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Source: *Australian Archaeology*, No. 25 (Dec., 1987), pp. 30-39

Published by: Taylor & Francis, Ltd.

Stable URL: <https://www.jstor.org/stable/40286747>

Accessed: 05-06-2020 03:39 UTC

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THE STONE HOUSE STRUCTURES OF HIGH CLIFFY ISLAND, NORTH WEST KIMBERLEY, WA

Sue O'Connor

High Clifty Island, a small island in the north west Kimberley, is the location of hundreds of stone structures which I began to record in the dry season of 1985. One of these was subsequently excavated. This paper examines the origin of the structures, their function and the implications for changes in social relations in this area in the recent prehistoric past. Some of the features unique to this group of islands which may account for the presence and density of the structures are discussed.

High Clifty Island is one of a small group of islands in the Buccaneer Archipelago of the north west Kimberley (Fig. 1). The largest and most prominent of the group are the two low sandy Montgomery Islands which are surrounded by dense mangrove stands. The small rocky islands comprising the High Clifty group that lie to the east of Montgomery, are so insignificant as to escape notice on the map.

High Clifty Island lies 10km west of the mainland at its closest point. It is only 1km long and barely 300m at its widest point. As its name suggests it rises abruptly from the sea to a height of approximately 15m. It is flat topped and composed predominantly of quartz sandstone. Surface soils are poorly developed, supporting in most parts little more than spinifex and stunted *Eucalyptus/Acacia* associations. This area of the Kimberley is subject to strong monsoonal rains which annually flush these bare rock surfaces. No surface water was obvious on the island during the dry season of 1985, but permanent freshwater is available in soakage on the large sandy Montgomery Islands. The most remarkable natural feature of this island group is a massive coral reef system which surrounds them. At low tide the reef connects several of the small rocky High Clifty Islands and only a narrow channel remains to separate them from the larger sandy islands. The land mass of all these islands combined at high tide is less than 20 sq km. With such a small land mass it is surprising that Love (in Tindale 1974) reports that these islands were home to a dialectally discrete group, the Jaudibaia people, who were exclusively island based.

Although mention of these structures had been made by previous investigators (Blundell 1975; Crawford pers. comm.), nothing I had read or been told prepared me for the extent of them. When I initially visited the island in 1985 I was accompanied by Sam Umbagai and Kahki Stumpagee from the One Arm Point and Mowanjurn

Aboriginal communities, respectively. Three stone circles were initially recognised but due to the heavy growth of spinifex it wasn't possible to appreciate the full dimensions of the stone workings.

