**New Work on the Later Archaeology of Rwanda 2006 to 2007: A Preliminary Fieldwork Report**

John Giblin  
Institute of Archaeology  
University College London  
31-34 Gordon Square  
London, WC1H 0PY, United Kingdom  
E-mail: tcrnjgi@ucl.ac.uk

**Introduction**

In the absence of previous systematic archaeological research in much of Rwanda, and the almost complete cessation of fieldwork since political instability began in the late 1980s, the broad goal of this research was to generate new data investigating patterns of continuity and variation during the Iron Age – approximately 500 BC to AD 1900. This report describes the results of fieldwork conducted as part of ongoing PhD research, and summarises twelve-months of survey and excavation in southern, central and northern Rwanda. The fieldwork focused on the collection of three archaeological data sets: site distribution, ceramics and subsistence remains. The specific aims of the research were:

1. To employ a systematic survey strategy and produce a more detailed distribution of Iron Age sites in three survey zones.
2. To isolate sites with sub-surface archaeological remains and to excavate test units to understand their chronology, cultural associations and economy.
3. To investigate the presence of subtle continuities and/or variations in Iron Age material culture, with a focus on ceramics, rather than the solid and inflexible framework previously used.
4. To collect subsistence data to question whether there is archaeological evidence to support the notion of an economic trichotomy during the Rwandan Iron Age between forager, cultivator and herder.

The project was conducted alongside Jane Humphris’ (UCL) PhD research concerning Rwanda’s pre-colonial iron production, the results of which will be presented elsewhere. The fieldwork was carried out in collaboration with the Institute of National Museums of Rwanda (INMR), with ceramic analyses supervised by Dr Ceri Ashley, zooarchaeological analysis supervised by Dr Andrew Reid and palaeobotanical analysis conducted by Dr Dorian Fuller (both UCL), in conjunction with the author.

**Survey Methodology**

Three 15 km by 15 km survey zones were chosen for examination around the towns of Ruhengeri in the north, Gitarama in the centre, and Butare in the south (Figure 1). This strategy was designed to generate data from three geographically and historically distinct regions and consequently investigate a potentially diverse cross-section of Rwanda’s past: Ruhengeri is located in a volcanic and, until recently, heavily forested, lacustrine region at the northern periphery of the 17th-19th century Nyiginya Kingdom; Gitarama is on Rwanda’s central plateau situated at the heart of the Kingdom; and Butare, known for its iron production, is in a riverine region at the southern periphery of the kingdom (Vansina 2004).

Initially, two survey strategies were chosen: systematic transect survey - a formal and arbitrary system of survey - and opportunistic survey, which targets particular locations, such as caves, lake/river shores, or hill plateaus, that transect lines may omit. However, it quickly became clear that an orthodox transect survey strategy was impractical. Rwanda is known as *Le pays de mille collines* or ‘land of a thousand hills’ and each hill is separated by rivers and marshes that snake around them, making it almost impossible to traverse the landscape in straight lines.

Instead, following Robertshaw’s (1994) work in Uganda, it was decided to survey by way of the available paths and small roads that transect the land. These routes cover all aspects of the landscape and often expose, through surface clearance or cuttings, archaeological resources that would otherwise have been obscured. During survey, time was also taken to informally interview men and women at their homes.
or local centres. Archaeological materials such as iron slag and ceramics were presented and explained, and the interviewees were asked to contribute any information they had about these objects occurring locally.

This pragmatic strategy identified 111 new sites and relocated 16 previously published sites. Relocation of previously identified sites was also an important part of the survey. Many previously published sites reported by Nenquin (1967) and Van Noten (1983) had been given now unrecognised names and extremely rough directions. Using these directions, vague maps and imprecise co-ordinates it was possible to narrow down an area and then enquire for informants who remembered the sites. This enabled us to assess these archaeological resources, and with the benefit of new GPS technology, to contribute more precise co-ordinates to the INMR’s sites and monuments record.

