Prehistory Society of Zimbabwe

Newsletter 140

Geological evidence does not support suggestions of mining in the Nyanga upland culture[1]

DAVID LOVE [1,2] & KEVIN WALSH [3]
[1] *WaterNet, PO Box MP600, Mount Pleasant, Harare, Zimbabwe*
[2] *ICRISAT Bulawayo, Matopos Research Station, PO Box 776 Bulawayo, Zimbabwe*
[3] *Oxford University Museum of Natural History, Parks Road, Oxford, OX1 3PW, UK*

Geology is not the key to understanding the archaeology of Nyanga. The proud agricultural and architectural history of the Ziwa and Manyika people is (Chikuhwa 2004). They have no history of mining: Swan (2008) discusses the pre-colonial processing of gold, which she says was 'confined almost entirely to elite sites of the Zimbabwe tradition'. It was carried out by melting mined or panned gold in an open potsherd, used as a crucible. Gold artefacts and evidence of gold working has been found in a number of elite sites on the Zimbabwe plateau, but none have been found in the Nyanga terraces. Iron extraction did occur in Nyanga, mainly to support the complex agricultural technology that society had developed (Chirikure & Rehren 2004). At the major Nyanga archaeological site of Ziwa, only iron and copper artefacts have been found (Summers 1952). There are no mines in Nyanga district on a map of the distribution of gold mines dated prior to 1890 (Swan 1994). Estimates of the timing of settlement in the Nyanga area are usually in the fifteenth to seventeenth century for the upland culture and the eighteenth and nineteenth centuries for the lowland culture, including Ziwa (Summers 1958; Beach 1994; Chirikure & Rehren 2004). If the terraces and pits structures had been used for gold processing this would have been remembered in oral history and probably also recorded by Portuguese or British explorers, both of whom were heavily invested in the search for gold in Zimbabwe.

The archaeological aspects of Kritzinger's (2007, 2008a, b) theories have been adequately responded to by Mupira (2008), Soper (2008), Sutton (2008) and many others. However, it is

[1] An earlier version of this article appeared in the *Geological Society of Zimbabwe Newsletter* (Love and Walsh, 2009)

necessary to consider some of the theories and speculation on geological processes and features which are presented in her work.

Kritzinger presents a qualitative comparison of terrace occurrence and underlying lithology. Although no figures are presented, it is argued that dolerite "is the formation most favoured by the terrace builders" and that this can be correlated with the Chimanimani supergene gold mineralisation. First, it should be noted that although a greater proportion of land over dolerite which was terraced, compared to the proportion of land over other lithologies (Soper 2000), most of the terraces, by total number, marked on the geological map of Nyanga are on steep-sided slopes in Archaean adamellites (Stocklmayer 1978). Soper (2000) explained the greater proportion of land over dolerite which was terraced (compared to other lithologies) as being a result of farmers preferring to cultivate the more fertile dolerite soil. This explains the distribution of terraces far better: dolerite soils were preferred for farming, and dolerite sills form natural terraces, such as those southwest of Nyatsundzuru. However, other soil types are by no means unsuited for farming and thus we find terraces on them as well.

By Kritzinger's argument, it would be expected that terraces should be observed on or downstream of dolerite. However, terraces have been mapped in some areas such as the Udu Valley where dolerite is absent. Kritzinger goes on to say that terraces were built over granitoids (gneisses, granodiorites, and tonalites) as a "secondary choice" and also on Umkondo sediments and links these two Nyanga lithologies to gold mineralisation. However, this is unhelpful as dolerite, granitoids and Umkondo sediments together comprise the full extent of the major lithological units in the Nyanga area (Stocklmayer 1978; Love 2002) and Kritzinger suggests that any of them could be auriferous. The absence of terraces from a non-prospective lithotype would support the "mining perspective" but no such case has been found.

