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ANOTHER LOOK AT STONE STRUCTURES NEAR MOUNT KARIOI

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Te Toto amphitheatre is a very impressive place, reminiscent of some of the wilder landscapes of Hawaii. It is set into high sea cliffs at the lower end of the Te Toto gorge, which drains the northwest slopes of the old volcano of Mt Karioi, south of Raglan. Although it looks like a sea-breached explosion caldera it was in fact formed by massive collapse of basalt lava flows following undercutting of the marine cliffs by waves acting on soft tuff layers. Richly textured red and black layered awesome cliffs and pinnacles surround a floor of glacial moraine-like rock strewn hummocks and benches formed from cliff-fall debris. *Archaeology in New Zealand* has published a couple of small articles on archaeological features in this amphitheatre, from an overseas "geanthroplogy research program" (Goles 1992, 1995).

In the first article Gordon Goles described two remarkable stone structures. One was a dry-stone retaining wall holding up a tiny dwelling terrace perched on the edge of a transverse ditch which cuts off access to a remarkable sheer rock pinnacle. Apparently the pinnacle, with the terrace at its base, constituted a kind of mini-pa.

The second structure was even more unusual - a free-standing drystone walled enclosure, apparently a hut, oval in ground plan, about 1 m high and 3.5 m long, with an opening at one end. While admitting that the remarkably good condition of this somewhat precarious edifice suggested a recent origin, Goles thought that its proximity to other prehistoric features, including rectangular pits, indicated that it too was prehistoric. Lichen growth indicated it must at least date back to 1950.

In the second article Goles described three additional features. First was a stony area in which numerous small patches seem to be either cleared of

stones or enclosed by stone alignments, presumably for horticultural purposes. Second was a remnant of stone "coffer dam" in Te Toto creek, described as "50 cm in height and the same in length". The third was a "ditched pa" on the sloping upland surface immediately south of the amphitheatre. There was potential access up the south wall of the amphitheatre to this site which was therefore presumed to be a refuge for the people normally living, gardening and shellfish-gathering down on the bottom of the amphitheatre.

On the basis of these features, Goles in his second article erects a "preliminary model for climatic and ecological controls of settlement in and near Te Toto amphitheatre" from which "testable inferences" about the age of Maori occupation could be drawn. During a warm, stormy, erosion-prone period of climate, he reasons, Te Toto would be an uncomfortable place to live - huts would be blown over, trees would be blown down, shellfish would be washed off their rocks by storm waves, and gardens wouldn't grow so well. Gannet Island, well offshore from Te Toto, would be less accessible for birding parties. So, obviously, people wouldn't want to live at Te Toto in warm stormy times. Presumably they would take a long vacation in the South Island.

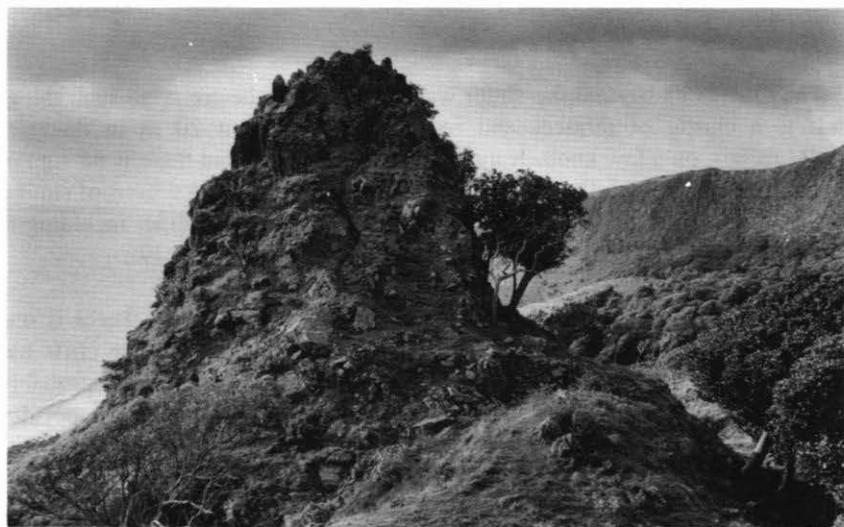
"Consider now," Goles invites us, "the likely conditions during cool dry times with infrequent storms". Gardens would thrive, especially if they were irrigated from Te Toto stream. The amphitheatre, though exposed to westerly winds, would have been relatively habitable. Shellfish would be more abundant and more accessible, and access to Gannet Island would have been more reliable. And, "of greatest significance", Te Toto creek, drawing from deep, well-charged aquifers on the rainy side of Mount Karioi, would, unlike some other creeks, be a reliable water supply during a long dry spell.

