


Overview of the Early Iron Age in the Letaba region of the Kruger National Park

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Received: 30 Nov. 2023

Accepted: 26 Mar. 2024

Published: 30 Aug. 2024

How to cite this article:

Antonites, A., 2024, 'Overview of the Early Iron Age in the Letaba region of the Kruger National Park', *Koedoe* 66(2), a1805. <https://doi.org/10.4102/koedoe.v66i2.1805>

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Archaeological research carried out in the Kruger National Park has identified several settlements of early African farmers that date to the Early Iron Age (EIA) – c. AD 200 – AD 1000. Two large EIA settlements, Le6 and Le7, were identified in 1977 on the southern bank of the Letaba River, opposite its confluence with the Tsende. Intermittent excavations of these sites were carried out between 1977 and 1989, but results have remained largely unpublished. These sites, which date back to the ninth century, have been the focus of new and ongoing research since 2021. The research has revealed that these communities were among the very first in the South African interior to participate in trade with the wider Indian Ocean world. This article contextualises the EIA of the Letaba River and surrounds with a specific focus on the history of research at Le6 and Le7 as well as briefly discusses new research at these sites.

Keywords: archaeology; heritage; early iron age; farming communities; Letaba River; early Indian Ocean trade; glass beads; archaeology ceramics.

Introduction

The Kruger National Park (KNP), predominantly recognised for its commitment to nature conservation, also boasts a rich tapestry of human history. Although the archaeological and historical record in KNP has been detailed elsewhere (Meyer 1986, 1989), the focus here is specifically on the Early Iron Age (EIA) – c. AD 250 to AD 1000 – of the Letaba River. The EIA is a watershed period in southern African history as it saw the rise of crop farming, metallurgical crafts, the herding of domesticated animals, the use of ceramics and the construction of permanent settlements. In the context of southern Africa, the term 'Iron Age' is employed as a convenient descriptor to denote the archaeology associated with Bantu-speaking communities over the past 2000 years. These communities, in contrast to hunter-gatherers who also inhabited the region, practised grain agriculture and worked with a variety of metals. Archaeologists distinguish between the Early, Middle and Late Iron Age (LIA) periods, which are not merely temporal classifications but distinct archaeological entities characterised by several social and material differences identifiable in the archaeological record (Huffman 1989, 1998). Generally, the EIA is associated with the first Bantu-speaking communities and their descendants who occupied much of the savannah region of northern South Africa. The LIA, on the other hand, dates to c. AD 1000 to AD 1880. This roughly 900-year period saw the influx of new population groups into the region, assimilation and diffusion with earlier EIA population groups and the expansion of settlements across most of the summer rainfall regions of South Africa, including the high-lying grasslands of the interior.

The northern Lowveld of South Africa – the low-lying subtropical savannah between the Drakensberg escarp and Lebombo mountains in the west – both within and beyond the confines of KNP, plays a significant role in understanding these significant historical developments. Early Iron Age settlements are often located along large rivers of the area, and several EIA sites have been identified along the Letaba River. Two large settlements, Le6 and Le7, are some of the largest yet identified in the region. The two sites are situated on the southern bank of the Letaba River at the confluence with the Tsende River, approximately 9 km northwest of the Letaba Rest Camp (Figure 1). Because they are separated by a deep gully, they were initially recorded as two distinct sites. However, this separation is somewhat misleading as, taken together, they represent nearly 700 m of continuous archaeological deposit along the southern bank of the Letaba (Figure 2). While they have been the subject of intermittent archaeological investigation since their discovery in 1977, they remain relatively poorly researched despite their potential regional significance. As a result, a new long-term research project on these sites was initiated in 2021. This article contextualises the EIA of the Letaba River and

