### Gerhard Jordaan SAHRA Permit Application 2013

#### Introduction

This application is for an excavation and destruction permit for analysis of material culture from TSH 1 and SK 17. These two sites are Early Iron Age settlements in the southern Kruger National Park. This research is part of a Masters of Arts in Archaeology from the University of Pretoria.

In the 1970s and 80s research conducted for a PhD at the University of Pretoria by Andrie Meyer (1986) indicated an abundance of archaeological sites in the Kruger National Park, in particular from the Early Iron Age (EIA). Meyer's thesis led to Honours research by the applicant on EIA ceramic material in 2011 (Jordaan 2011). The results from this project shed light on the function of pottery vessels used during the EIA in the area, as well as exploring networks of exchange and interaction between groups within the specific area (Jordaan 2011). What was evident from this preliminary study was the potential for further archaeological research in the Kruger National Park.

The work done by Meyer (1986) filled a key gap in the prehistory of the area. The research was extensive and highly informative, but with the project being conducted over a large area, the majority of the focus was placed on surveys, surface collections and test excavations with very little detail given to specific sites. This research project will therefore place focus on micro-temporal changes on two EIA sites (TSH1 and SK 17). This will be achieved through a combination of techniques, which includes small scale excavations with focus on the stratigraphic sequences, and changes in ceramic style and its associated material culture (c.f. Fowler & Greenfield 2009). By doing this it will be possible to understand small scale variations within an EIA settlement framework. This in return provides the possibility of understanding social patterns within EIA sites in the Lowveld.

# **Project Aims**

From my work on existing collections from TSH 1 and SK 17 it is evident that the focus in the past was placed on placing the site within a basic culture historical sequence. Thus there is little emphasis on change over time, as sites were not excavated in stratigraphic layers, but rather in arbitrary spits. In contrast, this research will try and reconstruct the stratigraphic sequence, placing emphasis on intra-site change and variation – e.g. the transition from Mzonjani ceramic use to Garonga ceramics at TSH1.By applying systematic excavations and material science analysis I hope to observe changes through the occupation of the sites on a small scale. New radiocarbon samples will also be taken on each site, in order to establish different occupational periods. Through this processes it will be possible to find material *in situ*, and observe changes across the sites.

The aim of this project is to:

- Discuss small scale variations and changes within two Early Iron Age sites.
- Form a better understanding of the ceramic sequences on the two sites. Can, for example, a transition be seen in the ceramics?
- Establish if the placement of the Garonga facie in the regional ceramic sequence can be validated?

# Site Description

Tshokwane 1 and Skukuza 17 are located in the Southern part of the Kruger National Park, and are located close to the Skukuza main camp. The area is mostly flat with isolated rock outcrops (Plug 1989: 62). The area has an annual rainfall of 400-500mm, with most of the rain falling between October and April (Plug 1989: 62).

Tshokwane (TSH) 1:

• 24.89673°**S** 31.66574°**E** 

TSH 1 is situated on the western banks of the Mutlumuvi stream in the Tshokwane district very close to Rhino Walking Safaris and Skukuza Main Camp. The site is covered with a layer of alluvial soil (Plug 1988: 220). No active erosion was visible during the 80's (Plug 1988) or during a reconnaissance trip in 2013. TSH 1 has a large number of small ash heaps visible on the site surface. These ash heaps have

been associated with domestic activity on other EIA sites (Huffman 1990, 1993). Therefore they are expected to/will potentially yield substantial amounts of material culture remains. Ten excavation pits were opened by Meyer -TSH1.1-TSH1.10. The most extensive of these excavations was conducted on TSH 1.1, and consisted of an excavation unit of 10.5m by 2m (Meyer 1986). This excavation was done in eleven arbitrary spits across one of the ash heaps located on the site. A radiocarbon date was also obtained from this excavation trench, and gave a date of 510 AD (Pta 3825). Other material culture discovered on this site includes an ivory bracelet as well as evidence of metal working and glass beads (Meyer 1986). The fauna remains from the site formed part of Plug's (1988) PhD research.

Meyer (1986: 222) has attributed the ceramics from the site to part of the Mzonjani facies. More recently it has been suggested that some of the ceramics may instead belong to the Garonga facies (Huffman 2007), which was identified after Meyer concluded his research (Burrett 2007). It is believed that the Garonga facies succeeds Mzonjani (Huffman 2007), however, this theory has never been tested as very few Garonga sites are known (see Huffman 2007). Through in-depth excavation, which focuses on the stratigraphy of the site, it will be possible to determine if these ceramic traditions did succeed one another or if they occurred during the same occupational period. For this reason it is also important to collect new radiocarbon dates from well stratified contexts.

Skukuza (SK) 17

#### 24°5728.05'S 31°42 30.04E

SK 17 is situated on the northern banks of the Sabie River 233m above sea level. It falls in the same environmental/ecological landscape as TSH 1.A dirt road runs through the site, and this was the main reason why the site was first discovered and later excavated by Meyer (1986). These excavations consisted of large test pits-. SK 17.1–17.5, where the majority of the work concentrated on recovering material culture already uncovered by the road works (Meyer 1988; Plug 1988). A radiocarbon sample was taken from SK17.2 (bone) which dates the site to 800A.D (Pta 3507). During a reconnaissance visit in February 2013, I noted that ash deposits

were still visible on the surface of the site. However, I also noted that alluvial soil from floods in January 2013 had covered portions of the site.

