Kenya
Past and Present

Issue 44

Kenya Past and Present

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Kenya Past and Present

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Contents

FRONT COVER
St Paul's Church at Rabai was built by the first missionaries to land in Kenya. The Museum now has refurbishment plans; see page 7. Photo by Ebrahim Mwangi, NMK.

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KENYA MUSEUM SOCIETY

The Kenya Museum Society (KMS) is a nonprofit members' organisation formed in 1971 to support and promote the work of the National Museums of Kenya (NMK). You are invited to join the Society and receive Kenya Past and Present. Privileges to members include regular newsletters, free entrance to all national museums, prehistoric sites and monuments under the jurisdiction of the National Museums of Kenya, entry to the Oloolua Nature Trail at half price and 5% discount on books in the KMS shop.

The Society runs the KMS Shop in the Nairobi National Museum and regularly organises events such as an annual art show, weekend and day outings, children's programmes, lectures, films and other activities to raise funds for NMK projects and for the development of exhibitions.

NATIONAL MUSEUMS OF KENYA

Nairobi National Museum	Nairobi
Karen Blixen House	Nairobi
Nairobi Gallery	Nairobi
Kabarnet Museum✦	Kabarnet
Kisumu Museum✦	Kisumu
Kitale Museum✦	Kitale
Lamu Museum & Lamu Fort	Lamu
Loiyangalani Desert Museum	Loiyangalani
Malindi Museum✦	Malindi
Meru Museum✦	Meru
Narok Museum✦	Narok
Shimoni Slavery Museum	Mombasa
Wajir Museum	Wajir

Sites and monuments:

Fort Jesus	Mombasa
Fort Tenan	Koru
Gede Ruins	Watamu
Hyrax Hill	Nakuru
Kapenguria	Kapenguria
Kariandusi	Gilgil
Kenyatta House	Maralal
Koobi Fora	Lodwar
Olorgesailie	Magadi
Rusinga Island	Mbita
Songhor	Songhor
Thimlich Ohinga	Makalder

✦ Under the new constitution, these museums have been transferred to their respective county control.

KMS member Veer Sikand makes a new friend at Ithumba, the David Sheldrick Trust release site for orphaned elephants in Tsavo East. Photo by Dr Priya Bowry Sikand.

The past year at KMS

Patricia Jentz, Chairperson, Kenya Museum Society

This past year has seen the Kenya Museum Society (KMS) benefit from the reorganisation of the National Museums of Kenya (NMK). The more self-reliant, business-based management style instituted by the NMK Director General, Dr Mzalendo Kibunjia, has resulted in better relationships with Nairobi National Museum staff.

Day outings

Day outings this year have been principally organised by KMS staff, Lucy Njeri and Dorothy Mkala. Visits to NMK departments were very popular. Research scientist Laban Njoroge took us behind the scenes of Entomology to see their magnificent insect collection that goes back to the founding of the Museum in 1908, while Dr Job Kibii welcomed us to Palaeontology and its world-famous early hominid fossil collection. A special tour for schools combined a palaeontology tour with a visit to the Archaeology Department; we also visited Ornithology for a demonstration of bird ringing, where fine mist nets are used to (temporarily) capture birds for measuring and tagging.

Also at the Museum, KMS members toured the *Who I am, who we are* exhibition, which used art and self-expression to stimulate reflection on belonging, civic responsibility, ethnicity and nationalism. Curated by Wambui Collymore and Xavier Verhoest, the exhibition made use of life-sized body maps, recordings, documentaries and photos.

Narinder Heyer, who more usually leads our weekend outings, took a group to the Sikh temple on Brookside Drive. She explained the evolution and history of the Sikh religion, then guided the group around the temple complex.

Few of us knew that silk farming existed in Kenya. At the National Sericulture Station in Thika, we learned of their plans to diversify the agricultural sector: establishing mulberry orchards, rearing silkworms, processing cocoons and finally producing silk.

Day trips further afield took us to hot and dusty Hell's Gate National Park in Naivasha, an active volcanic area, hence the steam venting for which it was named. Down Magadi Road is Olorgesailie, a prehistoric site known for the world's largest collection of hand axes and cleavers, which can be observed, in situ, where early humans abandoned them up to 200,000 years ago.

Rhodia Mann hosted a visit to her home, a treasure trove of African, especially Samburu, artefacts. Rhodia is a well-known tour guide, writer and jewellery designer whose adoption into a Samburu clan has allowed her over the years to make many insightful observations about this tribe.

And in December, we reinstituted, after a long hiatus, the visit to Nairobi National Park for KMS members' domestic staff. For many participants, this was the first time they had been inside a national park or seen the game animals Kenya is famous for.

Weekend outings

Geology took centrestage with a visit to Menengai Crater, Africa's second largest volcano caldera, near Nakuru, where the group toured the geothermal wells being drilled and explored nearby Lake Ol Bolossat, central Kenya's only natural lake. Geologist Dr Celia Nyamweru led a weekend trip to Lake Elmenteita and the Sleeping Warrior Crater, with a stopover at the archaeological site of Kariandusi.

Children and their parents learned how to trap insects on the KMS *dudu* hunt. Photo by Martha Nzisa.

The ever-popular trip to Ithumba in Tsavo East, the David Sheldrick Trust's release site for orphaned elephants, was run three times during the year. The Jaza train journey to Lake Magadi proved just as popular. All three train trips had their challenges, but a sense of humour helped everyone enjoy the adventure. The railway line transports the soda mined at Magadi Soda Works to Mombasa for export.

Bird and nature lovers got to explore Lake Baringo, one of the Rift Valley's two freshwater lakes, known for its diversity of birds. Dr Dino Martins hosted us at Laikipia's Mpala Ranch, now converted to a wildlife research centre with international funding and the support of NMK and the Kenya Wildlife Service. The final trip of the year to Mt Elgon National Park in western Kenya was a hikers' delight. Mt Elgon is known for its bat-filled caves which elephants visit at night to dig minerals from the walls. KMS weekend outings are led by Narinder Heyer.

Children's programmes

Activities this past year, coordinated by Saryoo Shah and Kathy Vaughan, brought younger KMS members closer to science. The year started with a *dudu* (insect) hunt at the Nairobi Arboretum, where the children learned about the major role insects play in our world, while becoming more aware of the environment. Another event mixed history and science with hands-on creativity in a 'make your own fossil' session to show how scientists unlock the secrets of the past by studying what appear to be ordinary 'rocks'.

Evening and Saturday programmes

KMS joined in the Museum's celebration of the Unsung Heroes of Palaeontology and Archaeology by hosting two programmes: Dr Christopher Brochu from the University of Iowa presented the *Giant horned crocodile that ate our ancestors*, and Professor Stanley Ambrose from the University of Illinois

talked about how climatic extremes affected genetic selection in the evolutionary journey of *Homo sapiens* in Africa.

Later in the year, Professor Yash Pal Ghai talked about the origins and objectives of the new Kenyan constitution and the impact it has had on our society. Prof. Ghai was instrumental in the early stages of writing the 2010 constitution.

Our evening programmes were held at the Muthaiga Club and were well attended by KMS and Muthaiga Club members alike.

Speakers this past year included Dr Celia Nyamweru, visiting from the US, who spoke about Kenya's natural cultural sites. The hugely popular Dr Dino Martins, internationally acclaimed for his work on pollinators, gave examples of how farmers are reaping bumper harvests by working more harmoniously with nature. Dr Alison Brooks, from the Smithsonian Institute, spoke about how society and social interactions evolved 300,000 years ago, and Tove Hussein updated us with new information on Karen Blixen. Tove is the author of a number of books about the famous Danish writer best known for her Kenya memoir *Out of Africa*.

Fundraisers

Our Annual Second Hand Book Sale, organised by KMS staff, was an even bigger success this year. This event is a great service for members who want their much-loved books to find good homes while giving others an opportunity to purchase quality books at reasonable prices.

The Affordable Art Show, chaired by Dr Marla Stone, was also very successful thanks to the sponsorship of Safaricom, Commercial Bank of Africa and Concorde Motors. A chamber music ensemble delighted guests at the opening night party. This show continues to grow in popularity, selling a record 97 of the 320 works on display.

The annual Affordable Art Show showcases Kenyan art and raises funds for Museum projects. Photo by Ebrahim Mwangi.

Projects funded

The money raised by our events has enabled KMS to fund the major renovation of a large hall for the Osteology Department to more efficiently store their collection and make room for a National Taxidermy Centre affiliated with the Department of Mammalogy. This project will continue through the next year.

Eighty copies of *Kenya Past and Present* issue 43 were donated to NMK's research library to be used as a reciprocal publication in exchanges with universities and museums around the world.

Our successes last year were a product of the hard work of our many KMS volunteers who donated their skills and time to assist the Society. I would like to thank them all. The Society would also like to thank the administration of the National Museums of Kenya for their support.

Professor Yash Pal Ghai, who was instrumental in drafting the 2010 Kenyan constitution.

Dr Emma Mbua uses plaster to prepare a hippo tooth for recovery at the new Kantis palaeontological site.

The past year at the Museum

Juliana Ruto and Hellen Njagi, National Museums of Kenya

The last 12 months have been an exciting time for the National Museums of Kenya with new contributions to critical research, the opening of interesting exhibitions with partners in Nairobi and elsewhere, new partnership agreements to support NMK's mandate, the participation of NMK in international bodies and conferences, and quality capacity building.

Early humans discovered close to Nairobi

Kantis is a new palaeontological site dated to 3.5 million years ago and located on the shoulders of the Gregory Rift near the Ngong Hills outside Nairobi. The site has yielded an abundance of fossils of some 29 extinct mammalian species, including the early human species *Australopithecus afarensis*, which is known in Ethiopia and Tanzania but had not previously been confirmed in Kenya.

The discovery of this species at Kantis is the first undisputed evidence that extends the geographical range of *Australopithecus afarensis* to the highlands of Kenya. The time period of 3.5 mya is poorly represented in the Kenyan fossil record and the new information from Kantis is expected to broaden knowledge of early human and faunal evolution.

Paper published

Initial research was undertaken by a consortium of scholars that comprised Kenyan, American, Japanese and French scientists coordinated by Dr Emma Mbua, an associate research scientist at the National

Museums of Kenya. This resulted in a paper published in the prestigious *Journal of Human Evolution, Elsevier* (online version) in March 2016.

Research at the site is ongoing and Dr Mbua hopes that Kantis will one day be gazetted for protection and the site marketed as a palaeontological tourist site, easily accessible from Nairobi by Kenyan student groups and other visitors.

Investment in Kenya's coastal heritage

NMK has been fortunate to have attracted both tangible and intangible investment in the preservation and promotion of Kenya's heritage, with particular attention to the museums and heritage properties located along the coast.

Oman House in Fort Jesus

The Oman House located within the Fort Jesus Museum, Mombasa's UNESCO World Heritage site, was refurbished by the National Records and Archives Authority of the Sultanate of Oman. The refurbishment included more detailed historical information on the exhibit and the replica of a dhow at the entrance.

The same institution also installed an enhanced exhibition on Oman House at Mazuri Hall in Fort Jesus. The exhibition presents Oman's historical presence in Kenya as well as the long existing relationship between the sultanate and countries in Africa. The exhibition was officially opened by the Cabinet Secretary for Sports, Culture and Arts, Hon. Hassan Wario, on 22 February 2017. Present during the opening of the refurbished structures was Omani Ambassador to Kenya, H.E. Saleh Suleiman and Tourism Cabinet Secretary, Hon. Najib Balala.

The refurbishment and the installation are significant investments in efforts to restore the world heritage site and its related buildings to their original splendour.

Rabai Museum near Mombasa

The Rabai Museum, 25 km outside Mombasa, is another recipient. In March 2017 the German Embassy and the National Museums of Kenya signed an agreement for the restoration of Rabai Museum to the tune of KSh 5.35 million. The project, to be undertaken this year, will be funded by the German Federal Foreign Office. Present to sign the agreement was the German Ambassador to Kenya, H.E. Jutta Frasch, and the Director General of NMK, Dr Mzalendo Kibunjia.

Rabai was founded by German Johannes Ludwig Krapf, the first missionary to land in East Africa. In 1846, together

Below left: Omani Ambassador to Kenya, H.E. Saleh Suleiman, Cabinet Secretary for Sports, Culture and Arts, Hon. Hassan Wario and Chair of the NMK Board of Directors, Dr Paula Kahumbu, view the new Oman exhibition at Mazuri Hall.

Below right: Director General of NMK, Dr Mzalendo Kibunjia, and German Ambassador to Kenya, H.E. Dr Jutta Frasch, shake hands on signing the agreement for the refurbishment of Rabai Museum.

St Paul's Church in Rabai, the first church building in Kenya.

with compatriot Johan Rebmann, Krapf built St Paul's Church, the first church edifice in Kenya and still in use today. The Krapf Memorial Museum in Rabai was established in 1998 to give formal reminder to monumental events during the days of the early missionaries. Stories about the first missionaries were passed on by word of mouth and are still told today.

Mombasa was also the site of the inaugural course, Heritage and Museum Basics, convened by the Kenya Heritage Training Institute (KeHTI) in Mombasa. Established in 2015, the institute aims to build the ongoing capacity and competence of museum officials and key stakeholders, creating a pool of trained individuals with the knowledge to tackle challenges facing heritage protection. Course participants were drawn from National Museums of Kenya, county governments, Kenya Defence Forces and the international community. Guest of honour during the training was the Permanent Secretary of the Ministry of Sports, Culture and The Arts, Joe Okudo.

International meetings at NMK

First regional workshop on Lepidoptera pollinator data

The National Museums of Kenya hosted the first regional training workshop on assessing Lepidoptera pollinator species diversity data in East Africa from 6 to 9 March 2017. Dr Geoffrey Mwachala, Director of National Repository and Research, officially opened the workshop while Dr Dino Martins, Director of the Mpala Research Centre, gave the keynote address.

This project targets three important Lepidoptera pollinator families: the hawk moths and the skipper and swallowtail butterflies. Partner institutions in the project are the Museum and House of Culture, National Museum of Tanzania and the College of Natural Sciences, Makerere University, Uganda.

Centre for Heritage Development in Africa (CHDA)

Centre for Heritage Development in Africa held a technical Tentative Listing workshop on 30 January 2017. NMK Director General Dr Mzalendo Kibunjia, who also doubles as the Chairman of CHDA, gave the keynote address. The workshop was an initial activity towards the realisation of a larger programme called the World Heritage Nomination Programme in Africa, initiated by the African World Heritage Fund.

The workshop was supported by the Norwegian Ministry of Foreign Affairs, the UNESCO World Heritage Centre and the World Heritage advisory bodies, which include the International Union for Conservation of Nature (IUCN), Switzerland, the International Council on Monuments and Sites (ICOMOS), Paris, and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), Rome.

CHDA is the programme's implementing institution in Anglophone Africa. The workshop brought together experts from Egypt, Eritrea, Ghana, Kenya, Malawi, Nigeria, Sierra Leone, South Africa, South Sudan, Tanzania, Uganda, Zambia and Zimbabwe.

In his speech, CHDA Director General Peter Okwaro said that the experts would review data on the tentative lists, discuss the

opportunities and develop a prioritised list of sites with clear potential on outstanding universal values.

Some popular exhibitions

This year saw the launch of several semi-permanent and temporary exhibitions covering wide areas of interest.

CBK@50 exhibition

In 2016, the Central Bank of Kenya celebrated its 50th anniversary and commemorated the occasion by developing an exhibition dubbed the 'Numismatic Museum' in partnership with NMK.

The exhibition highlighted early to modern forms of trade and exchange of goods and services in Kenya, including a section on the history and development of formal currencies from the early days of cowrie shells to coins and banknotes and eventual use of technology to facilitate trade.

Joy Adamson exhibition phase II

In April 2016, phase II of the Legacy of Joy Adamson exhibition opened in the Hall of Kenya. The exhibition seeks to promote an appreciation of the peoples, wildlife, plants and culture of Kenya through Joy Adamson's detailed watercolour paintings, complemented by related objects from NMK's ethnographic and scientific collections.

The exhibition was developed through a partnership between NMK and the Kenya Museum Society, with additional funding support from GT Bank. Phase 1 of the exhibit was installed in 2014 through a joint effort between NMK and KMS and funded solely by KMS fundraising.

100 Years of Irish in Kenya

2016 was the centenary of the Easter Rising, the first major revolt against British rule in Ireland since the United Irishmen Rebellion of 1798. The Irish Embassy in Nairobi commemorated the centenary with a poster exhibition in December 2016, showcasing key contributions of the Irish to Kenya over the past 100 years. From growing Kenya's first commercial coffee to churning out world-beating distance runners —yes, the Irish have been at the forefront. Turn to *On a wing and a prayer* on page 57 for more about the history of the Irish in Kenya.

Part of the Central Bank's numismatic exhibition to mark their 50th anniversary.

Underwater archaeology

NMK, in partnership with the Italian Cultural Institute, launched an underwater archaeology exhibition in Malindi Museum on 21 February 2017. Curated by NMK marine archaeologist Caesar Bita, the exhibition reflects the rich archaeological history that exists in Kenyan waters.

Images displayed in the exhibition include ship wreckage, some of which date back over 500 years. Entitled the *Amazing wonders of Kenya's underwater cultural heritage*, the exhibition reveals that there has been trade

and exchange of goods across the East African coast and the Indian Ocean for over 2,000 years.

The chief guest during the exhibition opening was the Italian Ambassador to Kenya H.E. Mauro Massoni; in attendance were over 100 guests.

African Heritage Under Threat

This temporary exhibition is a 10-year celebration of investing in heritage from 2006 to 2016 through a partnership between the African World Heritage Fund and the National Museums of Kenya. Installed in the Cultural Dynamism Gallery of the Nairobi National Museum, the photo exhibition highlights the different ways in which heritage is threatened, from natural disasters such as fire and floods to armed conflict and poaching.

Celebrating historical and personal stories and memoirs

The Nairobi National Museum continues to be a central location for sharing of key historical memoirs.

The memoirs of Mukami Kimathi

On 17 February 2016, H.E. Margaret Kenyatta, wife of President Uhuru Kenyatta, joined several Mau Mau veterans in celebrating the life of Mukami Kimathi and her sacrifices in the struggle for Kenya's freedom.

As part of the celebrations, the First Lady launched Mukami Kimathi's book, *Mau Mau freedom fighter*, about her role during Kenya's liberation struggle. Mukami Kimathi is the widow of Mau Mau leader Dedan Kimathi, who was executed by the British in 1957.

First Lady H.E. Margaret Kenyatta launches Mukami Kimathi's memoirs on her life as a Mau Mau freedom fighter.

Nairobi International Cultural Festival

The fourth Nairobi International Cultural Festival took place on 5 March 2016 at the Nairobi National Museum.

The annual event brings together cultures from different parts of the world. 2016 participants included Ethiopia, Indonesia, Japan, Kenya, Mexico, Somalia, South Africa, Switzerland and Spain, who presented their diverse cultural heritage through food, fashion shows, various crafts, and music and art.

PHOTOGRAPHS BY EBRAHIM MWANGI, AV DEPARTMENT, NMK

Bringing back the trees

Anthropologist Wilhelm Östberg documents what happened when a small NGO went to West Pokot to encourage livestock herders to plant trees.

Above:
The 1987 dry season landscape of West Pokot with goats browsing on loppings from the desert date, *Balanites aegyptiaca*. In the background is Morpus Hill.

Wilhelm Östberg

In 1987 the Chepareria area of West Pokot in the Rift Valley was an arid steppe. Bare and cracked, the ground resembled the skin of a hippo. It was land eroded down to the bedrock.

Today we find ourselves in a transformed landscape.[1] A park-like landscape meets the eyes. Fences made of thorns, euphorbia, sisal and agave

1 Grönvall 2015, Nyberg et al. 2015, Saxer 2014, Svanlund 2014, Wairore et al. 2015a+b, and Wernersson 2013.

enclose pastures green with trees and perennial grasses. Livestock move from one enclosure to another instead of being herded on an open landscape. Earlier all livestock had to be brought out of the area to find forage during the dry season. Now they can remain at home for far longer periods.

The change is both stunning and encouraging. The livestock keepers of Chepareria have found a way to transform their land, and their economy, in a way that is so successful that lowland West Pokot constitutes a shining example of land rehabilitation in arid and semi-arid areas. Their story is of significance for some seven million people in Kenya living in dry lands, and for many more people in other parts of East Africa and beyond.

That this major transformation should happen was totally unexpected, and it is therefore instructive to examine how it occurred and what the starting parameters looked like. There is a lesson to be learned in Chepareria.

The background

Back in the 1980s, the time when I first came to West Pokot,[2] the people there did not plant trees; they saw trees as part of the landscape, not being consciously planted. Some trees were indeed protected: these were the sacred trees, where meetings are held, and where sacrifices are made. God resides there, and such trees cannot be felled. The *Ficus natalensis* of the highlands and the *Ficus sycamorus* of the lowlands both belong to this category. Trees good for placing beehives were likewise not cut. Fodder trees were lopped but not felled.

A particularly valuable tree is the desert date, *Balanites aegyptiaca*. At the time of the year when it is hot, dusty and nothing is left in the stores — at that time the *tuyunwo* (as the tree is known in Pokot) produces its sweet fruits, even in very dry years, and people can prepare a vegetable relish from its leaves. Livestock feed on its fruits and leaves until the new grass appears with the rains.

I saw a vivid illustration of the importance of the desert date on one of my first days in Morpus village back in 1987. A small group of men told me how the livestock were away on dry season grazing at the Uganda border, that they were waiting for the rains to arrive and that there was no food in the area. One of the men said, "We eat trees", referring to the only fresh food available, the green leaves of the desert date.

Later I came to think that the phrase 'we eat trees' was true also in another sense. Trees were felled as fields were cleared to cultivate crops for the growing population. Trees were 'eaten' to build houses, and to turn into firewood. Trees provided fencing material. The many goats of the area contributed to their non-regeneration. The impoverished environment was well captured in the phrase 'we eat trees'. [3]

Some trees were valued, but the idea of planting trees in order to preserve the land was definitely not part of Pokot life. They preferred open pastures and in cultivated

2 I had come to Chepareria Ward to suggest ways to promote tree planting in cooperation with the management team of VI Agroforestry, a Swedish non-governmental organisation (NGO) started in 1983 that aimed, through agroforestry, to contribute to poverty reduction, increased biodiversity and climate adaptation. Today VI Agroforestry works in four countries, Kenya, Rwanda, Tanzania and Uganda. In 1987 it was a rather small organisation active in the Trans Nzoia and West Pokot districts in Kenya. My field studies came to focus on two lowland villages, Morpus and Pserum, situated in the lower parts of Chepareria Ward, where livestock production dominates. The events of this article refer to this part of Chepareria Ward and not the upper parts of Chepareria, where the climate is more humid and farming plays a bigger role.

3 The phrase was poignant and I came to use it as title for my report from Chepareria Ward (Östberg 1988), which suggested ways to promote land rehabilitation and tree planting in the area.

fields the Pokot felt that trees competed with the crops for water, nutrients and light.

Against this background, it seemed unlikely that preaching the general value of environmental care, tree planting or land rehabilitation would be understood or well received. The conclusion was that outside interventions had to be productivity-oriented to have a chance of success. There was just no point otherwise. There had to be direct gains involved.

The planning context

The colonial government had organised various land rehabilitation efforts in the area in the 1930s and 40s, with limited success. One of the last interventions, two years before independence in 1963, was the construction of a major cut-off drain dug across a slope to divert excessive runoff from fields in Morpus village. Reports confirmed that it had successfully protected the eroded area below. But by 1987 the sizeable cut-off drain had completely silted up, and could only be traced as a vague contour on the hillside. The gullies below it were encroaching into cultivated fields and homesteads.

Why had this obviously useful cut-off drain not been maintained?

Was it because people did not know what was required to keep it functioning? Nonsense. The Pokot around Sigor, northeast of Morpus, desilt irrigation canals as a matter of routine.

Was it because it required too much work? No, in fact not much work was required, compared to the benefits that the cut-off drain brought the community.

Was it because the cut-off drain was nobody's direct concern? Perhaps that. If so, the lesson for our project was that it was not enough for something to be technically sound, it also had to fit into the local organisational setup, and the colonial cut-off drain had not been integrated into the local decision-making system. Here was something to consider when planning how VI Agroforestry could promote tree-planting in Chepareria.

Exposed roots in a gully below Morpus Hill. 1987.

In 1987 VI Agroforestry, or the VI Tree Planting Project as it was then known, had already taken its first initiatives in West Pokot. It had established a couple of tree plantations, and was searching for ways to support land rehabilitation and improved livelihoods in the area on a considerably larger scale.

I had worked among the Marakwet, the neighbours to the south with whom

the Pokot share a language, basic social institutions[4], and also a very interesting hill furrow irrigation system, established in the late 1700s, that still functions today and forms the basis for farming in the arid Kerio Valley. It is a large-scale irrigation complex, consisting of more than 90 main canals, totalling over 300 km, which takes water down the steep Cherangany escarpment to the Kerio Valley where it is used for irrigated agriculture.[5] This large irrigation complex operates without any centralised form of management. It is organised in local water management meetings where residents meet, reason, plan and decide on which land to cultivate the coming season, how to divide the water, agree on responsibilities to remove sediment from the canals, make repairs, etc. Big and small issues are solved in the same manner, which is that people meet in the shade of a tree and discuss.[6]

It beggars belief that this vast and sophisticated complex can be run without any centralised authority, but this is exactly what happens. It may appear equally remarkable that the land can be cultivated for generations without major problems of salinization of soils.[7] Certainly, the area suffers from soil erosion. But again, the land continues to be cultivated generation after generation and people subsist from it.

The hallmarks of the Marakwet irrigation system can also be found, more or less, among the Pokot, although not in the Chepareria area itself.[8] It seemed reasonable to take this striking capacity of the Pokot to undertake major projects, and also the efficiency of what may appear a haphazard and unstructured decision-making system, as a point of departure for drafting a strategy for tree planting in West Pokot. Our conclusion was that the Pokot had in place the planning capacity and decision-making structures to undertake large-scale projects. It was, of course, important to work with these structures, and not to sidestep them.[9]

Making deals

In 1987 the agroforestry project had been around for a bit more than a year. It had carried out trial plantations on land belonging to primary schools and churches. Now it was time for expansion. The manager, a professional forester, Tor Nyberg, had an idea that appeared practical: "We now have young trees growing in some places. After just three to four years, these small plantations will represent a significant value. They contain a wealth of fodder in an area where there is seasonally absolutely no grazing. There is thatching grass, as well as bee forage. There will soon be timber. Could this wealth somehow be traded with the local communities, so that they themselves start to plant trees and to rehabilitate land, if they were offered the use of the fodder in the enclosures?"

In practical terms this meant we would enter into dialogue with local communities and create binding agreements with individuals who were prepared to create new enclosures in exchange for the available resources in the existing plantations.

4 The Pokot are divided into two sections, the mainly pastoral East Pokot and the agro-pastoral West Pokot. They belong to the larger Kalenjin group of peoples which includes their neighbours the Marakwet, the Sengwer and the Tugen, and also the Keiyo, the Nandi, the Kipsigis, the Sabaot and the Terik.

