

REPORT ON THE SURVEY AND EXCAVATION AT GULUWURU ISLAND:
LOOKING FOR S6670 STOKER II PERCIVAL CAMERON

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My name is Marc Oxenham. I am a bioarchaeologist. My professional qualifications are:

- Bachelor of Science
- Bachelor of Arts (Hons), Biological Anthropology
- PhD, Bioarchaeology

I hold the following professional appointments:

- Associate Professor of Archaeology & Biological Anthropology in the School of Archaeology & Anthropology at the Australian National University
- Head of Discipline Biological Anthropology, Australian National University
- Australian Future fellow
- Fellow of the Society of Antiquaries of London (FSA)

I have acted as a consultant biological anthropologist and archaeologist to the NSW Police, Australian Federal Police and Australian Defence Forces. As a bioarchaeologist I am involved in the search for, excavation and recovery of human remains and in the investigation of and reporting on skeletal remains. I am familiar with prehistoric, historic and recent human skeletal remains.

INTRODUCTION

I was tasked by UWC-A to carry out an archaeological survey, including excavation if warranted, of a beach on the north-eastern aspect of a small island just off the northern coast of Guluwuru island of the Wessel island group, Northern Territory. The aim of this task was to locate and recover the remains of S6670 Stoker II Percival Cameron who was reported to have been buried at this location on the 23rd of January 1943.

SITE SURVEY

An extensive review of written (and photographic) materials undertaken by UWC-A Researchers indicated that the northern half of the beach was the most likely location of Cameron's grave. While the northern half of the beach became the focus for the excavation component of the task, the entire beach (see below) was surveyed in some considerable detail.

The team (see Appendix) was transported to the beach in question at 0900 hours by the crew of the HMAS Brunei on the 27th October 2014. An extensive ocular survey of the beach, including high and low tide levels as well as the heavily vegetated region fringing the beach, was carried out (see Figure 1). No sign of a grave or artificial accumulation of rocks was found on the surface. In addition to carrying out a series of excavation trenches (detailed below) the entire beach and fringing vegetated area was extensively surveyed with a metal detector between the 27th and 29th October by Mr David Steinberg and MAJ Barry Hampson. Further, permission was sought from the traditional owners to burn back dead vegetation that had accumulated under the fringing vegetation in order to intensify our ocular survey of the beach. This burn-off occurred throughout the same period. Further surveying of the beach and fringing vegetation after these burn-offs did not reveal any obvious signs of a grave or artificial accumulation of rock.

SITE EXCAVATION

Lack of success in locating any grave features while surveying the beach led to the need to develop an excavation strategy. Three chief factors influenced the excavation strategy: (1) the (obvious) requirement of locating the grave or remains of the grave; (2) the need to understand the recent (past 70 years) history of the beach (i.e. any evidence for significant erosion and/or accretion) and (3) the presence of different types of beach encountered (relatively short backshore beach, steep change from the backshore to the dune; low lying heavily vegetated dune area). As the vegetated area of the beach was potentially more stable (likely less volatile history), the strategy was to excavate extensive shallow (up to 0.4m deep) areas of this region in order to locate any evidence for the rock feature that was placed on Cameron's grave. Moreover, advice from the Researchers indicated this was a less likely area for Cameron's burial, thus arguing against the need for excavating this region to any great depth. With respect to the backshore (the most likely area for Cameron's burial based on

advice from the Researchers), the strategy was to excavate a series of trenches up to 1.5m in depth in this part of the beach.

Figure 2 compares the beach in 1943 to the current beach morphology. As can be clearly seen, while the fringing low dune vegetation was significantly sparser in 1943, a series of five sandy alcoves visible in 1943 persist through to the current period. Alcove number 2 was identified as being the site of a possible cairn feature (which apparently included an oar) arguably visible in the 1943 aerial photograph (identified as the red arrow in Figure 2). In order to meet the above stated objectives, from the 27th to the 29th of October a total of nine trenches were excavated in the backshore region, beach ridge (between backshore and dunes) and the low lying vegetated dune area.

EXCAVATION SUMMARY

Table 1 summarises the excavated area including type of beach area excavated and the size of each trench. In total, a large area approximately 268m² (approximately 179m³) of beach was excavated. Figure 3 provides trench overlays (on both the 1943 RAAF aerial photo and a current google earth image) identifying which areas of the beach and fringing vegetated area were excavated. The following section summarises the excavation of the trenches, followed by a summary of the work and final conclusion.

