

Mind the clivias! Investigating the Palmiet Gwalagwala cliff.

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The Palmiet Nature Reserve covers various terrains from grassland to forest. The bulk however is riverine. Many of the established trees along the river course have been washed away by flooding over recent years. The Palmiet plant has disappeared from the river. Alien trees and plants are also taking their toll. Some trees are also under threat from muti collectors. However there are still areas where visitors can follow trails through indigenous forest and escape from the nearby city life. www.palmiet.za.net

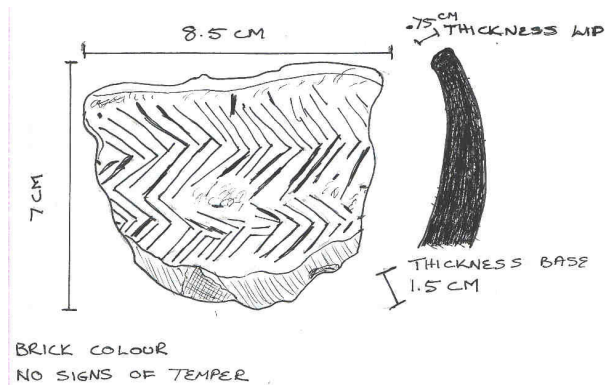
Mind the clivias! My attention was drawn by founder of the Palmiet Nature Reserve, Mike Cottrell, to a small patch of thin-leaved lanky clivias, presumably *Clivia miniata*, growing in the undergrowth of the overhanging Gwalagwala cliff. The cliff is named after the resident Purple Crested Turaco or Bloukuifloerie birds.



Clivia miniata var. flava from Hulme Plate 16

Mike and I were making our way along the steep narrow footpath that led from the Palmiet River to a dry shelter created by the massive sand stone cliff. I was there, not to appreciate the flora, but to investigate the site where Mike had found evidence of clay pots used by earlier occupants of the shelter. After the 1999 floods, on his daily walk in the nature reserve, he had spotted thick, undecorated, ochre-coloured shards of pottery at the base of the cliff. These were identified as having belonged to Late African Farmers and up to eight hundred years of age. A rush of flood water from the storm water pipe overhead had created a natural excavation of the cliff floor, exposing the pottery.

That day, on a nearby narrow cliff path, I also found a beautiful herringbone-decorated shard of pottery dating to the Early African Farmers, which could have been up to one thousand seven hundred years old.



Evidence of man's use of the Palmiet was found prior to our visit and housed at the Bergtheil Museum, Westville. These clues to the past provide a window into not only the technology people in the area used to procure food for survival, but also how food was processed. The clues include stone scrapers from the Middle Stone Age, that is 40 000 to 130 000 years before present. At this time man, as a hunter-gatherer, used spears as his main weapon. Residents on the banks of the river had discovered bored stones linked to the Late Stone Age, dated approximately 20 000 years before present. Written and photographic evidence depicts demonstrations by early San/Bushmen in the Cape, which reveal that these bored stones were used as weights on digging sticks to help break hard soil when digging for roots and bulbs to eat or use as medicine. At this time man had invented the bow and arrow, and also made use of bone hooks and sinew or reed traps to include freshwater fish and eels in his diet, especially in areas such as the Palmiet. Residents living close to the Palmiet have found in their gardens a number of pitted lower grinding stones used for processing cereal, which are associated with the ancestors of present day Tswana/Sotho and Nguni, Zulu and Xhosa, from the Early and Late African Farmers and Iron ages. Diaries of early European settlers record that they too had made use of the shelter, as the drift below the Gwalagwala cliff was used by ox wagons travelling from Durban to Pietermaritzburg with an out span quite close to the site.



Themba Zwane and the author at the cliff face shelter.

Manager of the Palmiet Nature Reserve, Steve Butler, confirmed that the Palmiet valley would have been an ideal setting for pre-industrial man to survive. The Gwalagwala cliff especially was ideal for survival thanks to its shelter from rain and wind; numerous edible and medicinal plants (including watsonia bulbs, amurala trees and clivias); proximity to the river; occupation by fauna such as duikers and dassies and clear view of potential wild life predators or human enemies.

Because of its visual geological record, hints of earlier occupation and surrounding living heritage – including the clivias – the shelter seemed an ideal destination to stimulate the imaginations and critical thinking of learners engaged in prehistory and history studies. Learners and visitors could not only read and hear about the living areas of the Stone Age and African and European Farmer inhabitants, but would be able to experience early man’s environment.

The Palmiet Nature Reserve committee insisted the shelter be investigated further before hordes of learners and visitors trampled through it. So began our challenge of a formal archaeological survey of the site. KwaZulu-Natal heritage agent, AMAFA archaeologist Themba Zwane, successfully applied for a permit to conduct a test trench at the shelter. Themba was so intrigued with the site that he continued in a voluntary position with the assistance of myself and other members of the community, particularly Nomusa Mabaso and the late Cyprian Madhlala. Finds were recorded and housed at the Bergtheil Museum Westville.