Therefore, it is reasoned, Te Toto was probably settled during a cool dry period, and Goles chooses the Maunder Minimum, 1645 to 1715 AD as being more likely than the Sporer Minimum (1400-1510), given the good condition of some of the stonework features (i.e. the oval enclosure).

The above reasoning all strikes me as being somewhat tenuous. If we look at the field evidence however, we see that it is less than ethereal. What follows is based on a couple of day's reconnaissance of Te Toto amphitheatre, some of it in the congenial company of the landowner, Tom Jackson of Ruapuke. Mr Jackson has been farming this land for 36 years.

having taken it over from his father. His father took it over from *his* father, who acquired it from the Crown, and who converted it from bush and scrub to pasture, starting in 1880. The present Mr Jackson knows his land intimately, and he knows what features were created by his family, and what features were there before his family acquired it.

According to Mr Jackson, and I can see no reason to disbelieve him, the stone enclosure was definitely a hut but is only a decade old. He first saw it one day when going round his stock about ten years ago, and it was roofed with a sheet of plastic. People are always crossing his land, generally to get to fishing spots, and quite often don't bother to ask permission, even when camping. Mr Jackson presumes it was boy scouts or surfies or somesuch, having a bit of a lark. The Stone Age is still with us, Mr Jackson says, and every one of us likes to try it out for a night or two.



Pinnacle mini-pa at Te toto. Transverse ditch on right cuts off access to a rocky knob. Only inhabitable area behind the ditch is the small terrace below the karaka tree. A dry stone wall is located between the terrace and the ditch. Photo: Nigel Prickett.

The only mystery about the hut is why, despite ten years having elapsed, the cattle haven't yet knocked it over. Mr Jackson isn't upset by the lichens - the rocks were, of course, already lichen-encrusted before someone gathered them to build the hut. So either we bring the Maunder Minimum forward to the 1980s, or we abandon the idea that the hut is indicative of a cool dry period. The plastic sheet would seem to be particularly damning evidence against the dry climate part of the model.

In the vicinity of the stone hut are, coincidentally, several rectangular pits and traces of charcoally paua midden, and some stone-edged habitation terraces (R14/222). There is nothing to suggest these are not of Maori origin.

The pinnacle mini-pa (R14/251) is quite real, and according to Mr Jackson, definitely pre-dates his family's arrival, as do several vague stone-delineated horticultural enclosures (R14/258), most of which I would not have spotted if Mr Jackson had not led me to them. Mr Jackson was also able to point out a swamp area of about 1000 sq m immediately behind the beach, across which a stone-surfaced dam with raised "kerbstones" (R14/259) had been built - to create a taro swamp perhaps. There is relict taro growing elsewhere (R15/551) on the farm.

The ditched pa beyond the south wall of the amphitheatre is no such thing. It is a cluster of terraces and rectangular pits about 20 m in diameter (R14/250), on a low knob. It may have had a palisade but there is no sign of any defensive ditch. There is nothing to distinguish it from dozens of similar small apparently undefended sites along the Waikato coastline, including at least two on the north wall of the amphitheatre (R14/223, 249).