5 See "Life among the Marakwet" by the author, in *Kenya Past & Present* issue 42.

6 Davies et al. 2014, Östberg 2004, 2014, Ssennyonga 1983, Watson et al. 1998.

7 Caretta et al. 2015.

8 Davies 2008.

9 The report (Östberg 1988) contained numerous practical recommendations. These were chiselled out in close cooperation with the VI management team, and are thus not my thoughts and judgements alone. I much appreciated the creative and intense interactions with Anders Carlsson, Norman Kimanzu, William Makokha, Gert Nyberg, Tor Nyberg, Margret Silali and Bo Tegnäs.

The ongoing practice of storing grass in a tree as a reserve for cows and calves remaining at home during the dry season (photo from 1987). Today much more feed is available in the area.

Traditionally, the Pokot would close off some areas with termite-resistant grass to prevent grazing during the rainy season, in order to have something to rely on later in the year and thus be less dependent on migrations with the livestock.[10] The colonial government had tried to create rotational grazing blocks in the area[11] but these had not survived. While I was in the area in 1987 a local decision was taken to remove all cattle from the area west of the river Tatwa, but it was never implemented.

We could draw a conclusion from these experiences: large-scale changes were unlikely to succeed; therefore enclosures should be relatively small areas, and they had to be based on contracts with farmers who had undisputed usufruct rights to the land that would allow them to make unhindered decisions on its use.

It was not possible to subsist only on crop production in Pserum and Morpus — keeping livestock was a necessity in this area. But again, in 1987, the area could only support livestock for part of the year. Animals were seasonally moved to higher ground where it was still possible to find forage and still later in the year people were forced to take the livestock to the Mt Kadam area in Uganda, a much-disliked migration that was dangerous for both the herders and the animals. We also knew of cases where children were sent away seasonally because it was difficult to feed them in Morpus and Pserum. If more fodder was available for the milk cows remaining at home during the dry season, this would be a real bonus. Livestock was an integral part of the local economy, and any plans for tree planting had to take this into account. We decided that to improve fodder supplies for livestock seemed a fruitful path to follow.

The neighbourhood meeting

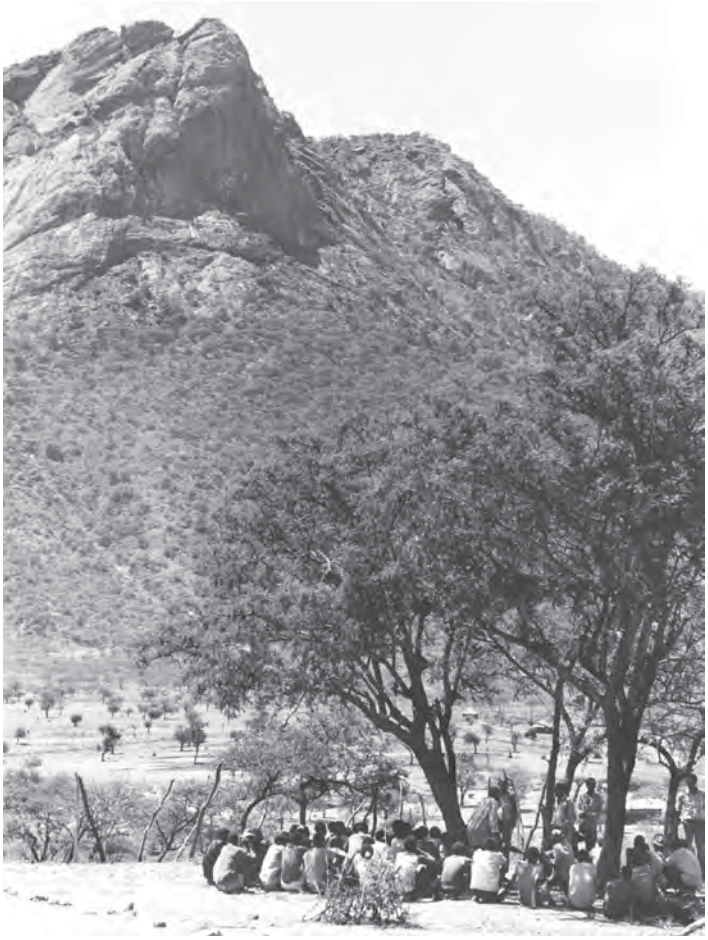
The neighbourhood or *korok* was the most important social unit. Most of the daily work was carried out together with neighbours, as was most of ritual life. This was the obvious social unit for the project to cooperate with. It was characterised by intensive social and work interaction. It was easy to convene meetings within the *korok*.

There is no formal authority in Pokot society, no kings or chiefs, no priests. Authority rests with men assembled for a neighbourhood meeting, the *kokwo*. Here disputes are resolved, decisions made, and news exchanged.

There are diviners, and also the *kirwokin*, someone who becomes noted for his skill in resolving disputes. Such men could be

10 Schneider 1953, 1959.

11 Gallé 1987, Vermaat 1986, Widstrand 1973.



Men gathered for a meeting below the Morpus Hill. 1987.

termed 'good talkers'. This may sound somewhat superficial, but it is an apt description of how they exercise influence. Both the diviners and the 'talkers' have important roles in Pokot society. But they cannot command others. Authority is never passed on from people assembled in a meeting to an executive office, because none such exists.

Elders are respected, and they are the ritual leaders in ceremonies. They also lead the blessings. But again, they do not command. To tell others how to organise their affairs was not done.

One problem we faced with using the *kokwo*, the neighbourhood meeting, as a principal venue for promoting tree planting, was that it is the men's world. Women will only participate if something of direct concern to them is to be discussed. In that case they sit separately and do not rise when they wish to speak, as men do, but remain seated. Since women generally are more involved in farm work than men, we reasoned they should have a leading role in the tree planting campaign. They also spend more time around the home and are better able to protect young trees planted close to the homestead. As things turned out, the project came to focus in particular on women.

Pokot men and women live rather separate lives. The project had to plan separately with each group on its own terms. To create arenas for interacting with women, the project would develop an extension service, and initiate small on-farm nurseries. If women became well informed about the tree planting initiatives, they would influence their husbands, who would see to it that their opinions reached the *kokwo*. Or so we reasoned.

Did it work?

Yes, it did. A number of the women employed in the tree nurseries soon went on to work with the project's extension service, which grew rapidly. The project made it a point that at all times at least a quarter of people employed to fence new enclosures and to dig terraces and micro-catchments had to be women. There were attempts, often, to bypass this but the project did not compromise on this point, and on the whole it worked. Women's groups were encouraged to collect and sell seeds from local trees, and to start small nurseries and sell seedlings to the project.

If a women's group collected a kilo of seeds they earned KSh 300, which at the time was a fair amount of money. More one kilo bags with seeds meant money enough for a group to invest in a *hoteli* serving tea, snacks and often also simple meals, or to buy land and grow maize to raise cash to buy cows and get milk. The history of the VI project has its grand success stories. But in particular it

documents the many, many everyday stories of women who planted trees around their homes, grew nitrogen-fixing bushes and beans and peas, enriched the soil, increased their harvests, found easily obtainable fuel wood and fodder for the animals, and reaped fruit that they sold in the local market to pay school fees for their children. So, it was women who benefitted most from the project. Or was it the environment? The point perhaps is that when a whole area has changed its resource base it becomes somewhat pointless to try to judge who benefitted most.

Opening negotiations

There was also a middle-way between the *kokwo* and field activities, and that was the *baraza*. This is the Swahili word for the meetings called by the administration and in which information is passed on to local communities. On the surface it looks much like a *kokwo*: it is people meeting in the shade of a tree to discuss. However the conditions are different. In the *baraza* it is staff with formal authority that set the agenda. People may have a chance to ask questions and air opinions, but it all happens on the terms set by the administration. For cooperation where local authorities were involved, the *baraza* was the appropriate venue. An added advantage is that a *baraza* better allows space for women's groups to air their opinions.

An episode captured the lay of the land. The Morpus plantation was started in haste just before the rains in 1987. A planning meeting was held with the headmaster of the school, five members of the school committee and staff from the VI Tree Planting Project. The committee had no specific demands regarding which trees should be planted around their school. The vice chairman of the school committee summarised their stand: "We are here and we wait. You may say what trees can be planted. We have agreed that you plant trees around the school. That is good. People must have an example to learn from. If other areas can be planted as well, is something to discuss another time. If it turns out well and people like it."

This was a subtle statement. He had sensed that the project was interested in enlarging the area to be planted. The project needed land. The committee could not offer that, but it could bargain with the possibility. Maybe the committee would later on be able to convince people to make land available for tree planting — if people were now employed and thereby learned the benefits of tree planting.

At the same time he surrendered to the project all responsibility for the outcome. The project was to take the risks. It should hire people and prove that trees will survive. He designated the project staff the experts, "you may say what trees can be planted". While being in favour of the idea of tree planting and land rehabilitation, he made no commitments.

The school committee did not need the project. They could do without it as they had done before. But if the project offered employment, this became attractive. They could wait and see how the plantation developed and in the meantime would earn a salary, and the whole thing could well develop into something useful for the future.

The villagers created a bargaining situation, and this was not a bad starting point for realistic planning. It was not ideas of land rehabilitation that caught the imagination but the employment offered. The rains were due. There was little time to get terraces and micro-catchments ready for planting. The only practical solution was to hire day-labourers. The trees survived in both the Morpus and Pserum plantations, grass was established, and the project had created a resource to start negotiations with. The venture was underway.

Of course, sceptics might say that in the end it was cash and employment that carried the day. What happened to the idea of fitting into local decision-making systems?

There was no contradiction. The project had established itself with a tangible offer, and could enter negotiations as a legitimate partner. This showed almost immediately. Some 20 people were to be hired at Morpus. The project said that it would appreciate if particularly needy families were considered, and if at least five of the 20 were women. On the day that work was to begin, some 60 people turned up hoping for employment. The assistant chief of the area had prepared a list of people to be hired. When the names were read out, no women were included and there was a disproportionate number of people from the assistant chief's own group. A three-hour-long discussion ensued. In the end four women were employed, and seven people from the assistant chief's group, and the remaining nine jobs were evenly distributed among other groups. Had the project opted for the easy solution and accepted the chief's list, it would have reinforced feelings that aid always ends up with those better off. Now the 60 people present could see that the project did not intend to do things the usual way. Instead they discussed until a consensus was reached, in line with Pokot modes of decision-making. The project had passed its first credibility test.

Live fence, restored pastures. A new landscape and new economic opportunities, 2015.

The transformation

To recall again the way it was in the late 1980s: The rain, when it came, skidded over hard and encrusted soil, unable to penetrate the ground, washing away whatever loose organic material lay on the surface. When the floods rushed down the slopes into the gullies, the ground was ripped open in a mighty and devastating spectacle.

Today the picture is very different. The open landscape has been complemented by private enclosures protected by live fences and thorns. Perennial grasses have come back, fodder trees have been planted, in places gullies have been stabilised and healed. The area looks green. Not all farmers use enclosures but very many do, and it is definitely possible to talk about a transformed landscape. Enclosures appear to have become a self-generating process. VI Agroforestry phased out its activities in 2001 and, interestingly, almost 40% of the present enclosures were established after 2004.[12] The enclosures make sense, both ecologically and economically. Predictably the enclosures show increased soil organic carbon, better vegetation cover and improved biodiversity. There is more grass for livestock in the enclosed areas and land degradation is reduced.[13]

Farmers with enclosures appear to migrate with the animals during the dry season much less than those who do not use enclosures.[14] When farmers rank the benefits derived from enclosures this factor is given prominence, followed by healthier livestock and improved livestock productivity. The enclosures also generate direct income as

12 Nyberg et al. 2015.

13 Recent research reports note many more changes such as increased incomes, increased milk production, poultry development, changing gender roles, land tenure changes, etc. However, my focus here is on landscape changes.

14 Grönvall 2015, Saxon 2014.

William Makokha, VI Agroforestry, inspects regenerating vegetation in a previously degraded environment with Dr Johanna Lindahl, International Livestock Research Institute (ILRI). West Pokot, 2015.

both grazing rights and fodder, and also roof thatching, can be sold. Furthermore, farmers with a longer experience of enclosures tended to have considerably more animals.[15] Everything seems to indicate that enclosures provide opportunities for improved living standards, and that in particular it is the livestock-based activities that generate income. Admittedly, much more could still be done to improve livestock productivity.

There are, of course, also problems with enclosures. They require an initial investment, they need constant maintenance, and it becomes more difficult to water the animals. The enclosures make it (even more) difficult to transport household water from rivers to the homesteads. Possibilities for free forage have diminished, which can increase conflicts, as can trespass and encroachments.[16] Enclosures can also be used to lay claim to land that one does not have undisputed rights to. And, as predicted, enclosures lead to economic stratification — incomes rise with increasing holdings, so that it seems that enclosures drive a process of income differentiation.[17]

The potential and real drawbacks have been less investigated than the obvious advantages. The research focus this far has largely been on studying the effects for individual households, coupled with general observations at a landscape level. There obviously is a need for studies into how the altered property regimes and the changed forms of natural resource management will affect both ecosystem services and social institutions. This is a very real knowledge gap.

Worries have also been expressed that the new opportunities might paradoxically lead to rehabilitated range lands reverting to their previously degraded state.[18] In November 2015, I visited Morpus and Pserum together with one of the pioneers of the area's land rehabilitation efforts, William Makokha of VI Agroforestry. For good reasons he is satisfied with the results, but he shares

15 Grönvall 2015.

16 Saxer 2014, Wernersson 2013.

17 Wairore et al. 2015(b).

18 Wairore 2015(a).

Lush home garden with fruit trees in a formerly severely degraded area.

concerns that the success could also have negative consequences. The improved soil quality encourages farmers to put more and more effort into growing maize and beans. In a year with good rains, quick profits can be realised. However, tractor ploughing means cutting trees and this makes the land more vulnerable to soil erosion. The county administration used tractors when it prepared a large grass-bulking plot. In Makokha's opinion, that was setting a bad example. Another impending threat is a projected dam intended to service the lowlands below Chepareria with water. Much needed, of course, but it may also lead to plans for cotton growing, for instance, that could jeopardise agroforestry activities and the traditional livestock economy.

Thus, as the benefits of the restored lands are reaped, the paradox is that the success might also carry within itself the seeds of its demise.

In the mid-1980s few imagined that the barren lands of lowland West Pokot would one day look like a park. It had all started with forester Tor Nyberg's idea that if forage could be reserved in small enclosures and offered to local livestock keepers on the condition that they enclosed similar areas on their own land, then the likelihood of survival on these bad lands would improve. He used methods that were at odds with established development discourse; he did not cooperate with national organisations but instead organised his own small team of foresters, an ecologist, a soil scientist and two community organisers, hired local labour to establish the soil conservation structures needed, and successfully tried direct sowing of a number of species. Bypassing tree nurseries in this area where water is scarce also proved to be the right decision, as was the strategy of involving the women in all phases of work. But more important than anything else: the team was sensitive to local decision-making processes and managed to make fair and transparent deals with local farmers and livestock keepers to enclose and restore lands. It turned out that the productive capacity of the restored lands substantially improved the lives of those who had joined the programme. The idea worked, and this was noticed by others in the community. Perhaps not even Tor Nyberg had envisaged how wider and wider areas were gradually becoming enclosed until a rehabilitated, productive landscape developed. After some 15 years the process

Forage for animals where there used to be only gravel and rocks.

had become self-generating and the VI project withdrew.

The farmers and livestock keepers of lowland West Pokot have proved that even very badly degraded lands can become productive again. Their enclosures, and their experiences, cannot be disregarded in any forthcoming discussion of land rehabilitation in dry areas. What happened in Morpus and Pserum is that remarkable.

ALL PHOTOGRAPHS BY THE AUTHOR

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The Goan pioneers of Mombasa

Selma Carvalho

Community historian Selma Carvalho explores the unrecognised contribution of the Goan community to the life of colonial Mombasa.

The 'God-fearing' Goan community of Mombasa, erroneously thought to be 'half-castes' of Portuguese and Asian stock, would have been in mourning in the wet month of May, 1906, for two from their ranks had died within days of each other. Sequeira, an assistant storekeeper at the Customs House, left work at 5:30 in the evening, arrived home and died shortly afterwards of a stroke. He had worked for the Customs House for eight years. The funeral took place on a Wednesday afternoon, attended by a large crowd of Goans numbering over 300.

Soon afterwards, J.C. Mascarenhas, who had arrived in Mombasa around 1888, died of pneumonia. He had had a career of some merit; in 1895, as paymaster, he had accompanied the British column leading a punitive expedition against the dissident M'Buruk bin Rashid, chief of M'Wele, for which he had been awarded a medal. But

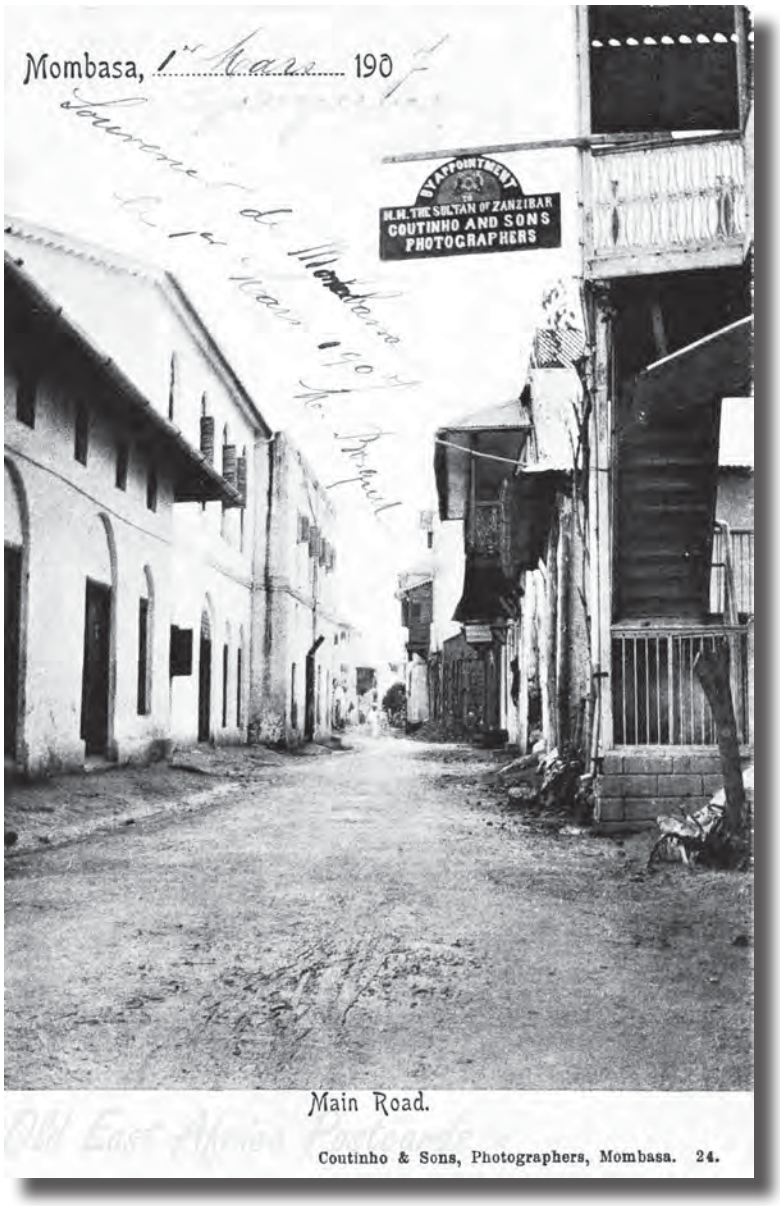


Photo above:
Mombasa main road, 1907. On the right can be seen the Mombasa studio of Coutinho and Sons Photographers. Goan traders, pharmacists and photographers who initially operated in Zanzibar moved their businesses to Mombasa as soon as it became a British protectorate. The *Handbook for East Africa,* 1905, lists the following pioneer Goan businesses in Mombasa: Souza Junior & Dias, M.R. de Souza Stores, E.N.J. D'Souza trader, T. Sequeira merchants, the tailor D.D. Souza, the photographer D.V. Figueira, and Edward St Rose Chemists. Image by photographers Coutinho and Sons, now in the public domain.

Mascarenhas' death highlighted the abject loneliness and isolation of that early Goan migration — his body lay in his house for two days before it was discovered. At the turn of the 19th century, it was men such as Mascarenhas, barely past their teens, with a

primary or secondary Portuguese education, that would head out to East Africa to join the British administration.

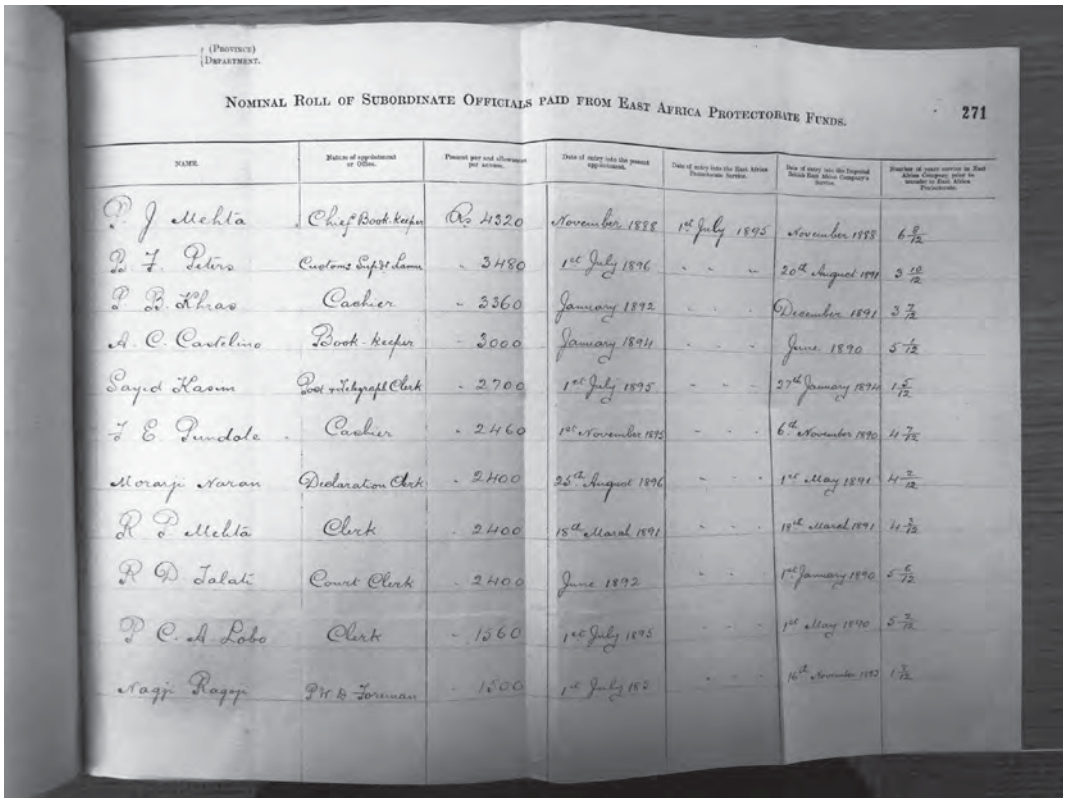
The small state of Goa on the west coast of India, with its excellent natural harbour and long history of trade between east and west, had been colonised by the Portuguese since the 16th century. The Portuguese retained their toehold on the Indian subcontinent even while the British empire claimed the rest of the country: in Goa, they set about aggressively converting the local population; later, they introduced European-style chapel schools which, in addition to basic literacy, stressed a great deal on music. By the time the British were casting their colonial eye over East Africa, much of the Goan converted population had embraced Portuguese culture.

While the British had been in Zanzibar in one guise or another since consular relations were established in 1841, they would gain a foothold in Mombasa only much later. Mombasa was a coveted prize; the island had a fine natural harbour and just across the channel the interior promised an abundance of spices, gum and ivory. After almost a decade-long hesitation, in 1887, Sir William Mackinnon of the Imperial British East Africa Company secured the much-awaited concession from the Sultan of Zanzibar, which assured him of control over a wide stretch of the East Africa coast, including Mombasa.

In the grand tradition of the East India Company, the British Crown granted a charter to Mackinnon's Imperial British East Africa Company, whose legacy the company historian would later record as being 'poorly conceived, badly managed and grossly undercapitalised'. Nonetheless, a small but high-spirited band of Company men arrived by 1889 to set up its infrastructure and so began Britain's involvement in what would eventually become present-day Kenya. IBEAC loyalist John Ainsworth, the son of a Manchester trader who later rose to be the Kenya Protectorate's first Chief Native Commissioner, arrived to find 'there were no houses available for the staff', so they pitched tents or made other makeshift arrangements in the Ndia Kuu area of Mombasa.

Despite the IBEAC's ambitions to open up the country as quickly as possible, the interior was only accessible by human

The central Ndia Kuu area of Mombasa in the early days of the British settlement. Photo: National Museums of Kenya.



(PROVINCE)
(DEPARTMENT.)

NOMINAL ROLL OF SUBORDINATE OFFICIALS PAID FROM EAST AFRICA PROTECTORATE FUNDS. 271

NAME.	Nature of appointment or Office.	Present per and allowance per annum.	Date of entry into the present appointment.	Date of entry into the East Africa Protectorate Service.	Date of entry into the Imperial British East Africa Company's Service.	Number of years service in East Africa Company prior to transfer to East Africa Protectorate.
P. J. Mehta	Chief Book-keeper	Rs. 4320	November 1888	1st July 1895	November 1888	6 9/12
D. F. Peters	Customs Supt. Lamu	3480	1st July 1896	- - -	20th August 1891	3 10/12
P. B. Khas	Cashier	3360	January 1892	- - -	December 1891	3 7/12
A. C. Castelino	Book-keeper	3000	January 1891	- - -	June 1890	5 7/12
Sayid Kasim	Post & Telegraph Clerk	2700	1st July 1895	- - -	27th January 1891	1 5/12
J. E. Pundole	Cashier	2460	1st November 1895	- - -	6th November 1890	4 7/12
Morarji Narain	Declaration Clerk	2400	25th August 1896	- - -	1st May 1891	4 3/12
R. P. Mehta	Clerk	2400	18th March 1891	- - -	18th March 1891	4 3/12
R. D. Talati	Court Clerk	2400	June 1892	- - -	1st January 1890	5 6/12
P. C. A. Lobo	Clerk	1560	1st July 1895	- - -	1st May 1890	5 7/12
Nagji Ragoji	P.W.D. Foreman	1500	1st July 1895	- - -	16th November 1893	1 7/12

East Africa Protectorate Nominal Roll, Mombasa, 1899, listing former employees of the Imperial British East Africa Company taken over by the British administration after the IBEAC's charter was revoked in 1895. The names of two Goans, A.C. Castellino and P.C.A. Lobo, can be seen on the list. Both joined the IBEAC in 1890, Castellino as bookkeeper and Lobo as clerk. Photo courtesy of National Archives, Kew, UK.

porterage at an exorbitant cost of £200-300 per ton. Goan agents often assisted in providing caravan leaders with indigenous porters, who then embarked on arduous journeys on foot carrying nearly 70 lbs (over 30 kg) plus provisions on their backs; a shameful practice tantamount to human bondage. The only viable alternative to make Mombasa profitable was to build a railway to the interior.