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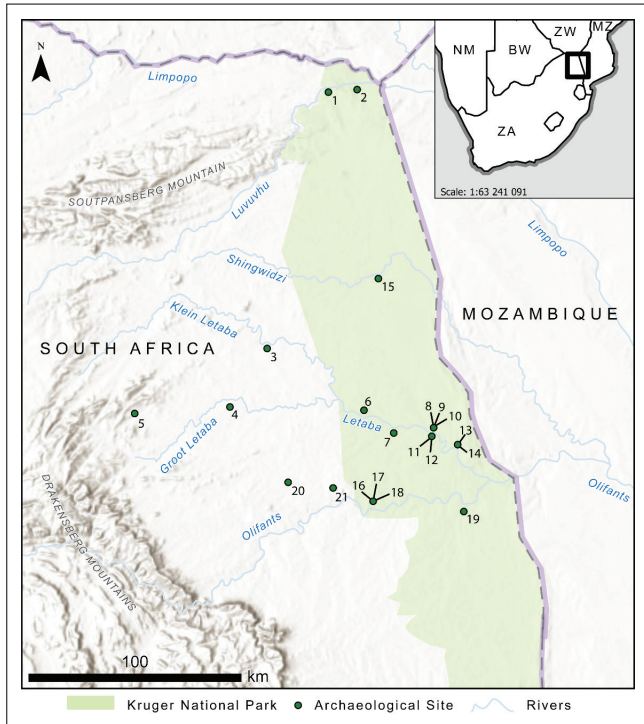


FIGURE 1: Map indicating the location of archaeological sites mentioned in the text. 1 = Makahane, 2 = Thulamela, 3 = Baleni, 4 = Eiland, 5 = Silver Leaves, 6 = Ma38, 7 = Ph9, 8 = Ma32, 9 = Ma33, 10 = Ma34, 11 = Le6, 12 = Le7, 13 = Mo7, 14 = Mo8, 15 = Sh14, 16 = Masorini, 17 = Shikumbu, 18 = Vhudogwa, 19 = Ol20, 20 = Harmony and 21 = Phalaborwa.

surrounds, specifically focusing on the history of research at Le6 and Le7, and also briefly discusses new research at these sites.

History of archaeological research

Iron Age research in the northern Lowveld has a long history. Early 'archaeological' publications, however, were mostly limited to descriptions of surface finds and chance discoveries by amateurs (e.g. Hall 1912; Paver 1933; Schwellnus 1937; Trevor 1930; Van Der Merwe 1933; Wells 1935). The 1960s marked the advent of professional archaeology in South Africa, leading to more focused research efforts, which, in the northern Lowveld, was initiated by Revil Mason (1962, 1965). The Phalaborwa region in particular became an early node of significant research and has remained an area of interest up to the present (Evers & Van Der Merwe 1987; Moffett 2016; Pistorius 1999; Plug & Pistorius 1999; Rightmire & Van Der Merwe 1976; Scully 1978; Van Der Merwe & Killick 1979). Elsewhere in the northern Lowveld, early seminal work was conducted by Tim Evers, who carried out excavations at various sites between the Olifants and Klein Letaba Rivers on the western boundaries of KNP, including Harmony (Evers 1974, 1979; Welbourne 1979), Eiland (Evers 1975, 1977) and Mabete (Evers 1982). Evers' work contributed to a broader characterisation of the Iron Age economy through research on salt production, mining, metal working and soapstone bowl manufacture.