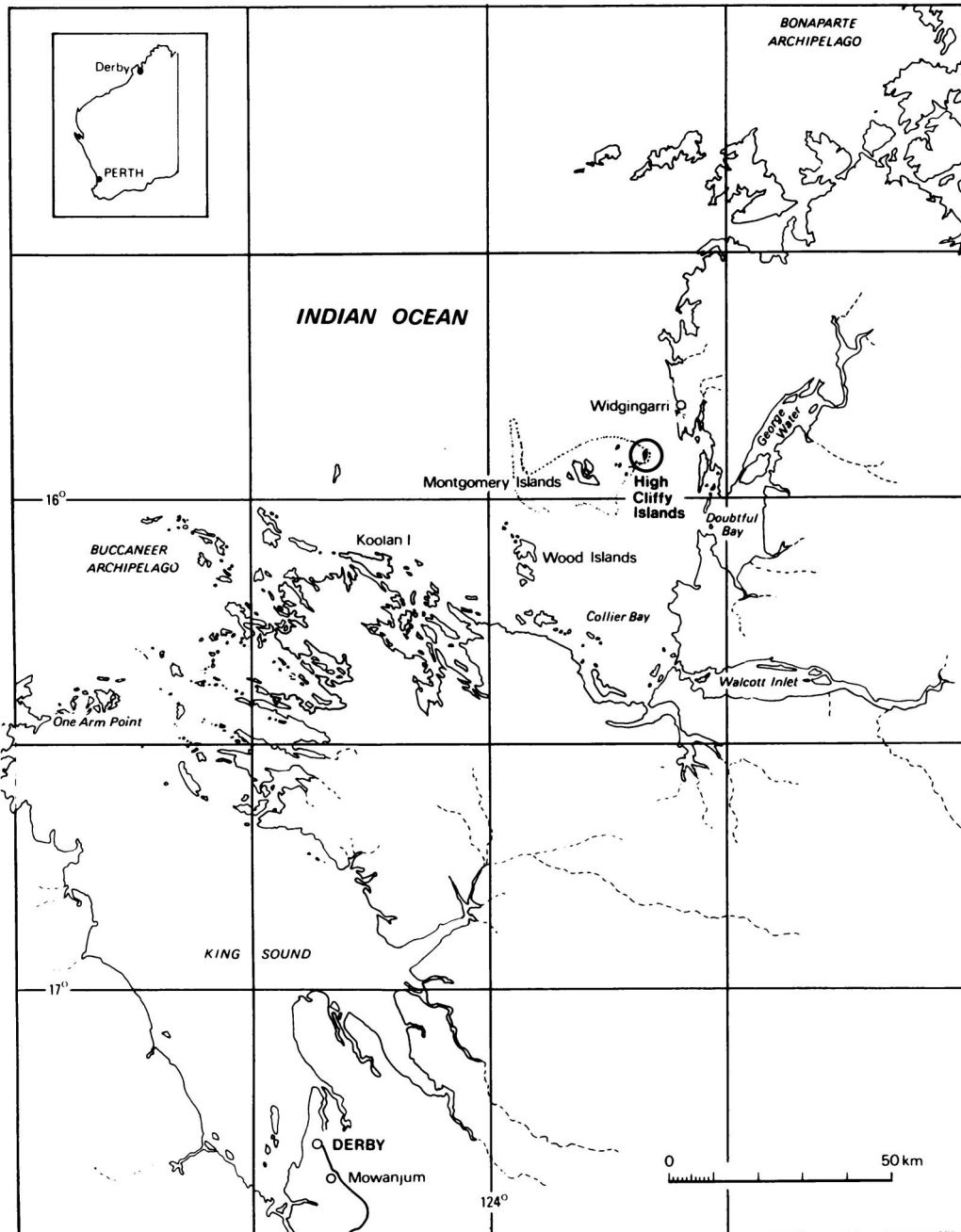


Figure 1: Location of High Clifty Island, Northwest Kimberley.

Kahki, bemoaning the fact that the country had not been burnt for many years, set fire to the spinifex as we departed. When I returned three weeks later I was amazed at the large number of structures revealed. Only about 50% of the island was thoroughly surveyed as these areas had been made accessible by firing. This relatively small area (.01km) was covered in literally hundreds of stone structures. During the course of the 1985 fieldseason I attempted to map as many structures as possible.

Aside from the stone structures, three rockshelters and several large open sites were recorded. Many different types of task specific sites were also located such as dugong butchering sites, metal harpoon sharpening sites and quarry areas. One rockshelter, one structure and one open site were subsequently excavated.

DESCRIPTION OF THE SHELTERS

Many of the structures have no obvious domestic or economic function, whilst others have substantial walls and entrances and for reasons discussed below have been interpreted as house structures. Many others are intermediate in shape and size. The problem lay in trying to discriminate which structures may have been functional in a domestic sense, if indeed any were, and what criteria could be used to determine this. The structures take a variety of forms and range in size from those comprising small, single rows of rocks, to those utilizing large rocks placed one on top of the other to form a substantial dry stone wall. Some of the structures are clearly not functional (in the secular sense), forming long pathways with standing stones and cairns. Others have the appearance of small circular hut bases, or are intermediate in shape and size (semi-circular walls that have collapsed). The structures that I wish to concentrate on here are those which have the strongest superficial resemblance to hut bases.