It is necessary at this point to clarify some issues on gold mineralisation, since Kritzinger repeatedly confutes supergene and placer gold mineralisation, which are two different processes. Firstly, the gold deposits of the Chimanimani gold rush occur mainly as secondary supergene mineralisation in laterites (e.g. Mupaya & Mangezi, 2004). That these occur above dolerites is not surprising because laterites are residual deposits of iron and aluminium oxides, readily derived from dolerite, produced under intense tropical weathering. They may well retain other resistant minerals such as gold, not necessarily sourced from within the dolerite. Any comparisons with Chimanimani should therefore be on the basis of laterite occurrence, which are widespread in Nyanga National Park (Love, unpublished data, 1999). Primary gold deposits are unknown in Zimbabwean dolerites, whose economic value comes from their use as monumental stone. Tilling *et al*. (1973) concluded that "the differences in gold content among common rock types (igneous and other) are simply too small, relative to the more than 1,000-fold gold concentration needed to produce ore-grade material, for any particular rock to be considered a more favourable source than another". For comparison with Australian dolerite-hosted gold deposits, the Golden Mile Dolerite gold deposit is in highly sheared rock of the Archaean Kalgoorlie terrane (Golding 1985). It is probably an extrusive deposit, and is metamorphosed and altered. Fourkoura is also developed in a highly sheared corridor of rock (Gryphon Minerals 2008). These deposits are not comparable to the unmetamorphosed Nyanga dolerites. Zimbabwean primary gold deposits are found in quartz veins and shear zones, almost entirely within Archaean rocks, unlike the Nyanga dolerites (e.g. Bartholomew 1990; Oberthür *et al.* 2000).

Kritzinger (2008a) argues that hillside terraces represent the residue of bench-mining of placer deposits covering entire hillslopes. Development of such deposits would be impossible: placers develop where there is a decrease in velocity of flowing water, normally in flatter parts of a riverbed or in an alluvial fan. Placer deposition is incompatible with the steep hillslopes of the Nyanga highlands. Placer gold deposition is known in Manicaland (and elsewhere in Zimbabwe) from recent river alluvial and elluvial deposits, downstream of gold-bearing granitoids (e.g. Hlambelo 2008) and downstream of the Chimanimani laterites. If concentration of gold in placers were likely in Nyanga, we would expect to find evidence of mining of riverbeds, not hillslopes.

The finding that soil layers in most terraces have been transported and deposited is consistent with agricultural terracing: the capture of sediment and prevention of sediment loss is a primary purpose of constructing terraces for agricultural reasons (e.g. Bouman *et al.*, 2007). Similarly, the presence of a high coarse sand fraction in terraces is expected: coarser sediment fractions are the first to be deposited when overland runoff reaches an obstruction that decreases water velocity, such as a terrace.

The presence of cairns of stones in the environment of terraces and pit structures is also consistent with agricultural activity: the clearing of stones from fields during land preparation. Vein quartz is also often used to delineate field boundaries, or is used as cairns, because it is an easily visible rock type. If the cairns contained vein quartz that was not otherwise present in the locality, that could be evidence of transported rock or regolith; this is unclear from the evidence to date. It would be interesting to know what proportion of all cairns consist mainly of vein quartz. That magnetite is found in quartz veins is hardly surprising. It is a simple oxide of iron found in a wide variety of geological settings.

The occurrence of gullies along geological contacts is readily explained by the poor resistance of contacts to erosion – in the Eastern Highlands many of these contacts are non-conformities (Mukwakwami *et al.* 2002). Many cliffs and waterfalls within the Nyanga National Park occur along granite-dolerite contacts, e.g. Mutarazi Falls (Tyndale-Biscoe 1957) and Nyazengu Falls (Love, unpublished data, 1999). No evidence has been presented suggesting gullies occur along quartz veins. It is unclear from the article whether the reported observation of quartz in some gulley walls is (i) vein quartz, (ii) *in situ* as opposed to being present in the regolith, (iii) related to geological contacts and (iv) representative – it is not stated how many gullies were visited or in how many gullies quartz was observed. Many gullies occur along the sides of rivers. To suggest a relationship between quartz veins, geological contacts and gullies it would be necessary to demonstrate that the majority of gullies occur along the line of quartz veins and geological contacts, and are not controlled topographically or hydrologically.

The current interpretation of pit structures as cattle pens (e.g. Garlake 1966; Soper 2000) places them at the centre of settlements. This has been demonstrated by the identification of hut circles, wall residues and other features at numerous pit structure sites, such as the reconstructed site near Nyanga (Rhodes) Dam. Kritzinger's interpretation of pit structures as settling tanks is at least hydraulically feasible, although Mupira (2008) has indicated the design features of pit structures were not presented accurately. Furthermore, the model shown in figure 2 (Kritzinger 2008a) shows deposition on the tank base, rather than at a "point bar" in the access tunnel suggested in the text. Critically though, the small dammed basins reported downstream of some pit structures are far too small to account for the scale of tailings that would have been produced by the hillslope strip-mining suggested by Kritzinger. Considering the figure of 22,000 ha of terraced land (Soper 2008), massive volumes of tailings would be expected from Kritzinger's theory, and no evidence for this has been presented – and a sugar cube sized piece of gold (say edge 1.5 cm) would weigh about 65 g, not 3 g.