Table 1: Trench Summary

trench #	location	dimensions (m)	total area (m ²)	maximum depth (m)	m ³
1	backshore	4.5 x 3.4	15.30	1.3	19.89
2	backshore	5.0 x 4.0	20.00	1.4	28.00
3a	vegetation clearing	3.3 x 8.0	26.40	0.4	10.56
3b	above beach ridge	11.0 x 2.0	22.00	0.4	8.80
4	vegetation clearing	5.6 x 3.3	18.48	0.4	7.39
5	backshore	12.5 x 3.3	41.25	0.9	37.13
6	on beach ridge	12.5 x 3.0	37.50	0.9	33.75
7	vegetation clearing	12.5 x 2.7	33.75	0.4	13.50
8	vegetation clearing	13.0 x 2.7	35.10	0.4	14.04
9	vegetation clearing	9.0 x 2.0	18.00	0.3	5.40
Total			267.78		178.46

As noted, among other things each trench was located to maximise a reconstruction of the history of the beach and also to maximise the likelihood of locating the grave. As such the main focus was on those areas above the high tide mark (backshore) and cleared areas (alcoves) within the fringing vegetation. The tidal area of the beach is relatively steep (~45⁰ incline), with a relatively flat and narrow backshore extending from the berm. A ridge of variable height (average <1m) extends from the backshore and leads directly to a very low series of heavily vegetated dunes and intermittent sandy alcoves. The focus of trenches 1, 2 and 5 was the backshore. The focus of trench 6 was the backshore-dune interface (ridge mentioned above). While the focus of the remaining trenches was on naturally clear areas (alcoves) within the otherwise heavily vegetated low dune area.

Backshore Trenches

In excavating Trenches 1, 2 and 5 the sand was extremely dry and loose making excavation difficult due to continuous slumping of the sides of the trenches. While trench 1 was excavated to between 1.0 and 1.3m in various areas, a pit was excavated to 1.6m in the centre of the Trench in order to understand the history of the beach. A significant amount of flotsam and jetsam was recovered from Trench 1 to a depth of 1.0m below the surface. Consolidated, compact very coarse sand was reached at an approximate depth of 1.4m. Trench 2 provided a similar picture, again with consolidated and compact coarse sand reached at an approximate depth of 1.4m. Moreover, small pieces of flotsam and jetsam, as well as turtle shells, at approximately 1.0m were recovered.

Trench 5, further north along the beach, was similar in terms of flotsam and jetsam in the first metre of deposit (albeit at a lower density than for Trenches 1 and 2). However, at the southern end of Trench 5 a coral rock feature was exposed at 0.7m below the surface (see Figure 4). The feature was approximately 2.0m long and 0.6m wide (i.e. resembled a grave). After exposing and recording the feature it was removed with further excavation down to 0.9m below the surface not revealing anything else. The coral rock feature was a natural coral lens and not a human made feature.

Backshore-Dune Interface Trench

Trench 6 is the only trench that sampled across the interface (the ridge) separating the backshore from the vegetated dune area. As Figure 3 shows, Trench 6 was a continuation of Trench 5 toward the dune area. The composition of material within this trench was essentially identical to that seen in trench 5.

Vegetated Dune Trenches

It was decided that a series of excavations of the natural clearings (alcoves) in the otherwise heavily vegetated dune area would be worthwhile. This area includes Trenches 3a, 3b, 4, 7, 8 and 9. Trench 3a (see Figure 3) includes the region identified as containing a cairn feature (including an oar), while Trench 4 (the most southerly Trench in the vegetated dune area) was principally excavated due to metal detector findings of what appeared to be WWII era corroded metal fragments.

It was not entirely clear from the historical (and interpretations thereof) data if Cameron was buried in the backshore region or the vegetated dune region, although the consensus opinion was that the backshore area was more likely. All significant natural clearings in the vegetated dune region in the northern half of the beach (alcoves 1, 2 and 3) were excavated to an average depth of between 0.3 and 0.5m. The purpose of these trenches (see above for reasons behind the Trench 4 excavation) was to identify the cluster of rocks apparently placed over Cameron's grave by his crew mates. Below 0.3 and 0.5m the sand became very dense and compacted, suggesting Cameron's burial crew would not have been able to penetrate the ground with their hands and the wooden oars available to them if they had buried him in the

vegetated dune region. As can be seen from Figure 3, a very large area was excavated with no evidence of Cameron's grave.