Figure 2: Stone house structure, High Clifty Island

These structures are roughly circular with a small entrance (Fig. 2). The walls stand up to 1m high and may be up to 50 cm wide at their base. Inside the structure is a maximum of 3x3m of usable space. The base of many of the structures is bare ripple sandstone. Some, however, have accumulated a small quantity of sediment which has been trapped by the walls.

Two of the house bases contained grindstones and one also contained a broken Baler shell (*Melo* sp). Stone artefacts were densely scattered within and outside the entrance of the structures. Artefacts were, incidentally, also associated with structures which appear not to be secular.

ETHNOGRAPHIC OBSERVATIONS

are more numerous and much more densely concentrated and secondly, that several of the structures are significantly more substantial than those previously recorded. This pattern was corroborated by the area survey of islands between Cape Leveque and High Clifty Island during 1985. An area of 150km in length was surveyed by boat and at least 12 islands were comprehensively checked for structures. The survey indicated that while stone arrangements were not uncommon, nothing even approaching this scale was located elsewhere. Like the Mitchell Plateau structures they usually took the form of two or three circular arrangements comprised most commonly of a single, often unconsecutive row of stones.

The other comparison that must be made is with the Lake Condah structures from the southern and opposite end of the continent. They utilize the same walling technique, are of approximately the same size and cluster in the same way. Like the High Clifty houses they are located immediately adjacent to a resource rich zone. The Lake Condah house structures would appear to date to within the last few thousand years (Wesson 1981; Site Files: Victorian Archaeological Survey). Over the past 5 years a great deal has been written about the significance of these and similar recent cultural manifestations in terms of what they signify about changes in social relations and organisation within Aboriginal Australia (see Coutts *et al.* 1978; Lourandos 1980, 1983, 1985; Williams 1987). For this reason, it seemed important to gain some idea of the antiquity of the High Clifty stone structures, even if only a relative chronology could be established.

With this aim in mind excavation of one of the structures was undertaken. It was envisaged that excavation might throw some light on the function of the sites as well as possibly provide some material suitable for dating. A further reason for excavating was provided by discussion with several colleagues in Perth and Broome, who suggested that the structures might be Macassan or, alternatively, result from Indonesian influence. Glass artefacts, pottery and clay pipe fragments are found on the surface of several of the mainland rockshelters and on one of the open sites on High Clifty (also excavated). Despite this, my initial impressions were that all artefacts in the vicinity of the house structures were made on stone. As mentioned earlier, while most of the putative house structures were constructed on rock surfaces some had accumulated small quantities of sediment. One of these (Site HC2) was chosen for excavation.

THE EXCAVATION

The entire site, as well as an area outside the walls, was gridded into 1 m squares. All squares within the structure were excavated and a similar number of squares from outside the entrance were removed for comparison. In all, 10m² were removed, 5 from within the 5 from outside the structure. The deposit within the house base had a maximum depth of 13cm although in most areas it was nearer to 5cm. Artefacts were recovered from all excavation squares and spits.

No datable material was recovered from the excavation although large numbers of stone artefacts occurred in all squares (average density 143 per spit/m²). A small quantity of economic material such as fish jaws and fragments of turtle carapace were also recovered, but no species identifications have yet been made. Some extremely small and weathered fragments of shell were identified but unfortunately not in sufficient amounts for dating.

In confirmation of my initial impressions all artefacts are made on stone - no metal or glass artefacts were recovered from the excavation. No analysis of the artefacts has yet been undertaken but a technological analysis comparing the artefacts from the structures with those from the High Clifty Shelter site (basal date 3210±100 B.P., WK 1096) is planned. The material recovered from the excavation confirms that the structures are of Aboriginal origin, and the food remains indicate a domestic function.

