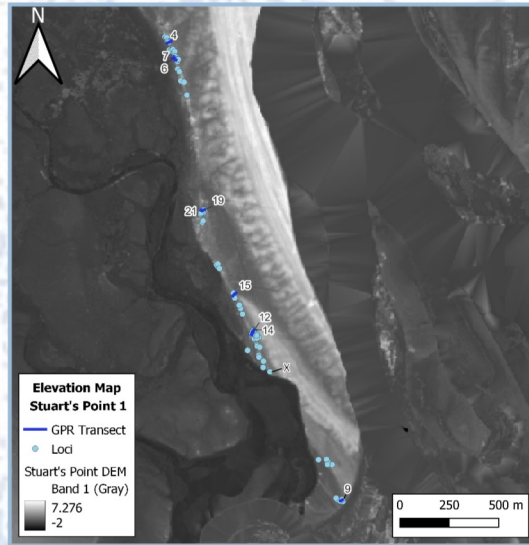
Sea level over time^{3,4,5}

LITHICS

- Transects 7, 19, 12 and 9 each found several lithics on the surface.
- Many had signs of polishing and blade scars.
- Most made of sandstone, others were possibly I-type granite from the Yarahapinni mountains (10km away).¹¹



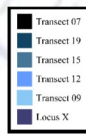
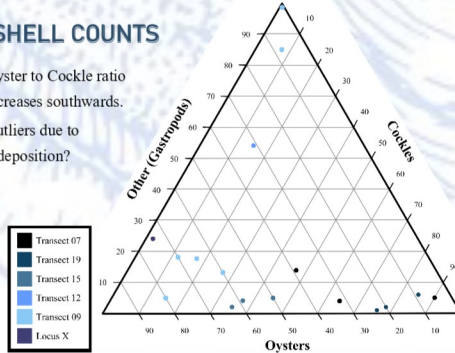
Cobble Core found between Transect 15 & 12



Stuart's Point, with all logged exposures and GPR Transects

SHELL COUNTS

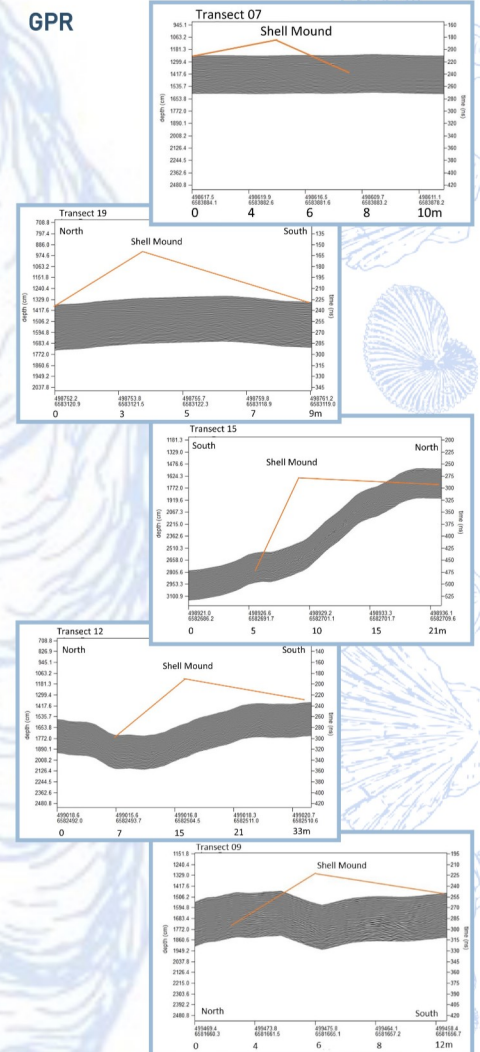
- Oyster to Cockle ratio increases southwards.
- Outliers due to redeposition?



A Trench through the midden (Transect 12)

On the way back from Surveying

GPR



CONCLUSIONS AND THE FUTURE

The middens are heterogenous and likely stratified with spatial variation. Future field schools and PhDs plan to study it, including excavation. The traditional owners want increased accessibility and are working with UQ to establish heritage tourism.

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ACKNOWLEDGEMENTS

We would like to acknowledge the Ngambaa Custodians Aboriginal Corporation and the Dungaluti Aboriginal Corporation for allowing us on their land, Michael Westaway and the University of Queensland for running the field school where this data was collected, Mary Hughes and Philip Sullivan for their help understanding the geology of the landscape, Alister G for his help with flora and fauna identification. Also Sam Stephens and Jason Kariviga for their time supervising the field school and for their photographic contributions.