The only significant find was a dense cluster of small rocks in the approximate centre of Trench 3a (see Figure 5). This cluster of rocks was approximately 1.5m in length and 0.55m in width and was oriented in a NE to SW direction. The top of the rock cluster was only 0.2m below the surface, with the base of the cluster 0.4m below the surface. A slightly darker sandy matrix surrounded the feature and suggested a grave cut. After recording the rock feature was removed and an excavation to 1.0m below the rock feature carried out without any sign of human remains. As with trench 5, this feature was clearly a natural clustering of rocks that fortuitously resembled a grave marker.

CONCLUSIONS

The chief aim of this mission was to locate and recover the remains of S6670 Stoker II Percival Cameron who was reported to have been buried here on the 23rd of January 1943. Despite an extensive and thorough survey of the beach in question, in addition to extensive excavation of the backshore and fringing vegetated dune area, no sign of Cameron's remains or evidence for a grave was located. The most obvious reasons for this outcome are that (1) we failed to excavate the exact position where Cameron was originally interred, or (2) Cameron's remains (and the vestiges of his grave) have been removed by natural or human means at some unknown period of time in the past.

In addressing these questions an understanding of the history of the beach over the past 70 years is necessary. A comparison of the 1943 aerial photograph of the beach with a recent google earth image suggests superficial similarities in the beach over the span of 70 years. In particular, while the density of vegetation on the fringing dune area is greater today than 70 years ago, the same series of sandy alcoves have persisted over time. This suggests that the extensive survey and excavation of the sandy alcoves (the entirety of alcoves 1 and 2 and a significant portion of alcove # 3, see Figure 2) failed to locate Cameron in the alcoves as he was not originally interred in the vegetated dune area.

The backshore part of the beach (that region above the high tide line, but in front of the vegetated dune area) is potentially the most likely part of the beach for the original burial of Cameron. The sand is much less compact than that in the vegetated dune area, and easier to access and excavate for the purpose of burying Cameron by the survivors in 1943. Three Trenches (1, 2, and 5) targeted this part of the beach. The most significant finding was the presence of modern flotsam and jetsam to at least 1m below the surface of the current beach level in each of these trenches. The only reasonable conclusion to be drawn is that the backshore (and indeed the entire backshore and foreshore) has undergone an extensive turnover of sand (a combination of erosion and accretion) over the past 70 years. The Gulf of Carpentaria experiences two cyclones per year on average (http://ntlapp.nt.gov.au/tracy/basic/Met/NT_cyclone.html) and the resulting storm surges can

cause significant changes to shorelines. It is highly probable that Cameron's grave and body were removed during presumably extensive storm surge activity in the past.

Other causes of beach disturbance include the significant number of turtles that turn over the beach during egg laying activities. An extensive number of hatched turtle shell material was excavated in Trenches 1, 2 and 5. Further, signs of crocodile movement were seen on the beach and crocodiles were presumably as active in the region 70 years ago as currently. Finally, the body may also have been recovered through unreported human activity any time between 1943 and 2014.

While it is still possible, albeit highly unlikely, that Cameron's grave and body remains undetected on the beach, any future search would need to include large earth moving equipment with an aim to excavating the entire beach to a significant depth.



Figure 1. Extent of ocular and metal detector surveys of the beach (current google earth image of the beach).

