[For PROJECT GALLERY]

[title]**Potsherd pavements and regional interaction in medieval northern Yorùbáland, Nigeria**

Bolaji Josephine Owoseni [ORCID 0000-0002-6167-9032]
Sainsbury Research Unit, University of East Anglia and McDonald Institute for Archaeological Research, University of Cambridge, UK (✉ owosenibolaji1309@gmail.com)
Received: 3 October 2024; Revised: 25 May 2025; Accepted: 17 August 2025

Abstract

Macroscopic analysis of potsherds used to make herringbone-patterned pavements at two medieval centres in northern Yorùbáland suggests production variations despite shared architectural traditions. Reflecting local production choices and broader regional interactions, these results affect our understanding of pottery production, cultural interaction and social complexity in medieval West Africa.
Keywords: West Africa, medieval, macroscopy, potsherds, ceramic production, herringbone

Introduction

Potsherd pavements are important architectural features in medieval West African archaeology, dating from the mid-first to late second millennium AD (Nzewunwa 1989). These durable surfaces, constructed from pottery fragments, sometimes combined with stones or pebbles, appear in various contexts, including palaces, shrines and household courtyards (Garlake 1974). Beyond their reflection of high craftsmanship and functional roles in water management, erosion control and sanitation, the pavements also held aesthetic, symbolic and spatial value (Aguigah 2018: 111–33).

A hallmark of classical Ile-Ife, the edge-laid and herringbone-patterned pavements became a pan-Yoruba material expression of a sociotechnological, political phenomenon and architectural identity (Ogunfolakan 2009). Early examples have been documented at Jenne-Jeno (Mali) and at Diama and Ulaira in northern Nigeria (Connah 1976; Nzewunwa 1989; McIntosh 1995), dating to the first millennium AD. Between the twelfth and fifteenth centuries AD, the tradition spread across Yorùbáland, particularly in Ile-Ife, Benin and Old Oyo (Garlake 1974; Agbaje-Williams 1987). The wide distribution in Nigeria, Togo and the Benin Republic (Ogundiran 2002; Haour 2013; Aguigah 2018: 111–33) suggests extensive

regional interaction. Despite their prominence, potsherd pavements remain under-researched. While earlier studies focused on layout and spatial use, more recent work has begun examining potsherd composition and production technology (Ogunfolakan 2009; Owoseni 2023). However, comparative studies of pavement-potsherd samples remain scarce.

This study addresses this gap through a macroscopic comparison of potsherds from herringbone-patterned pavements at two medieval sites in northern Yorùbáland: Ilorin City and Erinle Town. It examines features, including temper, surface treatment and modifications to explore local technological choices and broader regional interactions.

As part of a broader postdoctoral research project at the University of Cambridge, this study complements ongoing scientific work on Ilorin pottery, with Erinle samples to follow. By integrating typological and geochemical data, the ongoing research seeks to trace raw material sources and production strategies, offering new insights into sociopolitical developments and craft traditions in medieval Yorùbáland.

Study areas

Ilorin City (8°32′14.41″N, 4°32′39.81″E)

Ilorin, the capital of Kwara State in north-central Nigeria (Figure 1), is a key location in Yoruba history and archaeology. It was regarded as a frontier of the Oyo Empire (seventeenth–nineteenth centuries AD) and an entrepôt of Islam in Yorùbáland (Jimoh 1994). Located 168km north of Ile-Ife and 360km north-east of Lagos, Nigeria, Ilorin was, by the late eighteenth century, involved in West African Atlantic trade, dealing in commodities such as stone beads and pottery (O'Hear 1983). Recent archaeological investigations in Ilorin have pushed back the occupation of northern Yorùbáland, suggesting complex societies in the area (sixth and twelfth centuries AD), pre-dating Oyo imperialism (Owoseni & Haour 2022; Owoseni 2023).

