

The living legacy of Ari Siiriäinen: Six decades of Finnish archaeological research on the African continent

Oula Seitsonen

Abstract

Archaeological work on the African continent carried out by the researchers from the University of Helsinki has been an important part of the research output of the department of archaeology in the late-20th and early-21st centuries. This has been closely intertwined to the lifework of late professor Ari Siiriäinen (1939–2004). In this chapter, I review the research carried out in Africa by Finnish archaeologists, virtually all originating from the University of Helsinki, and the importance and future prospects of this work.

Keywords: Africa, archaeology, Ari Siiriäinen, cultural ecology, pastoralism

Africa, the cradle of mankind. Archaeological research on the massive African continent has been taking quick steps forward over the past two decades compared to the situation at the turn of the 21st century when University of Helsinki's late Professor of Archaeology Ari Siiriäinen (1939–2004) led his last expedition to East Africa (Figure 1). I was privileged to take part in his final project in 2002–2005, alongside my esteemed colleagues Vesa Laulumaa and Martti Koponen, in the part of the globe that had made the greatest impression on Ari ever since he took part on his first expedition abroad back in the 1960s. Basically all work carried out by Finnish archaeologists in Africa is tied to Ari's influence and lifework (Seitsonen 2005a).

However, despite the fast advances in the recent years on the African continent and more widely in the archaeological sciences, for instance in genetic and residue studies that have revolutionized many long-held views (e.g., Lipson *et al.* 2020; Culley *et al.* 2021), large parts of Africa are still archaeologically effectively *terra incognita*. Especially the coverage of studies is often patchy and information from selected well-studied regions is typically extrapolated over vast

areas. Also, just like with Ari and his legacy in Finland, globally the archaeological and palaeontological work in Africa is strongly personated with certain active researchers, such as the highly influential Leakey family and the Turkana Basin Institute established by Meave Leakey and the recently passed away Richard Leakey (1944–2022) in Kenya, with whom Finnish researchers have lately been working (Seitsonen 2015; Fortelius *et al.* 2016).

In this article I review the research carried out on the African continent by Finnish archaeologists, virtually all hailing from the University of Helsinki, and the importance and future prospects of this work. However, to begin with I take a brief look at the very first archaeological excavation in Africa, which was carried out by a Swede, and present one early Finnish adventurer, Henrik Jakob Wikar, who made insightful and useful ethnographic and geographic observations during his travels. Then I proceed to revise the work carried out in Africa, mostly in the sub-Saharan region (Egyptological work is left outside the scope of this paper), by the archaeologists from Helsinki in the 20th and 21st centuries, especially by Ari Siiriäinen.



Figure 1. Martti Koponen and Ari Siiriäinen on survey in Engaruka, north Tanzanian Rift Valley. Photo: Oula Seitsonen (2002).

Early Nordic explorers: First archaeological excavation in Africa and ethnography

Finnish explorers and adventurers have been roaming the African continent at least since the 18th century AD. Some of them made during their travels also good and insightful ethnographic documentation that can be applied in archaeological and anthropological studies. The first documented archaeological excavation in Africa was also carried out in the late-18th century, in 1776. The honour of this goes to our neighbour, as the study was carried out by Swedish Anders Sparrman (1748–1820) (Robertshaw 1979). Sparrman was born as the son of a vicar in Uppland and studied medicine and natural sciences in the University of Uppsala under the guidance of Carl von Linné (Linnaeus). After finishing his studies, he enlisted as a ship doctor for the East India Company and is best remembered as the botanist of the second voyage of James Cook in 1772–75 (Wallström 1983). After returning from Cook's expedition to southern Africa, Sparrman excavated in 1776 a large, findless stone cairn near Cookhouse, in modern day South Africa. This cairn has been later interpreted to have been linked

with the Zulu *isivivane* tradition, where passers-by added new rocks in cairns situated at crossroads and fords. This custom was linked to the ideology of communality typical to many traditional African communities (Robertshaw 1979).

Of the early Finnish travellers in Africa most important was Henrik Jakob Wikar (1752–?). Wikar was the son of the vicar of Kokkola and started studying in the Academy of Turku in 1769. After this he vanishes from the Finnish sources but surfaces in Amsterdam in 1773 when he signed up to work for the Dutch East India Company (Sivonen 1982). In the service of the East India Company Wikar ended up in Cape Town, where he struggled with gambling problems and debts, which might also give hints why he had left Turku some years earlier. In May 1775 he escaped his debtors into the uncharted inland of southern Africa and spent the next four and half years travelling up and down the Orange River valley (Afrikaans/Dutch: *Oranjerivier*). Little is known of his travels until 1778, but after that he started to keep a careful diary and mapping the river valley. He made insightful observations of the environment, fauna, flora, and the various ways of the 'bushman' [sic] tribes, such as their subsistence, beliefs, customs and trade connections

(Sivonen 1982). Besides these societal observations, archaeologically interesting are Wikar's notes on the arrows used by the locals with 'white stones' as arrowpoints. This likely refers to the millennia-old tradition of using quartz or chert microliths in arrows and other tools (e.g., Mossop 1935, 135). Microliths made of both stone and glass were common in southern and eastern Africa at least until the late 19th century (e.g., van Rippen 1918; Schapera 1930; Deacon & Deacon 1999).

Wikar's motive for keeping a detailed diary of his travels was revealed in his letter to Governor van Plettenberg in 1779. He explained that he has been making important observations of the uncharted inland, and apparently hoped to be allowed back to the service of the East India Company. With the Governor's approval Wikar returned to Cape Town in 1779, after which he vanishes from the documents (Sivonen 1982).

Start of the Finnish scientific archaeology in Africa, 1961–1965

The 1960s saw the start of scientific work by Finnish archaeologists on the African continent. Prior to that, most of the archaeological fieldwork in Africa had been carried out by the former and present colonial masters. The large-scale rescue work of the 'International Campaign to save the Monuments of Nubia' started in 1959 by UNESCO changed this rather stagnant situation and included research teams from many countries without colonial possessions. The research was initiated due to the work on the Aswan Dam on the border of Egypt and Sudan that then resulted in inundation of large areas along the river Nile (Figure 2:1). Participants from 17 countries answered to UNESCO's call. The massive research undertaking included for example the study of the temples of Abu Simbel and Philae (see Scarpa 1961), but also a large number of other, less monumental localities were studied (e.g., Säve-Söderbergh 1979; Holthoer 1995; Siiriäinen 2001).

The Scandinavian Joint Expedition to Sudanese Nubia, 1961–1964

Nordic countries joined the UNESCO call by funding the 'The Scandinavian Joint Expedition to Sudanese Nubia' (SJE) in 1961–1964. This expedition got its own concession area on the eastern shore of River Nile running from the Egyptian border all the way down to the Second Cataract, one of the largest concession areas granted to any of the expeditions (Figure 2). In the surrounding areas the other expeditions had been at work since 1959, for instance, the Combined Prehistoric Expedition, the research team from the Chicago Oriental Institute, and the Spanish expedition. Typically, these carried out large-scale excavations in their areas (Holthoer 1995; Siiriäinen 2001).

The SJE included numerous young and eager researchers who later became notable academics. The Finnish team included Carl Fredrik Meinander, who was also the director of the whole Nordic expedition in its first fieldwork season, Gustaf Donner, S. Dreijer, C.F. Gardberg, Rostislav Holthoer, Aarne Kopisto, Thorvald Lindqvist, M. Linkola, Ville Luho, Irmeli Ojamaa-Koskinen, Ari Siiriäinen and Jouko Voionmaa. Of these, Donner was not an archaeologist, but quickly became a competent fieldworker. From the other countries SJE included for example Knut Odner from Norway, Torgny Säve-Söderberg from Sweden, and Klaus Randsborg from Denmark (Säve-Söderbergh 1979; Siiriäinen 2001; Figure 3).