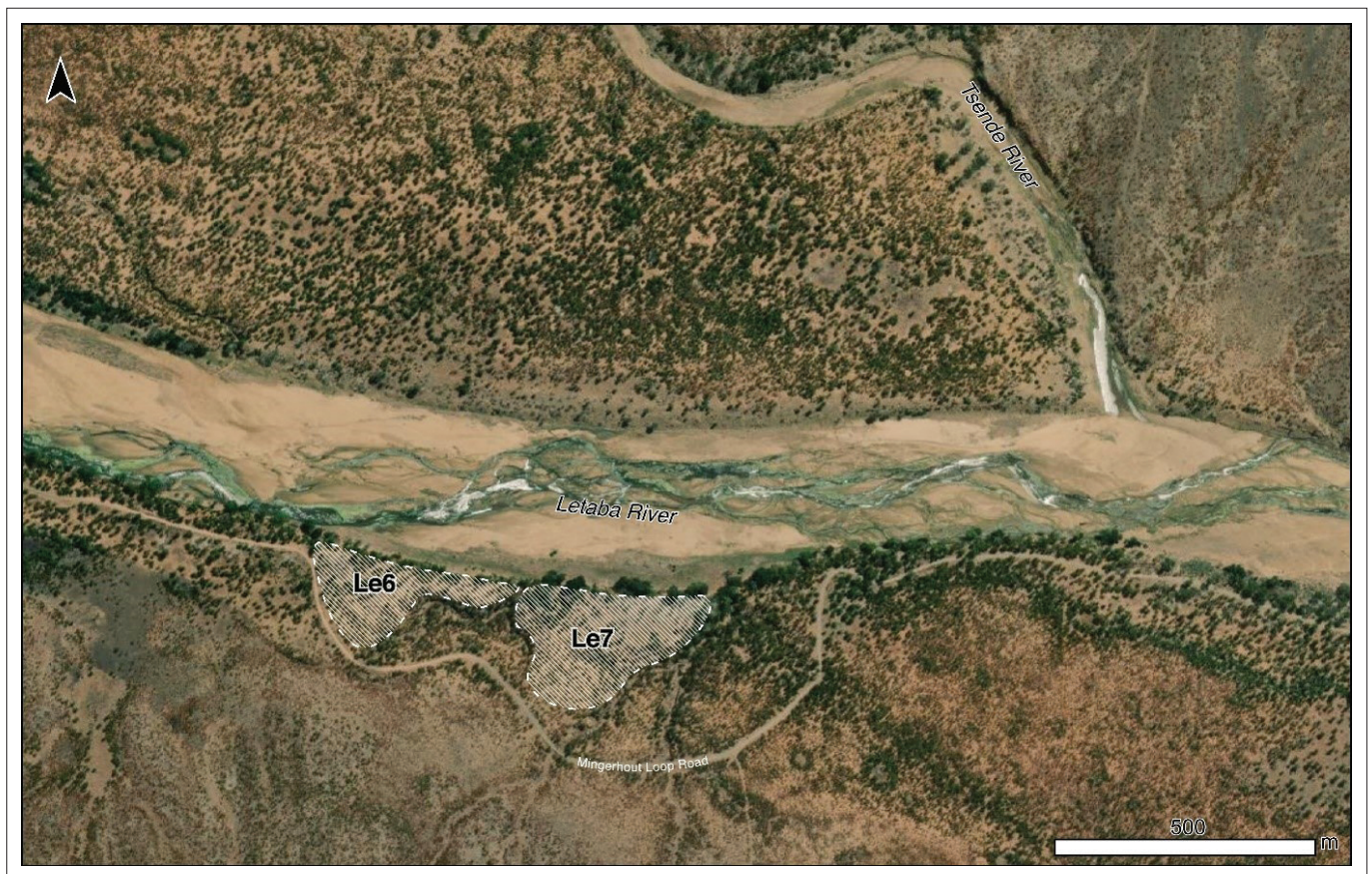


FIGURE 2: Approximate extent of the archaeological sites Le6 and Le7.

As was the case for the larger Lowveld region, the KNP saw little research conducted prior to the 1960s. The initiation of formal research projects in KNP commenced in 1965 when Hannes Eloff (University of Pretoria) and the historian J.B. de Vaal embarked on a research project that incorporated oral history, ethnography and archaeology – a novel combination at the time – to investigate the Makahane site in the far north of Punda Maria KNP (Figure 1) (Eloff & De Vaal 1965). A few years later, Eloff spearheaded another combined archaeological and ethnographic research project, this time at Masorini (Pjene), located east of the Phalaborwa gate. This project also involved the establishment of a living site museum – again, an innovative step for the time (Verhoef 1982). During the Masorini project, supplementary work was conducted in nearby hills such as Shikumbu and Vhudogwa (Eloff 1976).

These initial research projects at Makahane and Masorini brought attention to the unexplored archaeological landscape of KNP, and as a result, reconnaissance of the southern bank of the Letaba River was done as the Masorini Project was being concluded (Verhoef 1986). This initial survey established the presence of African communities in KNP from at least the earliest phases of the EIA with the recording of sites such as Le6 and Le7. These results prompted the formal establishment of a research project by the University of Pretoria to locate and identify archaeological sites and to conduct test excavations to establish a historical framework for human occupation across KNP. Ultimately, these surveys identified a total of 313 sites throughout KNP, spanning a period of over 1400 years (Eloff 1976, 1978, 1979, 1981, 1982; Meyer 1983, 1986, 1989). The survey component was concluded in 1986, and up to 1989, attention shifted to longer-term investigations at key research sites (Meyer 1989).