The IBEAC's floundering attempts at building the railway came to nought and in 1895 their charter was revoked. When the British Crown took control of Mombasa, they also took over most of the experienced IBEAC staff including two Goans, clerk Peregrino Caetano Antonio Lobo and bookkeeper Augusto Costantino Castelino, both of whom had joined the company in 1890. The British had a history of hiring Eurasian staff in India to man their administrative services. Mostly these were Anglo-Indians and early converts to Christianity in Bombay, who called themselves East Indians in allegiance to the East India Company. But the British also had a particular fondness for Christianised Goans, who appeared Europeanised and entirely supportive of imperial ambitions. Throughout their colonial reign in East Africa, the British would make a distinction between Goans and Indians for census purposes, and Goans, who carried with them a sense of distinct identity, would lead their lives socially and politically estranged from other Asian populations.

By 1903, Mombasa had become crucial to British East Africa's commerce and trade. The Makupa Causeway, a 'cylinder screw pile viaduct', now connected the island to the mainland. Mombasa had two serviceable harbours, which made it a hub for inland trade and distribution. On the eastern side of the island lay the old Mombasa harbour, about three-quarters of a mile in length and used since time immemorial by the lateen-sail dhows that arrived with the trade winds. To this, the British added Kilindini, a new port on the west side of the island, with facilities to handle railway equipment

and the increased traffic that came with colonial settlement. A new lighthouse with a dioptric single flashing light arose on the headland of Ras Serani. And much of the Uganda Railway, construction of which had commenced in 1896 starting from Mombasa and snaking inland, was completed.

As far as the British empire went, Mombasa was not a cosmopolitan city on the scale of Calcutta, but it was not without its own cultural and ethnic diversity. By 1896, it could boast of 107 Europeans, 169 Goans and Eurasians, 5,962 Indians, 596 Arabs and some 14,500 Swahili. Three years later, the Goan population had ballooned considerably enough for a Dr Luis Lobo to have been appointed president of the Goan community, comprising mostly men.

These unobtrusive, unassuming men — the faithful, docile companions of British district officers willing to travel with them to unexplored territory, work in remote *bomas* and suffer the inclemency of climate and terrain — is how the Goan is preserved in colonial memory. But the contribution of Goan pioneers in the early colonial history of East Africa is only now coming to light as we investigate their role with scholarly rigour.

Goan traders, for instance, dominated the retail sector. They ran mostly luxury and wine stores catering almost exclusively to a European clientele, who depended on them for their regular assortment of canned goods, wines, cheeses, boots, linens, fresh tobacco, jewellery, crockery, glassware and the latest novels from Europe. In a 1906 Christmas round-up of must-visit shops, of the nineteen listed in the *East African Standard*, nine were Goan-owned, competing aggressively with Mackinnon Bros, the only European merchant to have a formidable presence. The *Handbook of Kenya Colony, 1920*, described the retail trade as being 'largely in the hands of the Goanese'. Not only were these retailers vital to the functioning of the protectorate, they also greatly contributed to its stone-built infrastructure. Pharmacist Edward St Rose's built a three storey building on Ndia Kuu in 1906. The same year, partners Souza Junior & Dias constructed a large storeyed building to accommodate their business.

In other ways too, these Goan businesses anchored modernity in Kenya. Their advertising revenue enabled newspaper start-ups such as the *East African Standard* to flourish in the newly sprung townships. And Goans acted as distribution agents for the newspapers, selling them through their retail stores. The relationship between Goans and the printed word went beyond propping up advertising revenues and circulation. They were employed in good numbers in colonial newspaper establishments, mostly as compositors. The *East African Standard,* for instance, had in 1907 as 'foreman of the works', one Lobo, who proposed 'an enthusiastically received' toast to the prosperity of the *Standard* during a shindig at the editor's house. Of the 30 staff present on that evening, quite a few must have been Goan for afterwards songs were sung in 'English, Portuguese, Goanese, Hindustani and native tongues'.

It wasn't just privately owned newspapers that relied on Goans; the government did as well. The head compositor in 1902 at the government printing press was Francis Xavier Fernandes and his assistant was Antonio Caetano Monteiro. Compositor John Marcel Dias and pressman Hylario Antonio Cunha completed the team.

Perhaps the Goan role which has been most obscured with time is that of cultural broker. Despite their lack of any real political agency, Goans were instrumental in creating a public culture of biracial cohesion and collaboration.

The earliest manifestation of a shared public space was M.R. de Souza's store established

Michael Rosario de Souza lies buried at Nairobi South Cemetery, but he was a Mombasa pioneer entrepreneur who opened a store on the island in 1889. The store 'M.R. de Souza' became central to the social lives of the IBEAC staff and was known as 'The Club'. Souza was a hugely successful businessman; after his death in 1906, his wife Maria Blandina took over the business. Photo by Selma Carvalho.

in 1889, at a time when employees of the Imperial British East Africa Company looked for social interaction in a lonely port town. This hard-drinking, rambunctious lot met regularly at Souza's store for groceries, beers or mineral water. John Ainsworth in his memoirs remembered the store as 'The Club' and a place where one could 'always get a cold lunch'. These regular gatherings became the nucleus of the Mombasa Club.

The Mombasa Club, though formed strictly of European members, relied heavily on a Goan chief steward, J.D. Lobo, to ensure its smooth functioning. Lobo had first left the shores of Goa in 1880, as a steward working on board a Royal Navy ship. In 1896, he joined the Mombasa Club as chief steward. A much-loved personality of 'irreproachable character and manners', fondly known as 'Old Lobo', he worked at the club until his death in 1904.

Goans, keen on having their own social institutions, had been meeting at Customs House *godowns* (stores), and in 1901 formed the Goan Reading Room. Likely, the preponderance of Goans employed by Customs as clerks and in supervisory positions facilitated the use of Customs House premises as meeting places. The superintendent of Customs at Leven House, Mombasa, was the Goan, John Baptiste Faria, who had joined the colonial establishment in 1895.

Eventually, for their gatherings, the Goans leased the top floor of a building owned by D.L. Pereira on Ndia Kuu, at a monthly rent of 20 Rupees (the currency introduced from British India). It was during this period, as the name of the association implied, that a culture of reading spread. Colonial newspapers and books in various languages were donated and made available to members. Within a decade, the association came to 'possess a very valuable library'. Goan women, though few, enjoyed a fair degree of independence and could join the men at community events. They appeared always 'finely dressed, some in European style'. By 1911, a 'Bachelors'

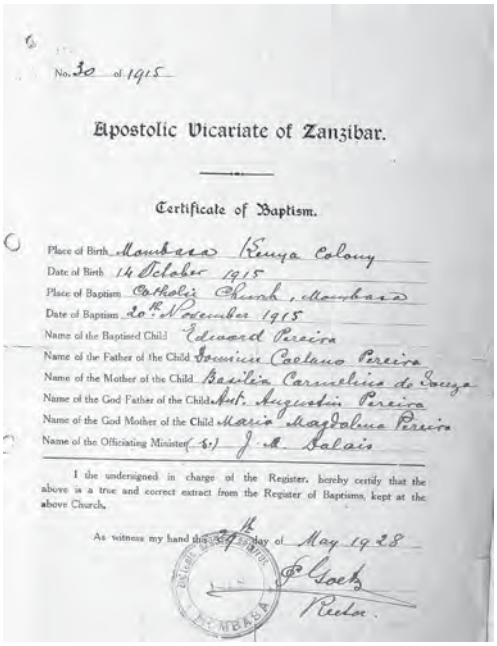
The status and role of Goan women: Ezalda Clara Albuquerque with husband Caetano Jose Dias and children, c. 1910. Ezalda arrived in Mombasa c. 1905 as a newly-married 17-year-old. Initially her husband and she operated a timber mill in Eldama Ravine. Fiercely independent, Ezalda was a frontier pioneer woman; she rode horses, hunted, drove a tractor and helped out with the wood-logging. Photo courtesy of Yvonne Dias (granddaughter).

Cottage' provided regular entertainment with Mrs Rozario and Mrs D'Mello singing *mandos* (Goan folk songs) in soprano. One contemporary commentator, J.C. D'Mello remarked that 'the presence of ladies was the essential part of a society'. This nod to gender equality further likened Goans to their European counterparts.

The *godowns* continued to be used for the plays the Reading Room performed. These were looked forward to by the entertainment-deprived Goans and Europeans alike. Their audiences included leading merchants and officials of the Protectorate. In December 1904, Acting Commissioner John Ainsworth and his wife, along with Sub-Commissioner Lane and the German Vice-Consul Dr Brode, occupied the reserved seats at a rather uninspiring performance of *The castle of Andalusia*. Included in the cast were 'many new actors: Rosario, Fernandes, Salter, Mascarenhas, Makertich'. The previous year had seen an even grander 'operatic performance' by the Goan Reading Room, where among the European audience were the merchant family Boustead, the protectorate's auditor W.A. Bowring, and Superintendent of Police Raymond M. Ewart. The opening chorus of *Awake, oh happy nation*, sung as an amicable quartet, exemplified the collaborative nature of the evening. The chief engineer of the steamship *Juba*, Francis Byrnes, gave a spirited solo on the banjo. Other cast members included a Mr Thoy, Durante D'Souza, Anselmo D'Sa, John Lopes and Castello Branco. The performances mounted were mostly farces and lacked finesse, but more admirable than theatrical ability was the biracial makeup of the cast: Europeans and Goans together on stage. The audiences at times tended to get carried away, fuelled by drink, and rowdy interruptions were common.

In 1903, Goans were found, yet again, to be at the forefront of engendering shared public spaces. Businessman D.L. Pereira offered his premises for hosting the founding committee meeting of the Mombasa Public Library. Present during the meeting were Judge Ralph P.B. Cator, who led the project, and High Court pleader, Parsee Cavasji Dalal who informed that 2,000 Rupees had been pledged as donations. On 11 January 1904 about a hundred people of 'all classes' assembled near Dalal's office and, led by Cator, walked towards the house of Indian Bohra merchant Adamji Alibhai where the library was housed, and where vice-president of the library Dewji Jamal and committee member Dr L.A. Gama Rose, a young, energetic, newly arrived Goan physician, received them. Cator then declared the library officially open. Its modest collection of publications included newspapers and magazines from India and Goa, Portugal, England, South Africa and Zanzibar. Once the public library became accessible, it was at times used as a venue for Goan Reading Room meetings.

Another public space Goans supported and sustained financially was the Holy Ghost Chapel. The Monsignor de Courmont, accompanied by the energetic Father Alexander le Roy, both of the Holy Ghost



No. 30 of 1915

Apostolic Vicariate of Zanzibar.

Certificate of Baptism.

Place of Birth Mombasa Kenya Colony
Date of Birth 14 October 1915
Place of Baptism Catholic Church, Mombasa
Date of Baptism 20th November 1915
Name of the Baptised Child Edward Pereira
Name of the Father of the Child Dominic Caetano Pereira
Name of the Mother of the Child Basilia Carmelina de Souza
Name of the God Father of the Child Aut. Augustin Pereira
Name of the God Mother of the Child Maria Magdalena Pereira
Name of the Officiating Minister (s.) J. A. Balais

I the undersigned in charge of the Register, hereby certify that the above is a true and correct extract from the Register of Baptisms, kept at the above Church.

As witness my hand this 24th day of May 1928

The baptism certificate and the photo taken at the christening of Eddie Pereira at the Holy Ghost Chapel, Mombasa, 1915. In the photo above, Dominic Caetano Pereira (left) is seen with his wife Basilia Carmelina Pereira and brother Augustinho Pereira. Basilia is holding the new-born Eddie, who grew up to become a well-known Indian nationalist in Kenya. The Catholic Church in Mombasa was still under the jurisdiction of the Apostolic Vicariate of Zanzibar when this photo was taken. It was Mombasa's Goan Catholics who sustained the Holy Ghost mission and chapel in its early days. Photos courtesy of Benegal Pereira (Eddie's son).

Fathers of Réunion via Zanzibar, had in 1889 established the Catholic mission of St Joseph at Ndera. That same year, le Roy conducted the first Catholic baptism in Mombasa, that of the Goans Diego and Natalie Pereira's infant daughter Mary. Later, after two years spent exploring the coast for possible locations to establish missions, le Roy returned to Mombasa and once again sought out Diego Pereira, from whom he bought a house. By 1892, with the house renovated and serving as a chapel, the Catholic mission marked its commencement, though the Holy Fathers despaired at the numbers evangelised. Le Roy's successor Father Flick noted, 'apart from the Goans the only Catholics in Mombasa are those at the mission'. The year 1897 proved more favourable when a plot of five acres for a new chapel was finally purchased at £30 an acre; it is now the site of the Holy Ghost Cathedral.

Goans continued to be pillars of the Catholic Church in Mombasa. Among those early church worthies was I.J.J. Maciel as parish

Mathias J. Maciel and Josephine de Sa, 1926, married at the Holy Ghost Cathedral, Mombasa. The cathedral was consecrated in 1923. The bride wore a white satin dress with silver lace trim. Bishop Neville, Father Goetz, Superior of the Mombasa Mission, and Father de Sa, uncle of the bride, performed the ceremony. Father Goetz had a long association with Goans, particularly in Nairobi; Father de Sa was the first Goan missionary to be posted to British East Africa. The wedding reception was held at the Railway Institute, Kilindini. Initially, wedding receptions were held in friends' homes or at a Goan store, and later at Goan institutes. Photo courtesy of Mervyn Maciel (son).

Further reading:
More information on the people and events mentioned in this article can be found in Selma Carvalho's two books, *A railway runs through: Goans of British East Africa, 1865-1908* (London, 2014), grant-commissioned by the Heritage Lottery Fund, and *Baker, butcher, doctor, diplomat: Goan pioneers of East Africa* (London, 2016), an illustrated history of pioneer Goans.

choirmaster and Saturnino de Souza as general organiser. The Catholic Church and the Goan Reading Room had overlapping social lives; the Holy Fathers were frequent guests at community events.

In 1912, the departing Bishop Allgeyer, whose evangelising zeal was responsible for much of the spread of Roman Catholicism in British East Africa, and who had presided over countless Goan weddings, funerals and celebrations, beginning in Zanzibar, was presented by the Mombasa parishioners, largely Goan, with a carved sandalwood *teapoy*, a tablecloth embroidered in gold, two flower vases, an ivory paper knife, a silver pen holder, a silver ink stand and a silver-framed photo.

After the British shifted their administrative headquarters to Nairobi in 1907, Mombasa became a secondary township. Nonetheless, it continued to be home to a sizeable Goan population, mostly employed as clerks working for the civil service. Mombasa Goans contributed richly to the social, religious and intellectual life of the coastal town through the schools they built, the Catholic missions they supported, and the sporting events they engendered. Their proudest moment came when sprinter Seraphino Antao made history by winning two gold medals for Kenya at the 1962 Commonwealth Games held in Perth, Australia — the first time any Kenyan athlete triumphed at an international event.

ABOUT THE AUTHOR

Selma Carvalho is a British-Goan writer, researcher and author of three books documenting the Goan presence in East Africa. From 2011 to 2014, she headed the Oral Histories of British-Goans project, funded by the Heritage Lottery Fund, UK. She also curated the first-ever exhibition on East African Goans, held in London in 2013. In 2011, she was awarded the Goan Association UK President's award for service to the community.

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Bows, arrows, poison and elephants

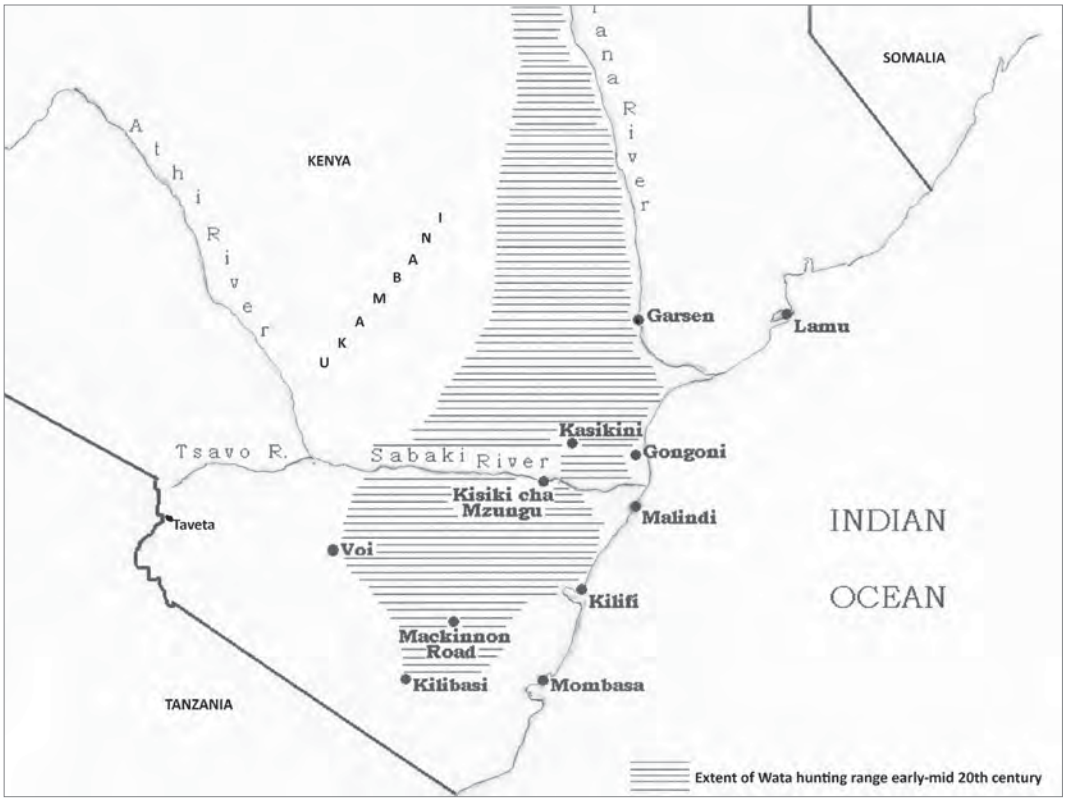
Ian Parker

Former colonial game warden Ian Parker shares his knowledge of the little-known Wata of the Kenyan coast, and the hunting culture that is now lost.

Above:
Arrow main shafts were as long as the bowman's extended left arm from the point of his shoulder to the first knuckle. Abakuna Tise, who later died in the jaws of a hippo he had just arrowed, c. 1959. Photo by Alistair Mathiesen.

The material presented here derives from a career in wildlife conservation and, in particular, from studying the ivory trade.[1] As a colonial game warden I was responsible for Kenya's Coast Province (1957–1960) south of the Tana Delta; excepting the Tsavo National Park, this reached Taveta in the west and Vanga in the south. It encompassed most of the land inhabited by the Wata (a.k.a. Waata, Waatha, Walingulu, Alangulo, Ariangulo, Wasanye, Sanya, etc.). From 1960 to 1964, I established and ran what was initially called the Waliangulu Scheme and later the Galana Game Management Scheme, some 7,500 km^2 to the east of and contiguous to Tsavo National Park (East). Set up specifically for

1 Parker 1964, 1971, 1973, 1975, 1979, 1985, 2004 and Parker & Amin 1983, Parker & Graham.



The extent of the Wata hunting range in the early to mid 20th century. Map by the author.

the Wata people, it was an endeavour to marry their elephant culture with modern conservation policy.[2] From 1964 to 1976 I employed on and off about 100 Wata individuals, counted some as personal friends and maintained contact with many until around 2000. Across nearly 50 years, I made field notes about them based on observation and long hours of conversation.

There will be some overlap between the observations recorded here and those in Ville 1995,[3] where the latter originated from my field notes and recollections that I made available to him. The thin ethnographic literature about the Wata is referenced by Ville & Guyo (ibid.) and promotes a general perception that they were hunters and gatherers, which is not strictly accurate. The pioneer park warden and conservationist Bill Woodley was familiar with the Wata, and knowledgeable about their hunting, between 1948 and 1958. Unfortunately his biographer,[4] writing for the popular market, blurred Woodley's meticulous recollections to 'make them more interesting'.

Historical Wata distribution is best defined as Kenya's coastal district (now county) of Kilifi, across its northern border to the south bank of the Tana River, and sporadically along the Tana's south bank as far as Garissa; across Kilifi's western border onto the lower reaches of the Yatta Plateau east of the Mopea Gap and the eastern base of the Taita Hills; and south to Kilibasi Hill in the hinterland of Kwale District. This was truncated by the formation of Tsavo National Park in 1948 (from where the Wata were expelled), and further by the 1967 lease of the land previously designated as the Galana Game Management Scheme to the private firm Galana Game & Ranching Ltd. Across this large range, Wata lived in small groups varying from one to several

2 Parker 1964.

3 Ville J-L 1995.

4 Holman 1978.

families as described by Ville, but in a far wider distribution than he was aware of. If their members were static, such small widely scattered groups would soon lose contact with one another. Contrary to such expectation, through their wide-ranging hunting nomadism, members were in sufficient contact with one another to retain a sense of community.

My informants from across the breadth of this range were all male, and while principally from Kisiki cha Mzungu and Kasikini, there were some from Garsen, others from Gongoni, Garbiti, Voi and Mackinnon Road.

The Wata referred to themselves as the 'Elephant People' and at the core of their culture was a singular weapon: a longbow.

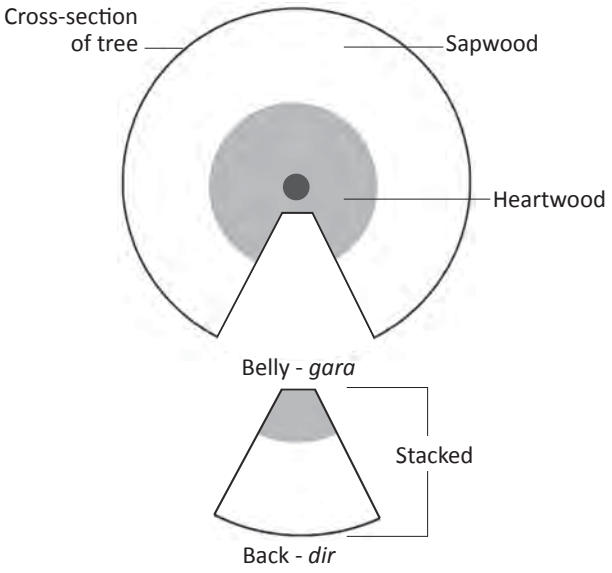
The great Wata longbow

Between 63 BC and 24 AD Strabo [5] wrote of killing elephants on the shore of the Red Sea:

> "Another way is to shoot them with arrows dipped in snake poison. It takes three men to shoot: two to hold the bow, while the third draws the string."

He could have been describing the Wata in the 20th century. The principle — a bow of enormous power to launch arrows tipped with poison — was the same. Just as with the famous Welsh longbows of mediaeval English history, to do so required special training and technique, the three elements of which are developing momentum, using torso muscles ("opening the shoulders")[6] and exercising both arm and body muscles to maximise their strength. A fourth aspect involves the mental work of coordinating these three into a composite action. As an illustration, a weight lifter adds momentum (the jerk) by employing and exercising many torso muscles as well as his arm muscles that enables lifting greater weights than possible by arm muscles alone. The art or sport of toxophily has been reviewed by Robert Hardy in some depth and much of what follows draws directly on his work and on Parker & Amin.[7] Bill Woodley also relied on Hardy in his appreciation of Wata bows, which is the substance of Holman's appendix *The Big Bow.*

The Wata longbow (*buni*) is double-convex, that is two gentle arcs (the upper being slightly deeper than the lower) meeting across the middle at the point of grasp (*gidobuniet*). Bows varied in length but were usually around the owner's height. In cross section the stave is roughly D-shaped and, in toxophily terms, highly 'stacked' (the distance between back and belly greater than the width of the back). It is so cut from a single stem that the outer curve or back (*dir*) is of elastic sapwood, while the inner curve of the bow's belly (*gara*) is of compressible heartwood. The combination of these two features makes the Wata weapon a naturally composite bow. Mechanically it is more efficient and powerful than a simple round-bow of the same length. The medieval Welsh



Cross-section of a tree stem showing how the Wata bow stave was cut to produce a D-shaped combination of sap and heartwood. From author's original illustration.

5 *The Periplus of the Erythraen Sea.*

6 Hardy 1976.

7 Parker & Amin 1983.

longbow featured the same dimensions and was also a natural composite of sapwood and heartwood.

Bill Woodley gave me 40 Wata bows confiscated during the anti-poaching programmes of 1956/57. Cutting through them at the points of grasp and midway between this point in the curves either side of it, all consistently had backs of sapwood, bellies of heartwood and were highly stacked 'Ds' in cross-section.

The bow string (*hribu* — meaning sinew) was fashioned by choice from leg or back sinews of giraffe, eland or buffalo (although others are also usable). Dried, and shaved with a knife into long thin fibres 1–2 mm in width (the longer the better), these shavings were then rolled and twisted together into a very strong cord of about 4 mm diameter, about twice or slightly less than a bow's length. When the bow is strung, bottom end (*shumo jelati*) first, then tensioned round the top end (*shumo iranat*), the surplus string was wound out of the user's way round the stave's upper curve. When not in use the bow was unstrung.