[FIGURE 1, 13.5cm colour]

Erinle Town (8°05′50.30″N, 4°42′11.46″E)

Located south-east of Ilorin, this primarily agrarian community lies 126km north-west of Ile-Ife and 273km north-east of Lagos (Figure 1). Oral tradition traces the town's foundation to the thirteenth century AD, linked to migration from Ile-Ife (Oduntan 2022). As with Ilorin, Erinle features herringbone-patterned potsherd pavements, offering valuable comparative potential for studying regional interactions and production in medieval Yorùbáland.

Materials and methods

The study examined 500 potsherds from Ilorin, recovered from the potsherd pavement surface of a 1 × 1m excavated unit (PPII), part of previous archaeological research (Owoseni 2023) (Table 1, Figure 2). Due to its location, exposed on an unpaved motor road, excavation opportunities for the potsherd pavement in Erinle were limited and only 41 samples were collected (Table 1). Sherds were carefully extracted using trowels to prevent breakage. Macroscopic analysis focused on surface decorations, sherd morphology (rim or body), colour, size, shape and thickness, and identifying inclusions and edge modifications (Table 1).

[FIGURE 2, 13.5cm colour]

[TABLE 1]

Discussion

The construction of herringbone potsherd pavements at Ilorin and Erinle reflects shared architectural traditions and suggests cultural connections (Table 1). However, comparative analysis of the sherds reveals nuanced differences in technological choices associated with pottery production (Figures 3 & 4). Similarities in surface colour characteristics suggest comparable oxidising conditions during firing, likely achieved through open firing methods (Heather & Miller 2007). Both centres show evidence of intentional modification of sherds for reuse in pavements, consistent with practices elsewhere in West Africa (Ogundiran 2002). Oral accounts from Ilorin mention the use of iron blades by artisans to shape potsherds used for pavement constructions.

[FIGURE 3, 13.5cm colour]

[FIGURE 4, 13.5cm colour]

Erinle potsherds have more inclusions (likely mica and quartz) than those from Ilorin, indicating differences in raw material sourcing, ecological environments or trade networks (Rice 2005), and probable geological or ecological influences on production choices. Ilorin's larger assemblage includes both body and rim sherds, while only body sherds were identified at Erinle—restricting efforts at the latter to determine vessel forms and functions, as rims are crucial for such interpretations. Larger, thicker sherds at Ilorin suggest different vessel types, clay sources or preferences for pavement construction. Decoration also varied: decorated potsherds were more prevalent in the Ilorin assemblage, suggesting greater emphasis on aesthetics, possibly indicating social hierarchy, ritual function or community identity. Comparative analysis suggests that the potsherds were from locally produced, domestic

pottery repurposed for pavement construction, rather than traded items made specifically for pavement architecture. This implies they were everyday objects adapted for a new purpose. Shared features, such as the herringbone pavement pattern and sherd colouration and polygonal modifications, suggest that these centres participated in larger cultural traditions with regional interactions through architectural knowledge, artisan practices or social values. However, variations in inclusions, decorations, ceramic compositions, sizes and thickness, suggest local adaptations based on community resources, environmental constraints and social practices.

Conclusion

The shared potsherd-pavement tradition exemplified in Ilorin and Erinle highlights the interconnectedness of medieval Yorùbáland, underscoring regional interaction and cultural continuity, while production variation in pottery demonstrates local innovation and identity. Comparative ceramic analysis thus provides valuable insights into the technological practices, social dynamics and cultural exchanges of medieval West Africa.

Acknowledgement

My thanks to Dr Matthew Davies for his comments on the manuscript.

Funding statement

I am grateful for the funding received from the McDonald Institute for Archaeological Research, University of Cambridge, UK.

References

AGBAJE-WILLIAMS, B. 1987. Ife, Old Oyo and Benin: a chronological consideration in the light of recent archaeological work at Old Oyo. *The Nigerian Magazine* 55(4): 23–31.