As well as the artefacts recovered during excavation a large surface collection of artefacts from areas near the structures was made. A piece of broken Baler (*Melo* sp.) shell collected from one of the sample squares was submitted for dating. It was embedded in the topsoil to a depth of 1cm. This gave a date of 370±50 B.P., WK 1095), which when corrected may be interpreted as modern.

WHY WERE THE HOUSES BUILT? FUNCTION AND PATTERNING OF THE STRUCTURES

Blundell (1975) who visited High Clifty Island in 1972 to make a surface collection of artefacts, was told by her informants that the structures were house bases whose walls had been formed by wooden uprights with bark coverings. It should be noted, however, that none of Blundell's informants had direct links with these islands.

Ethnographic accounts from other areas of the Kimberley such as the Mitchell Plateau, indicate that similar dwellings were constructed for protection against wet season rains. Vinnicombe and Reynolds (pers. comm.) recorded that the walls were used to hold down paperbark roofing which was additionally supported by two central wooden uprights. No paperbark (*Melaleuca* sp.) is, or would have been available on High Clifty Island, although it is possible that another type of roofing material such as spinifex and clay could have been substituted. Smith and Kalotas (1985) record the use of spinifex as a cover for shelters by the Bardi people to the south. Vinnicombe (pers. comm.), records that the houses were constructed on stone surfaces as during the wet the heavy downfalls would flow over the surface and out of the huts. This suggested use compares well with the context of stone structures on the islands of the Bonaparte Archipelago where Crawford (1982) describes the use of offshore

islands predominantly in the wet season when water was available. Given the ethnographic accounts for these islands which state that inhabitants had no mainland territory (Tindale 1974:242), if the High Cliffy sites were used during the wet season, then movement was solely between the large sandy islands and the rocky outliers. Certainly, this move must have had advantages as mosquitoes and sandflies would have occurred in plague proportions on the low sandy islands during the wet, whereas the more elevated mangrove free rocky island of High Cliffy would have been relatively comfortable.

Although there are large numbers of islands on this section of the Kimberley coast, the Montgomery group possess several unusual features which combine to make them unique.

Firstly, as mentioned earlier, while very small in terms of land mass, they are surrounded by an extremely large and productive reef system that considerably extends their land mass at low tide. Secondly, High Cliffy, unlike all the other islands of the Buccaneer Archipelago that I visited, is composed of both quartz sandstone and limestone. This is significant in that an extremely good quality chert source outcrops in the limestone. This type of raw material is not available on any of the other islands or adjacent mainland. Large quantities of this material are found on all sites on High Cliffy Island including several open sites, the excavated rockshelter and within the stone structures.

Thirdly, Love (in Tindale 1974:147, 242) records that the Montgomery Island group were occupied by the Jaudibaia who were a dialectally discrete group. According to Tindale the Jaudibaia were exclusively island based, having no access to any mainland territory. On this basis Tindale believes that they should be given separate tribal status, although Blundell (1975:63, 96-98), while recognising a dialectal separation argues the term 'sub-tribe' is more appropriate, (I am aware that the anthropological community is divided over the validity of the use of these terms). Blundell's informants thought that at least two clans of this group had estates on the adjoining mainland and at least two had estates on the sandy Montgomery and the High Cliffy Islands. No Jaudibaia people were still living when Blundell made her enquiries and some of her information is difficult to reconcile with that collected by Love. For example she suggests that the Montgomery islanders did not follow the asymmetrical exogamous system of wife exchange between 'tribes' that was normative for mainlanders (see Lucich 1968 for details of kinship) but rather direct or restricted exchange of wives occurred between their own island clans. It is probable that Blundell in recording mainland clans is actually witnessing the post contact fusion of clans. Tindale (1974:242) records that by 1931 the few remaining members of the Jaudibaia were being absorbed into the Atpalari clan of the mainland Worora.

Another possible explanation for the large numbers of structures on High Cliffy may lie in the perceived necessity to demarcate social space in an area where space was at a premium. In most areas where large groups of people were gathered it would be possible to achieve separation into hearth groups and observe appropriate avoidance relationships simply by spacial separation. This would not have been easily attainable on High Cliffy and the structures may have aided this social process.