By choice, bows were cut from the wood of several trees. Woodley lists six: *Thespesia danis, Lycium europaeum, Grewia plagiophylla, Grewia truncata, Cordia sinensis* and *Diospyros squarrosa.* Ville lists five, to which he adds *Vangueria madagascariensis* but does not list *Grewia plagiophylla.*

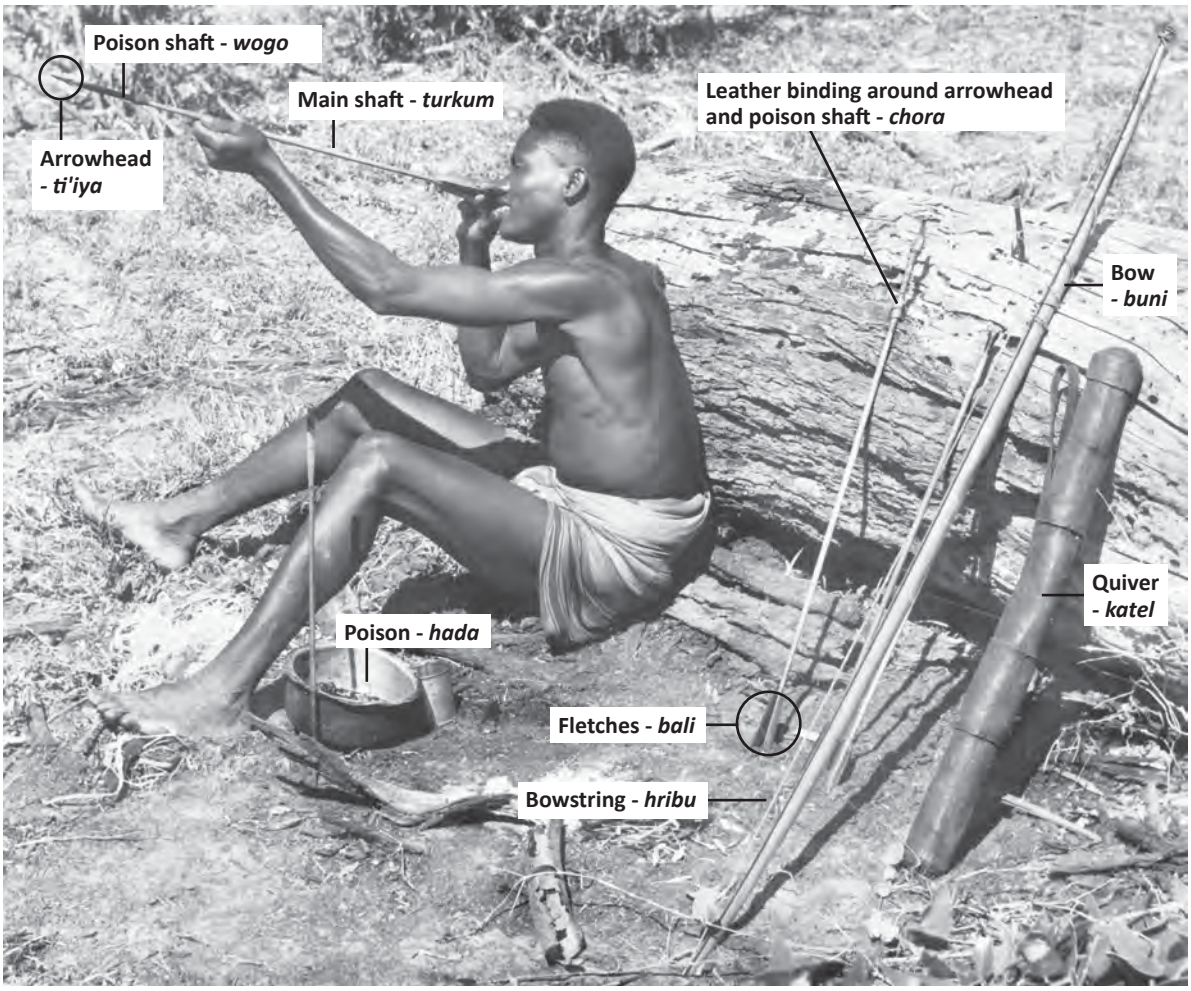
The draw weights of Wata bows were commonly between 55 and 59 kg with the greatest owned by Boru Debassa measuring a staggering 77 kg (measurements were made by the late David Sheldrick and Bill Woodley from bows collected during the 1956/57 anti-poaching campaign). The technique used by the Wata to pull their bows involved starting with the bow and nocked arrow pointing skywards above the archer's head and, with a coordinated action of back, shoulder and arm muscles, starting the pull and simultaneously lowering the bow until the arrow was on target at the moment when the bow was fully pulled in. Held on target for the briefest moment, the arrow was then loosed. The medieval Welsh and English archers used a similar technique, except that they started with the nocked arrow pointing at the ground, raising bow to target as they 'opened their shoulders'. Possibly this was because they had to end the movement with their arrows pointing upward for long-range volleys. Even a well-practised Wata archer could only fully draw his great bow four or five times in quick succession before having to rest.

Both Welsh and Wata longbows were clearly developed to cast an arrow either long distances or to strike at close range with great force. With the former they were used in volleys to around 300 m to deter massed infantry and at very close range to penetrate heavy body armour and break up cavalry charges. With the Wata, the single goal was to penetrate elephant.

The arrow

There was no point in having the capacity to deliver great force without an arrow that could withstand the stresses involved. The soft iron broad-head arrowheads (*ti'iya*) of the Wata could not penetrate heavy elephant bones, but as blades they would cut through the quarry's thick skin and facilitate entry deep into the animals' softer tissues.

While getting an arrow deep into an elephant explains the power of the Wata bow, penetration depended on an arrowhead both sharp and strong enough to withstand the forces involved. While some stone arrowheads might have met such demands, they do not decompose and had they been widely applied they would remain as archaeological evidence. In Kenya, the stone of choice for cutting blades was the volcanic glass obsidian and artefacts made from it are



Wata hunting equipment, 1960: Boru Duri having applied poison to an arrow. Photo by Alan Root.

widespread in central Kenya and northern Tanzania. Acquiring obsidian would have been within reach of the Wata. Yet, though I collected obsidian artefacts widely in Kenya and looked for them through Wata lands, I never found even one piece of obsidian — or any stone arrowhead for that matter. I posit, therefore, that given the physics of the Wata longbow, it evolved after iron became available. Wata had no recollection of using anything but iron for arrowheads and there is no archaeological evidence that they did.

The arrowhead was designed to cut a wide enough channel for the poison load to be deposited deep in the victim's body. Usually the shape was a classic broad-head. The two rearward points acted as barbs against withdrawal and are known as the arrowhead's ears (*gurr*). To ensure it would not bend upon impact, the base, or tang, was robust. It was also scored with the owner's personal marks as nicks and grooves. Dimensions and shapes of arrowheads varied somewhat with the maker's personal choice, without compromising the basic purpose. Many Wata hunters were competent smiths and fashioned their own arrowheads, using soft scrap iron that they either scavenged or bartered: six inch (15 cm) nails were considered ideal.

The arrowhead's tang or base was embedded firmly in the second part of the arrow — the fore- or poison-shaft (*wogo*). This was made of hard wood, 12 to 13 mm in diameter at its widest and anything from 150 mm up to 200 mm long. The anterior end of this poison-shaft was tapered from the midpoint along its length to meet the arrowhead tang smoothly with a streamlined contour and was bound with sinew so that the arrowhead was firmly

Wata hunter Abakuna Gumundi pulling in his longbow. Bronze statue by sculptor Robert Glenn c. 1990; proportional dimensions from life.

fixed into it. The posterior half of the shaft also tapered to a point 25 mm from the end, after which the shaft maintained a diameter of approx. 7 mm. This posterior 25 mm-long section fitted into a recess of similar dimensions in the arrow's main shaft. Poison shafts were again marked with nicks and grooves that identified the owner. These and a light but tight spiral binding of sinew or a coarse vegetable fibre produced a rough surface to which the tar-like poison would better adhere.

The third part of the arrow was the main-shaft (*turkum*), about 10 mm in diameter and as long as the bowman's extended left arm from the point of his shoulder to the first knuckle of that hand. Its fore-end was slightly bulbous with a recess 25 mm deep and 7 mm wide into which the poison shaft was counter-sunk snugly. This bulbous end was tightly bound with sinew and resin to prevent splitting. The main-shaft was absolutely straight and occasionally slightly thicker about the middle. The posterior end of the shaft was nocked with a recess (*kinta*) across its width, 5–6 mm wide and equally deep, into which the bowstring (*hribu* — a term for sinews generally) fitted when the bow was being pulled. Immediately ahead of the nock, a band about 4 mm wide was tightly bound with sinew threads and resin to prevent splitting.

Wata arrows were distinct from all their Bantu neighbours' in having four rather than three feather fletches or flights (*bali*). Fashioned from the vanes of primary feathers, by choice the best were those from Rüppell's griffon vulture and the white-backed vulture (collectively *rumich*), but others such as the hooded vulture, white-headed vulture, lappet-faced vulture or marabou stork (*bobolona*) would do and were occasionally used. Vultures were caught in leg snares set on and around a carcass. Each fletch was about 60 mm long and about 10 mm deep, set equidistant around the shaft's circumference and finely bound onto it with thread (*lilan*) and resin gum.

Huge care was taken to make sure that the poison and main shafts were exactly aligned. Some but not all fletchers then adorned their finished arrow shafts with a personal choice of giraffe hair (*marta*) bindings. A few men decorated their arrows with a little red dye or paint about the fletched end (though this was more common among Kamba hunters). Bows, arrows and the poison were made with great pride and to very consistent patterns. Arrows were carried in cylindrical leather quivers (*katel*) of varying sizes. The product was an exceptionally robust missile now ready for the application of poison (*hada*).

The poison

Arrow poison was derived from boiling organic matter (roots, wood, bark, twigs and leaves), principally from the tree genus *Acokanthera,* with additives.[8] The resulting liquor was strained to remove any solids and gradually concentrated by further gentle boiling until a thick dark brown or black tar-like residue was left. To me it smelt somewhat like molasses, but had a very bitter taste (personal experience), the more bitter the greater the concentration of glycosides and the more potent. However tasting was not a recommended test of virulence as the poison, if ingested, can be fatal and Wata were horrified by the idea. Like tar, it hardens with cooling. This was the finished product, ready to be applied to an arrow or stored in the dark.

Poison potency was tested by smearing a little on a thorn and then pricking a frog or

8 Reichstein 1965, Parker & Amin 1983.

toad with it. If it died quickly, the poison was good. Ville[9] refers to "a kind of armoured locust" (large spiny mole-crickets; sub-family *Hetrodinae*) of which I had also heard. I was also told that to test the poison a man took a knife, nicked an arm or leg so that a thin stream of blood flowed down the limb, and then put poison to the lower end of the trickle. If potent, the stream turned black and this colouration worked itself up against the direction of the trickling blood flow. Just before the poison reached the cut, it was wiped off.[10] I regard this story as apocryphal.

Tarlike, the poison became increasingly pliant and tacky when gently reheated. It was applied to the poison-shaft with a knife blade. Smoothed on, sometimes with the aid of a little water, layer upon layer was carefully added, becoming firmer as it cooled. Eventually the poison-shaft looked like a slender, black, smooth-surfaced, slightly tacky cigar. At its thickest the poison doubled the width of the poison-shaft, but retained a streamlined taper from the mid-point to the arrow-head.

The actual load on the poison-shaft depended on the owner's whim, how much poison he had available, and whether he had bought it or made it himself. Some were more sparing than others, so the final load varied greatly. Samples of rather old and dried out material I weighed were between eight and 15 grams, but I believe from seeing many arrows that some applications were much greater. I calculated that if the toxic cardiac glycosides constituted 15%[11] of the whole tarlike matrix, the average arrow carried 750 times the amount to kill a man (0.002 gm) or, on a weight-for-weight basis, 70 times the lethal dose for a 5,500 kg elephant.

The chemistry of *Acokanthera* arrow poisons was examined in some depth in Switzerland during the 1950s[12] and the toxic elements were identified as a range of virulent cardiac glycosides. Though there is some debate over *Acokanthera* taxonomy, it appears there are several species (*A. deflersi*, *A. friesiorum*, *A. longiflora, A. oblongiflora, A. oppositifolia, A. ouabaio, A. rhodesica, A. schimperi* and *A. venatata* among them) and all, it seems, produce toxic glycosides. However, the most potent appear to be *A. schimperi* of the Horn of Africa and Kenya coast and *A friesiorum* of the interior of Kenya and northern Tanzania.

A final step to the arrow, now fully armed, was a binding of soft leather (*chora*) wrapped tightly around both arrowhead and poison shaft. Made by choice from dikdik (*weesi*) skin (though other small antelope and thin-skinned animals would also do), this protected people from contact with the poison of which all were extremely wary, kept the tar from drying out completely when it would crumble and fall off the poison shaft, and kept the poison away from light.

Four men, all ace hunters — Boru Debassa, Galogalo Kafonde, Kathuo Kagala (a Giriama who lived as a Watic) and Abakuna Gumundi — described how they made poison (they all used the same ingredients). The basic element was the decoction from local *Acokanthera* trees. Their name for the poison and the tree appeared to be the same (*hada*). All four said that *Acokanthera* alone was effective, but added other ingredients to improve the product.

The caution over poison was extreme, and they felt it should not be made in or around dwellings or where there were women and children. They denied magic was involved in making *Acokanthera* poison, but Abakuna Gumundi said that he could understand how making it far away from

9 Ville 1995.

10 Holman 1978.

11 Watt J.M. & Breyer-Brandwijk M.G. 1962.

12 Euw J. v, & Reichstein 1950, Bally et al 1951a & 1951b, Muhr et al 1953, Bally et al 1958, Thudium et al 1958.

Acokanthera schimperi, whose roots, wood, bark, twigs and leaves were used to make arrow poison. Illustration from Köhler's Medizinal-Pflanzen, 1897. Photo: Public domain.

habitation could be seen as secrecy (equivalent to magic), but insisted that the reasons for doing so were simply because it was so dangerous.

The four informants had made their own poison, but of late had bought it from the Giriama. The reason for this may have been that the availability of poison trees was declining (e.g. Boru Debassa stated "I used to get my own poison from Bofa and Punda Malu — but now there are no trees left".)

They named four other plants as sources of material they added to their poison formula. Chopped roots and stem from the desert rose *(korgaio*) — *Adenium obesum (var somalinse)* — also produced virulent cardiac glycosides.[13] Next came chopped arboreal euphorbia *Euphorbia robecchi (hadama*) and/or the low shrub *Euphorbia tenuispinosa* (also called *hadama*). As an aside, euphorbia latexes generally are severe irritants and the botanist Peter Bally,[14] who had studied these arrow poisons, assumed any euphorbia latex would serve both for its tacky and irritant qualities. As irritants, their presence in a wound is likely to cause vasodilation and enhance the uptake of poisons.

My informants gave two reasons for including it in their manufacture. The first was that it caused incontinent urination and defecation, making a wounded animal easy to follow, even within a herd where its footprints were obscured by those of others. This would be in keeping with the euphorbia latex's irritant properties, particularly when lodged in abdominal viscera. The second reason was that it makes the poison 'tar' more malleable and adhere better to the poison shaft.

The fourth ingredient (not always used) was material from a tree *Platycelyphium voënse,* the Wata name for which is *satawo*. There is a connection here with their name for giraffe – *satawess*. Smoke from this tree smells unpleasant and will render food cooked over its burning wood inedible. Soft and yellowish, it burns easily even when green. Elephant avoid it, even when all other trees are gone. However, any poisonous principle is unknown to me. The connection between tree and giraffe may be because it enhances toxicity in such a way that giraffe are taken more easily by using it — they being considered hard to kill — but I also heard that "it was because the first hunter found *satawo* fruits in the stomach of the first giraffe he killed".

To verify what I was told, I made poison myself, using bits of root, wood, bark, twigs and green leaves from a single *Acokanthera friesiorum*. A dilute solution of 0.5 ml injected intraperitoneally on two laboratory rats was fatal in less than 15 minutes. When I took samples in McCartney bottles to show to the Wata for comment, they were literally grabbed from me by Galogalo Kafonde, who made off with them. Later I learned that he had refined them and said they worked well, confirming that *Acokanthera* alone was effective.

The injunction not to make poison in the vicinity of houses seems well grounded; there appears to be a volatile aspect to *Acokanthera* yet to be chemically determined. To take advantage of electric power, I had departed from instructions by concentrating the liquor in a temperature-controlled retort inside my house. Overnight it was pervaded with a smell of boiling spinach. On awaking next morning, my wife, two children and I all awoke with bad headaches.

13 Verdcourt B. & Trump E.C. 1969.

14 Bally 1979, personal communication.

Application

With the Wata longbow and heavy elephant arrow, the object was for one or two men to approach an elephant from its left side to within 20 paces, but preferably 10. In this close approach they divested themselves of all equipment including quiver, keeping only a short loincloth, leather belt, knife, bow and two arrows — one nocked to the bowstring and the other held in the right hand along with the pulled-in string, ready for instant use the moment after the first arrow was gone. Their intent was to place one or more arrows very low in the abdomen and a hand's breadth or two in front of the left rear leg.

Upon striking, the arrowhead and poison-shaft penetrated the abdomen, usually becoming detached from the main shaft whose bulbous fore end was held up by passage through the hide's fibrous tissues. As the target fled, this soon dropped out to be picked up by the following trackers for reuse.

The placement of choice mystified us game wardens who heard of it, including Woodley. For rifle hunters such a gut shot would result in protracted death from peritonitis, and had seemed incomprehensible. Consequently we opined that arrows must have been placed to angle toward the large blood-bearing spleen and/or liver in the anterior abdomen where shielded by ribs (as documented by Holman, quoting Woodley).

However, we had not listened. Wata were adamant that there was no angling involved (if there had been, both left and right sides would have been acceptable targets). Not only had we not been listening, but at the time we were ignorant of both internal elephant anatomy and the fast diffusion of drugs into an animal's system via intraperitoneal injection. Unprotected by heavy bone, the posterior abdomen was easily penetrated by the Wata arrows. Placed as little as 30cm into the low left gut, the probability of the small intestine being lacerated through more than one coil was high, and nowhere likely to hide the complete poison shaft. On top of this, the liquid gut contents augmenting the litres of peritoneal fluid bathing the viscera[15] would dissolve the poison, which would quickly enter the animal's vascular system through the peritoneal and mesenteric blood vessels. The size of the poison load and the length of the poison '*wogo*' was not so much overkill as insurance. It was so large that it would not be lost inside the gut, and even if only a small amount of the poison entered the animal's system, it would still be lethal.

Placing an arrow in the abdomen from the animal's right side ran the risk of losing the head and poison shaft deep in the vegetative mass carried in an elephant's huge caecum where the poison would be shielded from absorption into the blood and the victim would only die from peritonitis days later. While the Wata could not technically explain the reasoning behind the 'low left gut shot', any more than they could explain the poison's efficacy being the product of cardiac glycosides, in terms of available resources, it was very efficient — of that they were certain.

Elephants properly arrowed in the low left gut were commonly dead or completely incapacitated within 15 minutes. Bill Woodley told me how in 1948 he had followed the tracks of an elephant arrowed

15 Ville 1995 (ibid), among many hunters, comments "… the elephants belly contains 'water' which is drinkable…" They are referring to the clear film of peritoneal fluid that bathes the abdominal viscera of most vertebrates, but in the elephant is copious and might run to over 50 litres. Clear and isotonic, with the same osmotic pressure as the body's cells and consequently tasting slightly salty but very potable, It is not the consequence as widely assumed that elephants have a special organ or tank for storing water internally.

by Boru Debassa near the Sabaki river late the previous evening. It had left its fleeing herd within 200–300 m of where it was struck and he found it dead 4.8 km further on. For most of this distance it had travelled at a run, which at 20 kmh (within an elephant's ability) would have reached the point at which it could no longer proceed within about 15 minutes. The same hunter said that while there were exceptions, usually the elephants he arrowed did not go far from where they were struck. Many were about "400 paces" but, as these distances were never measured, his 400 paces could better be interpreted as 'close to where they were hit'. Another case verified personally by Woodley was when two hunters, Badiva Galogalo and Abashora Adi, arrowed eight elephants on the Sabaki in an evening, and all eight were found dead within a radius of about 10 km of where struck. Again, given that they would have been running before becoming unable to proceed, the furthest would have been incapacitated within 30 minutes and the others sooner.

While the lower left abdomen was the target of choice, there were other spots such as the neck at the base of the ears where, because of the ears' role as heat radiators, there are large blood vessels. Anywhere that the poison could be introduced into the bloodstream worked, though not as quickly as when placed in the low left abdomen.

I was repeatedly told of instances in which an elephant struck by an arrow on the temple ("where you shoot it with a rifle" as one informant remarked) had fallen dead on the spot. Though no one had seen this happen, reliable informants such as Abakuna Gumundi, himself an experienced hunter, were certain it had occurred as a rare fluke.

Wata elephant arrows are made for strength at short range. Mediaeval war arrows were also made for strength and armour-piercing, but at longer ranges, which meant that weight had to be kept below the point at which it compromised trajectory. From the limited information available it appears that medieval war arrows commonly weighed in at 1000–1500 grains.[16] Wata arrows had similar or larger dimensions, plus a load of poison paste, and probably weighed between 2000 and 2500 grains. Such arrows launched from bows ranging from 55–77 kg draw weight would have kinetic energies ranging from 45–100 kg, and momentums ranging from 1.3 to 2.2.

Some idea of the killing power of these arrows can be gained from a comparison with firearms. Though the kinetic energies are far less, the momentums are comparable, ranging from 1.3 to 2.2. Those from the lighter bows match the momentum of a military 7.62 mm SLR (1.3), while those from the heavier bows match the momentum of a 30-06 hunting rifle (2.0), both of which can easily penetrate an adult elephant's brain.

It is highly likely that arrows with such large momentums could stun a small elephant, which, even if it regained consciousness, would soon die from absorption of the poison. It is also possible that where the skull structure is of thin-walled hollow cells, as at the posterior edge of the masseter muscle above the zygomatic arch of the cheekbone, such an arrow might reach the anterior part of the brain in a small elephant.

Such speculation may or may not account for the record of the rare occasions when an arrow to the side of the head dropped an elephant in its tracks, but it gives some order of the power of the largest Wata bow. The Wata longbows, their arrows and the use of poison in the hands of a skilled practitioner killed elephants quickly and efficiently.

Though the Wata longbow and heavy arrows clearly evolved for taking elephant, they

16 Bane M. 2006.

were also used on rhino and hippo which, like elephant, were easy to approach to close range. They were additionally used to secure giraffe and buffalo, as these animals too were large and thick-skinned enough to warrant applying the bow's full power — albeit at longer ranges as they were more difficult to get close to.

Where 'thin skinned' animals (antelope, zebra, pigs and predators) were concerned, the Wata used lighter arrows (and sometimes lighter bows) and did not fully pull in their big bows to launch them. While not requiring the exertion of 'opening the shoulders' that restricted the archer's application of the fully drawn bow, it called for a higher standard of archery over longer distances — usually more than 50 m — of which most Wata were capable.

ABOUT THE AUTHOR

Ian Parker spent eight years in the Kenya Game Department before leaving to form East Africa's first wildlife research and management consultancy – Wildlife Services Ltd – with wife Christine Mowat and partners Alistair Graham, Tony Archer, Alan Root and Phil Glover.

In later years he was a member of IUCN's African Elephant & Rhino Group, a consultant to the CITES Secretariat, and a researcher on the international ivory trade for the United States Government.

Books authored or co-authored include *Elephants & their habitats: The ecology of elephants in North Bunyoro Uganda,* with R.M. Laws & R.C.B. Johnstone (1975), *Ivory Crisis* with journalist photographer Mohamed Amin (1983), *An impossible dream: The edited memoirs of seventeen colonial game wardens* (2001), and *What I tell you three times is true: Conservation, ivory, history and politics* (2004).

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Slipping into the mists of yesteryear, the Wata elephant hunting culture has been widely overlooked in western literature for what it was. This paper arose in a miscellany of personal notes and recollections arising from my association with the Wata between 1956 and 2000, extending what I have written of their bows and hunting techniques in the preceding article.

Notes on the Wata hunting culture

Ian Parker

The Wata way of life

Wata dwellings were strikingly meagre: small round huts that imparted a (false) sense of poverty and were in striking contrast to the larger, densely thatched huts of their Giriama neighbours and even more so to the tall, conical and expansive Orma thatched dwellings. Possibly they put little

Below:
The unsophisticated dwellings of the Wata belied pride in their culture. Photo by Bill Woodley.

effort into permanent structures because, without crops, they were not tied to an area (though some did plant a few crops around their bases).

While Ville[1] reported bush foods that the Wata used, a substantial part of their diets came from produce bought from Giriama or further afield, and this had been the case for a long time. Traditionally, they bartered ivory and meat for goods with coastal merchants directly or with the neighbouring Orma and Mijikenda. In 1980, money with which to do this came from salaries (by now some of them were employed by professional hunters and safari guides) and from selling hunting (poached) products. Across the 20th century a major source of income was ivory sold to the government.

Across the 20th century a major source of Wata income was ivory sold to the government

Finding ivory

Although hunting elephants was banned except for those licenced to do so, from early in the colonial period, the government knew that natural mortality among elephants produced ivory — and ivory was wealth. To take advantage of this, it paid a 'porterage fee' (the term reward was discouraged as it implied inducement!) on a weight basis for tusks handed in. The rate was decided arbitrarily at around 10% of prevailing ivory prices, which *inter alia* set a benchmark for what illegal ivory buyers would have to pay to get it. That it must inevitably have induced some poaching was understood but ignored. 'Found ivory,' as it was referred to, contributed significantly to Kenya's tax revenues from wherever there were elephants.[2]

The government banned elephant hunting and jailed those it could catch doing so, yet undermined this policy by paying for ivory brought in

Collecting ivory from natural mortality went without the risks of killing an elephant. Consequently all Wata — men, women and children — searched for it. They were skilled at recognising evidence associated with elephant remains. In a society which lauded hunting prowess and the incentive this gave to claim tusks as coming from personal kills, Wata nevertheless said that overall, found ivory constituted a larger source of the tusks they sold than those from elephants they killed.

Evidence of the abundance of ivory to be found from natural mortality comes from ivory sold by the national park authorities. Between 1957 and 1971, in the wake of the 1956/57 anti-poaching operation, there was no significant poaching in Tsavo National Park (the main source of park ivory sold). Yet found ivory ran to hundreds of tusks and was well documented in the official auction records. Similarly, when I ran the Galana Game Management Scheme in the 1960s, found ivory made up a substantial proportion of the ivory produced by the scheme. Further irrefutable evidence on the availability of ivory from natural death was given by Graham & Laws.[3] Outside the national parks, the government's porterage fee encouraged all who had reason to go where elephants were, to look for tusks.

In an era when all adult males had to pay an annual tax to the government, tusks were handed in at District Revenue Offices, where porterage was paid and from the money received, the 'porter' then paid his tax at the same office. Written

1 Ville J-L. 1995.

2 *Records of the Kenya Government's annual ivory auctions.* 1956-1976.

3 Graham A.D., & Laws R.M. 1971.

thus it imparts a greater sense of blatancy than was correct: the system functioned without public mention. Paradoxically, the government banned elephant hunting, jailed those it could catch doing so, yet undermined this policy by paying for ivory brought in by Wata and other rural people.

While, in relative terms, most Wata men were good hunters and skilled bushmen (they could recognise one another's footprints) only a minority were 'aces'. Some men were reluctant to get within the prescribed 20 paces of an elephant that made it easy to put the arrow where most effective. Some used inferior poison. Such influences, among others, meant that many elephants received arrows that did not produce a quick knock-down and were lost to the hunter. Their remains might be found a long time (sometimes years) afterwards. Consequently carcasses old and new were carefully searched for an arrow head and/or poison shaft that told the finder to whom it belonged. By Wata lore, the owner of the arrowhead was deemed the owner of the remains and due one of the tusks: if still in the skull, that closest to the ground. Failure to notify the owner of the find or to surrender the lower tusk to him was inhibited by witchcraft. All the aggrieved party had to do was find the carcass, burn the remains of the elephant's head and the thief would go mad! The same rule prevailed in cases where an animal hit by two arrows from different bows was deemed the property of the owner of the first arrow to strike. However, when hunting in pairs, such rules were interpreted with great latitude. In the division of a carcass, the fore limbs and fat belonged to the owner.

Learning to hunt

Boys were encouraged to hunt from an early age when their fathers or uncles would make them small round-bows, with which they practiced constantly. When seven or eight they would start accompanying the family men on hunting parties, initially just as porters and kept well away from big animals. In due course, around the age of 12, they would join hunters stalking and tracking and, when close to the quarry, climb a tree from where they could watch

Birds and small animals

Women and children regularly set snares for small animals and birds around where they lived. For several weeks in April when Palaearctic migrant birds were moving northward, prominent perches protruding above the tree canopy would be occupied by a succession of European rollers (*Coracias garrulus*) on the lookout for prey. Wata boys would select a perch, make a small clearing below it, place twigs coated with bird lime (a local latex) around the space and then in the centre place a large grasshopper, alive and kicking but pinned to the ground. A roller arriving at the perch would spot the bait, drop down onto one of the limed twigs beside it and be caught. In a good day, from two or three perches, a boy might catch 20 rollers, all thick with migratory fat and delicious when roasted.