The small size of the drain from a standard smallworkers' shaking table allows slurry to pass through, because the ore has already been through a ball mill. There is no evidence of finely ground ore on the terraces, certainly not on the scale that Kritzinger suggests.

Trying to understand the assay data is very difficult as the sampling procedure has not been described in any detail at all: basic data on locations and representativeness of data are not included in the original article or in the reply (Kritzinger 2008c). There is a real problem with the statement in the methodology that alluvial and bedrock gold was found in the field (Kritzinger, 2008a). It should be stated how much, in what form, what grain size and weight of gold; and what the bedrock is. Or does this statement mean that all thirty-one samples were collected on the same hill? If that is the case, then the assay data cannot be used to support any discussion of gold mining in Nyanga in general: selecting a study site where it is known *a priori* that gold mineralisation is present is the opposite of attempting representative sampling.

It is impossible to reasonably interpret the assay data without the information normally provided with geochemical analyses: data on the sampling locations, how representative the sampling was, what metals were assayed apart from gold, iron and copper and what were the detection limits? The use of four different laboratories is not normal procedure, unless all the samples are sent to all the laboratories to check accuracy. In this case different samples went to different laboratories for similar analyses, which is unprocedural. This irregularity alone would usually render such data unsuitable for comparisons. Were identical analytical methods used by each laboratory? Which values came from which laboratory? Were any blanks used or quality controls performed? These problems render the assay results questionable. The data presented are also incomplete, as the copper and iron values are not reported, and only ranges are given for the terrace rock and tunnel entrance samples. Presenting an average for samples from totally different environments, including terrace rock, laterite, slag and dhaka is statistically and geochemically invalid.

Assuming that the samples referred to as "?flux" and "dhaka" are from a pit structure sites, only two of the twelve pit structure samples have values of over 0.25 g/t - even this limited dataset does not support Kritzinger's the claim that pit structures were "purpose-built for the recovery of gold". A comparison to the Central Rand gold dumps is invalid, as these are deposits from which the gold has been removed. The three high values reported from the six "slag" samples are of interest, although the sample size is very small and cannot be representative of slag in Nyanga generally.

The grade range reported for the ten samples of "terrace rock" is similar to that reported for primary hydrothermal mineralisation in quartz veins at a single locality in the section "alluvial and bedrock gold". Is this the same statistic? Even if the range of 4-19 g/t for "terrace rock" is based solely on the ten samples collected from terraces, the sample size is far too small to be meaningful. The source of the ten samples is also unclear: how many terraces were sampled, what was the bedrock of these terraces, how were the ten samples selected? If the "terrace rock" samples are from the same terrace as the veins found by the Gungutsvas, then all that has been shown is that some vein quartz was used in constructing the terrace.

The furrows that carried water to the vicinity of pit structures can be far more simply explained as satisfying domestic demand and providing water for irrigation of small gardens near the settlement (Soper 2000; Chikuhwa 2004). The latter practice continues to today in suitable terrains in Zimbabwe (Mwenge-Kahinda 2007). It is not surprising that there were no dung deposits found in the pits. Farmers will have removed the dung to fertilise their fields – a widespread practice that continues today (Ncube *et al.* 2007) – and subsequent erosion of the vacated sites would have removed the traces remaining. The terraces and pit structures are almost all built so that they are sheltered from the cold easterly and south-easterly winds. This suggests an agricultural reason for their orientation (Summers 1958). The range of iron objects found in and around the terraces and other sites includes arrow heads, spear heads, knives and mbira keys, again suggestive of agriculture and defence.

In conclusion, none of the observations reported so far are inconsistent with natural processes and the agricultural interpretation (e.g. Summers 1952; Garlake 1966; Soper 2000) of the Nyanga archaeological structures. Critically, Kritzinger's theories on the formation of gold deposits in the Nyanga highlands are internally inconsistent, unsupported by available geological evidence and incompatible with the spatial scale suggested. The model presented for gold processing is similarly internally inconsistent and not supported by the (highly questionable) geochemical assay data. Finally, it is important to remember that most of the sites being discussed are national monuments. Shumba (2003) expresses regrets on the deterioration of the strong spiritual and cultural importance sites such as Ziwa to the local people, in recent times. Surely any attempt at mining, or even mineral exploration, would further erode this value to the community.