The University of Pretoria excavations and surveys conducted between 1977 and 1989 culminated in two PhD studies: the first by Andrie Meyer (1986) who created a detailed culture historical framework of Iron Age occupation of KNP. The second was by Ina Plug (1989) who investigated the animal economy and diet of the people who had inhabited KNP for the last 1400 years. From the 1990s onwards, archaeological research in KNP was run on an ad hoc basis, with smaller-scale studies primarily aimed at investigating individual sites (e.g. Grody 2016a; Jordaan 2016; Pelsner 2018, 2019; Pelsner & Van De Water 2020; Van De Venter Radford 2018). A notable exception is the excavation and reconstruction of the Thulamela site in the far north of KNP, which was run between 1993 and 1997 (Küsel 1992; Miller 1997, 2012; Steyn et al. 1998; also see Meskell 2007). Thulamela is also one of the few archaeological sites in KNP that is accessible to the public through guided visits.

The Early Iron Age sequence along the Letaba River, c. AD 250 – AD 1300

Archaeological research in the northern KNP, spanning nearly six decades, has established a general chronological framework of human occupation. Ceramic studies have

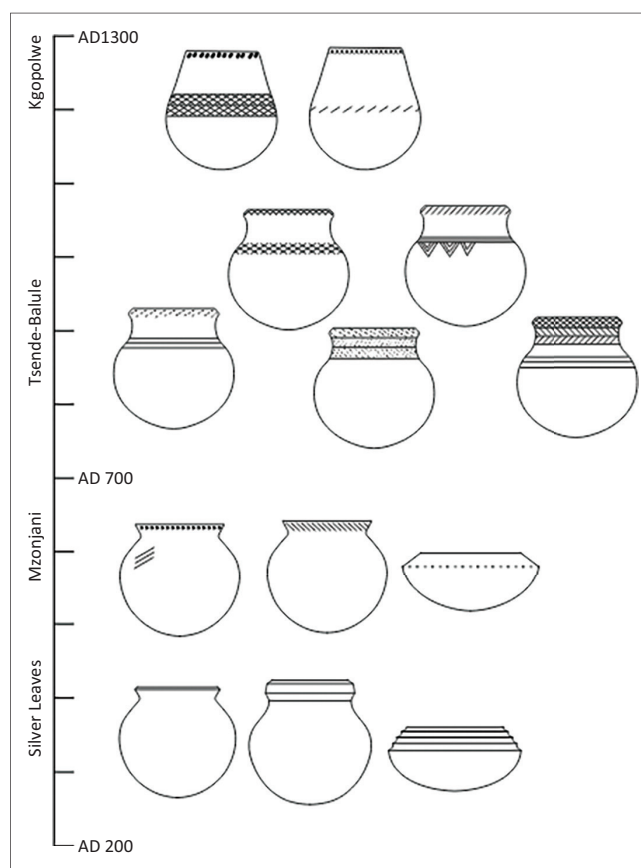


FIGURE 3: Schematic of the Early Iron Age ceramic chronology along the Letaba River in the Kruger National Park.

been crucial in this regard. The ceramic vessels, made and used by Iron Age communities, are stylistically variable in terms of shape and decoration and have been shown to be chronologically sensitive. As a result, ceramic style categories are widely used to date and group sites at various spatial scales (e.g. Huffman 2007). A regionally shared ceramic style implies a closely interacting community. While this is often assumed to overlap with linguistic or ethnic categories, style may crosscut these and other social identities (c.f. Pikirayi 2007). At a minimum though, areas of uniform ceramic style enable archaeologists to identify interacting communities, and because ceramic styles vary over time, they also are indicative of relative age and historical relationships.