Nordic researchers aimed at a total survey of the concession area to be inundated and carried out small-scale test excavations to assess the character, type, and dating of the located sites. When the SJE launched its campaign, the area was virtually an archaeological *terra incognita*. In the surveys a large number of previously unknown sites was located, dating from the Paleolithic to the Islamic Period. Originally the idea was to study only sites younger than the Mesolithic Period, as Paleolithic and Mesolithic habitation sites were to be studied by the Combined Prehistoric Expedition. However, in the SJE concession area also the older sites were studied by Nordic researchers (Säve-Söderbergh 1979), for instance, young Ari Siiriäinen who was interested

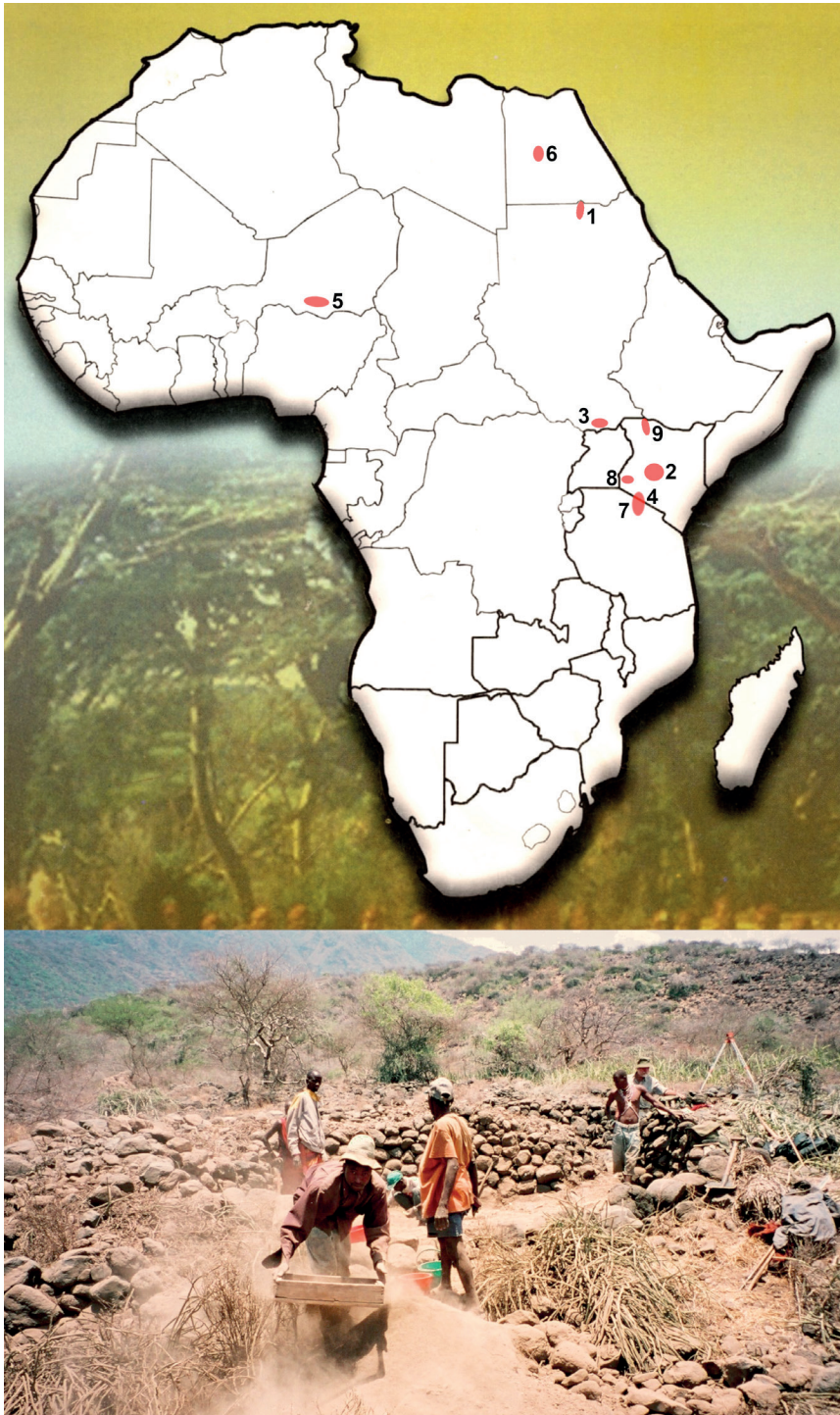


Figure 2. Top: Small red smudges on the huge African continent show the regions studied by the archaeologists from the University of Helsinki in 1961–2022: 1. Sudanese Nubia. 2. Laikipia, Kenya. 3. South Sudan. 4. Loita-Mara, Kenya. 5. Niger. 6. Western Desert, Egypt. 7. Engaruka-Sonjo Land, Tanzania. 8. Nyanza, Kenya. 9. Lake Turkana, Kenya. Bottom: Maasai workmen and Ari Siiriäinen excavating in Tanzania. Photo: Oula Seitsonen (2003).



Figure 3. Finnish SJE members, from left to right Rostislav Holthoer, Gustaf Donner, Irmeli 'Murre' Ojamaa and young Ari Siiriäinen. Photo: Ari Siiriäinen (1962–1963).

in lithics excavated the Paleolithic find localities Site 309 and Site 320 (Siiriäinen 1965; Figure 4). At different times, the Nordic expedition also employed 100–200 local workmen, who were successfully trained in archaeological fieldwork. Many of them became competent fieldworkers, and in the end the only tasks reserved solely for the Nordic archaeologists were mapping and report writing (Säve-Söderbergh 1979). The results of the SJE campaign were published as a massive multi-volume series in 1970–1991 (Siiriäinen 2001). However, there are a lot of new analyses that could be done with the excavated materials (see below).

The Finnish Nubia Expedition to Sudanese Nubia, 1964–1965

When the SJE ended, Gustaf Donner was devastated by the idea that the rest of the area would be inundated without studies. He was convinced that the region immediately south of the SJE concession area, which had been only cursorily

surveyed, held loads of sites that could be located in total surveys. Desperate to document the area, Donner decided to organize a smaller-scale follow-up for the SJE in 1964–1965: 'The Finnish Nubia Expedition to Sudanese Nubia' (FNE). He applied for and was granted a permit for field studies in an area reaching about 15 km south of Gemai on the eastern bank of the Nile River (Figure 2:1). Because the fieldwork of the joint Nordic project had ended, he had to start organizing the funding personally with small trickles from various sources, and in the end the fieldwork budget was relatively tight (Donner 1998a, 12–13; Siiriäinen 2001).

The FNE concentrated on systematic survey of previously unknown sites, especially burials, and attempted to at least test excavate as many of these as possible. Alongside Donner, two other SJE veterans took part in the FNE, Egyptologist Rostislav Holthoer and conservator Thorvald Lindqvist, together with Marina Donner and Carita Flander. The project hired about 35 local



Figure 4. Ari Siiriäinen admiring a Paleolithic flake in Sudanese Nubia wearing his famous pith helmet. Photo: Ari Siiriäinen (1962–1963).

workmen, who were all familiar from the previous field seasons and already experienced excavators (Donner 1998a, 13; Figure 5). To his lasting regret, young Ari Siiriäinen could not join the expedition as then professor of archaeology Ella Kivikoski ordered him to finish his Master of Arts studies instead of adventuring in Nubia (which he did not accomplish for another four years) (pers. comm. A. Siiriäinen 2003).

As so often happens with projects that have a tight field budget, the post-excavation work from the FNE took decades to finish. Only two brief reports were published of the work decades apart (Donner 1973; 1990). In the end, the results of the studies were finally published in 1998 as two volumes of *Suomen Muinaismuistoyhdistyksen Aikakauskirja* (Donner 1998a–b). Unfortunately, all the main researchers passed away before the publication was realized, and due to this the final publication was quite superficial and consisted mostly of site descriptions and find catalogues (Siiriäinen 2001). Owing to this, the results of the FNE, and to an extent also those of the SJE, are still little formless and hold a lot of research potential. At the moment, we are involved with my colleague Juuli Ahola (Ahola 2020) in a

pilot project, funded by the Joint Committee for Nordic research councils in the Humanities and Social Sciences (NOS-HS), mapping the state of the Nubian finds in the Nordic countries and attempting to revitalize their study (Lane *et al.* 2020), and also reviving the work on the finds stored in Finland, funded by the Finnish Cultural Foundation (Seitsonen 2021–2022).

As one special example related to these materials, most of the lithic finds from the FNE had gone missing at some point after they were transported to Finland in the 1960s and are thus missing from the final publications (Donner 1998a–b). After Ari passed away in 2004, we uncovered these in a large plastic container in a closet at his home, alongside his fieldnotes from various expeditions. Ari had obviously decided at some point to start working on that material, as some of the finds were preliminarily sorted, but then that work had been put aside when something else had come up, probably professorial duties based on the dates on the note slips. After the recovery of these finds from his home, they were transported into the archaeology department cellar at the University of Helsinki, and vanished once more. They were not seen again until 2021,



Figure 5. Local workmen digging in Nubia. Photo: Ari Siiriäinen (1962–1963).

when I finally could find time to dig into that messy cellar space (as my fieldwork was cancelled owing to the Covid-19 pandemic) and uncovered the container once again under some mixed junk (Figure 6). Now, I am finally working on that material so that it can be published and added to the other finds stored at the Finnish Heritage Agency (Seitsonen, forthcoming). The other find materials, such as the ceramic finds, stored at the Finnish Heritage Agency could also offer excellent, little studied research materials for archaeologists interested in Nubian archaeology (Ahola 2020).

