

## ■ RESPONSE

### Nyanga terraces: grain cultivation or gold-mining?

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In *Nyame Akuma* 73 (June 2010) Ann Kritzinger challenges the ‘dominant theory’ which regards the extensive terracing and connected archaeological features of the Nyanga hills in eastern Zimbabwe as the remains of a specialised farming system. By that normal interpretation the narrow walled terraces represent former fields, for sorghum principally, while the numerous stone-revetted compounds, many of which are physically incorporated into the flights of hillside terraces, are seen as family farmsteads. These distinctive compounds are routinely embanked and walled to form a roughly annular platform around a central revetted void or open ‘pit’, the latter entered through a narrow walled alley (or ‘tunnel’) roofed by flagstones as it curves under the platform. With variants across the district, these compounds (commonly called ‘pit-structures’) consisted, on the evidence of surface inspections and selective excavations, of a ring of houses and grain-stores (constructed of earth and wood with thatch roofs) on the raised platform, with one of the houses standing directly over the tunnel and equipped with a peep-hole in the floor or device for a vertical locking bar. The central ‘pit’ itself, measuring on average around six metres across and often two metres or more in depth, is generally seen as a pen for a restricted number of livestock. Broadly, this was Roger Summers’ conclusion after his extensive research at Nyanga in the 1950s, that being corroborated and substantially refined by Robert Soper’s focussed campaign of survey and excavations in the 1990s (see references). The latter confirmed, moreover, through radiocarbon and other dating indications, that this distinctive farming system evolved in the Nyanga hills from the 13<sup>th</sup> or 14<sup>th</sup> century and persisted till the 18<sup>th</sup> and, in certain areas, the 19<sup>th</sup> century.

In disputing the agricultural explanation for the various archaeological features of the Nyanga land-

scape, Kritzinger has been particularly critical of one aspect of my own thinking and of Soper’s conclusions too – namely that domestic animals could have been kept in the ‘pits’, and further that they belonged to a diminutive breed of cattle which would have been stall-fed, with their manure constituting an essential element in an integrated and intensive farming system. Her objections to all this have been set out over the last three years in the *Newsletter of the Prehistory Society of Zimbabwe* and in *Cookeia* (no.13, a series of Zimbabwe Museums and Monuments). The latter publication largely repeats the former, *verbatim*, and both include reactions from commentators, Soper and myself included, each followed by Kritzinger’s counter-responses. In itself, her scepticism on this particular point is in no way new; within Southern Rhodesia/Zimbabwe over the last hundred years various speculations, ranging from the thoughtful to the fanciful, have been advanced for these strange ‘pits’, such attempts at explanation commonly starting with a dismissal of the notion of cattle being penned inside by pointing to the narrow dimensions of the access ‘tunnels’ and their low entrances. (These entrances are in fact somewhat over a metre high. In some cases one encounters a more restricted gap, owing to deliberate blocking. That, conjecturally, could be an indication of a 19<sup>th</sup>-century campaign, perhaps symbolic as much as practical, to decommission these structures and the associated terrace-farming economy at a time of social reacculturation and political reorganization in this district.

Those of us who have been advocating the stall-feeding hypothesis for the ‘pits’ would not deny that it may appear complicated to doubting readers, and also that the case for the existence of cows of a size small enough to squeeze themselves through the entrances relies on indirect evidence. That consists of a scatter of written allusions to such a breed having been kept in parts of neighbouring Mashonaland till the 19<sup>th</sup> or early 20<sup>th</sup> century but now essentially extinct; and secondly, for corroboration, the discovery of cattle bones of dwarf dimensions in Soper’s excavations in a midden (15<sup>th</sup> to 17<sup>th</sup> centuries approximately) on Mount Muozzi summit in North Nyanga. This particular site, while culturally related to the main Nyanga complex, is, however, atypical, being at an altitude well above that of the uppermost terraces and pit-structures. For further support one can consider the question in broader context by citing ethnographic analogies from cer-

tain other parts of Africa where integrated farming practices include the confining and stall-feeding of small cattle, these being valued both for milk and for manure to maintain the fertility of the fields, the latter being terraced and stone-revetted in some instances. In referring to these existing, and geographically quite distant, examples, no historical connection with Nyanga is being suggested, of course; nevertheless, by providing comparisons at the broad level, they contribute both to overall understanding of agricultural techniques and to interpretation of archaeological features. In particular, they neatly explain the failure to find at Nyanga the ideal direct evidence, that is the requisite cattle bones (of the dwarf sizes recovered at Muozi) during excavations of the pit-structures themselves or adjacent middens. In fact, such middens and rubbish deposits on floors do not exist, and this absence is exactly what should be expected in an integrated system requiring all domestic and organic waste to have been composted with the cattle dung and comprehensively removed to the hoed fields (terraced or otherwise) where any bones would have rapidly decomposed. Admittedly, such a circular argument, in which the negative evidence is pivotal, may not satisfy every sceptic! Moreover, while I would uphold the outline picture of a complex agricultural system having flourished in the Nyanga hills in previous centuries, one in which stall-fed diminutive cattle and their manure were integral, I would certainly not insist that every detail is fully understood. That must await the next round of serious research, one with a strategy – and suitable experimentation – devised to address the questions emerging since Soper's work at Nyanga.