There is no sign of any artificial dam on the Te Toto creek. There is one place where a random group of very large rocks fallen from the cliffs has trapped logs and smaller boulders to form a sort of natural dam. It probably dates from the last really torrential downpour, rather than from a cool dry period.

To the south of Te Toto are two smaller but nearly as impressive amphitheatres, also farmed by the Jacksons. In the first of these is a large karaka grove in which we found occasional sea-rounded boulders, some apparently anvils and one a beater for fernroot or flax fibre preparation (R14/260). There are traces of paua midden in several places (R14/263). On the edge of the amphitheatre is a pa with terraces, rectangular pits, possible

collapsed rua, and a transverse ditch and bank (R14/253).

The southernmost amphitheatre contains a horticultural area (R14/261) about twice as big as the northern one, with a remarkable set of features including stone lines running up the hillside, stone heaps, and a dry-stone wall. There is also a 100 m long dead straight pre-Jacksonian drainage ditch, about 2 m wide and 1.5 m deep - which pours more cold water on the dry climate model. On a knob nearby is another cluster of terraces and pits (R14/267).

The age of these features is problematic. There is no reason to assume, as Goles did, that contiguous sites are contemporaneous. My impression is that they considerably pre-date the period of European contact, judging by the relatively subdued contour of terraces and pits relative to other sites on this coast. Duration and intensity of occupation are also problematic. Judging by scarcity of midden my guess is that the amphitheatres were no more continuously or densely occupied than the remainder of the Karioi coastline, it is just that the evidence for occupation is better preserved in the amphitheatres than elsewhere.

Mr Jackson, who has an interest in local history, knows of no traditional information about the sites. Te Toto was tapu for many years because of a minor massacre there in immediately pre-contact times. Current local folklore, incidentally, has inflated this to an enormous massacre, in which Te Rauparaha (who else!) forced his victims to jump to their deaths off the northern wall of the amphitheatre.

Comparison with the rest of the Waikato-King Country coastline open to the ocean (ie excluding tidal inlets such as Kawhia and Raglan) indicates that the settlement pattern at Te Toto fits into the post-moahunting settlement pattern elsewhere along the coast. That pattern (Wilkes 1995) includes:

- Fortifications with sparse or nil evidence of sustained occupation on most suitable upland locations. There is a bimodal size distribution of these pa - they are generally about 1400 sq m in defended area, but there are also a significant number of what might be called mini-pa, with a defended area of 200 sq m or less.
- Undefended settlements showing today as habitation terraces and rectangular pits on well-drained elevations, such settlements being about 7-10 times as abundant as pa. Little evidence for sustained

occupation. Artifacts (i.e. adzes) rare.

- Extensive evidence for widespread kumara cultivation, fernroot harvesting, and karaka tree planting, together with rare evidence of taro cultivation.
- Little evidence for seafood being an important component of diet, despite most settlements being located close to the coast. Shell midden layers are thin, small in area, and diffuse, except in proximity to sandy beaches and tidal inlets. Fishbone rare, fishhooks very rare, but fishing weights relatively common.
- Little evidence for birds or other forest resources being important in diet.

While the settlement pattern is similar the circumstances at Te Toto are different. What is distinctive in the Te Toto area is that the floors of the amphitheatres were originally littered, or even covered, with rock rubble resulting from erosional collapse of the basalt cliffs. This had two consequences:

- Rocks had to be cleared before gardens were cultivated or houses were built, so that it is much easier here than in most places to see where gardens or dwellings were formerly located.
- The rocks were handy for building retaining walls etc., and were so used, so that here Maoris were building permanent structures, whereas elsewhere they were building ephemeral structures. Again, we can see these structures today at Te Toto, while elsewhere we would have to excavate in the hope of finding postholes etc.