IMPLICATIONS FOR CHANGES IN SOCIAL RELATIONS

In an oft quoted paper that Lourandos wrote in 1983 he made the statement

By all indications intensification of social and economic relations would appear to have been increasingly taking place during the Holocene period on the Australian mainland, the process being nipped in the bud by the coming of the Europeans

(emphasis mine; Lourandos 1983:92).

Although it was not Lourandos' intention to imply an inevitable evolutionary spiral of the sort that gives rise ultimately to complex societies, some subsequent authors have imputed a one to one social evolutionary correlate. Ironically, in an effort to escape from the environmental determinist paradigm we may have unwittingly embraced evolutionary determinism. For example Williams (1987:103) in a recent paper on the Victorian mound complexes states 'Harris' model for the development of agriculture (1977:214-16) indicates a strong possibility that, in time, the groups of the Western District would have gone on to develop agriculture. All the preconditions for the development of food production were there' (Williams 1987:320). Williams later qualifies this to some extent and admits that this trajectory is not inevitable.

Since Lourandos' early work many Australian archaeologists have been quick to adopt the concept of intensification as a framework within which to view their data. This has recently led to criticisms by researchers, most notably Hiscock (1986) who has quite rightly pointed out that the label now masks more than it explains and that the real pattern of late Holocene changes in Australia is far more complex. Yoffee (1985:46) has also argued that some of the data are really stretching the label a bit too far when he says of Ross' (1985) argument for the Victorian Mallee sites: 'if this is "intensification", it is a very unintensified form of intensification'.

Despite the fact that I agree with Hiscock and Yoffee that the term has been overused and inappropriately used, I think that it has usefully freed us from the constraints of the rigid divisions of simple and complex societies and all that they imply. The utility of this type of approach is demonstrated by Allen (1985:56) in his paper on the small island of Motupore, New Guinea, where he shows that 'The archaeological correlates of ranked or complex societies... may be present in form, if not in size,' in simple societies.

While Allen is writing about an island in Melanesia with a well developed trading system I would suggest that what he states is equally appropriate to explain the economic autonomy of the Jaudibaia people of the Kimberley coast, and by extension the extremely high density of stone structures on High Cliffy Island.

Like the inhabitants of the Lake Condah stone houses and the Victorian mounds, the Jaudibaia could have maintained a viable sedentary or semi-sedentary population which concentrated on an extremely productive resource zone. In the case of the Lake Condah fish traps it was necessary to modify the land surface to maximise or regularise the resource. In the case of the Jaudibaia, no modification was necessary as natural fishtraps are formed by holes in the reef and each new tide replenishes the traps. The fish and turtles can be easily speared from the reef platform or simply picked by hand out of the smaller pools.

If, as has been proposed, the Jaudibaia were a discrete dialectal unit moving back and forward between the sandy and rocky islands of the group they would not have been able to sustain their population on this tiny group of islands without an extremely well developed trading system. While direct subsistence needs could be met entirely from the reef and surrounding waters and the plant foods of the islands, suitable wood for spear making is not available on these islands and it is likely that many other raw materials would have been absent. I suggest that what we are possibly witnessing at this high density living site is the Australian equivalent of Motupore and the island trading centres of Melanesia (cf. Allen 1985, Irwin 1978).

High grade chert could be traded with the mainland for other raw materials not available on this small island group. The large quantities of artefactual material found all over the High Clifty Island testify to a level of stone working not seen in any of the mainland rockshelters and open sites. Such an interpretation receives support from the type and quantity of material in the excavated rockshelter site. This shelter is not a quarry; material is being transported from elsewhere on the island, and yet, the density of material is unrivalled at any of the other north west Kimberley sites investigated.