Steve Butler impressed upon us that any work done in the area should first and foremost not have a negative impact on the surrounding flora, especially the clivias. Excavation continued specifically on weekends during the dry seasons due to the lack of access to the site as a result of the washed away bridge. Increased rainfall had a significant negative impact on continuity of the excavation.

Each visit rang with cries of *Mind the clivias!* This was especially true when groups of university students, both local and international, worked stints at the dig. I believe I saw the clivias closest to the river edge, where they receive the most light, blooming early one year, but cannot swear to it.

Paul Lawrence writes that *Clivia gardeni*, which grow naturally in areas of KwaZulu-Natal, bloom in spring and on mature plants in late summer.

When the season was very dry the clivias were more visible, but often they could barely be seen amongst the undergrowth. We were interested to note that new clivia plants came up outside of the dig area where we had disturbed the soil. The fellow diggers were mostly amused at my urgency regarding protecting the clivias, as to them they were nothing special. Steve warned me not to get too excited about the emergence of the new clump of clivias until we saw how many survived in the very dry area. Disappointingly only about three of the original approximately eight new clumps are still growing outside the dig in 2009.

Red graffiti on the shelter's cliff face indicated that it was frequented by alternative youth before we started our work there. Their irritation at our presence was demonstrated with calling cards of cigarette butts and alcohol bottles within the excavated squares. The string grid they removed and burnt neatly in a small pile. When we started to fence the dig area they showed their outrage by collapsing a side and throwing in rocks and broken beer bottles. Fencing and strategically placed information boards have to-date deterred any further vandalism.

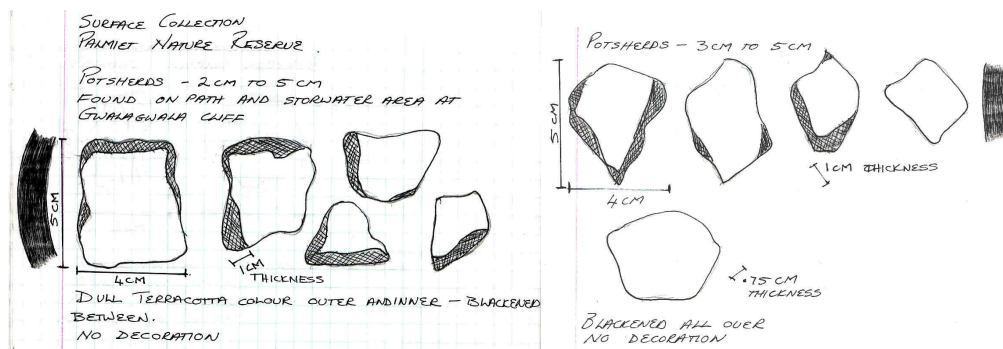
We discovered clues to a settler presence at 10–20cm below the surface in an area close to the east end of the shelter. The evidence included old thick green-tinted glass, a china shard, a bullet casing, some coins, interesting shells and charcoal. We were able to attribute an approximate dating to the settler use of the shelter thanks to the discovery of a beer bottle stopper. It was an internal screw stopper made of black ebonite identified by South African Breweries Ltd through the materials used and the embossed name CASTLE. The Breweries date the manufacturing period of these stoppers in Pietermaritzburg to between 1879 and 1907. These dates and identification of the bullet casing coincide with the South African Anglo Boer war and as such collaborate the written records of the use of the Palmiet drift by British soldiers' wagons when taking provisions inland. It is quite possible that the shelter was used periodically as a stopover between Durban and Pietermaritzburg.



Black ebonite Castle beer stopper dated 1879-1907

In the first quarter of 2004, after much sweat and dust, we reached a cultural level close to the cliff at 65–70 cm below the surface of the soil. We revealed a feature in the form of a large semi-circular fireplace or hearth demarcated by small rocks and broken pitted lower grinding stones of quartzite. We also unearthed two halves of a beautifully smoothed round quartzite upper grinding stone (approx 5cm x 15cm). Close to the rock face and under a small overhang were the charcoal and ash remains of three small hearths, possibly used to warm the rock face for cold nights. We

further discovered both black and terracotta undecorated shards of clay pottery. Historical and present practices reveal that the terracotta shards were probably the remains of clay pots used for cooking, storage and serving; the black pottery shards are probably remnants of traditional beer pots.



Samples of clay pottery shards from Palmiet Gwalagwala site

Themba thought it important to send samples of charcoal to the CSIR for carbon dating. This proved to be a worthwhile exercise as it indicated that the shelter was occupied on that cultural level in the 1500s. This time period is associated with a less researched pre-settler period, named Moor Park after the pottery manufactured by these African farmers who were iron-using agriculturalists. Natal Museum archaeologist Gavin Whitelaw wrote in 1997 that this group of African farmers were the earliest agriculturalists to inhabit the South African grasslands and ‘ancestral to Nguni and Sotho-Tswana speakers of southern Africa today’. The lack of glass and the presence of the small upper grinding stone at this cultural level of the excavation in the Palmiet also support that people were using the shelter before settlers moved into the area and maize (originally from South America) was introduced by the passing Portuguese sailors. Maize upper grinding stones are traditionally long stone cylinders needed for grinding the large maize grain, compared to the small round upper grinding stones used for the small indigenous grain such as sorghum (*amabele*) and millet.