If Kritzinger's recent contribution in *NA* were confined to doubts about the dwarf-cattle hypothesis (and certain aspects of the behaviour and management of cows which might usefully be kept in mind), there would be no need to respond here and now. That becomes necessary, however, since her concern is not to contribute to the developing discussion, but more pointedly to *disprove* not only the keeping of cattle in the so-called 'pits' but also the cultivation of crops on the terraces. The purpose (as in Kritzinger's articles published locally) is to propose a radically different interpretation of the whole Nyanga archaeological complex, by postulating instead that both the numerous pit-structures and the thousands of hectares of terracing represent the past exploitation of this landscape by extensive gold-min-

ing. In summary (if I have understood her arguments correctly), she sees the hillside terraces in their series, stone-revetted as they are, as testimony of stripping, with thorough sorting of the stony soil for recovery of eluvial 'placer' gold, while the pit-structures with their sloping and curving ingress tunnels are imagined as washing devices ('hydraulic tank systems') for the finer stage of the process. (See Kritzinger's tabulation of tunnel gradients with measurements of gold content, in grams per tonne, of soil and quartz samples.) The *NA* article concentrates on the tunnels, but the implications for the terracing are clear enough, both here and in Kritzinger's previous pieces. (The latter include some geological observations and mineralogical assays conducted in laboratories which I, for one, find unpersuasive – insofar as I can follow the sampling methods and results).

Without attempting to answer Kritzinger again point by point, two general considerations should be kept in mind. Being *general*, they may not account perfectly smoothly for every imaginable query which might be raised about the history of Nyanga or the functions of its various archaeological features, but for the same reason they cannot be cavalierly brushed aside in an attempt at comprehensive reinterpretation. Firstly, within Zimbabwe, it is notable how Nyanga (in contrast to certain districts to the north, west and south-west) is *not* renowned for gold availability, either now or in the past – despite reports of some recent and largely unauthorised mining efforts nearby, and for an earlier period some claimed place-name correlations of uncertain relevance culled from Portuguese sources (as mentioned by Kritzinger). If it were true that the whole vast area covered by terracing in and below the Nyanga hills had been stripped for gold, it seems barely credible that more articulate rumours did not filter through the trade routes to the Mozambique and Swahili coasts over the centuries – even allowing, as one hardly needs to be reminded, that those with knowledge of the richest sources would have been reticent about their actual locations. A more extreme negative argument for gold extraction from the terraces might assume that the stripping in antiquity had been so remarkably thorough as to have left virtually no trace behind!

Secondly, again from a general perspective, this time a positive one, the usual reaction on encountering abandoned hillside terracing, in dispersed localities in Africa as in other continents, is to regard it as

the relic of former cultivation, of grain-crops predominately. This is suggested by the analogy of terraced fields currently maintained and cultivated in many parts of the world, including a number of living African examples. It may be objected, of course, by those who demand *proof*, that analogy of this sort is never exact; moreover, one can point to instances, in earlier Africanist publications, of ancient cultivation terraces being alleged from unsound observations coupled to thoroughly antiquarian reasoning. Part of the problem is that the word *terrace* defies precise definition and may be applied, quite legitimately, in a range of contexts (e.g. architectural, horticultural, geological and, indeed, certain types of mining). But the identification of exceptions, as well as the occasional spurious report, does not discredit the normal attribution of an agricultural purpose for most genuine archaeological instances of hillslope terracing in series; nor, in the case of Nyanga, does it undermine the broad conclusions drawn from the detailed research recently completed by Robert Soper. For on surveying the flights of stone-revetted terraces and considering their distribution across the slopes of the Nyanga range and its foothills (an area of some 5,000 sq. km), it is difficult to imagine any other reasonable purpose and function. If some of the terraces look almost ridiculously narrow (only one or two metres on the steepest and least accessible terrain) and the soil thin and stony – as Kritzinger notes, and as one observes so frequently with hoed fields in Africa – that surely indicates pressure on the land and a heightened premium having been placed on soil-conservation through terracing, as the farming community became increasingly dependent on intensifying and balancing its system through a repertoire of devices. In particular, the revetting of the individual terraces with drystone walls, usually a good metre in height and sometimes more with their tops standing proud – a practice much more elaborate than mere piling or aligning the stones for clearance – would have protected against erosional tendencies. As deliberate constructions from their footings upwards, often double-faced with rubble infill and sometimes built-in drains (an essential storm-water relief device), these walls hardly look like a by-product of strip-mining. Furthermore, the integration of homestead-complexes into the terraced hillsides, through the bonding of the outer walls of the compounds with those of the adjacent fields, together with defined paths running from the uphill homesteads down through the terrace flights to the valleys, has fair

parallels in intensive farming systems elsewhere. (A particular purpose of the walled paths would be for leading the penned livestock to water and back without letting them stray onto the crops). Would any sort of mineral exploitation of these hills have left such neat and intricate signs?

This is not the place to elaborate. But readers of *Nyame Akuma* might like to note this example of fundamentally opposed interpretations of an archaeological landscape with highly visible remains – a divergence of thinking which admits no middle way or reasoned debate.

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