Because of the pioneering work by Meyer (1986) and Evers (1981, 1982), a general spatio-temporal framework of ceramic styles for the EIA along the Letaba River and adjacent areas exists (Figure 3). However, many gaps remain, compounded by the lack of adequately dated excavated sequences. Consequently, it is expected that as greater chronological resolution is applied to the archaeology of the region, a more nuanced sequence is likely to emerge.

To date, the earliest Iron Age communities in the Lowveld are associated with the ceramic style known as Silver Leaves (also referred to as Matola), with a relative date range between AD 250 and AD 430 (Klapwijk & Huffman 1996:90). Silver Leaves assemblages typically contain a limited number

of vessel shapes, predominantly jars with everted rims and closed bowls. A unique feature of these vessels is the presence of flutes and bevels as decorative elements (Klapwijk & Huffman 1996). Sites with these assemblages are relatively rare and have been found along the east coast near Maputo (Sinclair et al. 1993), northern KwaZulu-Natal (Whitelaw & Janse Van Rensburg 2020) and in the northern Lowveld at the name site outside Tzaneen (Klapwijk 1974). To date, only one Silver Leaves site, Ma38, has been identified in KNP, close to the confluence of the Letaba River and the Shipikane stream.

During the mid-fifth century AD, the Silver Leaves style develops into Mzonjani whose assemblages date between c. AD 300 and AD 700 (Huffman 2007). In general, the Mzonjani assemblages display a continuity in shape and design layout to Silver Leaves assemblages with a preference for jars with everted rims but lacking the distinctive bevels and flutes of the latter (Huffman 1998). In KNP, Meyer distinguished between northern and southern Mzonjani assemblages. The southern variant, Mutlumuvi, displayed a preference for decorative motifs of thick diagonal incisions on the rim, while the northern Mzonjani assemblages, Meyer refers to as Early Eiland ('Vroeë Eiland'), are more likely to be decorated with bands of punctates made with a triangular stylus.

Mzonjani ceramics are found over a large area of the eastern interior of South Africa with assemblages in the northern Lowveld, excavated at Harmony (Evers 1979), Eiland (Evers 1981) and Baleni (Antonites 2013). In the KNP, the Mzonjani sites along the Letaba falls within Meyer's Early Eiland group include Le7, Ma32 and Mo8.

Although the upper temporal range for Mzonjani in KNP remains undated, eighth-century settlements along the Letaba are associated with a ceramic style, which Meyer (1986) named Tsende. He associated this style with the arrival of new communities in the region, likely originating from the northwest around the western Soutpansberg region, based on the close resemblance to an earlier ceramic style from that area referred to as Happy Rest (Meyer 1986). Tsende ceramics have been identified at several sites along the Letaba River and its tributaries (e.g. Le6, Ma33 and Ma34). Meyer described Tsende ceramic assemblages as characterised by recurved jars with cross-hatched bands on the rim, often with continuous bands of decoration (frequently triangle motifs) around the neck. The Tsende style developed into Balule by the ninth century (present at sites such as Le7, Ph9, Mo7, Sh14 and Ol20), which are characterised by incised or stamped bands of decoration typically around the neck or shoulder on recurved jars. Bowls are prominently keeled with incised band decoration on or above the keel rim. Balule is associated with an increase in the number of settlements along the Letaba from AD 900 onwards (Meyer 1986). Both Balule and Tsende styles remain poorly defined and have, to date, only been identified in the KNP. While this may reflect sparse archaeological coverage of the wider area, it could reflect a process of increased regionalisation and diversification that characterise the end of the first millennium AD also

documented elsewhere in southern Africa (Coutu et al. 2016; Huffman 1998; Huffman & Whitelaw 2019).

Balule sites along the Letaba River seem to have been abandoned early into the second millennium AD. Between the 11th and 13th centuries, new communities were established around the hills that dot the landscape in the Phalaborwa area, where the inhabitants exploited rich copper and other mineral resources. These settlements are all associated with a distinct style known as Kgopolwe, characterised by the predominance of crosshatch bands on long-necked vessels (Evers & Van Der Merwe 1987). Typologically similar pottery has been found in the Nhlarweni and Shingwedzi regions of northern KNP (see Meyer 1986). By c. AD 1300, though the available evidence points to the absence of or at least a very low human presence in the Lowveld until the 16th century when LIA communities moved into the region (Evers & Van Der Merwe 1987; Plug 1988).