Ari Siiriäinen's time in African archaeology, 1971–2004

Taking part in the SJE made a lasting impression on the young archaeology student Ari Siiriäinen, and the rest is, as the saying goes, history. Ari's favorite reading already as a child had been stories about great adventures and exploration, and he had collected notebook after notebook of statistical information and maps of exotic and remote lands (Huurre 1999a; pers. comm. A. Siiriäinen 2004). Being part of the African 'adventure' in 1962–1963 had a massive effect on what came in the future:

'Testimony that I do not dream: I am writing this at Farakasen Naq'abdel-Karim of Sudanese Nubia, and look west, to Sahara. In front of me flows the Nile, in the middle of it is an island, el Geziret Faras. Palm trees, desert, feluccas, village with its

clay huts and dark inhabitants... on Wednesday 16th day of January a.d. 1963.'

(Ari Siiriäinen's field notes 1962–1963; translation by the author)

After the SJE fieldwork Ari travelled further up the Nile River, all the way to Juba. He later stated that especially this first sense of 'real' Sub-Saharan Africa had a massive effect on him, as it was exactly what he had been reading and dreaming about as a child (pers. comm. A. Siiriäinen 2002). A couple of decades later he returned to this area with his colleagues from the British Institute in Eastern Africa (BIEA) to carry out archaeological studies there (Siiriäinen 1982).

After his first African adventure, Ari spent the late 1960s working on Finnish archaeology and his PhD dissertation on prehistoric shoreline displacement in Finland. However, the Sudanese expedition left him with itchy feet and the African savannahs and deserts were always at the back of his mind (pers. comm. A. Siiriäinen 2002), and, indeed, all the Finnish archaeological work in Africa after the 1960s is somehow connected to Ari's research.

Pounding of the drums in the shadow of Mount Kenya: Ari's first East African expeditions in the 1970s

Ari described that the unlikely starting point for his major African work were the excavation he carried out in Northern Finland in the late 1960s.



Figure 6. The lost, found, lost and re-found lithics of the Finnish Nubia Expedition, recovered from under assorted stuff deep in the cellar. Photo: Oula Seitsonen (2021).

In the winter 1970, he was getting desperate while struggling to get a hold of the vast quartz-based material from those excavations. This continued his interest in the themes initiated in his Master of Arts thesis (Siiriäinen 1968). As a sidenote, Ari's M.A. thesis was one of the first in the Finnish archaeology to rely heavily on computer-driven analysis of finds, of which he was extremely proud at the time, carrying the piles of punched-cards populated with the characteristics of quartz lithics to be analysed at the university main computer (pers. comm. A. Siiriäinen 2003).

Just when Ari was about to 'go completely ballistic with those disgusting quartz lithics', it occurred to him that one should find an area where quartz has been used contemporaneously alongside so-called better quality lithic raw materials (pers. comm. A. Siiriäinen 2003). That way he would be able to start examining the idiosyncratic characteristics of quartz knapping and tools. Through a literature search, for example from Mary and Louis Leakey's publications of their early work in Kenya and Tanzania (e.g., Leakey 1931; 1936; 1966), Ari noticed that in East Africa he might find sites where quartz, chert and obsidian lithics were manufactured side-by-side within the same cultural framework. However, this choice of geographical region was likely also affected by the adventure books read as a young boy and the thrilling experiences of the Nubia expedition. Ari decided to bravely contact the then director of BIEA Dr. Neville Chittick (1924–1984) and inquired if he could come and excavate in Kenya. Chittick invited him to join the fieldwork of their then major research endeavour, the Bantu Project, in 1971 (pers. comm. A. Siiriäinen 2003). BIEA is one of the most important research institutes for history, archaeology, and anthropology in the East African region, and also the later Finnish studies in Kenya and Tanzania have been organized in co-operation with it.

However, the grand idea of assessing how the flaking properties of different lithic raw materials have affected the knapping techniques and the end products did not come even close to answering during Ari's first expedition. BIEA offered that Ari could excavate a Late Iron Age site at Gatung'ang'a, west of the Mount Kenya (Figure 2:2). In the end, the find material from the

dig consisted of about 60 kilograms of ceramics and 77 lithics. On the other hand, this was also a meaningful turn for the future directions of Ari's work in East Africa, as he became inspired (or forced) to study further the pottery (pers. comm. A. Siiriäinen 2003). At Gatung'ang'a he managed to prove the cultural continuity from the Early to Middle Iron Age, a central question that was reached only decades later in the adjoining areas (Siiriäinen 1973; Hurskainen & Siiriäinen 1995).

On this first East African excavation Ari also got his first taste of potential problems with the local workmen. He was unaccustomed to the very different way that things were organized and carried out in the local context and within the prevailing hierarchies, compared to Finland or even the more institutionalized context of the SJE fieldwork he had encountered in Sudan (pers. comm. A. Siiriäinen 2002). This caused numerous minor and major irritations during the excavations:

'200,- stolen, I strongly suspect [local workman]! --- Scary moments in Dondol. In Samburu kraal, unpleasant. --- Sighting compass lost! Is [local workman] a thief? --- Has hidden also the measuring tape! --- a suspicious looking guy dropped by to spy on us; robbers on the move! I took the spear inside – I don't like the Kikuyu Land or Kikuyus! Tense conversation with [local workman] about his reimbursement --- Disgusting discussion with [local workmen] about --- compensation for the excavation. --- trees had been felled directly over our trenches. Upsetting argument with [local workman].'

(Ari Siiriäinen's field notes 1971, names of the local workmen censored; translation by the author)

Yet, these numerous unexpected hindrances during the excavations only raised Ari's fighting spirits and urged him to overcome and adapt to the new cultural context and the differing ways of seeing and doing things, and eventually also to return to East Africa with much better success in the future. Alongside the troubles with the workmen, Ari was also missing his family, something that he never got used to no matter how much time he spent in the field (pers. comm. A. Siiriäinen 2003) (Figure 7). He sometimes tried to take mem-

bers of his family with him, but that was often complicated by the remoteness of his field sites, both in Africa and South America.

Altogether, the scarcity of lithics and the challenging relations with the workmen might have had their benefits in raising Ari's wider interest in East African studies and a seething urge to return. He got especially interested in the little-known Iron Age 'raised ridge pottery' that he and archaeologist Robert Soper spotted at several locations in Laikipia, on the northern side of Mount Kenya, after the Gatung'ang'a excavations. These finds led to Ari's most notable studies in East Africa.

In 1973 and 1976 Ari carried out wide-scale surveys and excavations in the Laikipia region (Figure 2:2), which is the stunning setting for example for the magnificent Academy Award-winning movie *Nirgendwo in Afrika* (Nowhere in Africa; Link 2001). Besides Soper's reconnaissance and small test excavations in 1970, Laikipia was virtually an archaeological *terra incognita* when Ari started his research. The monograph that he published about his Laikipia research (Siiriäinen 1984a) became Ari's most important and lasting contribution to East African archaeology and is still often

cited (Lane 2004; Causey & Lane 2005; Taylor *et al.* 2005; Causey 2010; Iles & Lane 2015; Boles & Lane 2016; Petek 2018; Muiruri *et al.* 2022).

The Laikipia studies also fulfilled Ari's original research theme in East Africa, as he found plenty of knapped lithics of different raw materials, especially quartz, chert and obsidian. This allowed him to analyze and compare how the differing fracturing and flaking characteristics of each raw material had affected the organization of the lithic reduction sequences (Siiriäinen 1977a–b). These kinds of technological considerations started gaining ground elsewhere only decades later (Knutsson 1988). In addition to the lithics, Ari was inspired by the long discussions with his British and American colleagues working in East Africa. He became influenced by the wealth of themes he encountered during his first African studies, such as the role of environmental and climate change and ecosystems on, for instance, livelihoods, technologies and migrations, and the wider long-term cultural ecological perspectives (pers. comm. A. Siiriäinen 2004). These set the directions for the development of his work on the African continent.



Figure 7. Ari's sketches for drawings he sent home in letters for his family (Ari Siiriäinen's field notes 1971).