All the family would dig for gerbils (*tatera*); these small rodents were considered good food. Specially favoured were tortoises, eaten by many if not most comunities except the southerly San. The apogee of good eating was a tortoise, gravid with a clutch of eggs, roasted on the coals: "The eggs are delicious — like ducks' eggs." Yet while tortoises were eaten, fish and snakes were not.

the hunt's final stages in safety. In all this time they would still own a round-bow, now quite strong enough to impale a dikdik, but without poison. In the company of hunting men they were naturally absorbing hunting lore and its associated skills.

Once a boy was a proficient archer, his father — or if the father was not a good hunter, an elder brother or uncle — would make him a proper Wata bow and arrows. While this was chosen and crafted he would be more observer than craftsman. He will have noted how once the stave was selected and cut, the bark was peeled away from the bow's back, with great care taken not to make any nick or cut in the outward-facing sapwood or even to remove small knots. All agreed that the slightest nick in the outward-facing sapwood of the bow's back would cause the stave to break at that point when under tension. Shaping the stave and determining how stacked it should be was done only down the sides and along the belly.[4]

With an elephant longbow his personal property, the neophyte would undergo the relentless training of pulling it in. Only when his mentor was satisfied that he could do this and consistently place an arrow on target, would he be introduced to poison, but it would be handled by his mentor and on not more than two arrows at a time.

By the time a youngster was ready to take the final step of going for his first elephant, he would have been conversant with the detailed elephant lore of his people. The general term for elephants was *arba*, but within that term each sex and age had specific terms. Male elephants were *korma* (the term for any male animal) *arbai*. A male with very large tusks of five or more cubits (one cubit = *mkono* = point of elbow to tip of extended middle finger) was an *usho*, with tusks of four cubits *tofa*, three cubits *boro*, one and a half cubits *dudurucha* and one or less cubits *chilago*.

Females with tusks between three and four cubits were *dadnaba* and considered mature. It was known to the Wata that herds were led by matriarchs — *dadnaba hadmina*, literally 'owner of this village' — long before European researchers 'discovered' this fact. A female with tusks of two cubits or less, and a virgin without a calf, was a *dubaro*, while all calves were *ilbaad*. An elephant without tusks was *kululu* (literally a toothless person). Tusks, likewise, had many descriptive terms relating to size, weight, shape and sex.

Superstition and ritual

Their pragmatism where their hunting technology was concerned notwithstanding, the Wata were very superstitious and many aspects of their lives were ruled by omens. Certain bird calls (e.g. the Nubian woodpecker *Campithera nubica* or crested bustard *Eupodotis ruficrista)* forecast whether the quarry of the day would be male or female, depending on whether it was heard from the hunters' right (male) or left (female). A great deal more depended on whether the call came from in front or behind, close by or far off, and by what angle to one's direction of travel. A snake crossing one's path was always a bad omen, particularly if it was black; those who saw it should abandon their errand forthwith. Striking someone with a piece of ivory was a dreadful sin, and I saw a group set upon and try to knife a game warden who tapped a Watic on the shoulder with a small tusk. Another belief was that one should never kill a dog (*serat*), but my informant, Abakuna Gumundi, usually willing to answer any question, was reluctant to be drawn on this other than stating how bad an act it was. The realm of Wata superstition was not readily discussed with outsiders and, other

4 See *Bows, arrows, poison and elephants* in this issue, pages 11 to 22.

than being aware of it, it was not an area I enquired about.

A youth was usually guided on his first elephant hunt by a supervisor and they would try for an easy target, often a calf. With success, all men in the hunting party present would gather round the hunter and his kill and sing. The emblem of a successful first hunt was the elephant's tail cut off and an incision made in the skin of the part removed so that the young hunter could insert his arm through it and, wearing this far up beyond his elbow, return to camp. The sign was greeted with shouts of joy and acclaim by all present, especially the women. He was taken aside, seated under a tent made of his victim's two ears, and his head was shaved and anointed with elephant fat. No matter how young he might be, this was the point of initiation into manhood: he was a man, could sit with the men, drink palm toddy or honey beer and take a bride. (Wata men were circumcised, but in infancy.[5])

Bride price was ivory in the amount agreeable to her family. The groom also had to provide them with meat from a worthy animal like rhino or giraffe and he had to be able to make fire with a stick of hardwood twirled rapidly in a piece of softwood, and fan the resulting embers into fire in a suitable flammable medium like old, dry, shredded elephant dung.

Animals other than elephant

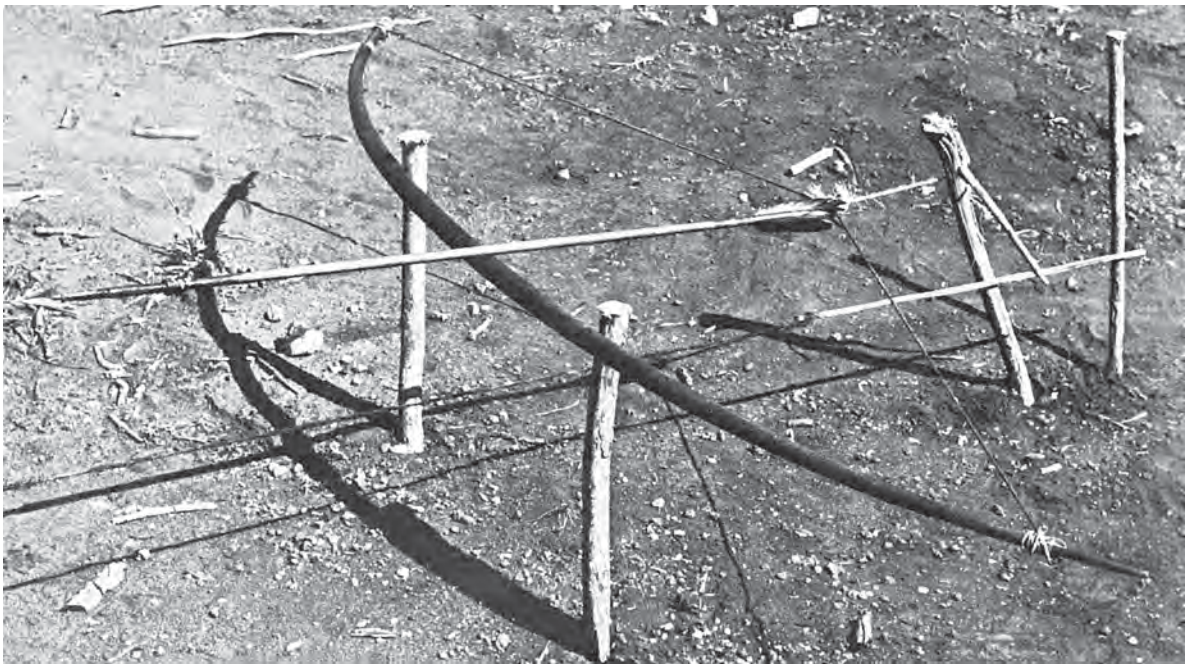
Though elephant hunting was the core of Wata culture, success with other animals, skill as an archer, bushmanship and hunting generally were all admired. A physical disability might prevent a man being proficient or, as sometimes happened, he might be just too timid. Such a person could redeem some social standing by, for example, becoming a specialised arrow maker. A successful giraffe hunter was particularly appreciated as not only were they difficult to stalk within bow range, but yielded choice meat, tail hairs for bangles and arrow bindings, and the best long sinews for bow strings. Giraffe were one species that were occasionally driven by beaters into an ambush by hidden bowmen. The acme of stalking skill was successfully taking an ostrich. These birds could, however, be killed more easily at the nest. A sharp spike (or damaged arrow) was stuck vertically into the ground in the midst of a clutch of eggs so that it protruded 20 cm or so above the level of the eggs. Poison was applied on the sharpened end. The brooding ostrich would return and, lowering itself onto the eggs, impale itself.

Many took rhino opportunistically. In some cases where, for whatever reason, a youth had been unable to kill an elephant, prowess with other big mammals would do, but as a distinct second best.

Sources of alcohol

In recent times the favoured alcoholic beverage was palm toddy, usually bought from Giriama who tapped coconut palms. Less frequently, but more so in the past, the Wata themselves tapped doum palms. The latter's branches were often interconnected with a scaffolding of poles, thereby spreading a man's weight while tapping sap among the terminal fronds. Until the 1930s, honey from the honey bee *Apis mellifera* was a major source of beer. These bees, while common at the coast, have become scarce in the drier hinterland.

5 Abakuna Gumundi, personal communication,



The bow-trap set for leopards was equally effective against human trespassers. Photo by Alan Root.

Though it was a Kamba speciality, a few Wata took leopard for their skins, using an ingenious bow trap set beside a pathway at the height of a leopard's body. A bow was pulled against two pegs and held pulled in by a trigger attached to a trip-cord that crossed the pathway ahead of the bow and along the projected flight path of an arrow placed in the drawn bow.

Anything touching the trip-cord released the trigger and the arrow was launched. Such devices were a real threat to any human who used the paths where they were set. Such a casualty was one Diwani Guyo who in 1962 was hit in the right calf. Despite getting to hospital, he died. While these bow traps were effective against animals, sufficient allusion was made to their efficacy against humans that I felt that was their real origin. They would have been a powerful deterrent against trespass when the need arose.

Ville[6] asserts that "... Waata were not aggressive towards outsiders ..." This is, I believe, not wholly true. The eastern Kamba people of Kitui District have a long tradition of acquiring ivory as hunters and of trading the commodity with Kenya's coastal people.[7] Those of easternmost parts of Ukambani were elephant hunters on a par with the Wata, whose methods they had adopted. The two groups were frequently in contact, and some individuals formed close trans-cultural friendships. Yet there was also considerable hostility and suspicion between them, and in the field Wata were wary of Kamba that they did not personally know as "either side would kill for ivory and goods".[8] Three Wata were renowned as ivory 'hijackers' who had murdered Kamba hunters and stolen their ivory.

Women commonly joined their men on extended hunts far away from their homes, or were called to a kill when made within reach of such bases. A fresh elephant was stripped of its meat in chunks which were then cut into thin ribbons about 2 cm thick and draped over the surrounding vegetation. In the interior's arid climate (but not on the humid coast) this dried within 36 hours[9] and

6 Ville 1995.

7 Parker 1979.

8 Boru Debassa, personal communication.

9 Parker 1964.

could be stored for months. Fat was highly prized, taken and rendered to a hard, white lard that also kept well.

Stories of three hunters

In Parker and Amin[10] I gave thumbnail sketches of three 'ace' elephant hunters: Boru Debassa, Galogalo Kafonde and Abakuna Gumundi. Their stories give an insight into the Wata hunting lifestyle.

Boru Debassa

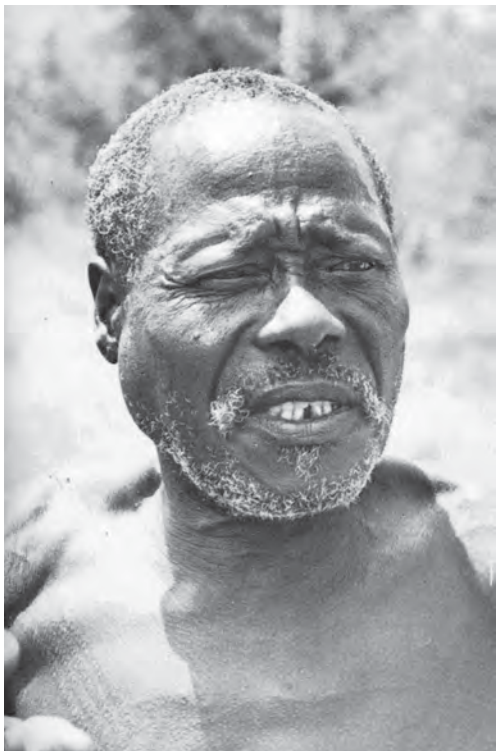
Boru was son of Debassa Abajabi and grandson of Abajabi Baroba. Father and grandfather had their bases at Yatta Roge on the Sabaki River (I forego the more usual term Galana because it merely means any flowing river e.g. the Tana) below the easternmost end of the Yatta Plateau, in what is now the Tsavo National Park. Boru himself was born at Kisiki cha Mzungu. The family's main familial contacts were, however, with the Wata of Garbiti. Boru's father was an indifferent hunter, but his grandfather was well known and bought his arrow poison from the Giriama at Bamba.

Boru's first bow was a round Giriama type made by his father and he spent his early boyhood practising on birds and small animals in the vicinity of the huts wherever the family's base was at the time. His first trophy of merit was a dikdik over which his mother made so huge a fuss that his peers still embarrassed him over it 50 or so years later. Graduating to a proper bow, his first two arrows were made by his father, who put on the poison and which Boru was not allowed to touch. He could only remove the *chora* (leather binding) from an arrow when actually ready to loose it at an animal.

An uncle had acted as his hunting mentor, guiding him to his first elephant kill. Late one evening they had come upon a small herd in a water course below sheer banks. This allowed a close and safe approach to within twenty paces. He had chosen

10 Parker & Amin 1983.

Elephant meat cut into thin strips and hung out in the sun to dry. Photo by Bill Woodley.



Boru Debassa, whose bow had a draw weight of 77 kg, the most powerful of all the Wata bows measured. Photo by Ian Parker.

a *dudurucha* with tusks of one and a half cubits, and his arrow struck in the approved place, but dark was falling and they could not follow it up immediately. Taking up the tracks next morning they missed the spot where the victim had left the herd. Several days later vultures indicated it had died only 80 paces from where he had arrowed it. The tusks he gave to a Giriama friend.

His second elephant was a *tofa* with four cubit tusks and the first he sold on his own account. He had experienced being chased by elephant when, following one his uncle had arrowed, they came on the elephants suddenly, were seen, and the whole herd came after them in a rush.

Later and with high standing as a hunter (a stocky and powerful man, his bow had a draw weight of 77 kg, the heaviest of all measured by David Sheldrick after it had been confiscated during anti-poaching operations), his main interest was hunting elephants, selling the ivory to a Mkamba, Ndibo Molu. He had no numerical estimate of how many he had killed, except that it was very many. In this he was not being coy but simply reflecting a cultural disinterest in numbers. Had he lost any elephants? He had, but again had no estimate of numbers. Usually they did not go far from where he arrowed them. Many were about "400 paces" but as distances were never measured, his 400 paces would be better interpreted as 'close to where it was hit'. He had hunted widely: as far north as the Tiva River, as far south as Garbiti, east to near Mangea Hill, but did not venture much west of Yatta Roge because it was Kamba country. To the question why he hunted, he put getting meat and fat for the family before ivory. Coincidentally, many years earlier, a Kamba ace who hunted with the Wata had said somewhat dismissively that Boru Debassa shot any elephant regardless of tusks, confirming Boru's statement. I interpret it as reflecting Boru's standing as a reliable provider rather than just a source of money.

On hunting in general, he had originally made all his own poison but in later years bought his poison from Ndibo who, in turn, bought it from the Giriama. He had taken many animals for food over the four decades in which he had hunted, again without recall of numbers. Unusually for a hunter of his competence he had never been interested in rhino, though he took 15 that he had come across opportunistically. He had never killed a lion, but had taken a sable antelope at Goshi, memorable because they were only occasionally seen.

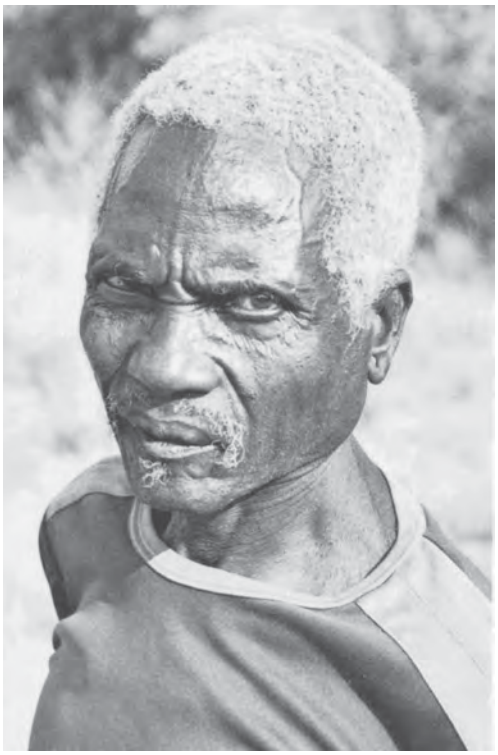
Galogalo Kafonde

Galogalo, son of Kafonde and grandson of Abaroba, became famous at an early age as a successful iconoclast. His grandfather lived at Chafa near Bilisa by Garsen and was not much of a hunter. Son Kafonde moved from Chafa to Shakama on the Sabaki River — and he was a good hunter. Galogalo himself was born at Shakama a year after the government introduced the one shilling tax on all males. As an adult Galogalo had moved up the Sabaki to Kisiki cha Mzungu. Where Boru Debassa was open and friendly,

Galogalo was reserved and suspicious and did not like white men (hardly surprising given their attitude towards 'poaching'). His first kill was a female lesser kudu near Garsamuke, by himself with no help. The second was giraffe — again on his own without guidance. The third kill was a lone elephant, a *boro* with three cubits of ivory. Rarely did Galogalo team up with another, until it was time to introduce his own sons Badiva and Hunter (named after the professional hunter J.A. Hunter) to hunting.

Like Boru, Galogalo could not tally all elephants he had killed, other than they were very many. Certain events stood out — like getting exceptionally large tusks. One such pair were six cubits in length, which he had found dead near the base of Sala Hill. They turned out to be the biggest known to have come out of Kenya, one weighing 86 kg and the other 81 kg. Galogalo had been much admired for his ingenuity in strapping them to logs and floating them down the Sabaki to Kisiki-cha-Mzungu. The tale of how they came to end up in the American Museum of Natural History is recounted in Parker *et al.*[11] He also took two more in the six cubit class; one set of these tusks was sold to a Mduruma called Dzeha for KSh 3 a pound and the other to a Mkamba, Kizoko, for the same price. Later he sold another very big pair to Ndibo Molu.

Perhaps reflecting his boldness, Galogalo had been chased many times and actually stood over by elephants on three occasions. The first was an *usho,* a large male with five-cubit tusks which, on receiving the arrow, wheeled round and was on top of him before he could flee. He scrabbled his way under a fallen *Commiphora* tree and while the elephant was demolishing it to get at him, he escaped past its stern. On the other two occasions large females had seen him as he closed in and both tried to trample him. Severely buffeted between their legs he escaped through their back legs. Many Wata had died in such circumstances.



Galogalo Kafonde is credited with finding the biggest known tusks to have come out of Kenya, weighing 86 and 81 kg. Photo by Ian Parker.

Galogalo hunted rhino as well as elephant: "They were so easy," referring to imitating their mewing call and luring them downwind to within metres. Again, he had no idea of how many he took in his career, but recalled one with multiple horns[12] weighing 23 kg. Another had "white" i.e. unpigmented horns, and with a friend Mzee Maitha (a Giriama) had taken them with the horns of 16 other rhino to sell in Mariakani. There they were set upon by a gang posing as game scouts who stole the horns.

He had killed 48 hippo, "hundreds" of warthogs, many antelopes, two lions and three leopards. They died close to where arrowed, but he made the point that none of the cats were immediately followed but left until the next day in case they were not dead. The claws and teeth were sold to a Giriama. The only animal that he had never collected was a sable, and he would still like to get one (1980) if only to be even with Boru Debassa.

11 Parker 2001 & 2004.

12 Parker & Amin 1983.

Hunter Abakuna Gumundi was also a gifted healer. He was murdered by Somalis in the 1980s. Photo by Tony Archer.

Abakuna Gumundi

Abakuna Gumundi of the Gamado clan is my third Watic ace, from Kasikini, north of Baricho. He was born in or about 1923 and became noted as a hunter and an exceptional herbalist and bone setter, possessed of great knowledge about the medicinal properties of the plants of Kenya's coastal hinterland. Consequently he was much in demand as a traditional doctor. Given his influence among the local people — Wata and Giriama — and that he had urged them to speak out against the Somalis then appearing in Kenya's coastal hinterland, he was murdered by Somalis in the late 1980s.

Abakuna had shown unusual interest in the world beyond the realms of most Wata, and had become a close friend of professional hunter and ornithologist Tony Archer — not because he needed the employment but due to his interest in the wider world around him. Such was his presence that in appreciation for a wonderful hunting safari with Archer and Abakuna in East Africa, their American client invited both as his guests on a safari to India. Thus Abakuna Gumundi found himself treated as a multimillionaire's guest, with his own suite in Delhi's most luxurious hotel. Too shy to eat in the public dining rooms, he preferred room service. The irony of his humble status being salaamed and served by a retinue of Indian servants tickled his lively sense of humour.

He flourished as a hunter — some say he was the best of all time though he denied it, saying that that accolade was due to a far greater ace, Galano from the Tana River, who had been killed by an elephant he was hunting in the late 1950s. Like Galogalo Kafonde, on the death of his brothers, Abakuna had become responsible for their wives and children in addition to his own. Prior to this he had spent nine years living in the bush without a permanent base. He never kept score of the elephants he killed but, understanding white men's fascination with numbers, opined that it was probably between 400 and 600. Like Boru, he was careful and had never been caught by an elephant. His most renowned feat was taking three large *ushos* in a morning with three arrows. He rounded this off by hiring a train of donkeys from a Mgiriama to carry the tusks out of the bush to the buyer. This, his peers thought, was real style and equal to Galogalo's feat of floating tusks down the Sabaki.

Some thought that the largest of these three elephants may have been the biggest ever taken by a Watic. However, unlike Galogalo's found tusks, their full weights were never known as it was customary to remove the butt-ends and tips of tusks before selling to the buyers' agents. Tips were sawn off at the point where the tusk diameter became less than the width of the first three fingers of one hand pressed together, and the butts were removed at the point where three fingers side by side would go no further when inserted down the tusk hollow. The purchasers insisted on this practice to get rid of the tusks' least valuable parts.

While he affirmed that elephant meat and fat was greatly prized by the Wata, he said they probably got most food from lesser animals. Indeed he referred to warthog (*golja*) as the Wata's sheep. An element of sport was always present in their hunting and while warthogs were arrowed as and when come across, the sporting way to take them was from out of a burrow. This occurred if one was seen backing into its hole unaware of the hunters, or if tracks indicated one or more were already resting underground (it didn't count if the warthog had seen the hunters and was taking refuge). One hunter crouched out of sight on the roof of the burrow with knife in hand. An accomplice, having ascertained the burrow's alignment, went to where he judged the underground end would be and proceed to stamp hard. It worked even better if there were two stampers. As the alarmed warthog shot out of the burrow, the man crouched above the entrance would endeavour to stab it with his hunting knife (*bilo*).

Cooperating with the neighbours

Some Kamba hunters were well known to the Wata, among whom they lived and hunted for extended periods. The aforementioned Wambua Mukula and Elui Nthengi were examples. They possibly contributed as much to understanding local hunting, via Bill Woodley,[13] as Abakuna Gumundi.

Illustrating such a transcultural case was Kathuo Kagala — a Mgiriama who had married a Wata woman and lived within the small Kisiki-cha-Mzungu community of Wata hunters and was accepted as one of them. The following notes taken down verbatim give insight into this:

> "Hunting near the Taita Hills and while very drunk … came across a leopard in a clump of sugar cane. Put an arrow into it and died very quickly."
> "Went with Baroba Kiribai to his elephant kill … found a lion on it. The lion was blind in one eye. It roared and vomited and died. The arrow went into the heart. It was a large male."
> "Went with Kithomo Matheka [a Mkamba] looking for small animals and came across a lion sleeping. Shot it in the gut with a dikdik arrow. It charged us but veered off and was dead within 500 paces."
> "I probably killed 150-200 elephants."
> "Together with Boru [Debassa] we killed 18 hippo in one evening and collected all the meat next morning."
> "In one morning arrowed 20 rhino, collected 10 and three others were found later from vultures and I collected all the horns."

Such kill rates by modern standards are carnage, but it should be borne in mind that they were incidents recalled from a hunting career of some 40 years. Being able to arrow 20 rhino in a morning may seem improbable today, yet the late Bill Woodley saw 40 in a morning's walk; he, Warden McCabe and myself saw over 60 in 13 km^2 in four hours on another morning in 1956, and during an aerial count in 1963 I personally counted 34 in two minutes. Being able to arrow 20 in a morning in the dry season over a watering point was certainly possible.

Another old Mgirima mentioned by Galogalo was Mzee Maitha. He too lived at least part time as a Watic. Not until 1980 did I learn that he was considered among the hunting greats. This was extraordinary as in the anti-poaching campaign of 1956/57 we thought we had heard of all top hunters. It transpired that not only was he held an ace among aces, but was a formidable *mchawi* (witch-doctor), which was why no one would inform on him. To have done so would have had dire

13 Holman 1978.

results. He, Kathuo Kagala and the Kamba Wambua Makula ran a successful 'scam' using the government porterage system that also applied to rhino horn. They brazenly approached an honorary game warden based in Voi with horns of several rhino they had killed, saying that they recovered them from 'poachers'. The warden accepted their explanation, praised them and paid the rewards, and told them to try to catch more poachers. This they indeed did for quite an extended period until the Tsavo National Park was declared in 1948 and the honorary warden felt it unwise to continue. Such cases illustrated how Wata communities readily adopted those from other cultures.

We admired these ingenuous people and were as ready to let them go with a warning as to have them thrown in jail

The economics of ivory

Traditionally the Wata disposed of ivory by selling or bartering it directly with merchants along the coast or to their Orma and Mijikenda neighbours. Within this complex trade network the Wata were by choice producers of the raw commodity, but without set borders to what they could or could not do. Much appears to have depended on personal whim and trans-cultural friendships. Subjectively where the Wata were concerned, I believed that the trade 'structure' had ratios of 100 hunters to 10 middlemen buyers to one merchant who, in 1957, was usually Arab or Indian/Pakistani.

The colonial game laws claiming all ivory belonged to the state drove the traditional commerce underground. Table 1 gives insight into the situation as it was during the 1956/57 anti-poaching campaign. The sample is biased because the programme aimed to stop elephant and rhino being killed. Thus 87 Wata cases related to 305 elephants, i.e. 3.5 elephants per man (range 1-26), with in addition one case of a Watic buyer although he only acknowledged buying a leopard skin. Another both hunted and bought ivory involving 17 elephants. The comparative Kamba evidence was of 1.5 elephants per hunter (range 1-8) involving 31 elephants, whereas there were 11 buyers relating to 22 elephants (range 1-14) and only two who both hunted and bought ivory (22 elephants). While the sample is small, it reflected the Kamba tradition of ivory trading as well as hunting. After 1957 the Wata became cautious and tended to sell only to a few Kamba who lived among them for extended periods.