There are always pieces missing from the puzzle of the past and the Gwalagwala cliff occupation is no different. There is no certainty as to the use of the large hearth and upper and lower grinding stones. Traditionally African farmers would have made their homesteads up on the slope in the grasslands adjacent to the Palmiet river rather than in the rock shelter. This type of occupation is not, however, unheard of and Gavin Whitelaw voiced the opinion that it could have been the choice of shelter for African farmers during a time of conflict, when they needed concealment as well as shelter. Local isiZulu speakers have speculated that the clues of the past point to the occupation of an inyanga or herbalist. They associate the small upper grinding stone with that used by traditional healers for grinding tobacco or medicine (*muti*).

Whoever the occupants were, their use of the shelter would have been seasonal as would their use of the flora such as the clivia. The broken grinding stones are evidence of African farmers who had moved on, as it was custom to break these items before looking for greener pastures. The large hearth was quite possibly made by a later group who used the broken grinding stones as a border and boundary for the hearth, which would have been useful as stands for pots or other domestic items. What we realised from our excavation was that evidence left by recent vandals and

settlers five hundred years before underlined cross cultural similarities in some social activities within the Gwalagwala shelter, namely the making of fire and drinking beer.

The clivias are not listed in the plant section of the Palmiet Nature Reserve website. Mike Cottrell told me that he assumed they originated from the suburb on top of the cliff, as those we spotted at the side of the path to the cliff were near a large mound that had been dumped by a bulldozer from the property above the cliff. Steve Butler, however, believes that the clivias are natural to the reserve as they grow on the cliff face. The thin leaves of the plants do give them a wild look.

So the origins of the natural heritage of the Palmiet clivias seemed to be as mysterious as the artifacts found in the cliff area – until I found historical confirmation of clivias growing naturally in the Palmiet. In the introduction of *Wild Flowers of Natal* written in 1854, M M Hulme mentions the abundance of natural flora in KwaZulu-Natal in the early 1900s and even refers directly to clivias in the Palmiet:

*For with Durban and Pietermaritzburg celebrating their centenary year it is interesting to recall, as my husband does so vividly, that even fifty years ago there were sheets of Arums in the spruits and vleis of the Congella and Pinetown flats, festoons of tree orchids in the thick bush of Westville and Sarnia, **Clivias and Agapanthus in abundance in the damp krantzes of Kloof and the Palmiet** and the Umhlatuzane Rivers, the sides of which were clothed in maidenhair Fern, Streptocarpus, and Begonias...*

(From 'Wild Flowers of Natal' Mairn M Hulme 1854)

Hulme further describes the traditional use of clivias ('*umayime*' as it is known in Zulu) in KwaZulu-Natal, where the whole plant is used in an infusion ('*mayime omphofu*') which is then 'sprinkled in yards to ward of evil of any description' including storms or floods. If the shelter was used five hundred years ago as a home or hideout, the clivias certainly grow appropriately on the outskirts of the domestic area between the safety of the cliff and the danger of the river and bush.

I am very interested in what further uses, besides magic, the inhabitants of the Gwalagwala shelter might have had for clivias if they were in fact growing naturally in the area more than four hundred years ago. Alice Aubrey of the Witwatersrand National Botanical Garden writes on their website that despite the rhizomes being extremely toxic, they are still used traditionally for medicinal purposes. D.J.H.Veale *et al* have conducted research on the use of clivias and the effects of indigenous medicinal brews on uterus contractions. Their findings support Paul Lawrence's statements on his website that a concoction made from the clivia rhizomes is used traditionally to ease labour pains, but that only an experienced 'Nyanga' would prepare the medicine due to the dangers of clivias containing 'toxic alkaloids, being part of the Amaryllis family'. John Winter of Kirstenbosch National Botanical Gardens in turn writes on their website that the stem of the clivia is used both for magical and medicinal purposes and that fortunately the entire plant is not destroyed when harvested, as much of the root is left behind to form new plants. Further investigation into whether there are commercial clivias growing in the gardens bordering on the cliff above the site, plus records of the clivias when they are in bloom, should help clarify whether the Palmiet clivias are in fact new or old residents of the Gwalagwala cliff and surrounding areas. If they are of an old established nature, then the theory of the shelter as occupied by a traditional herbalist or healer seems very plausible.

Damaging storms in Westville in 2006 and 2007 resulted in disturbance of the archaeological dig and on inspection of the site, archaeologist Charlize Tomaselli, then with AMAFA, ruled that no further digging might take place but that the dig could be cleaned up and used as an educational viewing site. In 2008 we started to take school groups to view the shelter and the dig, and the clivias were included in the educational trip. We hope that not only will such school excursions to the Palmiet contribute to the breaking down of cultural barriers through knowledge and the appreciation and conservation of our archaeological heritage, but that our future generations will also be inspired to mind, not just the clivias, but all our flora and fauna.



Archaeological excavation at Palmiet 2002-2006