Widening the horizons: Ari's African expeditions in the 1980s–1990s

In 1978–1981 Sudan's archaeologically poorly known southern regions encountered a rare peaceful period. As a result of this, altogether four international expeditions were sent out in the area. In 1981 also Ari was invited by his colleague Peter Robertshaw to take part in the BIEA research in Southern Sudan (Figure 2:3) where he had travelled already almost two decades earlier (Siiriäinen 1982; 1984b; Robertshaw & Siiriäinen 1985). However, the political atmosphere in Sudan was already getting worse when Ari joined the fieldwork. Consequently, the researchers had to continuously balance between simply surviving in the sensitive political situation and the demands set by their scientific work.

Ari said that he experienced the most unpleasant field experience of his long career in South Sudan, when one day the local warriors had gotten a hint that the archaeologists were uncovering human burial at the excavation site. The situation escalated quickly, as the warriors appeared at the site dressed up for war and waving their war-spears and insisted to observe the excavations (Figure 8). Uncovering the skeleton was a tense, slow and menacing process under the observing eyes of aggressive

warriors. Eventually the situation eased as the warriors interpreted from the teeth of the deceased that he had belonged to a rival tribe, and this turned in the end into a celebration of how the ancestor of their neighbours ended up in a plastic bag and a museum in Khartoum (Siiriäinen 1996a).

This incident, that Ari often remembered afterwards, shook his otherwise calm personality so much that he stated categorically that he would not set a foot in South Sudan until there is a lasting peace (pers. comm. A. Siiriäinen 2002). Ari also made a short visit to Khartoum in the mid-1980s to get a feel of the research scene and to greet some old SJE colleagues. He was greatly disillusioned by the somewhat resigned atmosphere of alcoholism and defeatism that he encountered (pers. comm. A. Siiriäinen 2003). Giving up was something that he could never accept. Despite some early-21st century expeditions, the past of the South Sudanese area is still sketchily known. Some of the keys for understanding the development of the Stone Age pastoralist cultures of East Africa might still await on the *toich* grass plains of South Sudan. The area is now once again in turmoil, despite the recent independence, which effectively hinders archaeological work.



Figure 8. Local warriors and children observing the excavation process in southern Sudan; people in the photograph are not related to the upsetting events described in the text. Photo: Ari Siiriäinen (1981).

Ari applied for the professorship in archaeology at the University of Helsinki and received it in 1983, which took some time off from his African work. To ensure the continuity of Finnish African archaeological research, Ari figured that he should introduce some students to the theme. Thus, the next year as he headed to the savannahs of Kenya, he had archaeology student (and later archaeologist) Juha Laurén with him. Juha took part in the fieldwork in the Loita-Mara region of southwest Kenya in 1984 and 1986 (Figure 2:4). However, in the late 1980s Ari's interests started to orient more and more towards other areas, especially South America (e.g., Pärssinen & Siiriäinen 1997; 1999a; Pärssinen & Korpisaari, this volume). Therefore, the Loita-Mara studies were left incomplete (see Siiriäinen 1990a) and were finally published for the most part only in the 21st century (Simons 2005; Siiriäinen *et al.* 2009). In fact, just in 2021 I found the missing bits of documentation from Ari's 1984 excavations in the Archaeology cellar of the University of Helsinki and will now finally be able to process those studies to get that information into the public domain.

Besides covering literally new ground outside the African continent, also in Africa Ari's attention was diverted to more holistic and higher-level questions that mattered for example to the understanding of the long-term roots of modern environmental issues and conflicts, and also to development co-operation (Siiriäinen 1986; 1988; 1991; 1996b). Especially questions about deforestation and desertification got into focus, and Ari took part also in the working of the Club of Rome (Siiriäinen 1984c; 1987a–b; 1989; 1990b; 1994; 1996b–c; 2000). Desertification and deforestation research led for example to Ari's solo expedition to Niger in 1988 (Figure 2:5 and Figure 9). In Zinder, southern Niger, Ari scribbled this note that characterizes him well into the margin of his notebook:

'Damn it, sometimes it feels like I was born just for this – adventuring in the remote outback, but always making scientific observations – it's a man's life!!! No water in the taps – brought to the bathroom in a big bottle. Cockroach war. [sic]'

(Ari Siiriäinen's field notes 1988; translation by the author)

Desertification and long-term climate change were strongly present also in the 1990s playa studies Ari carried out with Finnish geologists in the Western Desert of Egypt in 1995–1997 (Siiriäinen 1999b; Donner *et al.* 1999; Figure 2:6). These allowed Ari to also return to the study of Paleolithic stone tools, an interest that had been lingering at the back of his mind ever since his SJE excavations in 1962 (pers. comm. A. Siiriäinen 2004).

Finally, in 1996 Ari got a chance to return to his beloved East Africa. This time he had also students with him, my future colleagues Martti Koponen and Vesa Laulumaa, who both wrote their master's theses on African themes (Laulumaa 1997; Koponen 1998; Laulumaa & Koponen 1999). They both continued working on the continent in Ari's last African project 'Cultural ecology of the East African savannah environment in a long-term historical perspective' in 2002–2004. The project continued the research line initiated by Ari since the 1970s, studying the long-term development of the livelihoods, networks, ethnohistories and cultural ecology of precolonial societies in Kenya and Tanzania. I joined in the project as a young student and got my first African field experiences in the North Tanzanian Rift Valley and on the shores of Lake Victoria in 2002 (Figure 1; Figure 2:7–8). Unfortunately, that also turned out to be Ari's last African expedition, owing to health issues and other pressing matters. Thus, Vesa Laulumaa and I carried out the following field seasons alongside our Kenyan, Tanzanian, British and Swedish colleagues.

Unfortunately, Ari never got to write out the results from his last African project, as he passed away on December 9th, 2004. Vesa and I were at the time in Nairobi, returning from a field trip to northern Tanzania (Seitsonen & Laulumaa 2007), and had just been discussing with Ari on the evening of December 8th about results, some sampling issues, and a planned photograph evening after our return when we could have presented the fieldwork to him. Ari was especially delighted of the Paleolithic finds we had made and of which I sent him some photos, as these had not been encountered earlier in our study area (Seitsonen 2005b; 2007b). Therefore, in the end Ari left the stage in his own style, with his symbolic fieldwork boots on, and future research goals and plans clear in his mind.



Figure 9. Ari surveying in Niger on the edge of the Sahara in 1988. Photo: Ari Siiriäinen (1988).

After Ari

After Ari's passing, we continued with Vesa Laulumaa the work for the final two years of his last African project (see Laulumaa 2004; 2006; 2007; Seitsonen 2006; 2009a–c; Seitsonen *et al.* 2013). After that, our fieldwork in northern Tanzania and Lake Victoria has continued sporadically in small scale together with our Africanist colleagues (Lane *et al.* 2007; Seitsonen 2010; Westberg *et al.* 2010; Seitsonen *et al.* 2012; Prendergast *et al.* 2013). I also managed to finalize publishing the results from Ari's 1986 fieldwork, that we had started processing with him before he passed away (Siiriäinen *et al.* 2009). As mentioned, some of the finds and field notes from his studies had gone missing over the years, but recently these lost items have been re-found one by one, as the Covid-19 pandemic has allowed taking time to search the university storage facilities when fieldwork was mostly cancelled. The work on getting this information into the public domain is, thus, still ongoing, as is also the publishing of the more recent archaeological studies we have carried out with our international colleagues over the 2010s.

Most recently I have been involved in the co-operation between the Turkana Basin In-

stitute, founded by the Leakey family, and Finnish paleontologists and geographic information systems (GIS) specialists (Seitsonen 2015; Figure 2:9). In the pre-GPS (Global Positioning Systems) days, Leakeys had come up with a novel documentation system, where they marked all the fossil and stone tool find locations in high-resolution aerial photographs by punching a hole at the place with Acacia thorns and numbering the loci on the backside of these images. We are now in the process of geo-rectifying this backlog of air photos and find locations and turning them into a GIS research database. Besides this, I am working with ecologists on developing approaches to assess the so-called 'long Anthropocene' and study the past, present and future effects and possibilities of pastoralism in different parts of the world, for example in East Africa, Mongolia and northern Fennoscandia (Stephens *et al.* 2019; Cabeza *et al.* 2021; Manzano *et al.* 2021; 2023). Besides these new research directions, my colleagues and I are active in the abovementioned joint-Scandinavian return to the very beginnings of Finnish, Swedish, Norwegian and Danish African archaeological research, by revitalizing the work on the collections from Sudanese Nubia (Ahola 2020; Seitsonen 2022).