Animals other than elephants and rhinos in Table 1 do not reflect anything except the range of species hunted. We wardens tended to treat such cases as devices of last resort when we knew the individual had taken elephant and/or rhino, but had been unable to get a conviction on those counts. A further aspect worth recording is the ambivalence we felt over prosecuting hunters — particularly the Wata. Among the 33 listed as freed were 10 who admitted killing more than one elephant, including three who had taken 17, 23 and 26 respectively. Hoist with the petard of being law-enforcers, we did not believe the law either realistic or fair. We admired these ingenuous people and were as ready to let them go with a warning as to have them thrown in jail. Herein lay the seeds of what became the Galana Game Management Scheme, a programme designed to permit Wata to hunt an annual quota under strict government supervision.[14]

If Abakuna's estimated total had been 400-600 elephants over three decades, taking the mid-point of 500, this would be 17 elephants a year. If the 1956/57 anti-poaching campaign estimate of there being 400 active Wata elephant hunters is of the right order,

14 Parker 2004.

Table 1. Samples from Wata and Kamba convictions for poaching in the 1956/57 anti-poaching campaign in eastern Kenya

WATA																			
Crime	TOTAL	Jailed	Months	Max mths	Freed	Elephant	Rhino	Lion	Leopard	Giraffe	Zebra	Buffalo	Eland	Waterbuck	Oryx	Kudu	Hartebeest	Impala	Dikdik
Hunting	89	58	7	24	31	305	39	3	9	19	2	10	1	0	3	4	0	0	0
Buying	1	-	-	-	1	-			1										
Hunt & Buy	1	1	10	10	-	17													
						322	39	3	10	19	2	10	1	0	3	4	0	0	0

KAMBA																			
Crime	TOTAL	Jailed	Months	Max mths	Freed	Elephant	Rhino	Lion	Leopard	Giraffe	Zebra	Buffalo	Bushbuck	Waterbuck	Oryx	Kudu	Hartebeest	Impala	Dikdik
Hunting	20	17	9	24	3	31	4			2	2		1	2	1	5	3	2	1
Buying	11	2	-	-	9	21	15												
Hunt & Buy	3	3	48	96	-	22	11												
						74	30	0	0	2	2	0	1	2	1	5	3	2	1

Note:
Freed indicates either released simply because the man was, in the case of the Wata, 'A good chap', or with the Kamba because, although guilty, the accused mounted an effective defensive against untrained prosecutors.

and if each averaged only 3.5 elephants per year, their offtake would have been 1,400 across the whole Wata elephant hunting range. From a different aspect, would 3.5 elephants per man a year be adequate to keep Wata archers proficient and their culture and skills alive? As a comparison, to keep mediaeval English archers proficient they had to practise every week. It was when this rule was relaxed and their proficiency waned that the longbow gave way to the inferior musket. From this perspective it is not unreasonable to posit that an average of 3.5 elephants a year was a considerable underestimate.

The annual offtake could have been around 2,000 and well within the subjective Sheldrick/ Woodley estimates derived from the field. Given information from Laws,[15] it is not unreasonable to postulate that the whole Wata range may have held c. 50,000 elephants and such offtakes were possible (though this is not to argue whether or not they were sustainable).

Taking an average tusk weight of 9.65 kg and an average of 1.85 tusks per elephant,[16] 2,000 elephants would have generated 2,000 x 1.85 tusks x 9.65 kg = 35.7 tons of ivory annually. Doubling this to cater for found ivory which the Wata said was greater than their total killed, the resulting output of 71.5 tons annually was in the mid-1950s worth KSh 429,000 (valued at KSh 6/kg, the price the illegal buyers were paying the hunters or government paying for porterage). At a time when the average agricultural wage was less than KSh 40 per month, this was the equivalent of KSh 10,750 month/wages, or the equivalent of 27 months rural wages per man of the 400 Wata men per annum.

15 Laws R. M. 1969.

16 Parker 1979.

Speculative to a degree, it nevertheless orients one toward the order of monetary value elephant hunting was to the Wata in the mid-1950s. Add to this all the other animals they took for food and sale, and their economy gains perspective. Logically, by making hunting and trading ivory illegal, then setting the low porterage fee as a benchmark that illegal buyers had to pay, the government unwittingly depressed Wata income and created the incentive for them to produce more ivory to achieve the same proceeds they could get before the ban.

The foregoing is not intended to broach the contention swirling around elephants and ivory trading, but to show that the Wata clearly had a monetary economy at odds with the image of them as simple hunters and gatherers. The hallmark of that way of life is taking what is available and being largely (but not necessarily wholly) independent of surrounding economies. The Wata had a distinct culture with a monetary economy likely to have evolved and been driven by external demand for ivory for a long time, extending back far beyond colonial times.

ABOUT THE AUTHOR

Ian Parker spent eight years in the Kenya Game Department before leaving to form East Africa's first wildlife research and management consultancy – Wildlife Services Ltd – with wife Christine Mowat and partners Alistair Graham, Tony Archer, Alan Root and Phil Glover.

In later years he was a member of IUCN's African Elephant & Rhino Group, a consultant to the CITES Secretariat, and a researcher on the international ivory trade for the United States government.

Books authored or co-authored include *Elephants & their habitats: The ecology of elephants in North Bunyoro Uganda,* with R.M. Laws & R.C.B. Johnstone (1975), *Ivory Crisis* with journalist photographer Mohamed Amin (1983), *An impossible dream: The edited memoirs of seventeen colonial game wardens* (2001), and *What I tell you three times is true: Conservation, ivory, history and politics* (2004).

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On a Wing and a Prayer

100 years of the Irish in Kenya

Bróna Ní Mhuirí

The year 2016 marked the 100th anniversary of the '1916 Rising' in Ireland, a milestone on the country's road to achieving independence in 1922. To commemorate that event, the Embassy of Ireland in Kenya organised an exhibition chronicling the presence and contribution of Irish people in Kenya since 1916. This article draws on the themes of that exhibition.

Above:
Sister Nina Underwood, one of the 'Flying Nuns' of Turkana, in the 1960s.

The Irish have a long tradition of travel and emigration. Today, an estimated 70 million people worldwide claim Irish ancestry and heritage — among them former US President, Barack Obama, whose other heritage is Kenyan.

The Irish came to Kenya as entrepreneurs, teachers, doctors, coaches, aviators, farming and motoring pioneers, workers in non-governmental organisations, and especially as missionaries, both religious and lay.

The Kenya they encountered mirrored in many ways their own experience of home: agricultural, traditional, poor in material wealth, but rich in culture. They stayed to become an integral part of the development of a newly emerging African state which, like the country of their birth, had a strong desire for independence.

This history of the Irish in Kenya since 1916 outlines the stories of some of the Irish who travelled from a small island nation on the edge of Europe to contribute to and be a strong presence in the development of present-day Kenya.

Coffee and the Holy Ghost Fathers

Irish missionaries grew the first commercially viable coffee plants in Kenya and launched its coffee industry. In 1899 the Holy Ghost Fathers (today known as the Spiritans) from Ireland and France arrived in present day Nairobi and settled in the then Kikuyuland, now Muthangari. They named their mission St Austin's. One hundred coffee seedlings arrived with them, the plan being to grow coffee commercially to finance the mission. An Irish Spiritan, Father Tom Burke, was head of the mission. He was a young energetic Limerick man from a rural background. In 1905, Fathers Burke and Hemery tasted the first commercially viable coffee in Kenya. In 1906, the coffee appeared in a Nairobi shop and was soon being exported.

The coffee, an Arabica mocha blend, was quickly recognised as a commercial crop suited to the Kenyan climate. Farmers who had failed with other commercial crops set up large coffee plantations using seed from St Austin's. Karen Blixen bought some of her seedlings from the mission. It was almost fifty years before a competitor would rival the mission plants.

Motoring pioneer

John Joseph Hughes was a visionary who contributed to farming, business and industry in Kenya in the first half of the 20th century. Hughes came to Kenya in 1920 as an advisor for the world's largest buyer of flax. He quickly realised that a mixed farming policy, rather than monoculture, would suit local conditions better. He moved to the Agricultural Department of the government to develop this policy successfully. When his two-year contract ended Hughes joined forces with another Irishman, Tom O'Shea, a general outfitter in Eldoret, and travelled through western Kenya supplying farmers with goods.

Harvesting the first coffee crop at St Austin's Mission in 1905.

A Model T Ford brought into Kenya by J.J. Hughes.

In the 1920s Hughes secured the rights to import Model T Fords into Kenya. In this era of the Great Depression he devised a modified form of barter whereby Model T Fords were sold in exchange for crops. It was a resounding success. In 1928 he set up Hughes Ltd. in Nakuru, which soon became the largest motor company in the country, capturing 52% of the motor market in Kenya. J.J. Hughes had a deep sense of responsibility towards his adopted country and set up a fully equipped training school for Kenyan mechanics.

After independence he became the Republic of Ireland's first Honorary Consul to Kenya.

Aviation

The Irish were central to the birth of aviation in Kenya. A Cork man, John Evans Carberry, formerly the 10th Baron Carbery [sic], came to Kenya in 1920 and brought his passion for flying with him. In 1928 he imported the country's first registered aeroplane, christened 'Miss Kenya'. Seeing the commercial potential in aviation he registered a new company, Kenya Aircraft Company Ltd. His second plane, 'Miss Africa', made the first civilian flight from Kenya to Croydon, England. Mrs Florence Wilson, a passenger on that flight, established Wilson Airport on her return.

Carberry loaned his custom-built Percival Vega Gull to Beryl Markham, the first woman to fly solo east-west across the Atlantic in 1936. He also financed that flight. It is reported that Beryl Markham undertook the flight in response to Carberry's challenge.

The first registered plane in Kenya, 'Miss Kenya', owned by John Evans Carberry.

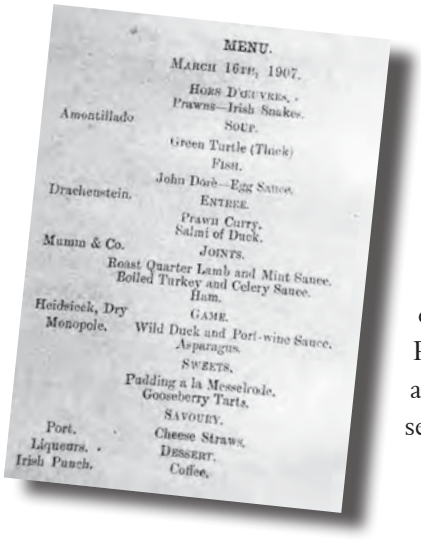
Kenya Airways was founded in 1977 with technical and management support from Aer Lingus, Ireland's national airline. Dublin man, Brendan Donohoe, seconded from Aer Lingus, was finance director of Kenya Airways in Nairobi in the 1990s. In 1994 he became general manager and part owner of Air East Africa, a successful cargo operation in the east and central African regions.

Retired Irish Honorary Consul, Joe O'Brien, is an engineer and licensed aerobatic flight instructor. He has trained people from all walks of life in aerobatic flying, from missionaries to the chair of the Convention on International Trade in Endangered Species (CITES).

From 1998 Joe was a volunteer aerobatics instructor for the Kenya Wildlife Service (KWS). Over 14 years he trained eight pilots for the KWS Airwing, most of whom went on to become professional pilots. Joe O'Brien, in his eighties now, is still active as an engineer.

The Kenya Irish Society

Originally the East African Irish Society, the Kenya Irish Society was co-founded in 1924 by Dublin man, Edward Keane Figgis. Figgis was a partner in the Nairobi-based Daly and Figgis law firm, the oldest law practice in Kenya and today known as Daly and Inamdar Advocates. In 1972, reflecting political changes in East Africa, the society became the Kenya Irish Society (KIS).



MENU.

MARCH 16TH, 1907.

HORS D'ŒUVRES.

Amontillado — Prawns—Irish Snakes.

SOUP.

Green Turtle (Thick)

FISH.

Draehenstein. — John Dory—Egg Sauce.

ENTRÉE.

Prawn Curry.

Salmi of Duck.

Munn & Co. — JOINTS.

Roast Quarter Lamb and Mint Sauce.

Boiled Turkey and Celery Sauce.

Ham.

Heidsieck, Dry Monopole. — GAME.

Wild Duck and Port-wine Sauce.

Asparagus.

SWEETS.

Padding a la Messelrode.

Gooseberry Tarts.

SAVOURY.

Port. Liqueurs. Irish Punch. — Cheese Straws.

DESSERT.

Coffee.

The menu from the first St Patrick's Day celebrated in Kenya, 1907.

Ruth Hogan, a past president of the society, wrote a history of the many members and past presidents who contributed greatly to their adopted country. Among these:

- Dublin man, John Clark Stronach, was the engineer for the building of Nairobi State House in the 1920s and became the country's Director of Public Works in the 1940s.
- Mayo man, Sir Joseph Sheridan, was Chief Justice in the 1930s and presided over the infamous Broughton Trial in 1941, where Sir Jock Delves Broughton was controversially acquitted of the murder of Josslyn Hay, 22nd Earl of Erroll.
- Another Dublin man, Archibald Thomas Ayres Ritchie, a graduate zoologist, arrived in the country after World War I and was Kenya's Chief Game Warden from 1923 until 1950.
- Sir Joseph Aloysius Byrne was the first Irishman to be appointed Governor of Kenya in 1931. He was a keen golfer and the Sir Joseph Byrne Cup was awarded at the Royal Nairobi Golf Club for many years.
- Mr Justice Bourke, later Sir Paget Bourke, was a senior Kenyan judge in the early 1950s. He was also an uncle to the first female president of the Republic of Ireland, Mary Robinson.
- Cork man, Alfred (Fred) Dalton, was appointed first general manager of the newly formed East African Railways and Harbours Administration in 1948, a post he held until his retirement in 1953. He went on to become chairman of the Maize and Produce Control Board and also sat on the local civil service selection board.

Government and administration

Prominent in the East Africa Power and Lighting Company (EAPL), Wexford man, Paddy Deacon, came to Kenya in the late 1940s. Paddy was head of personnel and management for EAPL. He recruited and trained Kenyan employees and established a residential training school. He ran management training courses for organisations such as Securicor, Mumias Sugar, KCB Bank, John Mowlem & Co. and the Nation Media Group. He was a governor of the Kenya Polytechnic and, together with Shell and British American Tobacco, founded the Federation of Kenya Employers. Among other things, he was also a member of the Industrial Court and served on the Board of Trustees of Gertrude's Children's Hospital for 27 years. In recognition of his contribution to his adopted country, then-President Moi appointed him a Member of the Order of the Burning Spear in 1999.

Early Irish Carmelite Sisters in Nairobi.

Missionaries

By far the greatest number of Irish people to come to Kenya were missionaries, both lay and religious. Irish missionaries first arrived in the mid-19th century and passed on not only the gospel message but also many skills as a means of contributing to the social, technical and

Paddy Deacon with then-president Moi.

Sister Teresa Joseph O'Sullivan established the first Catholic high school for Kenyan girls in Limuru in 1936. She was also the teacher of Kenya's Nobel Peace Prize winner, Wangari Maathai.

economic advancement of the Kenyans among whom they lived.

Many hundreds came and stayed to work in a wide variety of pastoral and development activities, particularly in the areas of health care and education. They worked in every (then) province in Kenya.

Forty Catholic missionary congregations and orders, either founded in Ireland or with Irish members, have worked, and are still working, in Kenya. Their contribution is manifest today in institutions such as the Mater Misericordiae Hospital, which was Nairobi's first Catholic inter-racial hospital.

The Church of Ireland, through the Church Missionary Society of Ireland (CMSI), and earlier as part of the Church Mission Society, has been present in Kenya since the mid-19th century. Irish Presbyterian missionaries, through Presbyterian Global Mission, have also been a presence in Kenya for many years. Their work continues today in areas such as Kajiado, Narok and Nairobi.

One lay missionary was the Venerable Edel Quinn who established the Legion of Mary (a movement for lay missionaries) in Kenya in 1936. She broke new ground for missionaries by bringing together people of different races and ethnicities in mixed Legion branches. Travelling with her Islamic driver in an old 1932 Ford, she established branches in Uganda, Tanzania and Malawi.

Motivations have changed since these early missionaries came to Kenya, but their commitment to the Kenyan people is as strong as ever. Today their focus includes justice and peace, ecology and working with the poorest of the poor.

Education — The quiet revolution

It was notably in the area of education that the Irish, in particular the missionaries, contributed to their new country. Irish missionaries established primary and secondary schools in every province in Kenya.

Wangari Maathai, Kenya's Nobel Peace Prize winner, was taught by an Irish nun who had fought in Ireland's War of Independence before becoming a nun. Sister Teresa Joseph O'Sullivan established the first Catholic high school for Kenyan girls in Limuru in 1936. Maathai acknowledged the nun's influence in her memoir, *Unbowed*, saying Sister Teresa had aroused and encouraged her lifelong interest in science. In 1983 Sr Teresa received an award from the National Council of Women in Kenya in recognition of her contribution to Kenyan women.

St Mary's School, Nairobi, is the Alma Mater of President Uhuru Kenyatta. It was founded by the Irish Holy Ghost Fathers in 1939. In the same area as St Mary's is the prestigious Loreto Girls School, founded in 1921 by Irish Loreto nuns. In 2013, the Loreto Sisters were awarded the Kenyan Golden Jubilee Award for Excellence in Education.

St Patrick's High School, Iten, was founded by Irish Patrician Bothers in 1961. It became the third secondary school for Kenyan boys north of Naivasha. In 1989, the school was one of the first in Kenya to start using computers. It is widely regarded as the best distance-running high school in the world.

Coaching Kenya's champions

The last two world record-holders of the 800 metres — Wilson Kipketer and David Rudisha — were coached by former St Patrick's High School principal, Brother Colm O'Connell. A Cork man, Brother Colm came to Kenya in 1976 for a few months and has stayed 40 years. Initially with no formal training in athletics, he has coached almost 30 Kenyan World and Olympic medallists. He is equally encouraging of girls and is credited with starting the influx of female athletes to Iten in the 1990s. The small high-altitude town in the Rift Valley is now a major centre of athletic excellence. Athletes from Kenya and around the globe live and train there. Today Brother Colm, the 'godfather of Kenyan running', is still training champions. There are an estimated 120 athletics training camps in Kenya basing their approach on Brother Colm's style of coaching.

Brother Colm O'Connell, who put Kenya's distance runners on the world map.

The Flying Nuns and healthcare

Another notable Irish contribution to Kenya is in the area of health, by both missionary and lay medics.

Perhaps the most unusual Irish involvement with Kenyan health care was that of the so-called Flying Nuns of Turkana. In the early 1960s the Irish Medical Missionaries of Mary (MMM) sent young nuns to northwest Kenya to provide a mobile medical clinic. The young Sisters piloted flimsy two-seater aircraft, whose wings and fuselage were wrapped in Irish linen and spray-painted for durability. They flew over a desert of 51,000 sq. km, doing their own refuelling and basic maintenance, bringing the only available medical assistance to famine-stricken areas, their supplies usually samples from Ireland and the USA. Their work continued through the 1960s. A hospital and training centre were subsequently set up in Kakuma, which continue today under the supervision of the local diocese.

Dr Roland Burkitt had a practice in Nairobi in the 1920s with other Irish doctors. He was among the first to understand that, in cases of fever, lowering temperature quickly was necessary. A somewhat eccentric man, he was known to have driven a patient naked around Nairobi to this end! When found pouring water into the radiator of his car, after it boiled over coming up the

escarpment, an old patient passed by and shouted, "Giving your car a spot of your own famous treatment, Burkitt?"

The better known of the Burkitts was Professor Dr Denis Parsons Burkitt, surgeon, scientist and clinician, who came to Mombasa in 1943. He learned Kiswahili and trekked equatorial Africa to establish his medical research.

Denis Burkitt had an outstanding ability to observe disease patterns, identify their peculiarities and develop concepts and hypotheses. He won the Canada Gairdner International Award for outstanding discoveries or contributions to medical science in 1973, one among many awards.

He was the first to describe a common and lethal form of childhood cancer in Africa and the first to discover its cure. African lymphoma, now known as Burkitt's lymphoma, is a form of non-Hodgkin's lymphoma recognised as the fastest growing human tumour, associated with impaired immunity. Burkitt first described the disease in 1958. He studied it in children with malaria and with the Epstein-Barr virus. Burkitt's lymphoma is studied by medical students across the globe.

He was also the first medical researcher, thanks to his observations in Africa, to connect a high fibre diet with better health. He was fond of saying, "If you have an enemy, give him your frying pan". His pioneer book on the topic is *The Fibre Man*. He died in 1993.

Gerald Edward Nevill was an Irish surgeon who made a major contribution to Gertrude's Children's Hospital, Nairobi, helping it become a modern paediatric institution, the first in sub-Saharan Africa. The chair of its Board of Management for 42 years, his contribution is recognised in a wing named after him at the hospital.

In more recent times, Carmelite priest Dr Fr Robert McCabe's research in Turkana into tropical diseases resulted in *Desert Nomads*, a book outlining solutions for providing healthcare in remote rural areas. It has become a recognised handbook for all those working in tropical medicine.

These pictures and snippets illustrate but some of the stories of the Irish in Kenya. Today there is still a strong Irish presence in Kenya — almost 1,500 strong. Irish people work in the areas of business, education, non-governmental organisations, sport and in the United Nations, to name but a few. The deepening business relationships and the re-establishment of an official embassy in 2014 will inform future relations between Ireland and Kenya so that they can be strengthened by mutual understanding, respect and opportunity.

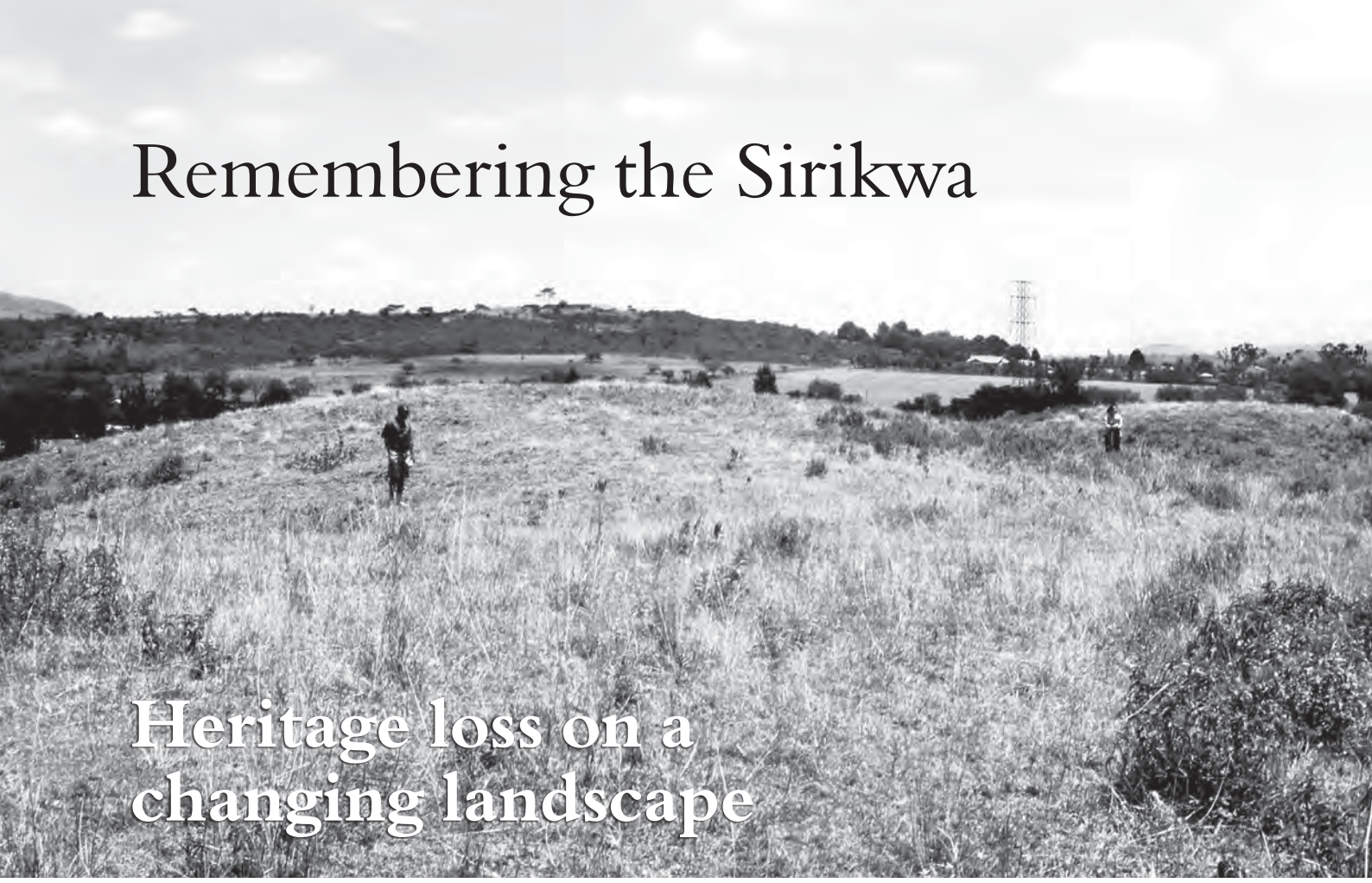
PHOTOGRAPHS PROVIDED BY THE AUTHOR

Information for the exhibition and this article was sourced from the Kenya Irish Society archives, the archives of Irish missionary congregations and orders, the books *Kahawa, Kenya's Black Gold* by J. Block, R. Pearson, C. Tomlinson (2005) and *Unbowed: A memoir by Wangari Maathai* (2006), and all the Irish and Kenyans who generously agreed to be interviewed and allow their stories to be told.

ABOUT THE AUTHOR

Bróna Ní Mhuirí is the wife of the Ambassador of Ireland in Kenya. A former teacher of history and Gaelic language and teacher trainer, she has taught in a number of African countries. She is currently producing a booklet on behalf of the Embassy about the Irish in Kenya.

Remembering the Sirikwa



Heritage loss on a changing landscape

John E.G. Sutton

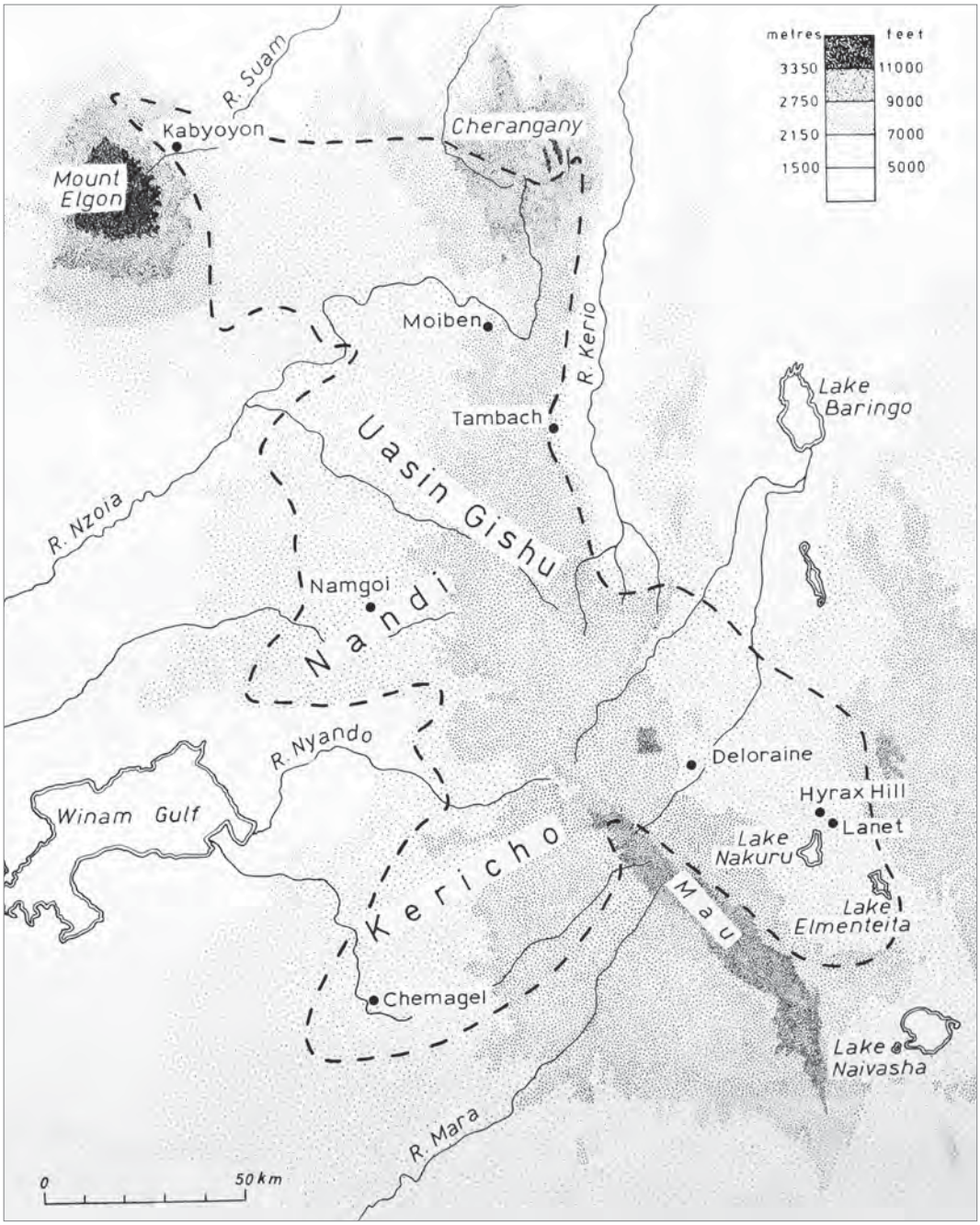
The case for protecting the 'Sirikwa holes', by the archaeologist who surveyed their vast numbers.