Survey Results: Southern Zone

In the southern survey zone 52 new sites and ten previously published sites were identified (Figure 2). With the exception of Mara and Nyirankuba (Hiernaux and Maquet 1960; Nenquin 1967) all the previously published sites are located to the south of the survey region and are the result of intensive work by Van Grunderbeek et al. (1983) and Van Noten (1983) into early iron smelting. The landscape in the southern zone is less dramatic than the central and northern survey zones. The altitude varies approximately 400 m between the highest hilltop and lowest river valleys and most hill slopes, although steep, are
traversable by foot. This allowed for good coverage of the range of environments within the survey zone. The total site distribution and total site elevation suggest that whilst sites are found in a wide range of locations they are not seen in the wet low-altitude environments, which occur between the hills at approximately 1400m above sea level. However, the majority of sites are in close proximity to these environments.

The survey found seven new Early Iron Age (EIA) sites – dating to approximately 500 BC to AD 1000 – in this southerly zone. These were identified by the presence of Urewe ceramics, and all except one were found in association with iron production remains. The results show a wide distribution of sites, for example sites occur near large and small rivers, and in higher altitude drier zones. The site elevation shows more conformity with seven out of eight sites ranging from 1711 m to 1753 m above sea level. Based on the evidence from these sites it seems Urewe-using people were selecting sites close to the highest points of the hills.

The survey also found thirty-seven new Late Iron Age (LIA) sites – approximately AD 1000 to 1900 – in the southern zone. These were identified by the presence of roulette decorated ceramics and all were
found with iron production remains. The site elevation data for the LIA suggests that lower altitude sites began to be exploited alongside the original hilltops used in the EIA. This development may be the result of growing populations and increased pressure on prime locations.

**Central Zone**

In the central zone forty-three new sites were identified and one previously published site was relocated: Rugobagoba (Figure 3) (Hiernaux and Maquet 1960; Nenquin 1967; Van Noten 1983). The landscape in central Rwanda is extremely dramatic and the aspect increases sharply compared to the southern zone. Many of the hill slopes in this region are not traversable and winding paths and roads navigate around them. As in the south, survey sites are distributed broadly across the zone, and with the exception of the most northerly site, are not found in the lowest or wettest areas. However, unlike the southern survey zone, sites are often not located next to rivers or near the highest altitudes.

The central survey identified five new EIA sites with Ureuwe pottery and all of the sites except GPS014
were found in association with iron production remains. The EIA site distribution shows that whilst one site is located in close proximity to a riverbank, the rest are found on plateaus above the river or further south in drier, less riverine areas, and as in southern Rwanda, there is a preference for hilltops. The survey also identified thirty-eight new sites with LIA ceramics. Again, only one site, GPS014, was found without surface iron production remains and, as in the EIA, LIA sites were located away from the major rivers, with a preference for the lower altitude area to the east away from a high ridge to the west. However, as in the southern zone, the site elevation graphs suggest that during the LIA a greater range of elevations were utilised than in the EIA.

Figure 4. Northern survey sites.

Northern Zone

In the northern survey zone sixteen new sites were identified as well as five previously published sites (Figure 4; Nenquin 1967; Van Noten 1983). The landscape in the northern survey zone is very striking. The highest volcanoes rise to around 4000m above sea level whilst their slopes rapidly descend approximately 2200m to the shores of Lakes Bulera and Ruhondo to the southeast. The smooth sides of the volcanoes and the western lakeshores are in sharp contrast to the sharply undulating and steep hills to the northeast and south of the lakes.
The boundary of the Virunga National Park along with the borders of DRC and Uganda to the north and the shores of the lakes to the east prevented the establishment of a regular survey area. Therefore a survey zone was created that covered an approximately similar surface area but respected these political and natural boundaries. The survey found that, unlike in the previous zones, sites in the north were not evenly distributed and instead clustered around particular areas. For example, the slope between the volcanoes and the lakes, where the geology is made up of large lava flows and very thin soils, was almost devoid of surface-scatter sites. Instead sites were located close to the lake, in caves, or on different geology to the northeast and south of the lakes.