References

Bartholomew, D.S. 1990. Gold deposits of Zimbabwe. *Zimbabwe Geological Survey Mineral Resources Series* **23**.

Beach, D. 1994. *The Shona and their neighbours*. Blackwell, Oxford.

Chikuhwa, J. 2004. *A Crisis of Governance*. Algora, New York.

Chirikure, S. & Rehren, T. 2004. Ores, furnaces, slags and prehistoric societies: aspects of iron working in the Nyanga Agricultural Complex, AD 1300-1900. *African Archaeological Review*, **21**, 135-152.

Bouman, B., Barker, R., Humphreys, E. and Tuong, T.P. 2007. Rice: feeding the billions. In: Molden, D. (Ed.) *Water for Food – Water for Life: A comprehensive assessment of water management in agriculture*. Earthscan, London, pp515-549.

Garlake, P.S. 1996. *A Guide to the Antiquities of Inyanga*. Historical Monuments Commission, Bulawayo.

Golding, L.Y. 1985. The nature of the Golden Mile Dolerite, south-east of Kalgoorlie, Western Australia. *Australian Journal of Earth Sciences*, **32**, 55-63.

Gryphon Minerals. 2008. Projects. http://www.gryphonminerals.com.au/projects_banfura.html [accessed 10 February 2009]

Hlambelo, M.T. 2008. Mutare River Alluvial Gold Project. *Geological Society of Zimbabwe Newsletter*, December 2008, 11-13.

Kritzinger, A. 2007. A mining perspective of the archaeology of the Eastern Highlands of Zimbabwe. *Prehistory Society of Zimbabwe Newsletter*, **135**, 1-7.

Kritzinger, A. 2008a. Gold not grain – precolonial harvest in the terraced hills of Zimbabwe's eastern highlands. *Cookeia*, **13**, 1-14.

Kritzinger, A. 2008b. Nyanga archaeology - mining perspective gaining ground. *Geological Society of Zimbabwe Newsletter*, December 2008, 4-8.

Kritzinger, A. 2008a. Reply: Gold not grain – precolonial harvest in the terraced hills of Zimbabwe's eastern highlands. *Cookeia*, **13**, 23-24.

Love, D. 2002. The geology of the country around Nyangani Mountain: a preliminary report. *Geological Society of Zimbabwe Newsletter*, July 2002, 8.

Love, D. & Walsh, K.L. 2009. Nyanga archaeology – no evidence to support mining activity. *Geological Society of Zimbabwe Newsletter*, February 2009, 18-21.

Mukwakwami, J., Blenkinsop, T.G., Hanson, R. & Munyanyiwa, H. 2002. Umkondo Igneous Province and Mesoproterozoic Umkondo Basin in Eastern Zimbabwe. *Geological Society of Zimbabwe Newsletter*, July 2002, 8.

Mupaya, F.B. & Mangezi, S. 2004. *Report on Gold Mining in Tarka Forest Area, Chimanimani District*. Unpublished report, Zimbabwe Geological Survey.