Aspects of Early Iron Age life along the Letaba

Eloff (1976, 1978, 1979, 1981, 1982) and Meyer's (1983, 1986, 1989) research, while mostly focussed on establishing regional chronologies, also provided a valuable dataset on EIA settlement patterns. Kruger National Park EIA sites were characteristically situated on elevated riverbanks above the 10-year flood line, often at the confluence of rivers and their larger tributaries. Settlements were invariably found on soils with at least marginal agricultural potential (Meyer 1986; Plug 1988), which may suggest cultivation occurred near, or even within, the settlement (Greenfield, Fowler & Schalkwyk 2005; Maggs 1994).

Excavations by Meyer and Eloff were mostly limited to small test units to obtain datable material and diagnostic ceramics, and as a result, our understanding of the spatial organisation of these sites is vague. In general, though, sites are characterised by middens and pits with scattered remains of huts and granaries. Artefacts include ceramics, faunal remains, slag, metal objects, glass beads, bone implements, stone tools, and upper and lower grinding stones (Meyer 1986). The absence of any deeply stratified and significant build-up of material suggests the frequent movement of settlements, potentially because of over utilisation of the surrounding environment and veld degradation (Plug 1988).

Plug (1988) studied the hunting and herding strategies of Iron Age communities in KNP using the material excavated by Eloff and Meyer. General trends in animal use suggested that Iron Age farmers had to adapt to an environment that had only marginal pastoral potential and, in modern terms, was regarded as largely unfavourable for livestock herding. While hunting was evidently a prime source of meat, at least some of the Lowveld EIA communities did keep cattle and, to a lesser extent, sheep and goats (Plug 1988). The area is predominantly mopane veld, which despite a low carrying capacity, does provide good fodder for cattle. As the indigenous African cattle breeds are heat tolerant, the

temperature range of the Letaba region would therefore not have been a problem. Overgrazing and veld degradation would, however, have been a problem when it was left unchecked (Bonsma 1976).

Animal diseases that would constrain cattle ranching during the Iron Age include nagana, carried by the tsetse fly (*Glossina* spp.), malignant catarrhal fever (MCF), foot-and-mouth disease, African horse sickness, African swine fever and various tick-borne diseases (Mitchell 2018; Plug 1987, 1988, 1989). The main limitation to the keeping of cattle in the past would have been the presence of tsetse fly and tick-borne diseases (Plug 1988, 1989). These diseases occur regularly each year when their arthropod carriers are most active. Indigenous cattle breeds have a degree of tolerance against some of these diseases (Krinsky 2019; Murray et al. 1984; Perry & Young 1995). Historically, tsetse fly distribution was never constant, and vast areas could be contaminated quite rapidly (Fuller 1923). Factors influencing these fluctuations include climatic variations (rainfall and temperature) and the abundance of game (Lambrecht 1964; Nash 1969). In addition, human land use such as bush clearing can reduce the suitable habitats for flies (Dorward & Payne 1975).

The KNP faunal assemblages also showed that Iron Age communities likely took measures to control herd sizes. Herding implies that specialist knowledge would have built

up about the best summer and winter pastures and how to survive draughts. Meyer (1986) argued that the areas suitable for cattle keeping essentially determined the pattern of human settlement in KNP, population density and the size of political units, as well as relations between different social and corporate groups. In areas such as the Lowveld, where cattle keeping was difficult and unrewarding, populations were sparser, political units smaller and other forms of economic activities asserted themselves (Meyer 1989).

Research at Le6 and Le7

Le6 and Le7 are located on the southern bank of the Letaba River, on a high terrace, about 12 m above the river (Figure 4). The two sites are separated by an erosion gully, in places nearly 50 m wide. Surface finds include large scatters of ceramic sherds, refuse middens, subterranean pits, slag concentrations and burnt hut rubble. Both sites are cut by the Letaba River on the northern edge and sheet and donga erosion on their southern sides.