Let me introduce this appeal for urgent protection of archaeological features on the modern farmed landscape as a personal story — one with, inevitably, its measure of bias. More than 50 years ago, as Kenyan independence was beckoning, I was privileged, as an aspiring archaeologist, to be offered a research studentship of the fledgeling British Institute of History and Archaeology in East Africa.[1] My aim was to explore the history of African pre-colonial agriculture by locating signs of ancient fields and farming techniques — in retrospect, a rather ambitious expectation. For a promising area to start this endeavour I took up the suggestion of Dr Merrick Posnansky (then supervising the Institute's 'up-country' activities from his base at Makerere and the Uganda Museum) to concentrate on the highlands of western Kenya, essentially the country occupied by the Kalenjin people, on whose rolling grasslands and forest edges numerous archaeological features had already been reported by colonial antiquarians.

This was sound advice; immediately on basing myself at Kapsabet in Nandi in 1962, I started noticing old disturbances on the ground, plainly visible as grassy hollows on the open pastures or as bush-choked depressions. What I could not discern at first was whether these signs of previous activity might prove, on closer investigation, to be simply those of continuous Nandi

Above:
Hollows and mounds typical of Sirikwa sites, here seen at Lanet near Nakuru.

1 This institute, later renamed the British Institute in Eastern Africa (BIEA), was established with the express purpose of extending knowledge of African history over past centuries (in marked contrast to both imperial history and colonial-style anthropology) and, towards that end, to work in close association with the museums established in each country and especially with the newly formed University of East Africa comprising, from 1963, Makerere College in Kampala and its junior partner colleges in Nairobi and Dar es Salaam (before their split into separate universities in 1970).



The western highlands and central Rift Valley, showing the Sirikwa zone (broken line) and excavated sites (black dots). Map from *A Thousand Years of East Africa* by John Sutton, 1990.

occupation during late pre-colonial or even early colonial times, or whether they would point instead to much older and distinct systems of settlement and land use. One reason for this uncertainty was the degree to which the landscape of these highlands had been considerably transformed in the previous 50 years of colonial rule. That transformation, as I began to realise, had been in two opposed directions, the region having been divided between locations and whole districts 'scheduled' for European farming (notably Uasin Gishu plateau in the centre as well as the high-rainfall tea estates around Kericho) and secondly the 'reserves' left for African settlement (Nandi, Elgeyo Marakwet, Kipsigis, etc.). This policy of land division had produced a remarkable patchwork pattern on the regional maps and conspicuously differing landscapes on the ground. The African 'reserves' looked relatively well populated with their homesteads of thatched round houses and adjacent *shamba*s; whereas the impression of

the 'White Highlands' generally, except the intensively farmed tea plantations, was one of unending open grassland with selected areas of cultivation and few people, those mostly concentrated in 'squatter quarters' on the separate farms. These contrasts in land use were already affecting archaeological visibility and preservation.

At the same time it became plain that the earlier accounts of antiquities were highly variable in their quality, ranging from fair descriptions of 'ancient' (i.e. pre-colonial) relics, poorly understood though they were, to an array of wildly inaccurate reports involving sometimes imaginary features. These included supposed *menhirs* (erect standing stones of presumed 'ritual significance') to ruined stone walling here and there, let alone cattle-tracks being mistaken for stretches of ancient roads traversing eastern Africa (as if recalling Roman roads in Britain). More than that, the random features reported, the plausible and the dubious bundled together, had been used to construct fanciful historical theories.

Especially notorious was the vanished 'Azanian civilisation', a notion concocted in the 1920s/30s by one G.W.B. Huntingford, a young British settler with intellectual inclinations and an (untutored) enthusiasm for anthropology and the Nandi language (to which he applied himself assiduously). Huntingford presented this 'civilisation' (in 1933 in the British archaeological journal *Antiquity*) as the achievement of an intelligent 'Hamitic' population which would have arrived in the Kenya highlands from a vaguely northerly direction a full thousand years ago and flourished there for several centuries, eventually giving way for some unexplained reason to the 'more barbarous tribes', those whom the colonists encountered after 1900. These imaginary Azanians with their supposedly advanced technology — testified by ruins of stone constructions, 'ancient roads' (as noted) and dubious signs of irrigation engineering, altogether signalling a lost 'golden age' — thus offered a pseudo-intellectual twist for settler ideology. Though that and its racist implications were rarely spelled out, the notion was endemic in the colonial farming community that the existing Africans, including those recruited as farmhands, were incapable of anything technical or requiring forethought, such as efficient land use, productive cultivation, the management of flocks and herds, and conservation of resources generally.

Despite such blatant prejudices and implausible interpretations, there was a positive side to these antiquarian reports and rumours, as set out over the years in district records and obscure journals (published locally as well as in South Africa and Britain), since they guided me to plenty of archaeology visible on the surface or hidden under bush. That was quite enough for a start in 1962 — once the vagueness of the records and available mapping could be overcome! Equally valuable was local knowledge, with farmers, Kalenjin themselves in Nandi and other districts as well as helpful settlers on the Uasin Gishu plateau and certain tea estates, willing to show me across the land to point out all sorts of antiquities and anomalies. Nevertheless, as I immediately suspected, the varied features I was examining, even the genuinely archaeological ones, should have belonged to several distinct periods of the past, thus casting doubt on any attempt to lump them together as the vestiges of a single vanished 'civilisation'.

The Sirikwa phenomenon as seen on the ground

My concern here is a particular type of archaeological feature — one grossly misrepresented in that 'Azanian' package — so frequently encountered as late as the 1960s across the western highlands, from Sotik in the south, across Kericho, Nandi and the Uasin Gishu plateau to the Cherangany hills and the slopes of

Mount Elgon for its northern limit, with an eastward arm rounding the Mau and dropping into the elevated Nakuru stretch of the Rift Valley. These are the so-called 'Sirikwa holes': more accurately they should be described as 'hollows' since they are never deep or vertically dug but survive as tilted saucer-shaped depressions, each measuring 10 metres more or less across. Almost invariably they occur (or occurred till very recently) in clusters on sloping ground overlooking springs, swamps or streams, some groups consisting of ten or less, with the individual hollows often obscured by bush, while other groups in open grazing country counted a hundred or more on facing slopes. Altogether, this means that many thousands of these Sirikwa hollows were created and used in the western highlands.

But that would have happened over time, a span of several centuries as we can now show. As became clear on excavating selected examples of these hollows, revealing that each one was surrounded by a stout wooden fence with a narrow down-facing gate shielded behind a pile of mixed cattle dung and mud scraped daily from the hollow, they would not have recommended themselves for comfortable living over many years. Nor would the thatched round houses attached at the back. They would have been repeatedly abandoned and replaced by new compounds on the same hillside, while the decaying examples morphed into the realm of archaeology. In that way the numbers of these abandoned hollows accumulated over the centuries, but obviously they cannot be used to calculate former population density at any one time (as Huntingford had attempted from his imagined Azanian villages).

Of course, not every surface depression encountered in these highland districts — lying between 1,500 and 2,500 metres in altitude — has to be attributed to the ancient Sirikwa (and one has to be alert to various disturbances resulting from modern farm activities). But there are distinctive details about Sirikwa remains, notably signs of earth or rubble embankments around the sides and uphill back of each hollow (to support the former encircling stockade) or neatly coursed stone revetting instead, typically in areas of rocky terrain in North Nandi and Uasin Gishu. And, wherever the abandoned hollows have not suffered erosion or disturbance by recent cultivation, the entrance gap can be discerned on the downhill side and, outside that, a broad mound with short grass cover, representing the old dung-heap. Alternatively, in the southerly part of the range in Sotik, one usually notices a pair of such mounds flanking the curved approach (and hiding the narrow gate and sentry posts from view). In this district, the hollows were cut into the earth and crumbly subsoil to reach their largest dimensions, some as much as twenty metres across, that is over twice the average

Typical Sirikwa hollows photographed in North Nandi, early 1960s, at Kapkoimur (left) and Kabiyet (the latter being cleared of bush and trees in readiness for cultivation; note also the embanked side and the entrance left foreground). In the Kapkoimur example, a line of subsidence at the rear reveals the position of the original encircling fence supported by stone backing.

width of the closely clustered stone-lined examples on the Uasin Gishu plateau.

In the 1920s Huntingford — who deserves commendation for his pioneer observations and descriptions of sites in North Nandi and the Elgeyo Border, despite his mistaken assumptions about their date and purpose — called these various hollows 'hut-circles' and groups of them 'pit-villages'. That terminology, misleading as it proved, reflected his boyhood experience in England and Wales where he had developed a youthful enthusiasm for history and field exploration, and learned the vocabulary in vogue in British archaeological circles. By carrying this intellectual baggage with him when migrating to the Kenya highlands with his parents in 1919/20, and applying it to what he encountered on a very different landscape, he imposed a set of terms which has had an undue influence on later generations of antiquarians, and on students too.

Such confusion was compounded by Mary Leakey who in 1938, soon after her arrival in East Africa, was encouraged by her husband Louis to excavate two such hollows selected from a cluster of thirteen at Hyrax Hill (the site labelled, inaccurately, the 'north-east village') just outside Nakuru town. From a technical angle her undertaking of this assignment was meticulous, setting an example for later archaeologists in Kenya to emulate. However, her interpretations — in describing the hollows as 'pit-dwellings', and imagining that the whole group had constituted a 'village' (rather as Huntingford had assumed for the broadly identical hollows he encountered in Nandi) — no longer stand. For, East African archaeology, for what it was worth in the 1930s, had nothing to offer her for comparison. All the same, subsequent re-examination of her excavated findings has been possible only with the help of her published report of the excavation — incidentally a new scientific departure in East African archaeological practice — which records every detail and measurement.

Moreover Mary Leakey, following her early archaeological experience in Britain (and in deference to Louis who was already considered the authority on all things scientific, ethnographic and archaeological in Kenya) assigned these features to a so-called 'Neolithic' age. This mystifying and, as we now know, downright inaccurate label bedevilled the study of East African archaeology for several decades. It persisted even after Posnansky demonstrated in his excavations in 1957 at nearby Lanet, where he found an iron entrenching tool and distinctive roulette-decorated pottery, that the true dating of the hollows should be only a few hundred years back (in the recent Iron Age), not thousands as the Leakeys had imagined.[2]

Despite such misconceptions, in labelling, interpretation and historical significance alike, these reports by Huntingford and Mary Leakey in the 1920s/30s have been important for the development of later research into the Sirikwa phenomenon. By reconsidering their local observations in broader perspective, one can recognise now how the differences in detail across the wide region are variations of a consistent model. (The use of stone, for instance, lining the hollows and the protective banks in certain districts, was surely not a fundamental cultural marker, as Huntingford had insisted in his 1920s anthropological thinking, but depended essentially on the local geology, in particular the availability, or not, of surface stones.)

No less important, these numerous Sirikwa sites, accounting altogether for many

2 Sonia Cole, surveying the Leakeys' work in her *Prehistory of East Africa* of 1954, tried just too hard to explain the Leakeys' 'Neolithic' in the Rift Valley; and the confusion was only increased by her attempt to correct it in the second edition of 1963.

1964:Excavating a stone-lined Sirikwa hollow at Muringa (Moiben, north end of Uasin Gishu plateau), with walled gateway enclosure in distance. (Scale divided by feet, almost two metres overall.)

thousands of hollows — considering that well over a hundred sites were recorded in 1962-64 in a survey that was in no way exhaustive, some containing just a handful of hollows, others reaching over a hundred — must be of central significance for the history of the Kalenjin people and, equally, for understanding how they managed their herds and flocks on the highland pastures from about the 13th century until as recently perhaps as the 18th. (The dating span is not exact, but an estimate from excavation results and radiocarbon tests so far.) That is not something on which to pronounce a definitive statement based on the modest results achieved in the fifty-odd years since my first involvement. Any aspiration of that sort must depend, rather, on continuing research, with fresh sets of ideas and questions being tackled through the best techniques of archaeological excavation and of post-excavation examination and laboratory testing now available. For the sake of such advancement of historical knowledge, it is imperative at this point that a representative selection of these Sirikwa features be earmarked as a resource deserving protection.

The dwindling archaeological record

The need for such gazetting and effective protection becomes increasingly urgent across the western highland region in the face of wide-scale levelling and destruction of Sirikwa and other archaeological remains. Much of this damage is happening unwittingly through the extension of farming by hoe and increasingly by plough on smallholdings, let alone heavier mechanised treatment of broad commercial estates producing various crops for regional and global agribusiness.

As a result, the number of visible and undamaged archaeological features has declined catastrophically. Of the thousands of Sirikwa hollows recorded in the 1960s, it is doubtful whether a quarter survive intact. That's a very impressionistic conclusion reached in recent visits to formerly recorded sites, followed by a focused fact-finding tour of the western highlands in 2015.[3] Sirikwa hollows still preserved as whole groups have

3 The assistance of James Munene Koome, then of Kenyatta University, was instrumental to this survey and recording.

become very rare indeed; with luck one may, by remembering what to look for, make out just one or two hollows still undamaged, and the occasional vestige of a mound, where there had been, before land reallocation and enclosed farming, several times that number on the open pasture. Quite as often there is no sign at all surviving above ground.

Equally distressing has been the fate of the prominent stone heaps or 'cairns', often two metres or more tall and ten metres in diameter, which used to stand in clusters in the same region. It is presumed that they marked ancient burials, *not* of Sirikwa however, but of people who were herding cattle before them, more than one thousand years ago. This older dating became clear in excavations in 1963 and study of the finds, which include pottery of pre-Iron Age types, very distinct from the roulette-decorated vessels manufactured in later centuries that are typical of Sirikwa sites. Hardly surprisingly, these large cairns, as piles of stones that can be (just about) lifted by hand, have presented themselves as handy sources of material for homestead foundations and, increasingly, for all-weather approach roads for motor vehicles. The stones have thus been carted away, at first by the donkey-load, nowadays by lorry. Others are simply dismantled to ease farming work.

Hundreds of these cairns have been robbed, if not completely destroyed, over the last fifty years in the Keses Valley and Lolmeningai slopes of the Nandi-Uasin Gishu border; while in the Nyando Valley, at the site of Kapkures overlooking Fort Ternan, where 70 such substantial cairns in good shape were mapped in 1963, only minimal traces can be identified now. That is despite the site being immediately adjacent to a fenced compound belonging to the National Museums, maintained to guard the internationally famous Miocene site (where Louis Leakey retrieved, along with other extinct mammal fossils, the piece of Ramapithecine jaw several million years old which he named *Kenyapithecus wickeri*, after the local farmer who discovered this ancient lake bed). It seems that staff stationed at this lonely spot have never been instructed about later features meriting protection on the same ridge.

Large cairn, presumably a burial monument, of pre-Sirikwa age at Kapkures, Fort Ternan, seen in 1963. This was one of a large group on the ridge top and flanks, virtually all of which have suffered severe damage, if not complete destruction, since.

The scale of the modern farming process — a veritable transformation of the highland landscape, much more extreme than that of the colonial experience — was barely foreseen during the survey of the 1960s. But the signs were beginning to show as the British administration in its final years, followed by the independent Kenyan government, promoted African resettlement schemes on wide areas of land previously scheduled for European farmers while at the same time companies with sufficient capital were increasing their output of commercial and export crops on large specialised estates.

As an expanding process this massive extension and, equally, intensification of farming could not and cannot be halted, of course; both have been, and remain, absolutely essential for feeding the vastly increased population of the country. But it should not be beyond the efforts of conservation and educational interests in Kenya, in tandem with the legally constituted protection and conservation authorities (in the National Museums' organisation in the first place, working with local communities and relevant county administrations), to devise viable provisions for heritage awareness and protection, and to thus ensure a resource for further archaeological research.

We will come back to this issue and a fuller account of the Sirikwa hollows. Before that we should ask how these archaeological features, once so common on the western highland landscape, acquired their strange label, Sirikwa — with the further assertion that the hollows represent the places where in past times those Sirikwa people guarded their cattle each night.

Why the name Sirikwa?

Fixed though it is in Kalenjin notions of deeper history, the name rarely figures in normal discourse these days. It belongs to the past and looks back to that dateless past, and it is uncertain whether any group or groups of people ever called themselves Sirikwa. But it's not an invented label, for it was mentioned at the beginning of the twentieth century by Kalenjin elders when pressed by curious British administrators. The latter relied, of course, on interpreters, in particular their Maasai guides; and questions may have been posed too crudely when demanding a simple explanation for the numerous deserted hollows, especially the striking stone-revetted examples of Uasin Gishu. As a result, ethnological and historical enquiry was probably skewed from the start — well before anthropologists with more sensitive manners for gathering traditional knowledge came on the scene.

All the same, there was doubtless some substance to the early allusions to the Sirikwa as a former people, since there existed until recently memories of clans called (kab)Silikwa (or variants of that form) in the northerly Kalenjin areas of Cherangany and Elgon. Moreover, further away in the opposite direction, in north-central Tanzania, a division of the Tatoga pastoralists — whose language is distantly related to Kalenjin — was recorded by an early colonial officer as Sirikwajek. These instances of the name's persistence are not necessarily a reliable guide to the specific identity of those responsible for the archaeological hollows, but seem rather to point to a dim and distant collective memory of a Sirikwa population in what are now the main Kalenjin areas of the western highlands.[4]

4 But note that the Sirikwa zone did not extend into the Tugen Hills or the Kerio Valley. The

Thus it happened that, whenever awkward questions about the hollows were asked by outsiders, in particular European farmers who settled in Kericho and the edges of Nandi and on the Uasin Gishu plateau before and after the First World War, the local Kipsigis, Nandi and Keyu elders, as well as recruited farmhands, raked their vague consciousness of the departed Sirikwa — and the latter's legendary attachment to cattle — to muster some sort of answer. Most of those early settlers were, of course, less interested in so-called 'tribal' history than wanting a straight explanation of why the terrain close to the best water sources was riddled with so many disturbances, typically filled with obstinate bush and poor soil. Worse still on Uasin Gishu and the Elgeyo Border was any stonework, often consisting of neatly coursed circles that obstructed ploughing.[5]

And so, the term 'Sirikwa holes' caught on, with settlers cursing those legendary Sirikwa for the damage — and also the colony's government for allocating bad land (albeit sold at rock-bottom prices). Furthermore, if one thinks over how the earliest settlers (Boers as well as British) would have introduced themselves to Kalenjin elders (let alone to the younger, 'warrior' age-set), either through interpreters or in their limited Kiswahili (*ki-Setla*), there must have been plenty of room for misapprehension.

It could well be that the explanation for the hollows as Sirikwa cattle *bomas* became established in colonial farming wisdom across these western highland districts by a process of suggestive questioning and simple feedback during the early years of the twentieth century — an example of local lore and tradition being turned into doctrine in which any nuances were irretrievably muddied.

Sometimes one used to hear — and one still hears — a different story, suggesting that the Sirikwa hollows should be attributed to former Maasai, particularly the section remembered as Uasin Gishu (named after their striped cattle). During the nineteenth century, this Uasin Gishu branch was effectively destroyed as such in the inter-Maasai wars (their plight exacerbated by cattle epidemics); but they were still fresh in local memory only 100 years ago, just when the first colonial settlers were establishing themselves. Thus, that way of explaining the frequent groups of these hollows as Maasai work would have been a natural reaction among many Kalenjin at the time, whenever pressed on the matter. And even now anything appearing to be connected with herding cattle on the formally open pastures is so often attributed to Maasai or deemed 'Maasai-like'.

But as a historical explanation, that seems too glib. In particular, the overall dating span of construction of the hollows — probably beginning no later than the 13th century — places them several centuries before the main Maasai incursions into these highlands, while comparative-linguistic studies suggest a regional continuity of Kalenjin dialects from before that Maasai period through till the present. Whichever way one might try to reconstruct the region's ethnic history, it would be unrealistic to imagine the Sirikwa population having disappeared *en masse* and the Kalenjin simply 'arriving' as if from nowhere to fill the void. Clearly, the existing Kalenjin-speaking

notion that the techniques of irrigation agriculture of lower Marakwet should be credited to the Sirikwa is a patently false one. It can be traced to enthusiastic agricultural officers of the colonial period who, having heard about Sirikwa in the nearby highlands, supposed that everything of indigenous, pre-colonial note in the region should be attributed to that same source!

5 It was also alleged by tea-planters in Kericho and Nandi Hills that any effort to plough over and level Sirikwa hollows proved self-defeating, since the soil had been permanently spoiled in antiquity by the hooves of cattle squeezed into these pens open to the sky and the heavy rains; furthermore, that the mixture of mud and urine rendered the poached ground too alkaline for growing tea! Other settlers, anxious to grow European vegetables, declared the same soil ideal for cabbages.

population must, in a rough and ready way, be the descendants of the Sirikwa, through continuous occupation of the very same districts. As a broad deduction, that does not, of course, exclude the absorption of various minor elements from all round, including Maasai splinters who lost out during the deadly competition for grazing territory in the nineteenth century.[6]

6 An additional indication of language continuity is provided by the Okiek hunters, honey-collectors and (formerly) potters of the Mau and Lembus forests. As purveyors of forest products to Maasai as well as Kalenjin, they have needed multi-lingual skills. But the home language of these small specialist bands has remained Kalenjin, albeit an archaic dialect. That must be the closest survival of old Sirikwa speech.

The Sirikwa in Kalenjin history through 800 years

Even before the Uasin Gishu Maasai were making their presence felt in the western highlands some 200 years ago, the modern Kalenjin communities (or 'tribes' as they were classified by the colonial government: Nandi, Kipsigis, Elgeyo/Keyu, Marakwet, Kony, Sebei, etc.) would have begun emerging from their ancestral Sirikwa roots, as a reaction to what we might call the Maasai Revolution. That saw a massive expansion of Maasai-speaking sections from the northern plains into the lusher high grasslands, targeting at first, it seems, the Nakuru stretch of the Central Rift and the plateaus to its east more than the Sirikwa-Kalenjin country to the west.

Whatever the precise details of this Maasai expansion process — a topic requiring renewed research on the languages and place-names of the region, as well as archaeology — it should not be imagined as one of population replacement so much as interaction. That would have involved assimilation of some of the former Sirikwa into the increasingly prestigious Maasai identity, especially on their eastern, Nakuru, side. Arguably, it was here that certain Maasai divisions acclimatised to the highland environment, by adapting herding strategies, with their small humped variety of cattle, already developed by the indigenous Sirikwa.

But the Maasai Revolution was more than that. It was driven, apparently, by a revival of a pastoral ethic, with its dependence on, if not a fanatical attachment to, the flocks and herds, especially cattle and their milk. At its extreme this led, in theory at least, to a taboo against grains or other vegetable foods. As an ideal, such a way of life would have been sustainable even in the best of times for only a minority — a minority even of those who called themselves Maasai and spoke the language. Essential here was jealous control of sufficient expanses of quality pastures, and permanent water sources too. That territorial control was more important than the numbers of cattle; for, as an economically-inclined anthropologist once put it, 'A cow is a machine for turning grass into milk'; and for the purpose of community subsistence the limiting factor is not the size of the herd, or that of the individual beasts, but the extent and quality of the available grazing.

Indeed, in the environment of the Kenya highlands, the small Maasai breed — or, it seems, the Sirikwa breed which Maasai sections acquired or improved as they expanded from the drier northern lowlands — had been acclimatised to withstand endemic diseases and epidemics, as well as the vagaries of wet and dry seasons and extended droughts. Thus, whenever

disaster struck, recovery of the herds, and likewise survival of their owners, stood a better chance with a fair number of resistant breeding cows, however skinny their appearance and limited their milk yield, than by trying to keep alive a selection of prized but vulnerable beasts.

With sufficient grazing territory being vital — for the flocks of goats and sheep ensuring a meat supply, as well as for the cows and their milk (plus select breeding bulls) — strategies of defending the resources of that territory were equally essential. And in the case of pure pastoralists, equally vital (following losses caused by droughts or diseases) would have been the raiding of surrounding communities in order to restock — or, in extreme circumstances, jettisoning their principles by requisitioning harvested grain where available.

All that required a military system based on a highly disciplined age-set organisation and fighting tactics using long-bladed socketed spears. The latter, replacing the smaller hafted model of spear traditional in the region, required in turn a supply of smelted iron worked to order by the smithing castes. These pursued their craft — and doubtless intensified their output during the Maasai ascendancy from approximately the 17th century onwards — in localities across the region blessed with suitable ores.

So, while there may have been little change in the type of cattle as perfected during the Sirikwa era, what had to change were the strategies of protecting them on the pastures and guarding them by night. This meant new patterns of Kalenjin settlement sheltered behind the forest edges, as they abandoned the now vulnerable Sirikwa hollows and the style of living attached to them. They would have kept fewer cattle, because control of the open grasslands, notably the Uasin Gishu plateau, was regularly contested; instead, they turned more to cultivating grains, notably finger-millet and sorghum. In fact, this trend towards a more balanced agricultural-pastoral economy and diet — and enforced rejection of the pure pastoral ethic — is evident in late Sirikwa sites, especially in the southerly part of their range, as became evident when excavating at Chemagel in Sotik.[7]

Eventually, even here, the Sirikwa living model was phased out as a practical response to the presence of Maasai sections in the region at large, and their incursions into the western highlands to seize the best tracts of grassland for their own herds, thanks to their new-style military organisation and upgraded weaponry facilitating wide-ranging cattle-rustling and intimidation generally. In this situation Sirikwa hollows, which were designed, it seems, to thwart dishonest neighbours or small-time thieves at night, would have become obvious targets with the cattle trapped inside. Instead, Kalenjin herdsmen had now, whenever danger threatened, to relay the alarm from ridge to ridge and rush their stock into secure glades in the forest where the enemy, if daring to pursue, could be ambushed.