The survey in the northern zone identified one new EIA site and re-identified two previously published sites. Unlike the southern and central zones, none of the EIA sites in the north were found in association with surface metal production remains and they are all located close to river or lakeshores, nesting beneath rock outcrops or higher altitude features. This contrast continued with the twelve new LIA sites and seven previously published sites found in the northern zone. For example, eleven of these sites were in volcanic caves and only two sites were found in association with iron production waste. Furthermore, whilst sites remain close to lakes and rivers they now also appear in higher altitude areas up the volcanoes. There is also a significant departure to the northeast and south where sites are now located away from the volcanic geology.

Excavations

Excavations began in July 2007 and continued until December 2007. The original methodology was to excavate at a comparable number of chronologically and geographically distinct survey sites within each of the zones. These sites were supplemented with new excavations at previously excavated and partially reported sites such as Masangano and Bugarama (Van Noten 1983).

Southern Zone

In the southern zone test units were dug at eight sites. These included a range of surface assemblages and environments. However, only one of the sites, BPS036 Kabusanze, preserved any significant sub-surface archaeological deposits, not including furnace remains. These sites, dug by Jane Humphris and the author, include Gahondo, Cyamukuza I and II (Van Grunderbeek 1983; Van Noten 1983), Nyirankuba (Hiernaux and Maquet 1960; Nenquin 1967), Kamana/ Mugogwe (BPS001), Kamambuye (BPS040) and Mpinga (BPS050).

BPS036, Kabusanze

BPS036 at Kabusanze in Huye District was originally identified during survey by the presence of Urewe ceramics and small pieces of iron slag scattered across a hilltop. Upon our return to the site a concentration of Urewe pottery was found and two test units were excavated nearby. The excavations in unit B did not encounter any archaeological deposits but in unit A three cut features (two pits and a burial) were found which contained Urewe ceramics. Unfortunately, no section relationship was preserved between the burial and pits although it was observed during excavations that the large and most recent pit truncated both the earlier pit and burial beneath. The large pit fill contained occasional Urewe, rare and fragmentary bone, occasional bone beads and charcoal with an orangey clayey-silt matrix. The earlier pit feature was cut into natural orange gravels and was filled with distinct fine green soft silt and three large sherds of the same vessel. The preliminary zooarchaeological analysis has revealed no identifiable animal bone remains from either pit, however, palaeobotanical analysis of the bulk samples have revealed charred sorghum seeds from the large pit and a charred pearl millet seed from the small pit. The Urewe ceramics from both of these features fit the classic Urewe type that is characterised by ‘dimple bases, bevelled rims and decorative motifs’ including ‘channelling, scroll and circle pattern, cross hatching and punctured dots’ (Posnansky 1961a:183).

The burial was the most significant feature encountered during the excavations at BPS036. Whilst the large pit had truncated the burial beneath, the base was preserved and cut into the natural gravels. Two skeletons were found in the burial: one infant in the burial fill above an adult skeleton at the base of the burial with grave goods. The adult skeleton was positioned on its side with the head to the north and the legs to the south in what appears to have been a crouched position facing west. However, the skel-
etont was very poorly preserved and may have been disturbed by post-depositional processes. The burial grave goods included bone beads, one cowrie shell, four iron objects, and a small but complete Urewe vessel alongside a number of almost complete much larger Urewe vessels. These ceramics again fit the classic Urewe type. However, the cowrie shell is unexpected and may be the first evidence of long distance trade from the coast to central Africa in the EIA. Finally, the four iron objects present a rare opportunity to study the final products of the iron working process in an EIA context. Two of the objects are shaped like a bracelet whilst another appears to be a necklet. The fourth is highly fragmentary but was a thin disc-shaped object with a small hole in the middle. The iron artefacts have been x-rayed to show the iron to corrosion ratio and three have enough iron present for small samples to be taken for SEM-EDS analysis to gain further insights into early iron production in the region to be carried out by Jane Humphris. Radiocarbon dates are also being sought for both the pits and the burial. Only one other burial of this period has been found and partially reported in the region from North Kivu, Democratic Republic of Congo (Misago and Shumbusho 1992), making this a very important find for Rwanda and the African Great Lakes region.