The sites were first identified in 1977 during the original Letaba River reconnaissance by Eloff. From the outset, they were regarded as important research sites, which were under threat because of extensive springhare burrowing and soil erosion that had already destroyed large portions of the sites (Eloff 1978). Initial controlled surface collection of artefacts



Source: Photograph taken by M. van Aswegen

FIGURE 4: View of Le7 facing towards the southwest.

was done in areas under visible threat and named as numerical subdivisions: Le6.1 to Le6.12 on site Le6 and Le 7.1 to Le7.8 on site Le7. A follow-up visit in 1979 made it clear that the soil erosion noted in 1977 had worsened to such an extent that urgent intervention was required to save archaeological material on the verge of being lost. Subsequently, excavations were conducted in areas notated as Le6.13 and Le6.14 at Le6 and Le7.9 to Le7.19 at Le7 (Eloff 1979). The sites were also included in a summary report on the Iron Age of the KNP (Meyer 1983) and Meyer's PhD (1986). An inspection in 1989 again revealed the destructive impact of soil erosion on the archaeological deposit and prompted further controlled surface collections and excavations (Meyer 1989).

While the excavated materials from earlier research were succinctly covered in Meyer (1986), and the faunal remains included in Plug's (1988) dissertation, the excavated material post-1986 remained unanalysed until the mid-2010s. Decades later, Evin Grody analysed some of the faunal material from these excavations as part of an MA dissertation (Grody 2016a, 2016b). Her detailed taphonomic analysis of butchery patterns drew attention to possible specialisation in both the hunting and the processing of large wild mammals at the sites.

Ongoing research along the Letaba River

In his initial interpretation of the sites in the 1980s, Meyer identified three separate occupation phases based on his reading of the ceramic stylistic and limited radiocarbon data. Meyer (1986:223, 226) believed that portions of Le7 marked the first location of occupation – associated with Mzonjani ceramic style (or Early Eiland as Meyer named it) of the area, shifting to Le6 after a short hiatus (associated with Tsende ceramic style), and a final shift back to Le7 (associated with Balule ceramic style). However, Meyer based this interpretation on only two radiocarbon dates – one for each site – and both from bone collagen. Le6 (Pta-3491) produced an uncalibrated date of 1160 ± 50 BP and from Le7 (Pta-3478), a date of 1120 ± 50 BP. The fact that only two dated samples were available and that the sites were largely palimpsests of features lacking stratified sequences, meant that chronological interpretations remained tenuous.

In 2021, the author revisited the Le6 and Le7 ceramic assemblages and investigated the unanalysed material recovered after 1986. A return to these assemblages was principally motivated by the establishment of refined spatial and chronological frameworks for the Iron Age and new interpretations of economy, life and society, over the past few decades. In particular, Grody's conclusions demonstrated that the hunting economy of Le6 and Le7 was more than just a subsistence strategy borne out of necessity, but a specialised economy focussed on the hunting of large ungulates such as buffalo, zebra and wildebeest. In her view, the sites acted as hunting camps with intermittent occupation during which intensive carcass processing took place. The lure of this area could potentially have been for provisioning by non-local communities who travelled here to hunt and procure animal

products not available elsewhere. A similar pattern had previously been posited for salt production during the EIA in this same region (Antonites 2016).

While the faunal evidence was compelling, the interpretations remained hampered by the lack of a fine-grained chronology and contextual information. In addition, the culture-historical frameworks of earlier studies operated at a regional scale, which meant that the material culture record had been catalogued, but not interpreted. Interpretation, however, requires a contextual approach that can trace the various networks of association between the fauna, ceramics, their spatial and cultural contexts of action and other cultural objects (see Hodder 1987). The chronological interpretations of the site are extremely challenging though as none of the earlier excavated material originated from stratified sequences but rather represent single depositional events (Meyer 1986). To complicate matters, maps and plans of older excavations were largely lacking the detailed contextual information needed to accurately interpret the spatial dynamics of shifting occupations.