Mupira, P. 2008. Comment: Gold not grain – precolonial harvest in the terraced hills of Zimbabwe's eastern highlands. *Cookeia*, **13**, 16-18.
Mwenge Kahinda, J.-M., Rockström, J., Taigbenu, A.E. & Dimes, J. 2007. Rainwater harvesting to enhance water productivity of rainfed agriculture in the semi-arid Zimbabwe. *Physics and Chemistry of the Earth*, **32**, 1068-1073.
Ncube, B., Dimes, J.P., Twomlow, S.J., Mupangwa, W. & Giller, K.E. 2007. Raising the productivity of smallholder farms under semi-arid conditions by use of small doses of manure and nitrogen: a case of paerticipatory research. *Nutrient Cycling in Agroecosystems*, 77, 53-67.
Oberthür, T., Blenkinsop, T.G., Hein, U.F., Höppner, M., Höhndorf, A. & Weiser, T.W. 2000. Gold mineralization in the Mazowe area, Harare-Bindura-Shamva greenstone belt, Zimbabwe: II. Genetic relationships deduced from mineralogical, fluid inclusion and stable isotope studies, and the Sm-Nd isotopic composition of scheelites. *Mineralium Deposita*, **35**, 135-186.
Shumba, M. 2003. Ziwa National Monument: its significance to the local people hangs delicately in the balance. Section B2, *International ICOMOS General Assembly and Scientific Symposium*, Victoria Falls.
Soper, R. 2000. The agricultural landscape of the Nyanga area of Zimbabwe. In: Barker, G. and Gilbertson, D.D. (Eds.) *The Archaeology of Drylands*. Routledge, pp220-250.
Soper, R. 2008. Comment: Gold not grain – precolonial harvest in the terraced hills of Zimbabwe's eastern highlands. *Cookeia*, **13**, 18-20.
Summers, R. 1958. *Inyanga: prehistoric settlements in southern Rhodesia*. Cambridge: Cambridge University Press.
Sutton, J. 2008. Comment: Gold not grain – precolonial harvest in the terraced hills of Zimbabwe's eastern highlands. *Cookeia*, **13**, 20-23.
Stocklmayer, V.R.C. 1978. The geology of the country around Inyanga. *Rhodesia Geological Survey Bulletin*, **79**.
Tilling, R.I., Gottfried, D., & Rowe, J.J. 1973. Gold abundance in igneous rocks: bearing on gold mineralization. *Economic Geology*, **68**,168-186.
Tyndale-Biscoe, R. 1957. The geology of a portion of Inyanga District. *Southern Rhodesia Geological Survey Short Report*, **37**.
Swan, L. 1994. Early gold mining on the Zimbabwe Plateau. Changing patterns of gold production in the first and second millennium AD. *Studies in African Archaeology* **9**, Societas Archaeologica Upsaliensis, 181p.
Swan, L. 2008. Minerals and managers: production contexts as evidence for social organization in Zimbabwean prehistory. *Studies in African Archaeology* **12**, Societas Archaeologica Upsaliensis, 152p.

Garden Roller Beads from Blue-Jay/Bunting Close, Hillside Dams, Bulawayo, Zimbabwe

PAUL HUBBARD & ROB BURRETT
Independent Archaeologists, Zambezia Encounters, Bulawayo
Email for correspondence: hubcapzw@gmail.com

Long known for a variety of archaeological phenomena (Burrett 2007), Hillside Dams lie in the southern suburbs of Bulawayo. With the establishment of a Community Trust to manage and conserve the area, the Hillside Dams Conservancy has once again become a favoured recreational area for local residents, the authors being no exception. The main archaeological site in the area is that of Blue Jay/Bunting Close, first excavated in the 1970s by Huffman (1974). After a series of fires passed through the site we visited it to assess its full extent, with a view to possibly initiating further investigations in the future.

Whilst walking around, we noticed a massive midden located at the upper end of the site. Subject to erosion, a mass of fragmented bone, pottery sherds and pieces of dhaka are being revealed. Lying in close proximity at the base of the midden was half of a glass bead which, on closer inspection, turned out to be a garden roller (cf. Wood 2000). Walking around on other occasions, we have noted other garden roller fragments in the area of this main midden - still rather rare however. Huffman (1974: 81-96) did not recover any beads in his excavations which makes this an important find for this site, suggesting that there is a great deal more to the material signature of the site than previously suspected.

Garden roller beads were made by people living in the Shashe-Limpopo Basin (SLB) by members of the Bambandyanalo (or K2) and Leokwe communities. They were locally made glass beads created by heating smaller imported beads in a clay mould, fusing them together to form a large, chunky bead that is usually blue in colour. They are restricted to sites thought to be closely associated with the early Shona state centred at K2 (Huffman 2007; Wood 2000).

This bead, therefore, raises interesting questions about the possible role of this Bulawayo site vis-à-vis the wider world of the Shashe-Limpopo Basin. Huffman (2007: 387, 391) has argued that the trade in garden rollers was more controlled than for other beads, possibly only being traded between the elite from Bambandyanalo to subsidiary chieftainships. Thus this site in Bulawayo could be much more important from a geopolitical basis and spatial boundaries of the extent of state power than previously suspected. It might even have been a regional capital - something we feel is possible given the wide extent of material culture we have observed in the Hillside Dams area.

More prosaically, the bead indicates that the archaeological sequence at the site may be more nuanced than currently accepted. The broad regional ceramic sequence for this area of Zimbabwe is Zhizo replaced or transformed to Mambo (subject author specific interpretations) then to Woolandale. In the SLB it starts with Zhizo which transforms into Leokwe as well as early K2 as an intrusion. Huffman's (1974: 96-97) Bulawayo excavations revealed that a Zhizo occurrence followed by Woolandale. The presence of this bead presents several possibilities, potentially redefining this sequence.