It is notable that the only two areas in which large quantities of shattered rock are lying around on the Waikato-King Country coastline are also the only two places where stone lines, stone heaps and stone walls are known - the other location being in the vicinity of a much smaller basaltic volcano, further north at Waikaretu (R13/120). The fact that settlement patterns are the same in these stony areas as in other areas suggests that the Maoris didn't seek out stony areas so that they could build stone heaps and stone lines, but rather that they had to build stone heaps and stone lines because there were stones littering the places where they wanted to garden. One reason why they

wanted to garden in these areas despite the extra labour involved might have been that the basalt-derived soil was more fertile. Tom Jackson said that the soil in the Te Toto amphitheatre, unlike that in some parts of his farm, grew good pasture without ever being topdressed. These amphitheatres are also slightly less exposed to westerly gales than the cliff-top uplands on either side.

What makes the Te Toto area particularly valuable archaeologically is that it has been in the one farming family ever since it was broken in, so that we can be reasonably sure which features are of pre-Contact origin (e.g. the massive drainage ditch), and which are of post-Contact origin, (e.g. the oval stone hut). Even better, we also know that there has been no post-Contact cultivation of the floors of the three amphitheatres, so we can be reasonably sure that anything which was there in late Maori times is still there.

Morals are not my strong point, but I think there are a couple of morals to this story. Before gushing into print:

1. Always talk to the landowner. Farmers, who are there year after year and in all seasons, see and have seen things that are not obvious to itinerant archaeologists. (They also like to know who is wandering round on their land.)
2. Always check the site record files. If Goles had done this he would have discovered that Steve Edson, a very competent field archaeologist, visited Te Toto in 1978 but didn't see any remarkable oval stone enclosure. That might have sown, or even germinated, a seed of doubt about the antiquity of what Goles saw.

REFERENCES

- Goles, G. G. 1992. Stonework features at Karioi, West Coast North Island. *Archaeology in New Zealand* 35: 177-179.
- Goles, G. G. 1995. Preliminary model for climatic and ecological controls of settlement in and near Te Toto amphitheatre, Whaanga District, West Coast, North Island. *Archaeology in New Zealand* 38: 94-99.
- Wilkes, O. R. 1995. Site recording, site types, and site distribution on the King Country Coastline. *Archaeology in New Zealand* 38: 236-256.

APPENDIX: A SUGGESTION FOR AINZ

The Te Toto amphitheatre is archaeologically an important area, but for reasons other than those suggested by Gordon Goles. I think, with respect, that the two articles by Gordon Goles should not have been printed in AINZ. No one with so little background in NZ archaeology should be given so much space in which to draw such wide-ranging conclusions from such flimsy evidence.

It would be too draconian, authoritarian, stuffy and even expensive to require AINZ to have a formal refereeing system. On the other hand it must be a daunting responsibility for a part-time, presumably unpaid editor to have to decide on their own whether every article submitted should or should not be published.

Could I suggest as a compromise that AINZ as a general rule not accept an article based on fieldwork unless NZAA site record numbers are cited for all sites mentioned in the article. This simple little rule would give the AINZ editor some assurance that there was some substance to the sites being described in the article, knowing that records for those sites had been scrutinised and accepted by a beady-eyed local filekeeper who most likely had some familiarity with the district in which the sites were located. And behind every local filekeeper lurks the even beadier-eyed central filekeeper!

The rule would have some side benefits too:

1. It would benefit readers by providing precise - and concise - identification of sites.
2. It would benefit the site recording scheme by providing an additional incentive for fieldworkers to submit site records.
3. It would commit the author to putting more information, including grid references, plans, measurements and photos, into an accessible database than could be squeezed into an article, so that anyone wishing to challenge the author's conclusions knows where to go to find the author's data. This puts field archaeology into a situation similar to that of, for example, biology, where an author describing a purported new species has to lodge type specimens in a recognised repository where others can examine them.

4. It could benefit any author not familiar with the site recording scheme. Having been referred to the appropriate filekeeper by the editor, that author would learn what sites had already been recorded in the area he/she was writing about. An amiable and not too overworked filekeeper might even offer to read and comment on a manuscript before it was submitted.