I have been especially delighted to notice that Ari's legacy lives on internationally and that his African research has not been forgotten. It is among the most widely known and influential works carried out by Finnish archaeologists. His African studies stretched over four decades, covered vast geographical areas, and ranged temporally from the Paleolithic to contemporary issues. Altogether, the African archaeological research by Finnish archaeologists covers six decades, and can be divided into six main phases (Figure 10):

- 1) Birth of Finnish African archaeology: the Nubia expeditions and Ari's first excavation in East Africa, 1961 to 1971.
- 2) Ari's peak period: Work in the Laikipia and Loita-Mara regions in Kenya, 1971 to the mid-1980s.
- 3) Waning of Ari's African activity: Ari's interests became to encompass new areas (most importantly to Andes and Amazonia), from the mid-1980s to the mid-1990s.
- 4) Rebirth of Finnish African archaeology: Ari's return to East Africa and Sahara and his last field project in northern Tanzania, from the mid-1990s to the early-2000s.
- 5) Bearing the flame: Carrying on and finishing the work on Ari's last research project in East Africa, from the early-2000s to the mid-2010s.

6) Covering new and old ground: New research themes in co-operation with paleontologists and ecologists, and a return to the beginning with the re-examination of the materials from the Nubia expeditions, since the mid-2010s.

These phases are mirrored in both African archaeological fieldwork and publication activity by Finnish archaeologists. As can be seen from Figure 10, over 50 percent of all the publications are Ari Siiriäinen's handiwork (Huurre 1999b), while I am responsible for about one fourth of them, and about half of the rest are the work of Vesa Laulumaa. Ari's African publication activity was on the rise from the 1960s to the turn of the 1990s, which reflected his most active fieldwork period in East Africa. By 1990 Ari had published most of the work he had carried out so far (Siiriäinen 1990a), although some of it was left unfinished (Siiriäinen *et al.* 2009). The peak period of his African publications was seen in the late-1980s with the active and socially influential environmental historical and development co-operation discussions. He summed up his acquired knowledge in African archaeology in the monograph *Afrikan kulttuurien juuret* (Roots of African Cultures), published together with Arvi Hurskainen in 1995 (Hurskainen & Siiriäinen

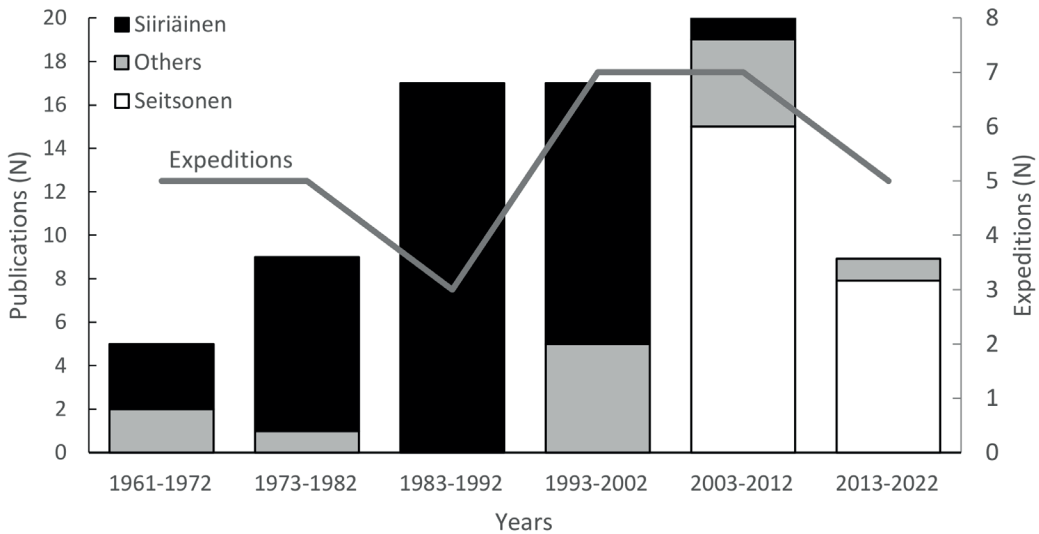


Figure 10. Number of publications dealing with African themes (columns, scale on the left) and expeditions to sub-Saharan Africa (solid line, scale on the right) by archaeologists from the University of Helsinki in 1961–2022.

1995). That book can be seen as an interim summary of his work in Africa until then. In the 1990s, the new research fields in South America reduced Ari's publication activity on African themes, but by the late-1990s his African feet had started itching again, and a new rise in his interest can be seen with the new research activity in northern Tanzania. After Ari passed away, Finnish contribution in the African archaeological research has relied on Vesa's and my contributions.

It remains to be seen what directions the Finnish African archaeological research will take in the upcoming decades. Since its beginnings in the 1960s, the existence of this field has relied on a handful of active and industrious individuals, and its continuity rests solely on introducing new Finnish Africanists into the field (Figure 11). In the past decade, there has been a trickle of enthusiastic archaeology students working on African themes (e.g., Louzolo 2014; Ahola 2020). For example, Sarita Louzolo acted as a student representative on the Society of Africanist Archaeologists executive committee in 2012–2014, and now there are a few students working on the Nubian find materials, which is an encouraging prospect for the future. However, fieldwork carried out on the African continent is an especially important way to recruit and get new initiates more firmly drawn into the archaeology of this geographical area. In recent years Helsinki archaeology students have been able to join in for example the Turkana Basin Institute field schools that cover paleontology and archaeology in northernmost Kenya.

Ari was keen to keep up the Finnish archaeological research in sub-Saharan Africa until the end of his life. He hoped to return to it fully, in his own words, '--- as soon as we get all this South American business out of the way.' (A. Siiriäinen, email to the author, June 1st, 2004; translation by the author). In his last email to me, two months before his untimely death, Ari stated that: '--- I would sit in Nairobi for a couple of weeks writing – I have all kinds of small ideas that should be put on the paper before I finally hang up my work gloves. We'll see, day by day.' (A. Siiriäinen, email to the author, 11 October 2004; translation by the author).

We'll see, day by day.

Acknowledgements

I want to thank all my wonderful Africanist colleagues with whom I have had the privilege to roam the savannahs of East Africa! This includes most importantly the departed *wazee* Ari Siiriäinen and Joseph Mutua, and Martti Koponen and Vesa Laulumaa with whom I have happily Engaruka'd through the years. I owe gratitude also to the wonderful Ceri Ashley, Lee G. Broderick, Mikael Fortelius, Kennedy Gitu, Kate Grillo, Paul Lane, Audax Mabulla, Stephen Manoa Oino, Israel ole Molel, Gilbert Oteyo, Mary Prendergast, Daryl Stump, Ruth Tibesasa and David Wright.



Figure 11. Oula Seitsonen, Ari Siiriäinen and Vesa Laulumaa in northern Tanzania on Ari's last African expedition. Photo: Martti Koponen (2002).

Ari Siiriäinen – Professor of Archaeology in 1983–2002



Figure 12. 'A good archaeologist doesn't whine', Ari Siiriäinen in Greenland in 1977. Photo: Ari Siiriäinen.

Ari Pekka Siiriäinen (16 November 1939 – 9 December 2004) was born in Vyborg, Karelian Isthmus (nowadays Russia), on the eve of the Winter War of 1939–1940 (Huurre 2000; Carpelan & Lavento 2005; Seitsonen 2005). As an archaeologist, Ari became especially famous for his extensive travels, and indeed he was only a few weeks old when he was taken on his first trip, packed in a basket as the citizens of Vyborg were evacuated in the face of the Soviet bombings and attack on Finland. His family later moved to Helsinki, although Ari enjoyed referring to himself as a 'Vyborg lad' throughout his life. Ari described that already as a child his favourite reading were books about great adventure and exploration, which on the one hand offered him a respite and imaginary getaway from his broken home and, on the other, affected his thinking and wishes for the future (pers. comm. Ari Siiriäinen 2003). In the end, as an archaeologist, he became an explorer himself.

Ari studied at the famous 'Norssi', Helsinki Normal Lyceum, which he fondly remembered later in his life, and after finishing high school, he

started studying at the University of Helsinki. At first, his focus was on quaternary geology, but early on in his studies, he became involved in archaeology, first at a summer job excavating in Lapland in 1960. At the time there was a generation of archaeologists working in Lapland at rescue excavations related to the construction of several reservoir lakes and dams. Archaeology soon took over Ari's interests, although he never forgot his origins in geology, as was mirrored by the many research themes that he later pursued. During his studies, in 1966, Ari married Inger Lindholm, and they got three children, Petra, Tua and Pekka (Figure 13). Ari was also active in student life, and was, for example, one of the founding members of PADAY, 'Pien-Arkeologien Demokraattinen Ammatti-Yhdistelmä' (roughly translated as the 'Democratic Labour Confederation of Marginal Archaeologists'), a kind of predecessor for the current archaeology student union Fibula.