Central Zone: GPS014, Karama

In the central zone only one site was considered suitable for excavation. During survey, informants who recognised unusual ceramics in a road dug in the 1960s brought the site to our attention. Further investigation found a road cut section containing roulette decorated ceramics and faunal remains with Urewe ceramics on the road surface. Two test units were excavated at GPS014. In unit A, beneath a cultivated, disturbed soil deposit and a mixed sub-soil containing roulette decorated ceramics, was a deep pit with Urewe pottery cut into natural gravels and clay beneath. Preliminary analysis of the finds from the pit identified faunal remains including cattle, sheep/goat and wild species alongside a charred finger millet seed.

Unit B contained a series of sand and silt deposits above a shallow pit. Again the most recent deposits contained roulette decorated pottery, whilst the pit contained Urewe ceramics alongside mixed faunal remains and one charred finger millet seed.

Ceramic analysis of the Urewe sherds from both units suggests that these are a ‘devolved’ form similar to wares identified by Posnansky (1961b: 134) and Ashley (2005) in Uganda. Whilst the excavations failed to encounter the classic Urewe ceramics seen on the road, the identification of a devolved form in stratigraphic association with roulette decorated pottery is potentially very significant. Radiocarbon dates are currently being sought for both pit features.

Northern Zone

Due to the poor potential for sub-surface archaeological deposits in both the southern and central zones, the northern zone became the focus of the excavation season. The northern zone was known to have a number of previously published sites with good deposits, such as Masangano, the Musanze caves and Bugarama (see Van Noten 1983) and the survey identified many more new ones.

Masangano

Masangano has been partially excavated and published by Hiernaux and Maquet (1960), Van Noten (1983) and Simonet (2004). Their work revealed the presence of roulette decorated pottery and Urewe ceramics above earlier deposits. Whilst the site has since been subjected to heavy disturbance through cultivation, distinct areas are preserved at the surface as depressions, raised areas and/or changing soils. Based on the results of an intensive site survey, the southern end of the site was selected for excavation and two test units were placed over two contrasting deposits. Unit A was located at the edge of the site next to a steep slope above the river. The surface deposit here was sandy and contained large Urewe sherds. Unit B was located to the north on top of a raised area of very dark, bluish-black, clayey soil.

Despite the presence of Urewe ceramics on the surface of unit A, the excavations encountered no significant archaeological deposits and the excavations here were abandoned. Unit B was more successful, encountering three well-defined archaeological deposits above natural clay and sands. The most recent was a bluish black, silty-clay that had suffered disturbance through cultivation and contained only very rare roulette decorated pottery and quartz flakes.
Beneath this was a bluish-black sub-soil more compact than the previous deposit that contained rare Urewe sherds, quartz and slag. These deposits sealed a brownish black clayey-silt with frequent Urewe and rare charcoal. The raised bluish-black soils around unit B appear to represent an area of significant human activity dating back to the EIA. Unfortunately, only highly fragmentary pieces of bone were recovered and despite intensive sampling no palaeobotanical remains were identified. However, the ceramic analysis was more interesting and suggests that the Urewe ceramics at Masangano represent a north Rwandan variation. For example, whilst the quality of the ceramic is maintained and some expected decorative features are present, other features, such as the heavy bevelling of the rims seen on Classic Urewe, are absent. Radiocarbon dates are currently being sought for the EIA horizon in unit B to provide a more detailed chronological context to this ceramic anomaly.