AGUIGAH, D. 2018. *Archéologie et architecture traditionnelle en Afrique de l'Ouest. Le cas des revêtements de sols au Togo*. Paris: L'Harmattan.

CONNAH, G. 1976. The Daima sequence and the prehistoric chronology of the Lake Chad region of Nigeria. *The Journal of African History* 17(3): 321–52. https://doi.org/10.1017/S0021853700000475

GARLAKE, P.S. 1974. Excavation at Obalara's land, Ife: an interim report. *West African Journal of Archaeology* 4: 111–48.

HAOUR, A. 2013. Mobilité et archéologie le long de l'arc oriental du Niger: pavements et percuteurs. *Afriques* 4. https://doi.org/10.4000/afriques.1134
HEATHER, M. & L. MILLER. 2007. *Archaeological approaches to technology.* Oxford: Elsevier. https://doi.org/10.4324/9781315434612
JIMOH, L.A.K. 1994. *Ilorin: the journey so far*. Ilorin: Atoto.
MCINTOSH, S.K. 1995. *Excavations at Jenné-Jeno, Hambarketolo, and Kaniana (Inland Niger Delta, Mali).* Berkeley: University of California Press.
NZEWUNWA, N. 1989. Prehistoric pavements in West Africa. *West African Journal of Archaeology* 19: 93–116.
ODUNTAN, O. 2022. The history of Odumosa. The powerful hunter and founder of Erinle. Available at: www.olaleone.org/2022/12/the-history-of-odumosa-powerful-hunter.html (accessed 08 Sep. 2025).
OGUNDIRAN, A. 2002. *Archaeology and history of Ilare District (Central Yorùbáland, Nigeria) 1200 – 1900 A.D.* (British Archaeological Reports International Series 1090). Oxford: Archaeopress.
OGUNFOLAKAN, A. 2009. Settlement strategies, ceramic use, and factors of change among the people of northeast Osun state, Nigeria, in T. Falola & A. Usman (ed.) *Movements, borders, and identities in Africa*: 81–98. Rochester: University of Rochester Press. https://doi.org/10.1515/9781580467285-005
O'HEAR, A. 1983. The Economic history of Ilorin in the nineteenth and twentieth centuries: the rise and decline of a middleman society. Unpublished PhD thesis, University of Birmingham.
OWOSENI, B.J. & A. HAOUR. 2022. Survey and excavations in Ilorin, Nigeria: a first archaeological insight. *Nyame Akuma* 97(1): 36–42.
OWOSENI, B.J. 2023. The settlement of Ilorin, Kwara State, Nigeria: an archaeological and ethnohistorical investigation. Unpublished PhD Dissertation, University of East Anglia.
RICE, P.M. 2005. *Pottery analysis: a sourcebook*. Chicago: University of Chicago Press.

[Figure captions]

Figure 1. Map of Nigeria showing Ilorin and Erinle and the locations of the pavement sites (Credit: B.Owoseni).

Figure 2. Potsherd pavement from Ilorin (photograph by B. Owoseni).

Figure 3. Pottery from Ilorin pavements: a mixture of polygonal-shaped sherds, including both decorated and plain examples (photograph by B. Owoseni).

Figure 4. Pottery from Erinle pavements; left) the only decorated sherd from Erinle, which is worn (photograph by B.Owoseni).

Table 1. Summary of analysed potsherds from Ilorin and Erinle Pavement sites.

Description variables	Ilorin	Erinle
n (sherds)	500	41
Undecorated (%)	466 (93.2%)	40 (97.6%)
Decorated (%)	34 (6.8%), style varies	1 (0.4%)
Pottery composition	Body and rim parts	Body only
Colour	Brown and grey	Brown and grey
Inclusions	Fewer	Higher
Size: longest single dimension (mm)	25–95	25–38
Thickness (mm)	90–195.3	78.6–176.2
Modifications (e.g. chipping)	Polygonal shapes (i.e. triangular, rectangular)	Polygonal shapes