A vital turning point for Ari, as he often remembered, was his involvement as a young student in the Scandinavian Joint Expedition to Suda-



Figure 13. Family portrait drawn by Ari in the field in his notebook in the 1970s.

nese Nubia in the winter of 1962–1963. It fulfilled some of his childhood dreams and gave birth to new professional ones, which gave direction for his future work. However, then Professor of Archaeology Ella Kivikoski forbade Ari from taking part in the next field seasons in Sudan and demanded that he concentrate on finishing his Master of Arts thesis, instead of adventuring along the River Nile. Ari's MA thesis in 1968 became one of the first studies in Finnish archaeology to employ computer-powered analyses (using punch cards), and also one of the first technologically oriented analyses about the manufacture and use of quartz lithics, involving also experimental archaeology in the form of quartz knapping (Siiriäinen 1968). The lithic-technological studies were one theme that carried on to Ari's later work.

After his graduation, Ari was employed by the nowadays Finnish Heritage Agency, then State Archaeological Commission and, since 1972, National Board of Antiquities, and acted through the years, for instance, as an amanuensis, intendent

and the area supervisor of Lapland from 1973. In his day job at the Heritage Agency, Ari continued to pay attention to interesting and novel research themes, which often involved connecting archaeological and geological analyses. The isostatic shoreline displacement and its effects on Stone Age habitation and subsistence were one such theme, and Ari finished his Licentiate of Philosophy thesis already a year after his MA in 1969 on the Stone Age shoreline displacement chronology of the Finnish coastal zone (Siiriäinen 1969). Shoreline displacement chronology gained a central place in Ari's work, and he soon defended his PhD dissertation on the same theme (Siiriäinen 1974). Ari's dissertation was among the first in Finland based on publications, six articles published in 1969–1973.

Through the 1970s, Ari was employed at the Finnish Heritage Agency, but became also involved in archaeological work in East Africa since 1971. His original work in Kenya aimed at testing some of the hypotheses he had developed during his MA research, which he managed to assess based on his work on the Laikipia Plateau in Central Kenya (e.g., Siiriäinen 1977). Ari led several expeditions to Kenya, and on top of that visited the Soviet Eastern Karelia with geologists Matti Saarnisto and Hannu Hyvärinen in 1976, and took part in a joint Nordic expedition to Greenland in 1977 (Figure 1). He also worked at the University of Berkeley in 1978–1979. His term in Berkeley, as well as his close contacts and co-operation with the American and British researchers in East Africa, were vital for the formation of his scientific, cultural ecological and anthropological approach to archaeological research.

In the early 1980s, Ari applied for and was awarded the professorship of archaeology at the University of Helsinki in 1983. The professorial duties did not hinder Ari's urge to carry on his studies in East Africa, however, and already the following year saw him on an expedition in Kenya again. This time he had with him an archaeology student, Juha Laurén. Involving archaeology students in his expeditions became a common practice, as Ari realized that to carry on the Finnish involvement in African archaeology, and later also elsewhere, necessitated initiating and engaging new and active youngsters into the fieldwork. Besides various parts of Africa, Ari's research fields expanded with Martti Pärssi-

men to South America in 1989 (Figure 14), as part of the Finnish Jabal Haroun Project to Near East in 1997, and in 1998 to the former Finnish Karelia, to his ancestral grounds.

Alongside his numerous expeditions, Ari acted through the decades as a member in the Club of Rome, was always active in the archaeologists' professional organisations both in Finland and abroad and became enthusiastically involved in the development co-operation work inspired by the work in East Africa and his studies of long-term environmental and climate change. As a professor, Ari was always interested in and engaged with the students and their student union activities and was always encouraging for the young and aspiring generations. He was a dynamic and concentrated teacher and inspired numerous students to pursue the directions and themes that they were themselves interested in and motivated about. Ari was not without flaws as a teacher and professor, however, as his long absences due to fieldwork often placed stress on the other members of the department, as he somewhat regretfully mentioned after his retirement (pers. comm. Ari Siiriäinen 2003). He noted often jokingly that 'Good students don't need any supervision, and it's a waste of time to supervise the bad ones', an attitude that did sometimes show in his temperament and approach to teaching and

supervision. Still, Ari directed several generations of new professional archaeologists in his three decades as a professor in Helsinki, in which time also archaeology itself evolved tremendously in Finland and elsewhere. It is largely thanks to Ari and his wide international networks that archaeology at the University of Helsinki has been able to gain such an international standing nowadays, covering vast temporal and geographical ranges in the studies, from the earliest hominids in Africa to the contemporary archaeologies of modern-day Finland.

Unfortunately, soon after Ari retired in 2002, hoping to be able to fully commit to research without teaching and administrative responsibilities and finish a couple of book ideas he had in his mind, he was diagnosed with cancer and a heart disease after his last expedition to South America in 2003. Ari passed away on 9 December 2004, right after his 65th birthday. He would have had still a lot to give to archaeology in Finland, East Africa, South America and elsewhere, and Ari had many ongoing plans and ideas for future work that he was pursuing when his life was sadly cut short. Luckily, his students have been able to carry on his flame on different continents. Just before Ari passed away, he commented openly that both professionally and personally, 'I'll die as a happy man.'



Figure 14. Ari (fifth from the left) with locals and Finnish archaeologists in the Amazon. Photo: Ari Siiriäinen.

References

Archival sources

Siiriäinen, A. 1962–2002. Field notes from the African expeditions. Archaeology, University of Helsinki.

Electronic sources

- Lane, P., Fredriksen, P.D., Graham, A. & Dann, R. 2020. *Reinvigorating Scandinavian Archaeological Research on Nubia and African Collections*. https://www.arkeologi.uu.se/digitalAssets/777/c_777952-1_3-k_stavanger.pdf Accessed 1 Jan 2022.
- Manzano, P., Azcárate, F.M., Bencherif, S., Burgas, D., Byambaa, B., Cabeza, M., Cadahía, L., Chatty, D., Eronen, J.T., Galvin, K.A., Herrera, P.M., Holand, Ø., Itani, M.A., Niamir-Fuller, M., Pauné, F., Perrier, G.K., Scoones, I., Seitsonen, O., Stenseth, N.Chr., Varela, E., Waters-Bayer A. 2023. eLetters to Science: “Grazing research should consider mobility and governance”, answer to Maestre et al. “Grazing and ecosystem service delivery in global drylands”, 27 March 2023. *Science* 378(6622). <https://doi.org/10.1126/science.abq4062>.
- Seitsonen, O. 2015. *Human Evolution Workshop XI: Geographical Information Systems and their Application in the Turkana Basin*. Turkana Basin Institute, <http://www.turkanabasin.org/humanevolution/hew-11/>. Accessed 1 April 2022.

Bibliography

- Ahola, J. 2020. *Re-examining the spread of ideas along the Bronze Age Nile – Ceramic jugs in the Nubian-Egyptian borderland*. Unpublished Master of Arts thesis. Near Eastern Archaeology, University of Copenhagen.
- Scarpa, R. 1961. Paperino e il colosso del Nilo. *Topolino* 292–293. Sine loco: Walt Disney.
- Boles, O.J.C. & Lane, P.J. 2016. The green, green grass of home: An archaeo-ecological approach to pastoralist settlement in central Kenya. *Azania* 51(4), 507–530.
- Cabeza, M., Manzano, P., Burgas, D., Cadahía, L., Eronen, J., Fernández-Llamazares, Á., Bencherif, S., Holand, Ø., Fortelius, M., Seitsonen, O., Fernández-Giménez, M.E., Galvin K.A. & Stenseth, N.Chr. 2021. Towards a holistic understanding of pastoralism. *International Grassland Congress Proceedings. XXIV International Grassland Congress / XI International Rangeland Congress, Nairobi, Kenya*, 1–6. Nairobi: Kenya Agricultural and Livestock Research Organization.
- Carpelan, C. & Lavento, M. 2005. Ari Pekka Siiriäinen 1939–2004. *Muinaistutkija* 1/2005, 2–11.
- Casey, M. 2010. New archaeological discoveries from the Laikipia Plateau, Kenya. *Azania* 45(1), 112–136.
- Casey, M. & Lane, P.J. 2005. GIS and landscape archaeology, delineating the possible long-term environmental effects of pastoralism on the Laikipia Plateau, Kenya. *Nyame Akuma* 64, 24–32.