Musanze II, III and IV

The Musanze caves are a series of large caves located to the west of Ruhengeri, which were produced by volcanic gas bubbles collecting in solidifying lava. Van Noten (1983) has already excavated in two of these caves Akameru and Cyinkomane. However, informants no longer remember these names and during the survey they had to be tentatively identified based on written descriptions and photos. The survey identified a further five large cave entrances and three of these Musanze II, III and IV were selected for excavation.

The units in all of the caves were excavated to bedrock except unit A in Musanze II that had to be discontinued due to earlier rock falls that prevented further excavation. All of the caves had extremely good bone preservation and the excavations consistently produced large quantities of LIA roulette decorated ceramics and large amounts of wood charcoal alongside bone beads and a range of metal objects. In general, the deposits and finds from both are comparable to those found in the Musanze caves. The ceramic assemblage contains the same distinct handle forms, general vessel shapes and décor alongside mixed faunal assemblages of heavily butchered remains of hunted and herded animals. Similar metal objects and bone beads were also encountered and preliminary palaeobotanical analysis has again identified parenchyma alongside indirect evidence of grain use, such as grain harvesting knives, pounding stones and grinding stones. However, these caves also contained worked pieces of ivory, teeth and bone unlike the Musanze caves. Radiocarbon dates are now being sought from the earliest two contexts in both caves to establish the earliest occupancy of the caves and to begin to understand the chronological accumulation of the excavated deposits.
Bugarama and RPS014

Bugarama, on the shore of Lake Bulera, was originally identified and excavated by Simon (1983). Simon’s description and illustrations suggest that EIA and LIA ceramics are present in a single sequence. Unfortunately, today the lake level is approximately two to three metres higher than when Simon excavated and the most interesting areas have since been submerged (Figure 5). In response, site survey was undertaken and two test units were located at the base of a steep escarpment where large quantities of roulette decorated ceramics were observed on the surface. However, both were abandoned before any significant undisturbed archaeological deposits could be reached due to water logging, as were two units at RPS014 where unusual incised ceramics had been found at the surface during survey.

Summary

The fieldwork summarised here amounts to some of the most intensive and extensive systematic archaeological work ever carried out in Rwanda and has demonstrated that previously located and new archaeological resources still exist in Rwanda despite intensive agriculture and settlement. Whilst the survey results are heavily skewed in favour of certain archaeological sites and materials due to biases associated with surface visibility, surface coverage, varying experience of survey participants, high deposition and high erosion environments and so on, a variety of significant new deposits have been identified that warrant further investigation.

Figure 5. Submerged house by Bugarama [the lake levels have risen by 2 to 3 metres since Simon (1983) excavated there].
The survey data broadly corroborates the existing picture for the Iron Age in Rwanda. In all three-survey zones Urewe and roulette decorated ceramics were identified and there is a rise in site frequency between the EIA and LIA, fitting the expected population rise and growing visibility of sites. However, it is notable that the dramatic increase in sites between the EIA and LIA in southern and central Rwanda is not seen in northern Rwanda and it is possible that environmental factors may have influenced this variation. Environmental evidence and contemporary informant accounts suggest that the northern survey zone was forested from the EIA until relatively recently. Land clearance, often associated with iron smelting and agriculture, during the Iron Age, may not have been applicable here due to the lack of iron ore and thin soils because of the volcanic geology.

The excavations encountered a variety of contexts and materials from across the EIA and LIA. Important individual features were found, such as the unique burial with evidence of very early long-distance trade, alongside more general results that directly tackle the research questions outlined. Whilst the palaeobotanical assemblage is limited in size, any preservation of such remains in this region can make an important contribution to our understanding of the use of domesticated plant foods. The excavations have also generated a large assemblage of ceramics and faunal remains within which some important results are already emerging. These include the identification of three distinct variations in Rwandan Urewe ceramics, the appearance of roulette decorated vessel handles in LIA northern Rwanda (absent in other areas) and the continued occurrence of mixed economic remains across a range of sites suggesting either that Iron Age peoples enjoyed a variety of subsistence practices or at least had access to a range of markets. These ideas will continue to be developed during the course of this research.

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