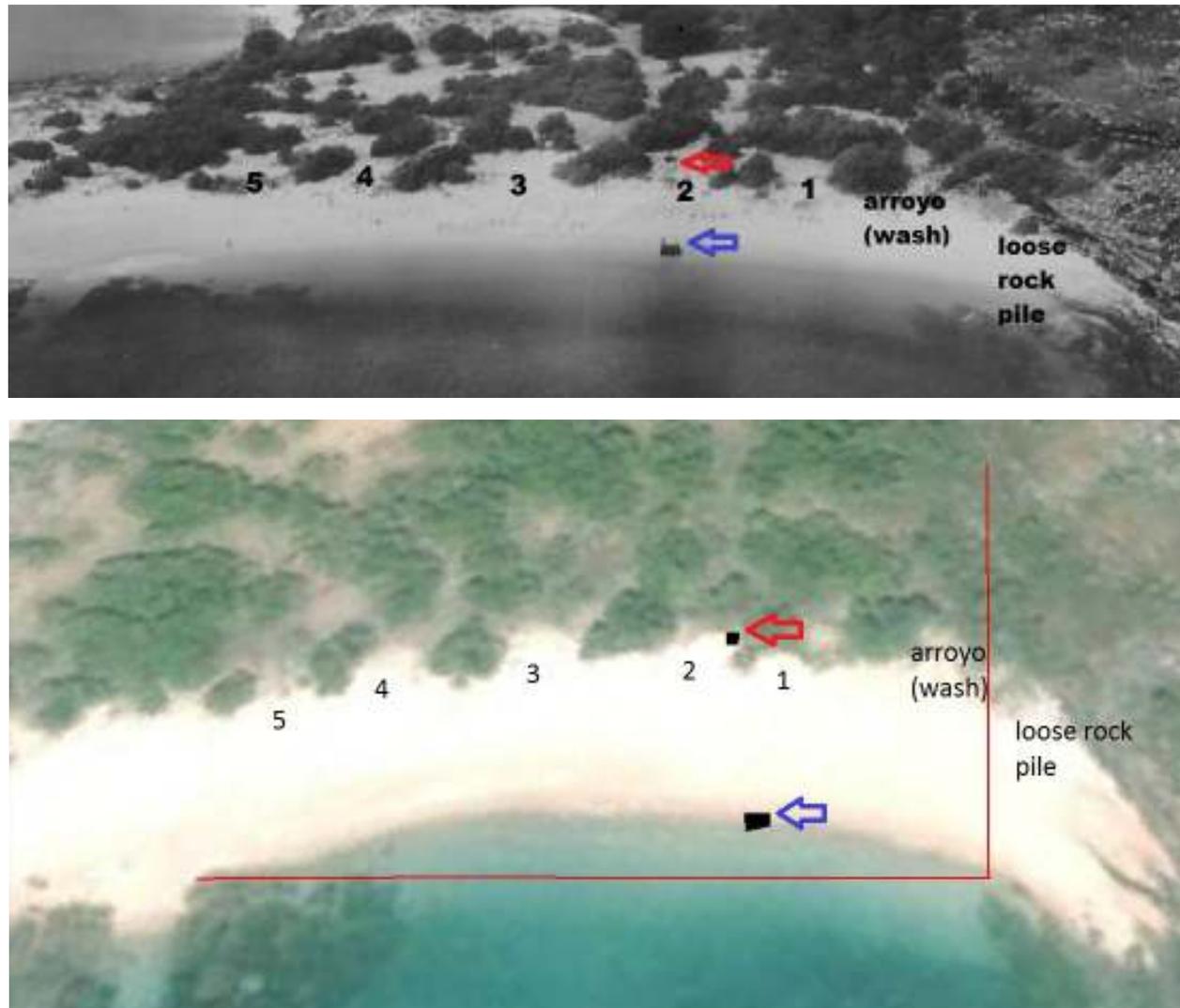


Figure 2. Above, RAAF photo from 1943. Blue arrow depicts the survivors' raft. Red arrow depicts a feature believed to be a cairn of some sort made using an oar. Below, the current beach (google earth image) with the position of the cairn and raft superimposed. The numerals 1-5 in both images identify a series of non-vegetated alcoves in the dune area that are common to the beach today as well as 70 years ago.