- Culley, C., Janzen, A., Brown, S., Prendergast, M.E., Wolfhagen, J., Abderemane, B., Ali, A.K., Haji, O., Horton, M.C., Shipton, C., Swift, J., Tabibou, T.A., Wright, H.T., Boivin, N. & Crowther, A. 2021. Collagen fingerprinting traces the introduction of caprines to island Eastern Africa. *Royal Society Open Science* 8(7), 202341.
- Deacon, H.J. & Deacon, J.D. 1999. *Human Beginnings in South Africa, Uncovering the Secrets of the Stone Age*. Walnut Creek: Altamira Press.
- Donner, G. 1973. Preliminary report on the excavations of the Finnish Nubia Expedition 1964–1965. *Kush* XV, 7–47.
- Donner, G. 1990. Brief report from the Finnish Nubia Expedition 1964–1965 to the Murshid are south of Gemai east. *Nubian letters* 15, 1–5.
- Donner, G. 1998a. *The Finnish Expedition to Sudanese Nubia 1964–65*. Suomen Muinaismuistoyhdistyksen Aikakauskirja 105:1. Helsinki: Finnish Antiquarian Society.
- Donner, G. 1998b. *The Finnish Expedition to Sudanese Nubia 1964–65*. Suomen Muinaismuistoyhdistyksen Aikakauskirja 105:2. Helsinki: Finnish Antiquarian Society.
- Donner, U., Ashour, M.M., Embabi, N.S. & Siiriäinen, A. 1999. Quaternary geology of a playa in Farafra, western desert of Egypt. *Annales Academiae scientiarum Fennicae* 160, 49–112.
- Fortelius, M., Žliobaitė, I., Kaya, F., Bibi, F., Bobe, R., Leakey, L., Leakey, M., Patterson, D., Rannikko, J. & Werdelin, L. 2016. An ecometric analysis of the fossil mammal record of the Turkana Basin. *Philosophical Transactions of the Royal Society B* 371: 20150232. <http://doi.org/10.1098/rstb.2015.0232>
- Holthoer, R. 1995. Kulttuuriaarteet suojaan uhkaavalta tuholta. K. Himma (ed.) *UNESCO 50 vuotta ja Suomi*, 36–40. Helsinki: Suomen Unesco-toimikunta.
- Hurskainen, A. & Siiriäinen, A. 1995. *Afrikan kulttuurien juuret*. SKS Tietolipas 134. Helsinki: SKS.
- Huurre, M. 1999a. Ari Siiriäinen, 60. M. Huurre (ed.) *Dig it all. Papers dedicated to Ari Siiriäinen*, 7–8. Helsinki: Finnish Antiquarian Society & Archaeological Society of Finland.
- Huurre, M. 1999b. Ari Siiriäinen, list of publications. M. Huurre (ed.) *Dig it all. Papers dedicated to Ari Siiriäinen*, 374–377. Helsinki: Finnish Antiquarian Society & Archaeological Society of Finland.
- Iles, L. & Lane, P. 2015. Iron production in second millennium AD pastoralist contexts on the Laikipia Plateau, Kenya. *Azania* 50(3), 372–401.
- Knutsson, K. 1988. *Making and using stone tools. The Analysis of the Lithic Assemblages from Middle Neolithic Sites with flint in Västerbotten, Northern Sweden*. Aun 11. Uppsala: Societas Archaeologica Uppsaliensis.
- Koponen, M. 1998. Ekologinen arkeologia: eräs esimerkki Afrikasta. *Muinaistutkija* 3/1998, 40–47.
- Lane, P.J. 2004. The ‘Moving Frontier’ and the transition to food production in Kenya. *Azania* 39, 243–264.
- Lane, P.J., Ashley, C., Seitsonen O., Harvey P., Mire, S. & Odede, F. 2007. The transition to farming in eastern Africa, new faunal and dating evidence from eastern Africa, new faunal and dating evidence from Wadh Lang’o and Usenge, Kenya. *Antiquity* 81(311), 62–81.
- Laulumaa, V. 1997. Polttoviljelyn leviäminen Saharan eteläpuoliseen Afrikkaan kahden tapaustutkimuksen valossa. *Muinaistutkija* 2/1997, 4–8.
- Laulumaa, V. 2004. ‘Kuvunja chungu’ -itsemurha. *Muinaistutkija* 3/2004, 41–42.
- Laulumaa, V. 2006. The Population of Ancient Engaruka - a new approach. *Azania* 41, 95–102.

- Laulumaa, V. 2007. Minunko Afrikkani? Kenelle kuuluu Afrikan arkeologia? *Arkeologipäivät 2007*, 7–13.
- Laulumaa, V. & Koponen, M. 1999. Ancient Engaruka: environmental and cultural history studies in Eastern Africa. M. Huurre (ed.) *Dig it all: Papers dedicated to Ari Siiriäinen*, 349–354. Helsinki: Finnish Antiquarian Society & Archaeological Society of Finland.
- Leakey, L.S.B. 1931. *The Stone Age Cultures of Kenya Colony*. Cambridge: Cambridge University Press.
- Leakey, L.S.B. 1936. *Stone Age Africa, An Outline of Prehistory in Africa*. London: Oxford University Press.
- Leakey, M.D. 1966. *Excavation of Burial Mounds in Ngorongoro Crater*. Dar es Salaam: Printpak.
- Link, C. 2001. *Nirgendwo in Afrika*. Movie. Germany: Constantin Film.
- Lipson, M. et al. 2020. Ancient West African foragers in the context of African population history. *Nature* 577, 665–670.
- Louzolo, S. 2014. *Sademetsän selviytyjät. Tutkimus läntisen Keski-Afrikan pygmiä elinympäristöstä ja kontakteista heitä ympäröiviin bantuyhteisöihin*. Unpublished Master of Arts thesis. Archaeology, University of Helsinki.
- Manzano, P., Burgasa, D., Cadahía, L., Eronen, J.T., Fernández-Llamazares, A., Bencherif, S., Seitsonen, O., Fortelius, M., Fernández-Giménez, M.E., Galvin, K.A., Cabeza, M. & Stenseth, N.C. 2021. Toward a holistic understanding of pastoralism. *One Earth* 4(5), 651–665.
- Mossop, E.E. (ed.) 1935. *The Journal of Hendrik Jacob Wikar (1779) with an English Translation by A.W. van der Horst, and the Journals of Jacobus Coetse Jansz (1760) and Willem van Reenen (1791) with an English Translation by Dr E.E. Mossop*, ed. Cape Town: The Van Riebeeck Society.
- Muiruri, V., Marchant, R., Rucina, S.M., Scott, L. & Lane, P.J. 2022. Late Holocene environmental change and anthropogenic: Ecosystem interaction on the Laikipia Plateau, Kenya. *Ambio* 51(3), 785–798.
- Petek, N. 2018. *Archaeological Perspectives on Risk and Community Resilience in the Baringo Lowlands, Kenya*. Studies in Global Archaeology 24. Uppsala: Uppsala University.
- Prendergast, M.E., Mabulla, A.Z.P., Grillo, K.M., Broderick, L.G., Seitsonen, O., Gidna, A.O. & Gifford-Gonzalez, D. 2013. Pastoral Neolithic sites on the southern Mbulu Plateau, Tanzania. *Azania* 48(4), 498–520.
- Pärssinen, M. & Siiriäinen, A. 1997. Inka style ceramics and their chronological relationship to the Inka expansion in the southern Lake Titicaca area (Bolivia). *Latin American Antiquity* 8, 255–271.
- van Rippen, B. 1918. Notes on some Bushmen implements. *Memoirs of American Anthropological Association* 5(3), 75–97.
- Robertshaw, P.T. 1979. The First Archaeological Excavation in Southern Africa. *South African Archaeological Bulletin* 34, 52–53.
- Robertshaw, P.T. & Siiriäinen, A. 1985. Excavations in Lakes Province, Southern Sudan. *Azania* 20, 89–161.
- Schapera, I. 1930. *The Khoisan Peoples of South Africa; Bushmen and Hottentots*. London: George Routledge & Sons.
- Seitsonen, O. 2005a. Remembrance: Ari Siiriäinen 16.11.1939–9.12.2004. *Journal of African Archaeology* 3(1), 155–156.
- Seitsonen, O. 2005b. Stone Age observations in the Engaruka area. *Nyame Akuma* 63, 27–32.
- Seitsonen, O. 2006. Archaeological research in the northern Lake Manyara Basin, Tanzania in 2003–2004. *Azania* 41, 41–67.
- Seitsonen, O. 2007a. Suomalaisen Afrikan arkeologisen tutkimuksen lyhyt historia. *Muinaistutkija* 4/2007, 20–32.
- Seitsonen, O. 2007b. Middle Stone Age component at the abandoned Sonjo Buri Village site, Tanzania. *Nyame Akuma* 67, 75–82.
- Seitsonen, O. 2009a. Prehistoric land-use in the Loita–Mara region, southwest Kenya: a preliminary GIS site catchment analysis. *Nyame Akuma* 71, 46–53.
- Seitsonen, O. 2009b. Preliminary GIS study of the pastoralist Settlement Pattern in Engaruka, Tanzania. *Proceedings of the 19th Biennial Meeting (2008) of SAfA*.
- Seitsonen, O. 2009c. Change and continuity in the Holocene lithics use in the Nyanza Province, Kenya: a general overview. *Proceedings of the 19th Biennial Meeting (2008) of SAfA*.
- Seitsonen, O. 2010. Lithics use at Kasyore sites in Eastern Africa: Organization of the lithic technology at four recently studied sites in Nyanza province, Kenya. *Azania* 45(1), 49–82.
- Seitsonen, O. 2022. Kolmesti löydetty ja kahdesti kadotettu: Suomalaisen Nubia-retkikunnan hävinneet ja uudelleen löydetty kivesineet. *Muinaistutkija* 3/2022, 2–11.
- Seitsonen, O. & Laulumaa, V. 2007. Hunters, pastoralists and hill-furrow farmers – Archaeological studies in the Sonjo Land, northern Tanzania. *Nyame Akuma* 67, 83–90.
- Seitsonen, O., Sonninen, E. & Heikkilä, P. 2012. Pastoral Neolithic studies in Northern Tanzania: an interim report on XRF and stable isotope analyses in the Engaruka area. *Nyame Akuma* 77, 11–23.
- Seitsonen, O., Laulumaa, V. & Koponen, M. 2013. Archaeological Reconnaissance Between Lake Manyara and Engaruka, Tanzania, in 2003–2004. *Nyame Akuma* 79, 45–59.
- Siiriäinen, A. 1965. The Wadi Halfa Region (Northern Sudan) in the Stone Age. *Studia Orientalis Fennica* 30, 3–34.
- Siiriäinen, A. 1968. *Arkeologisen kvartsaanalyysin hahmotelma ja sen sovellutusesimerkki*. Unpublished Master of Arts thesis. Archaeology, University of Helsinki.
- Siiriäinen, A. 1969. Über die Chronologie der steinzeitlichen Küstenwohnplätze Finnlands im Lichte der Uferverschiebung. *Suomen Museo* 1969, 40–73.
- Siiriäinen, A. 1973. The Gumba and Athi of Central Kenya, archaeology and oral tradition. *Suomen Museo* 1973, 105–17.
- Siiriäinen, A. 1974. Studies relating to Shore Displacement and Stone Age Chronology in Finland. Helsingin Yliopiston arkeologian laitos. Moniste 10. Helsinki: University of Helsinki.
- Siiriäinen, A. 1977a. Quartz, chert and obsidian – A comparison of raw materials in a Late Stone Age aggregate in Kenya. *Finskt Museum* 1974, 15–29.
- Siiriäinen, A. 1977b. Later Stone Age investigations in the Laikipia Highlands, Kenya. *Azania* 12, 162–186.
- Siiriäinen, A. 1982. Historical perspectives of the economy of the Southern Sudanese Nilotes. *Suomen antropologi* 1982, 201–209.
- Siiriäinen, A. 1984a. *Excavations in Laikipia. An Archaeological Study of the Recent Prehistory in the Eastern Highlands of Kenya*. Suomen Muinaismuistoyhdistyksen Aikakauskirja 86. Helsinki: Suomen Muinaismuistoyhdistys.
- Siiriäinen, A. 1984b. Two southern Sudanese pottery traditions in a historical perspective. *Norwegian Archaeological Review* 17, 11–18.
- Siiriäinen, A. 1984c. Luonto muuttuu, ihminen muuttuu. Arkeologia selvittää Afrikan noidankehää. *Tiede* 2000 9–10/1984, 34–40.
- Siiriäinen, A. 1986. African prehistory and cultural ecology. *Suomen antropologi* 11, 112–123.
- Siiriäinen, A. 1987a. Swidden cultivation in the precolonial history of Africa. *Suomen antropologi* 12, 269–278.