Meyer (1986) suggested the ceramic at SK17forms part of the Mzonjani facies but also shows some resembles to ceramics of the Ndondondwane facies (Huffman 2007).Huffman (2007) on the other hand thinks that the ceramics belong to the Garonga facies. Seeing that the possibility of multiple ceramic sequences seems likely this site will be vital to the understanding of intra-EIA relationship in the area, but also to identify and study another Garonga site. By looking at the possibility of change in the ceramic phases it will be possible to determine change and variation within this settlement. Through further excavations and analysis of the site on a more in-depth level, local variability and change within EIA communities can be explored more fully.

### **Analytical Methods**

The first stage of the research process will be to locate the old excavation trenches dug by Meyer (1986), in order not to re-excavate these. New excavation units will then be placed over the domestic spaces as well as the ash middens. Excavations will focus on the stratigraphic sequences in order to identify small scale temporal changes. The unit size will start with 2x2m test units, and expanded as deemed necessary (based on material culture and features found). The anticipated depth of the units based on the desktop study done, will range between 35 and 70 cm.

Compositional analysis through X-ray fluorescence spectrometry (XRF) and thinsection petrography will be conducted on ceramic material from previous and current excavations. Through the use of XRF it is possible to analyse the chemical composition of ceramic material. Every ceramic vessel carries a chemical composition pattern or "fingerprint" from the clay and raw materials it was made from. Therefore it is possible to trace a certain vessel to a clay source, and through this it is possible to determine if ceramics were introduced into an area, or if it was sourced locally (Pillay et al 2000: 54). Thin-section petrography consists of thinsections being cut from ceramic sherds (normally 24x 48mm, 30 micron thickness). These samples are then analysed through a microscope to identify rock fragment inclusions within the clay matrix (Tite 1999; Wilmsen et al 2009). This makes it possible to form a better understanding of how the ceramic vessel was created and their specific technology (Tite 1999). It needs to be highlighted that these processes forms part of invasive analysis. Small but representative number of non-diagnostic ceramic sherds (where possible) will be subject to destructive analysis to obtain the necessary results. The success of this research project relies on comprehensive small scale stratigraphic excavations, re-analysis of Meyer's (1986) excavated material from the sites (which is stored at the University of Pretoria), as well as previously untried XRF and thin section petrographic analysis of the ceramics.

These analytical methods will make it possible to understand the diachronic nature of these Early Iron Age occupations, as well as possible relations between different EIA groups.

### Timeframe

The fieldwork for this research project, subject to SAHRA's approval, will take place over a period of two weeks in May to June 2013. The thin section and XRF analysis will be conducted at the University of Pretoria's ceramics laboratory, under the supervision of Prof Anders Lindahl, from the University of Lund's Laboratory of Ceramic Research who will give specialist guidance. This will be done between June and August 2013. The analysis of all the other material culture will also be done during this time frame. The material will be stored at the University of Pretoria at the Archaeological Laboratory.

#### Preparation and relevant fieldwork experience

The work undertaken by Meyer (1986) has supplied us with a better understanding of the prehistory in the Park, but because the collection was so large, current attention will be focused on a representative EIA sample. Work on the material culture from TSH1 and SK17, which is housed at the University of Pretoria, has already started. From working with the past collections of these sites it was possible to see which sites should be revisited. Before I revisited the sites I established a relationship with all the relevant stakeholders (e.g. SanParks liaisons officers at Kruger Park), and have obtained permission to do archaeological research within the Kruger National Park. The different stakeholders in the Kruger Park have shown a keen interest in the project, and are eager to know more about the archaeology of the area. After this I revisited the relevant sites and surveyed the surrounding area. Through doing this I acquainted myself with the wider landscape, and have identified where excavations should be conducted on the sites. The sites were also recorded through photographs of the area and the material culture.

I have gained relevant knowledge and preparation for this project through my Honours degree as well as working on many different archaeological projects. My Honours research on Early Iron Age material of the Kruger National Park gives me a better understanding of the archaeology in the area. I have also worked on archaeological projects in the Soutpansberg (Dr Alexander Antonites) Boekenhoutfontein (Dr Ceri Ashley), as well as in Maltino (Dr Sven Ouzman).

I feel that these different projects across South Africa on different topics, as well as my Honours degree, make me capable of successfully conducting this research project.

# **Conclusion and Project Relevance**

The present archaeological study will build on past work in the Park (Meyer 1986; Plug 1988), and add new perspectives on the EIA in the area which will broaden our historical knowledge of an area which is extremely important to South Africa. The research conducted by Meyer (1986) and Plug (1988) highlighted the importance of archaeological research within the Kruger Park, but it also showed that much more needs to be done in the area. I have shown the importance of new archaeological research through my Honours project (Jordaan 2011). Therefore this project will approach the topic of the EIA in a different light, with focus placed on small scale indepth excavations and material science analysis of ceramics. This research project will fill a gap in Early Iron Age archaeology in southern Africa, through systematic and analytical methods.

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