The Sirikwa phased out but, in a sense, still here

This attempt to summarise the history of the western highlands over several centuries — from the Sirikwa era till it was phased out by Maasai expansion, and beyond that to the colonial intervention — may seem rather bold and might stand alternative interpretations. Indeed, it is time for fresh thinking. But advancement of knowledge requires new evidence which can only be

7 For a late parallel or derivation of sorts, we might note the communal homestead compounds of the Kuria (Tende) people well to the south, on both sides of the Tanzanian border. These were (and in some places still are) arranged as a ring of family houses encircling a central cattle *boma*. Might this example point to the historical link for the Tatoga 'Sirikwajek' further south again?

supplied by continuing research efforts, in archaeology in particular.

Below, I outline some aspects of the Sirikwa era that need testing in a modern way, and reiterate the importance of protecting a selection of surviving sites as a resource for such continuing research and re-evaluation, and for heritage awareness more broadly. But appreciation of heritage falls flat unless supported by genuine activity directed at unearthing new materials and ideas to keep the debate alive. The case of the Sirikwa has been suffering for lack of this; instead, old dogma reflecting fixed ethno-historical biases tends to be repeated uncritically, with less appetite for real research and archaeological initiative.

At the same time, history can be played with, particularly that of the Kalenjin. In the years leading to independence and beyond (1940s–60s), when the sense of Kalenjin identity was being forged (and that communal name popularised, by radio, in particular, promoting a standard Kalenjin tongue), the legendary Sirikwa became a useful slogan for asserting an ancestral territorial claim across the western highlands.

Indeed, in the very year of independence, there was established a vast Sirikwa County comprising the former colonial districts of Nandi, Uasin Gishu, Elgeyo Marakwet and Trans-Nzoia, with its Council HQ in Eldoret. (Short-lived though this Sirikwa super-county was, as central government had second thoughts on regional administration generally, it was accompanied by a rash of enterprises — shops, garages, *hotelis* and bars — calling themselves 'Sirikwa'; and it left a more permanent mark, at least in Eldoret, where a new upmarket hotel seized the name for itself and dominated the town's skyline.)

Yet, as time moves on, one notices among the newest generation a reversion to the contrary belief that the Sirikwa hollows should be attributed to Maasai of the pre-colonial period, rather than being central to a longer Kalenjin heritage. This way of thinking may reflect the current ideals of modernity and development in which archaeological features such as these, with their reminders of old-style pastoralism and antique lifeways, do not appeal — at least, wherever the question of association through direct descent is implied. More comfortable to regard them as quaint reminders of someone else's history?

One lesson from this is that antiquarians, academic researchers and museum curators advocating protection and conservation of archaeological sites — in particular, the increasingly rare clusters of Sirikwa hollows which remain undamaged — should avoid a dogmatic manner when expounding on local history lest, unwittingly, they turn a sense of pride in local heritage into denials of association and reluctance to cooperate. Misapprehension or not, such attitudes cannot be overcome by trying to dictate people's history; rather, they can be taken up as the first step towards stimulating measured debate.

There are also practical, economic considerations, seeing that archaeological features of this sort, occurring in rambling clusters, disrespect modern land-holdings with their precisely surveyed and fenced boundaries enshrined by farmers' title deeds. On the fertile soils of Kenya's western highlands, capable of producing crops for subsistence and market sales too, one cannot expect smallholder farmers and their families to feel automatically sympathetic to conflicting 'cultural' interests.

Heritage: The case for protection and preservation but, equally, for continuing historical research

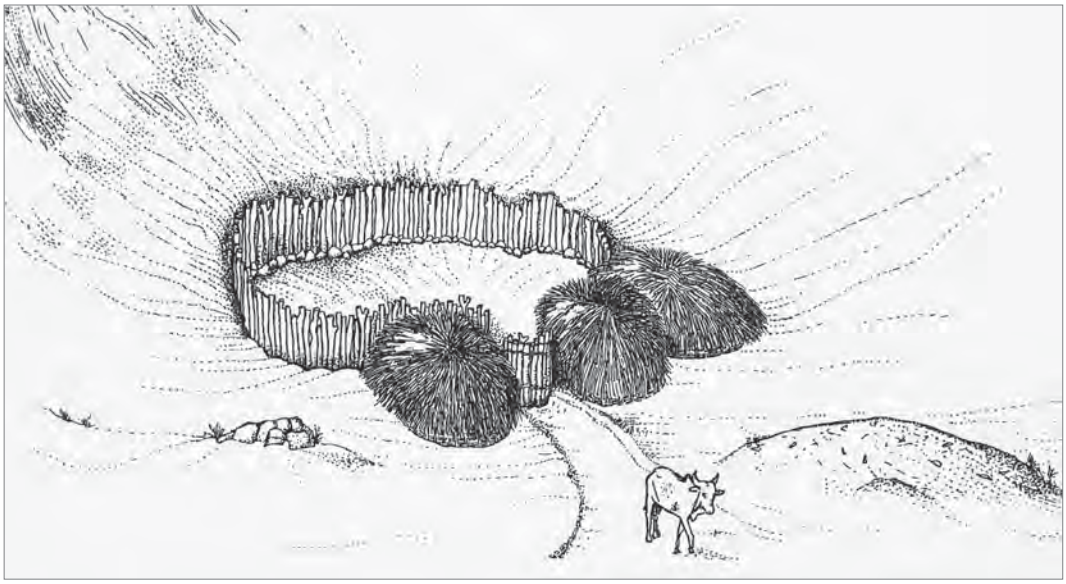
Of course, there ought not to be any conflict, at least in principle, between what are simplistically categorised as 'cultural' and 'developmental' interests. But Kenyan families who depend on the land allocated to them (and remember how their parents or grandparents struggled to obtain it) will understandably view the issue differently from roaming academics and antiquarian-minded visitors from afar, let alone bureaucrats from government agencies armed with copies of the antiquities laws. Clearly, the lofty ideals of what is called *heritage* and the case for protection and conservation need to be pursued not by high-handed fiat, but by involving local communities and educational interests, unofficial as well as official. From that base of understanding, one could proceed to identifying suitable examples of the various archaeological features for special marking and listing. Except for a truly unique feature or an exceptional discovery requiring urgent protection, it should be possible with patience for such selection to be decided locally.

Sirikwa sites under NMK: Hyrax Hill and Lanet

As it is, there exist two Sirikwa sites under formal protection, on land actually bestowed upon the National Museums some time back. These are Hyrax Hill (Site II, the unfortunately named 'north-east village') and Lanet; they happen to be within view of each other just east of Nakuru town, on either side of the dual-carriageway from and to Nairobi. This area lies well outside the main Kalenjin region, and was known in the nineteenth century as Maasai grazing territory — before being assigned for European settlement early in the twentieth. This former Maasai dominance is reflected in the bulk of the place names around Nakuru and Elmenteita, suggesting that the Sirikwa presence hereabouts must have occurred a few centuries earlier, probably before 1500. Such dating is in broad agreement with excavation findings and radiocarbon tests undertaken so far, especially at Hyrax Hill.

Another reason for thinking that these Sirikwa remains in the Central Rift date that far back is that, unlike those sites to the west, they lack nowadays available year-round water. For, while the rain can be heavy at times, it quickly soaks into the volcanic soil only to ooze into Lake Nakuru. That is now a shallow soda basin, too alkaline for either cattle or their herders; while the nearest permanent fresh water is at the mouth of the Njoro river around the north end of the lake, hardly convenient for regular use by people and their cattle based at Hyrax Hill, or Lanet further away. These observations present a strong indication of environmental, if not climatic, change since the early Sirikwa exploited the grasslands of the Central Rift five centuries or more ago. Interestingly, there are hints of former springs, once more reliable than now, on the lower end of the Lanet site, and possibly below Hyrax Hill as well.

The significance of Hyrax Hill — a small but prominent lava spur right by the main road — lies not solely in the Sirikwa features at its foot. It marks the beginning of serious archaeology in Kenya, with the first research effort of Louis Leakey in 1926. His primary concern then was on burials revealed by quarrying on an adjacent kopje (a site later destroyed by installation of water cisterns);



Reconstruction of an early Sirikwa hollow of about 1200 AD at Hyrax Hill by Nakuru, near the southeasterly limit of the Sirikwa range. From *A Thousand Years of* East Africa by John Sutton, 1990 (sketch by Spana Davidson, after model by Avril Sadler).

at the same time he searched around the main hill. Besides recognising at the north-*west* corner the mounds and hollows of the Sirikwa — but not using that label, assuming mistakenly their Neolithic age — and also signs of later, apparently Sirikwa-derived, occupation on the eastern side (the 'Iron Age' occupation of Site I), he was especially excited by burial mounds (stone cairn variants in fact) on the latter site which, as subsequently became clear, were very much more ancient. In fact, these cairns, of which the oldest had been virtually flattened over time, stood close to a readily detectable ancient shoreline of Lake Nakuru, created at a period of higher regional rainfall some 5000 years ago. It was to sort out these features and their dating that, 12 years later, he put his young wife Mary to work at Hyrax Hill.

Lanet's importance is of a different order. This extensive site consists entirely of closely packed Sirikwa features — perhaps as many as 100 hollows, each with a substantial earthen mound adjacent. By contrast with the neglected appearance of Hyrax Hill, these features at Lanet are unusually visible and impressive because this plot of ground happens to be frequently grazed by locals' sheep and cattle which keep the grass and weeds short. And it remains until now wonderfully preserved, yet at the same time so obviously vulnerable to encroachment, being practically engulfed by the densely populated suburban sprawl from Nakuru town. The exception is the southern boundary which is shared with Nakuru National Park. (In fact, the archaeological remains continue beyond the park's high-security fence. Formerly they extended at the north end too, beyond the railway and the main road where they have been destroyed by a housing estate.)

The permanent protection of Lanet is essential for another reason — the existence of an earthwork enclosure at its central eminence. This feature, surrounded by a roughly defined ditch with a series of high mounds forming its outer side, is virtually unique. When Posnansky tested the ditch in 1957, several examples of *bau*-game double lines were revealed in the soft underlying rock, presumably cut by bored Sirikwa herdsmen some centuries ago. Would this have been a special place in the early formative days of the Sirikwa — for, say, age-set rituals and gatherings, even annual jamborees for indoctrinating the

initiates into the communal pride, duties, behaviour and customs of their pastoral life and identity?

Notwithstanding the National Museums of Kenya having enjoyed legal ownership of Lanet and Hyrax Hill for many years, the effective protection of both sites against encroachment (and theft of fencing materials too) has been a constant struggle.

For what had been an open grassy plain, as described by Mary Leakey in the 1930s, has since, as Nakuru town has expanded, been enclosed and developed for homes and gardens, roadside businesses, factories and schools. In fact, the survival of both sites — the loss of slivers of land along the edges notwithstanding, and, in the case of Lanet, the deepening tracks of pick-ups and lorries being driven over the soft soil — has been little short of miraculous. That fortunate circumstance places a moral commitment on all concerned, unofficial as well as the National Museums organisation, to ensure their continued, permanent protection. More than that, it presents a challenge to utilise them responsibly and imaginatively as public cultural and educational assets.

To succeed in such a purpose, one might advocate less rhetoric about 'heritage' — so overworked as that word has become in any discussion of protection and conservation at local, national and international levels, and most famously in UNESCO's World Heritage secretariat with its list of 'inscribed' sites. It would be a long time indeed before Sirikwa hollows were to qualify for this sort of recognition, one normally reserved for the most spectacular sites and structures around the globe, those expected to attract the worldwide tourism business (together with funds for public presentation and appropriate facilities). In practice, what has become a global heritage industry can generate a mercenary side in local situations in which bureaucratic efforts to secure grants from international organisations (and, with luck, income from tourists at the same time) gain priority over the genuine pursuit of knowledge and contributions to the resident people's history.

What is needed, rather, is more local and regional commitment tied to research devised to expand knowledge of the Sirikwa beyond the modest results achieved in the 1960s and 1980s. Regardless of how those efforts come to be judged by future scholarship, they were from any modern perspective pursued within a limited frame of vision and debate.

In other words, the significance of the Sirikwa and of what has been revealed about their way of living — of managing themselves, their cattle, goats and sheep, and the pastures on which they depended, as well as their (limited) cultivation — need to be aired in a wider context, drawing moreover on current knowledge and ideas from the broader region. Conversely, new studies of Sirikwa sites, if planned with relevant questions in mind and the latest excavation techniques and archaeological aids at hand, could be producing results to contribute to much more than an understanding of the Sirikwa phenomenon alone.

For one thing, landscape and environmental approaches to archaeology have developed enormously in recent decades and, alongside these, interdisciplinary studies of pastoralism, both present and past, have benefited by testing broad theoretical issues at the practical local level. In part, these studies — which bridge the gulf between natural and human sciences — have been provoked by concern with drylands and the wellbeing (or precariousness) of communities which subsist in environments prone to drought and famine. Beyond that, there are the long-term questions of development, let alone periodic ones of humanitarian relief when crises arise and

generate worldwide publicity. Areas of both northern and southern Kenya, including the renowned game and conservation reserves (and those of northern Tanzania likewise), have lent themselves to a variety of such studies by international teams, supported by research grants which routinely include provision for participation by local scholars. Oddly, the old Sirikwa country of the western highlands of Kenya has appealed rather less to this fashionable field of recent research — perhaps because it appears too tame and settled and easily accessible from the centre. Also, whenever it suffers from variations in rainfall, it is liable to be excess rather than drought!

New research needed: Rethinking Sirikwa hollows and the Sirikwa way of life

The important revelation of the excavations of Sirikwa hollows in the 1960s was that they were not 'pit-dwellings' or hut-circles — as Huntingford, from his surface inspections in Nandi in the 1920s, had imagined; as had Mary Leakey too, on completing her excavations at Hyrax Hill (Site II) in 1938. But Mary Leakey produced valuable clues, though without recognising their significance. Particularly striking in her report is the complete absence of holes for fixing wooden posts (which had long since rotted) or indications of any structure at the base of the hollows, except for an encircling trench to support an enclosure fence — or staunch stockade, rather — around the perimeter. Indeed, if one looks carefully at Mary Leakey's published account of these excavations and glances at her meticulously measured stratigraphic sections and contoured plans of the excavated 'pits' (as she called them), these stockade foundations (with supporting stones) are obvious enough.

This became clear with the advantage of subsequent work in 1963/4 on Sirikwa hollows in districts to the west, followed by further investigation of Hyrax Hill itself in 1985. The latter excavation showed how the brittle volcanic sub-surface, which underlay the soft and exceedingly thin ashy soil at the foot of the hill, had been eroded, causing the vestiges of the stockade trenches to peter out on the lower side of the hollows where the narrow entrance and flanking gate-posts would have been. Since in 1938 there were no comparable excavated sites for

Hyrax Hill, Site II: Hollow D, excavated in 1965 by Museum staff, and left open for display. This photo 20 years later shows, despite weathering and collapse, the foundation line of the encircling fence.

reference, the significance of these features which had been virtually erased could not be appreciated.[8]

Indeed, my own initial assumption when beginning work in the western highlands in 1962 — while, like those before me, drawing on my early archaeological experience in Britain — was that these Sirikwa hollows must represent former house sites. But the failure to locate post-holes when excavating the floors was troubling from the start. It was only by extending the excavations *outside* the hollows' perimeters that the puzzle was resolved as the outlines of one or more round houses revealed themselves. In areas ideal for external grazing, such as the Uasin Gishu plateau with its numerous clusters of small stone-encased hollows, these attached wooden structures were of minimal diameter, representing very flimsy thatched huts to accommodate a herdboy (with apparently, behind an internal partition, a space for any newborn calf, which would have been crushed by the cows if left in the main enclosure). In Sotik, for contrast, the excavation at Chemagel

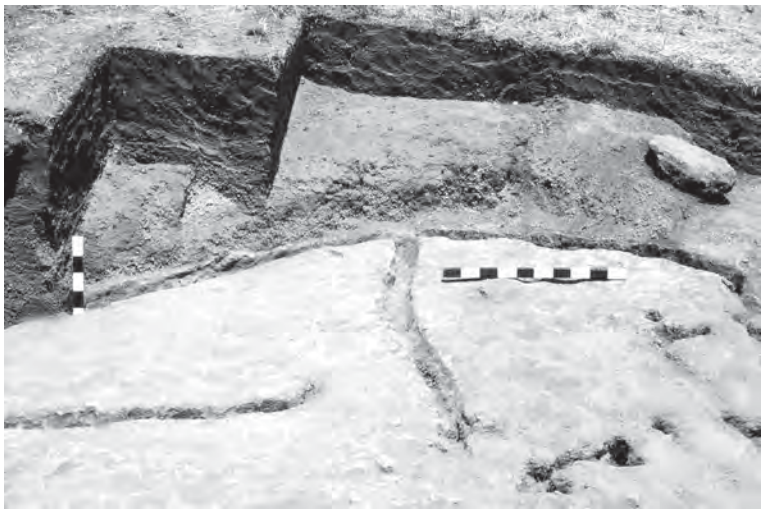
Large Sirikwa hollow as excavated at Chemagel (Sotik) in 1964, showing the stockade line and a round house (6m diam.) attached to the side.

revealed two very substantial houses of cone-on-cylinder form, one divided into rooms, the other serving as kitchen with a fixed hearth, grinding equipment and substantial pots in place. This was obviously a family compound, in which herding of cattle, goats and sheep — guarded at night in a wide hollow surrounded by a heavy timber stockade with its narrow entrance passage and even narrower gate between heavy posts and, for extra security behind that, a solid slide-and-pin drawbar too — was evidently complemented by the cultivation of grains which were home-ground into flour.

Such houses were sited at the rear or side of each hollow — or even right by the gate to serve as guard posts — as was discovered at Hyrax Hill when retesting the site in 1985. Being constructed as annexes to the fenced cattle enclosure, they were firmly attached to face inwards through a narrow door, yet remaining on the outer side of the fence. Thus, the only access to these houses was through the main gate and the enclosure, ensuring a sealed defended unit, one in which the milking and tending of the cattle and, especially, of newborn calves, were integrated with the living and sleeping arrangements of those guarding them.

In some cases, after learning where to look on sites undisturbed by either hoe or plough, one could just about discern these

8 There is another side to explaining the excavator's reasoning. From the start Mary Leakey was thinking that each hollow should have contained a flat-roofed house, on the analogy of those of the Iraqw ('Mbulu') people of northern Tanganyika which Louis Leakey had encountered a few years previously while on his way to Olduvai Gorge. But that interpretation would have necessitated a rectangular structure with a heavy earthen roof, the latter supported by a grid of massive wooden poles fixed deeply into the subsoil. The existence of such supports is patently contradicted by the excavated testimony at Hyrax Hill (Site II), namely the complete lack of any sign of former post-holes in the bases of the two hollows which were completely cleared. Moreover, the round shape of the hollows — both here and throughout the whole Sirikwa region — argues against any theory imagining rectangular structures. The hollows had not simply eroded into a rounder shape after their abandonment. For the trench to hold the stockade clearly defines the original circular form, and the pitting of the floor and erasure of the gateway details would have been caused by the feet of cattle which, as we can now see, were penned at night in this unroofed but intensely defended enclosure.



Hyrax Hill 1985 excavation: House attached to hollow, set right against the gate-posts of the narrow entrance. This house was divided into three small rooms, those with smooth floor (to left) for sleeping, that to right of partition, with pocked floor, for newborn calves or goats (painted scale: 1m).

house positions as level platforms annexed to the sides of the main hollows; while in Uasin Gishu they sometimes appeared as small satellite walled circles at the back. And that was exactly what (as I was preparing to excavate) curious Kalenjin insisted I should find. Their insistence was specific that the hollows themselves did not contain houses at all but were tightly secured unroofed cattle pens, and that any houses would have stood outside, while being at the same time attached to the fence.

Such a vindication of local elders' wisdom, over the contrary reasoning of visiting researchers drawing on their experiences in a different continent, deserves respect as an example of inherited knowledge about archaeological features. Those elders with whom I spoke in the early 1960s had never seen typical Sirikwa hollows in use, for they had been superseded several generations previously. But a shrewd understanding of these archaic arrangements, as well as of cattle management more broadly across these well-watered highland districts, was still running in their veins.[9]

9 The so-called 'stone houses' of the Elgeyo escarpment, notably on the ledge at Tambach, some of which were in use well into the 20th century, may have had some influence on local knowledge. These late survivals were modified versions of the deserted stone-lined Sirikwa hollows at Kaptagat and elsewhere on the plateau above, adapted to the escarpment face.

Unanswered questions: a focus for continuing research

Reflecting on my own efforts over fifty years ago towards understanding the Sirikwa and interpreting their signs on the landscape of the western highlands, there are two issues to be addressed now by archaeologists keen to contribute to knowledge of East Africa's pre-colonial past.

The *first issue* is the need for a more satisfactory chronology: That mooted here (between the 13th and 17th-18th centuries) is too imprecise for charting the evolution of the Sirikwa system, for explaining the development of local variants, and for comparing with the histories of surrounding regions, in particular the Lake Victoria/ Nyanza basin to the west with its strong agricultural tradition, and secondly the drier and sparsely populated northern plains with equally long traditions of pastoralism.

Dating can never be exact, of course, but establishing a working framework will become important not just for comparing individual sites but for environmental history more broadly, and signs of climatic variations over time. Study of Sirikwa sites, therefore, should not be seen as an antiquarian pursuit of purely local significance. Rather, they offer an invaluable resource ready to be exploited for modern scientific concerns in ways which were hardly imaginable in the 1960s.

One reason for chronological vagueness then was the poorly developed state of radiocarbon dating, especially its application to sites of the last few centuries. Since then there has been considerable refinement of the radiocarbon method and improved faith in the laboratories' results. Even so, such 'dates' (as these bare measurements are misleadingly called) need, like any sort of evidence, critical evaluation with their historical context kept in mind. Without that, blindly quoting the laboratory formulae

(with their 'standard deviations' and other laboratory shorthand) serves little purpose.

In any case, it remains essential that only good, uncontaminated samples are submitted from excavations, which must be meticulously conducted with an eye for any stratigraphic disturbances, and properly documented too. Even then, archaeologists impatient for precise laboratory 'dates' should think twice before committing research funds indiscriminately. Very often a thoughtful evaluation of the excavated evidence and its situation can produce a more effective understanding of a site, even if inexactly dated, than the expense of a set of supposedly prestigious radiocarbon measurements. Such obsession with unattainably precise dating hinders sensible consideration of the forms and physical context of Sirikwa hollows and their wider surrounds, let alone their variants in space as well as time.

This is the *second issue:* The picture previously offered of Sirikwa hollows as individually guarded cattle pens, with houses attached to accommodate a single family or just a herdboy or two, plus a heap of dung outside to shield the gate from view, must be much too simple. Even if the purpose was to guard one's livestock against dishonest neighbours (rather than substantial raiding parties as recorded from the later Maasai era), the vulnerability of the fence, however ingeniously protected from approach in the dark, has to be faced realistically. The image of thatched huts or houses standing exposed on the outside, as if inviting a lobbed firebrand, cannot be quite right!

There must have been more than a single occupied compound on the hillside at any time, as well as communal responsibilities for security, involving the shared and constant watch of some secondary, outer fencing or other overall protective arrangements. Essential details of this sort have still to be identified by excavation.

This is not to return to the discredited idea of groups of hollows representing real villages, as Huntingford and Mary Leakey both imagined years ago through failing to appreciate that the numbers of Sirikwa hollows on any one (undamaged) site must be due to the cumulative effect of repeated building, decay, abandonment and replacement of these wooden structures over several generations. But for purposes of security, as also of daily management of herds and flocks to be grazed and watered, one has to be thinking not of individual self-contained families but, rather, of communities with strictly enforced duties and responsibilities set out for each age-group and gender. Alongside that, one has to be asking questions of territory, environment and seasonality as well.

Resolving these issues in a convincing way must be a long-term ambition, of course. But some points should be obvious. As a region straddling the equator, the western highlands does have its wetter and drier years, and wetter and drier seasons within them; but every year is different, the 'short' rains sometimes failing or conversely continuing to run into the usual 'long' rains or the pattern reversing itself. (Here, as anywhere, the weather never behaves 'quite right'!) Such vicissitudes require flexibility and fall-back devices by pastoralists for their survival in extreme years. In fact, such flexibility requiring appropriate decisions on communal grazing is normal, and one can discern the signs of this in the archaeological evidence.

In particular, the close clusters of small, stone-lined Sirikwa hollows of the Uasin Gishu plateau, especially the Moiben escarpment at its northern end, and the minute sizes of the round huts attached (with a smooth-floored back room just about sufficient for a herdboy to sleep), strongly suggest that this district served as seasonal external grazing (called *soi* in Nandi). By contrast, towards the southerly limit of the

Sirikwa zone, the large size of the houses excavated at Chemagel in Sotik indicate a family compound balancing agricultural and pastoral pursuits. Yet a degree of seasonality and out-grazing doubtless applied here too. Also to be considered is whether this combined economy was typical of Sotik over several centuries of the Sirikwa system, or only of the suggested late dating of the example excavated.

That's the chronology question again! Addressing it effectively calls for a programme of research designed in a more focused and coordinated way than earlier investigations. I suggest that an obvious site from which to lead such a programme would be that under the National Museums' guardianship at Lanet, not simply because of its unusual size and remarkable preservation, but equally because, in order to justify such a privileged status, its scientific and historical potential ought to be demonstrated to the local community as well as the broader public by some genuine on-site activity.[10]

Earlier in this article, I hinted that the occupation of Lanet should belong early in the Sirikwa sequence, and also wondered about the purpose of this spectacular concentration of archaeological remains, let alone that of the central 'earthwork enclosure' which Merrick Posnansky drew to attention 70 years ago.

It could well turn out that some speculations, both old and current, will prove worthless — except that any determined exercise to test them will advance our knowledge, maybe in unexpected directions, and raise more compelling questions in turn. There's potential there, waiting to be exploited to reveal more of Kenya's history over several hundred years.

10 The last serious work conducted on this site was in 1996 when the late Ari Siiriäinen of Helsinki University, with BIEA support, undertook a 3D survey of the entire visible surface remains.

ABOUT THE AUTHOR

After graduating in History in Oxford, John Sutton's career has been spent researching and teaching pre-colonial history and archaeology in both eastern and western Africa, with a special interest in the development of indigenous agricultural practices during the African Iron Age. After a period as graduate student and lecturer in the (former) University of East Africa (Makerere and Dar es Salaam), he served as Professor of Archaeology in the University of Ghana (1976-82) and as Director of the British Institute in Eastern Africa (1983-98). He is a fellow of the Society of Antiquaries.

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PHOTOGRAPHS PROVIDED BY THE AUTHOR

Further reading

For the fieldwork of 1962-64 and older literature relating to the Sirikwa, see the author's *Archaeology of the western highlands of Kenya* (BIEA Memoir 3, Nairobi, 1973).

Later contributions to the subject are reported in annual volumes of *Azania* (the journal of BIEA) and are listed in the site study *Hyrax Hill and the later archaeology of the central Rift Valley* (BIEA separate 2000, reprinted from *Azania* 33, 1998).

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