- Siiriäinen, A. 1987b. 'Mustat' ja 'Värikkäiset' Etelä-Afrikan historiassa. *Kanava* 15, 527–529.
- Siiriäinen, A. 1988. Kolme teesiä kehityskaaressa. *Suomen antropologi* 13(3), 39–40.
- Siiriäinen, A. 1989. Man's role in the ecological progress in Africa, towards a long term historical model. A. Lemma & P. Malaska (eds.) *Africa beyond Famine; A Report to the Club of Rome*.
- Siiriäinen, A. 1990a. Excavations of Elmenteitan sites in the Oldorotua Valley. P. Robertshaw (ed.) *Early Pastoralists of South-Western Kenya. Memoirs of the British Institute in Eastern Africa* 11, 261–266.
- Siiriäinen, A. 1990b. On the historical aspect of deforestation in the tropics. M. Palo & G. Mery (eds.) *Deforestation or Development in the Third World III. Metsäntutkimuslaitoksen tiedonantoja* 349, 23–28.
- Siiriäinen, A. 1991. Näkökulmia kehitysmaiden väestönkasvuun. *Kanava* 7, 442–443.
- Siiriäinen, A. 1994. Vielä 2000 vuotta sitten Saharassa virtasi vesi. *Tiede* 2000 7/1994.
- Siiriäinen, A. 1996a. Man and forest in African history. M. Palo & G. Mery (eds.) *Sustainable forestry challenges for developing countries*, 311–326.
- Siiriäinen, A. 1996b. Vatten i Sahara? *Nordenskiöld-samfundets tidskrift* 55–56, 67–85.
- Siiriäinen, A. 1996c. Norsu lasikaupassa, arkeologi vieraassa kulttuurissa? *Muinaistutkija* 3/1996, 34–38.
- Siiriäinen, A. 1999a. Inkavaltion ekspansio. Rafael Karsten ja lähdekritiikin merkitys. *Suomen antropologi* 24, 16–25.
- Siiriäinen, A. 1999b. Archaeological evidence for dating the sediments in a playa in Farfara, western desert of Egypt. *Annales Academiae scientiarum Fennicae* 160, 113–146.
- Siiriäinen, A. 2000. Socio-cultural history of deforestation in Africa. M. Palo & H. Vanhanen (eds.) *World Forests from Deforestation to Transition? World Forests 2*. Springer: Dordrecht.
- Siiriäinen, A. 2001. Suomalaiset arkeologit Nubiassa 1961–65, suomalaisen egyptologian alkuvaiheet. E. Salmenkivi & H. Widgren (eds.) *Niilin varrelta, Suomen Egyptologinen Seura 30 vuotta*, 8–20.
- Siiriäinen, A., Seitsonen, O. & Láuren, J. 2009. Pastoralists in the northeastern Mara Plains, Kenya, archaeological investigations of the Pastoral Neolithic and the Pastoral Iron Age. *Azania* 44(2), 163–193.
- Simons, A. 2005. Exchange networks, sociopolitical hierarchies and the archaeological evidence for differential wealth amongst Pastoralists in south-western Kenya. *Nyame Akuma* 64, 33–35.
- Sivonen, S. 1982. Henrik Jakob Wikar, suomalaissyntyinen Afrikan tutkija 1700-luvulta. *Historiallinen Aikakauskirja* 1/1982, 14–23.
- Stephens, L. et al. 2019. Archaeological assessment reveals Earth's early transformation through land use. *Science* 365(6456), 897–902.
- Säve-Söderbergh, T. 1979. The Scandinavian Joint Expedition to Sudanese Nubia. *Det Kongelige Danske Videnskabernes Selskab Historisk-filosofiske Meddelelser* 49(3). København: Det Kongelige Danske Videnskabernes Selskab.
- Taylor, D., Lane, P.J., Muiruri, V., Ruttledge, A., McKeever, R. Caj, Nolan T., Kenny, P. & Coodhue, R. 2005. Mid- to late Holocene vegetation dynamics on the Laikipia Plateau, Kenya. *The Holocene* 15(6), 837–846.
- Wallström, T. 1983. *Svenska upptäckare. Höganäs: Bra böcker*.
- Westerberg, L.-O., Holmgren, K., Bärjeson, L., Håkansson, T., Laulumaa, V., Ryner, M. & Öberg, H. 2010. The development of the ancient Engaruka irrigation system, Northern Tanzania. Physical and societal factors. *Geographical Journal* 176(4), 304–318.