As a result, new surveys and excavations of Le6 and Le7 were started in 2021, which, as far as can be ascertained, was the first visit to the site by an archaeologist in nearly 30 years. As seen by earlier researchers, the damage caused to intact archaeological deposits by active erosion was still ongoing. Consequently, the 2021–2023 excavations concentrated on specific areas where deposits were in imminent danger of being lost. Where possible, these rescue excavations also aimed to aerially expose larger areas to investigate spatial organisation within the settlements.

An important aspect that has come to the fore is the role of early Indian Ocean trade connections with the South African interior. While Grody (2016b) emphasised local provisioning, it seems that longer-distance trade in game products should also be considered as an economic driver. Although Meyer did note imported glass beads recovered from Le7, the absence of an established glass bead typology for southern Africa at the time, meant that the significance of their presence had been understated. The now well-established glass bead sequences for the region (Wood 2011, 2012) indicate that the beads from Le6 and Le7 are typologically similar to the Zhizo-bead Series and can be regarded as some of the earliest in the South African interior (Figure 5). Indian Ocean trade connections with the interior would expand and over time play a significant role in the development of well-known southern African civilisations like Mapungubwe and Great Zimbabwe (e.g. Chirikure 2014). The Letaba sites are, however, older than these civilisations further to the north and effectively represent the initial phase of southern Africa's integration into international trade connections (c.f. Coutu et al. 2016).

The new excavations at Le6 and Le7 have also found unambiguous evidence of smelting and smithing activities at the sites – as seen in the presence of tuyeres, slag and furnace remains. Other features of EIA life that had not previously been identified here include granaries, which



Source: Photograph taken by M. van Aswegen

FIGURE 5: Glass beads from Le6.

strongly suggest agricultural activities at or near the sites. While the Letaba sites are clearly a palimpsest of occupations, the preliminary evidence suggests that they were likely the location of varied and diverse activities that changed throughout a roughly 400-year occupation.

Conclusion

The time depth, number and range of archaeological sites along the Letaba make this a significant area of EIA presence in the KNP. Le6 and Le7 are the largest EIA settlements recorded to date, and while these sites were identified more than 45 years ago, many questions remain. Their re-examination is yielding tantalising insights into early African society and their connections to the wider world. Ongoing research, initiated after an almost three-decade hiatus, addresses the challenges posed by the lack of a fine-grained chronology and detailed contextual information. Preliminary findings reveal evidence of early Indian Ocean trade connections, shedding light on the role of EIA communities in the development of long-distance trade networks, which played a significant role in the regional economy during later periods. Additionally, the identification of metal smelting and smithing, as well as grainbin structures, suggest potentially varying and diverse activities over the course of their occupation. The new research enhances our understanding of the EIA along the Letaba River but also that of the wider region.

The archaeological research being carried out on the Letaba sites also has present-day applications beyond expanding our knowledge of ancient society. It also provides data that can inform management strategies for the long-term preservation, research and promotion of archaeological sites in KNP. In addition, the Letaba sites offer the unique opportunity to study the historical ecology and long-term patterns of human-environmental interactions in one of Africa's preeminent conservation areas.

Acknowledgements

The author would like to acknowledge the contributions of the University of Pretoria staff and students who participated

in the excavations both past and present. South African National Parks' personnel generously assisted with various aspects of the research: Louise Swemmer, Andrew Desmet, Kirsty Redman and Thanyani Madzhuta. I especially appreciate the support received from Thabo Kgomommu and Dr Ndukuyakhe Ndlovu from the South African National Parks (Cultural Heritage Unit). Michelle van Aswegen (photography) and Daniel du Plessis (graphical art) provided creative outputs for the project. Annie Antonites provided comments on earlier drafts.

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Author's contributions

A.A. declares that they are the sole author of this article.

Ethical considerations

No human or animal subjects were included in this study. Archaeological excavations carried out by the author on Le6 and Le7 were done under the South African Heritage Resources Agency Permit 3296. The research in Kruger National Park falls under the South African National Parks Research Agreement SS667.

Funding information

The research is supported by the National Research Foundation [Grant Number: SRUG2204163557]. South African National Parks' Cultural Heritage Unit provided logistical support for fieldwork.

Data availability

Non-digital data and objects supporting this study are curated at the Department of Anthropology and Archaeology, University of Pretoria.

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