The first possibility is that the Zhizo occupation lasted longer than thought, locally transforming into Zhizo B (Robinson 1985) but with the people at the time enjoying limited contacts with the Leokwe community of the SLB. There might have been some cross-cultural connections with the southern Shona State at this time and this could have resulted in the Bulawayo based Zhizo people changing their dominant ceramic style to become Woolandale with time. Alternatively, there could be a Mambo occurrence between the Zhizo and Woolandale occupations which went unrecognised during the original excavations. Thirdly, Woolandale people, in contact with the SLB via the gold trade, could have been using and valuing the beads long after they disappeared in the SLB due to their scarcity in the interior.

The find of a garden roller bead, a relatively miniscule portion of the material culture, has raised several questions about the history of the site that require further investigation. Only further excavations and more detailed ceramic analysis will help answer the questions in any meaningful detail.

We also put on record the siting of a typical Zhizo bead – snapped blue cane bead located at one of the nearby clusters of dhaka and midden material. This could also be curated bead but is as easily derived from the known Zhizo occupation.

References

Burrett, R.S. 2007. *Hillside Dams, Bulawayo: Project Proposals*. Unpublished report submitted to the Hillside Dams Trust, Bulawayo.

Huffman, T.N. 1974. *The Leopard's Kopje Tradition*. Salisbury: Trustees of the National Museums and Monuments of Rhodesia. (Museum Memoir 6).

Huffman, T.N. 2007. *Handbook to the Iron Age. The Archaeology of Pre-Colonial Farming Societies in Southern Africa.* Scottsville: University of KwaZulu-Natal Press.
Robinson, K.R. 1985. Dated Iron Age sites from the Upper Umguza Valley 1982: their possible implications. *South African Archaeological Bulletin 40 (141)*: 17-38.
Wood, M. 2000. Making connections: relationships between international trade and glass beads from the Shashe-Limpopo area. in *The South African Archaeological Society Goodwin Series 8: African Naissance: The Limpopo Valley 1000 Years Ago* Leslie, M. and Maggs, T.M.O'C. (eds.), 78-90, Cape Town: South African Archaeological Society.

New Publications on Zimbabweanist Archaeology

Chirikure, S. & Pikirayi, I. 2008. Inside and outside the dry stone walls: revisiting the material culture of Great Zimbabwe. *Antiquity 82 (318)*: 976-993.

'Any study of Great Zimbabwe has to rely a great deal on re-examining and re-assessing the work of early investigators, the men who removed all the most important finds from the ruins and stripped them of so much of their deposits' (Garlake 1973: 14). The authors review the surviving archaeological evidence from this world famous site. They challenge the structuralist interpretation – in which different parts of the site were allocated to kings, priests, wives or to circumcision rituals – and use the architectural, stratigraphic and artefactual evidence accumulated over the years to present a new sequence. The early enclosures on the hill, the Great Enclosure and the valley enclosures now appear as the work of successive rulers, each founding a new residence and power centre in accord with Shona practice. Their theory needs to be elaborated though with more archaeological, archival and ethnographic work.

Makuvaza, S. 2008. Why Njelele, a rainmaking shrine in the Matobo World Heritage Area, Zimbabwe, has not been proclaimed a National Monument. *Heritage Management 1(2)*: 163-180.

Njelele, a rainmaking shrine on the southwestern fringes of Zimbabwe's Matobo National Park, has not been proclaimed a National Monument in spite of being one of the most important cultural heritage places in southern Africa. The initial motivation for proclaiming Njelele a national monument emanated, in part, from contests for recognition of spiritual status and thus control of Njelele by members of local indigenous communities. Control over Njelele also has been a source of conflict between the local people and government departments since at least the 1960s. Makuvaza believes that neither colonial administrators nor post-liberation politicians, who consulted the oracle at Njelele at the height of the country's liberation struggle, could bring about national monument status for Njelele because it embodied the diverse values of several interest groups.

Pikirayi, I. 2006. The demise of Great Zimbabwe, AD1420-1500: an environmental re-appraisal. In *Cities in the World 1500-2000* (eds Roger Leech & Adrian Green), Maney Publishing, 1-17.

No further details available.

Pikirayi, I. 2005. The cultural landscape of the Shashe-Limpopo confluence zone: threats and challenges of preserving a world heritage setting. *Proceedings of International Council of Monuments and Sites (ICOMOS) 15th General Assembly and Scientific Symposium vol. 1*: 427-433. Xi'an: World Publishing Corporation.

No further details available.

Postal Address: Prehistory Society of Zimbabwe, P.O. Box A 723, Avondale, Harare, Zimbabwe.