DISCUSSION

Allen has urged archaeologists working on simple societies to pursue issues such as organisational change in trade, and by extension, elements of complexity (1985:56). This paper has attempted to raise some of these issues in relation to archaeological variability in the north west Kimberley archaeological record.

Most of the propositions outlined in this paper are archaeologically testable. Seasonal use of the island will be examined by analysis of the faunal material in the rockshelters and open sites. Examining the proposed dry season component on the large sandy Montgomery Islands is more problematic. Given the exposed nature of these islands it is unlikely that any subsistence related materials would have survived and the short reconnaissance trip undertaken failed to locate any archaeological remains at all.

If trade in the chalcedony of High Clifty Island was as important for the reproduction of the Jaudibaia as I have suggested, it should be archaeologically visible on the mainland areas where trading relationships were strongest and it is possible that this material if highly valued is moving some distance inland. Technological analysis of the High Clifty assemblages should indicate whether and at what stage of reduction material is leaving the island. Future research in the region should clarify these issues.

CONCLUSION

This paper proposes a speculative model for recent hunter-gatherer adaptation on a small group of islands in the north west Kimberley. Ethnographic sources indicate that these islands may have been occupied on a sedentary or semi-sedentary basis, and this pattern is supported by the wealth of archaeological material found on High Clifty Island, most prominent of which are the stone house structures. It is suggested that High Clifty Island was occupied on a sedentary basis throughout the wet season when surface water was readily available and that the stone houses were constructed primarily as wet season shelters in an exposed environment where the few natural

rockshelters would not have been sufficiently large to fulfill this function. While extremely rich in marine resources these islands lack other materials necessary for survival and it has been argued that these were obtained through trade from the mainland in exchange for chert.

ACKNOWLEDGEMENTS

I wish to thank Peter Veth, Peter Hiscock and Scott Cane for discussion and constructive suggestions on the ideas presented. Patricia Vinnicombe is also thanked for sharing her ethnographic information from the Mitchell Plateau.

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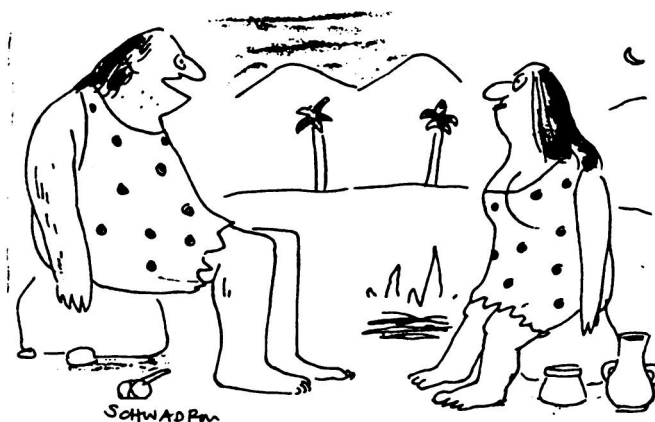
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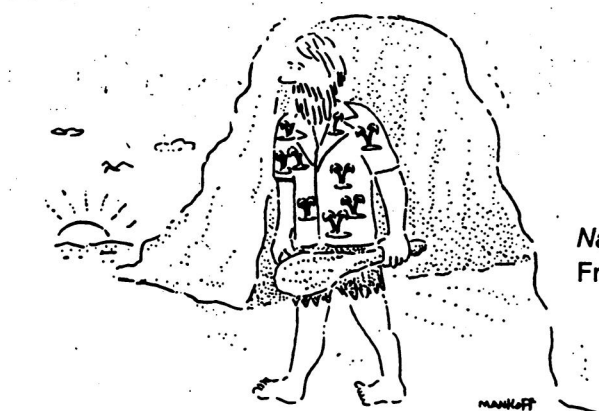
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From JS



"Five years down the road, career-wise, I still see myself as a hunter-gatherer"

MANKOFF



National Times on Sunday 14/12/86
From RJ

THE END OF THE ICE-AGE