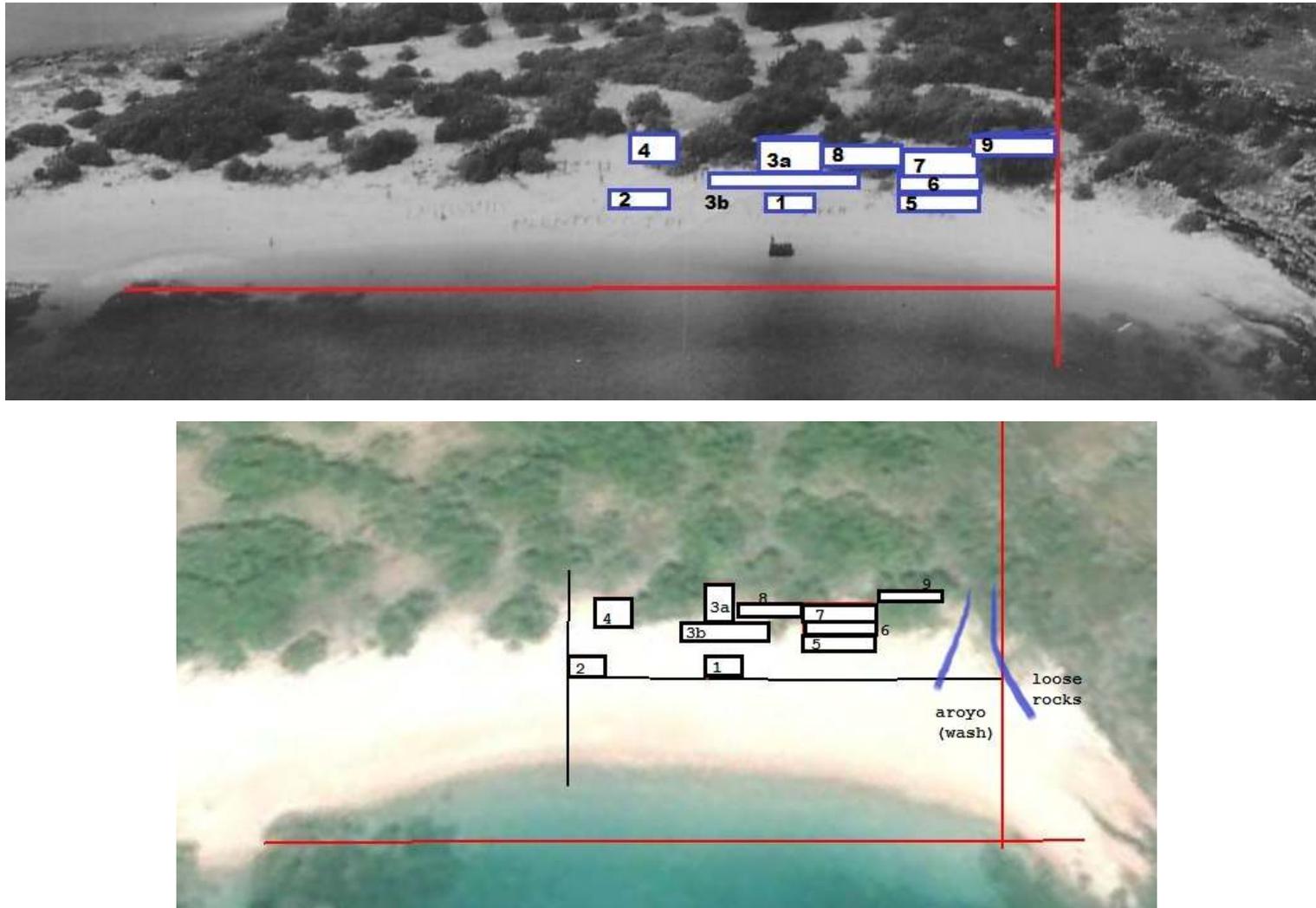


Figure 3. Above, trench overlays on the RAAF 1943 photo. Below, trench overlays on a current google earth image. Note that distortion is caused by comparing an essentially perpendicular satellite image (google earth) to an oblique aerial photograph (RAAF). The google earth trench overlay is to scale, while the overlay onto the oblique aerial photograph is an approximation only. Trench 3a encompasses the cairn feature noted in Figure 2 above.



Figure 4. Coral rock feature in the southern end of Trench 5.



Figure 5. Rocky feature in Trench 3a. While resembling a grave feature it was subsequently found to be a naturally occurring feature.

APPENDIX

Chief Team Members

Mr Brian Manns (Team Leader)

CMDR Geoff Fiedler (Navy Team Leader)

LCDR Russell Lain (Forensic Odontologist)

MAJ Barry Hampson (Researcher)

Mr David Steinberg (Senior Heritage Officer, NT Government)

Marc Oxenham (Archaeologist & Osteologist)