

Barbets Duet Site Visits to Tanzania

February 2016

Travellers: Chris Jones, Felicity Jones, Barbara Heinzen, Bernard Mburu, Sankara Yambo

Hosts: Mwajuma Masaiganah, Mwasama School, Bagamoyo; Msi Choke Seaweed Farmers, Mlingotini; Hans Mtika & Rose Lyimo, Himo & Dar es Salaam, Anne Outwater, Dar es Salaam

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Background

Following the 2016 Barbets Convention in Molo¹, four Barbet travellers, plus a driver, drove to Tanzania by way of the Amboseli and Tsavo National Parks in Kenya. Their first stop was Himo, Tanzania, where Hans Mtika gave them a tour of the Barbet site in Himo. The travellers then visited Bagamoyo and Dar es Salaam. This is a report of what they learned.

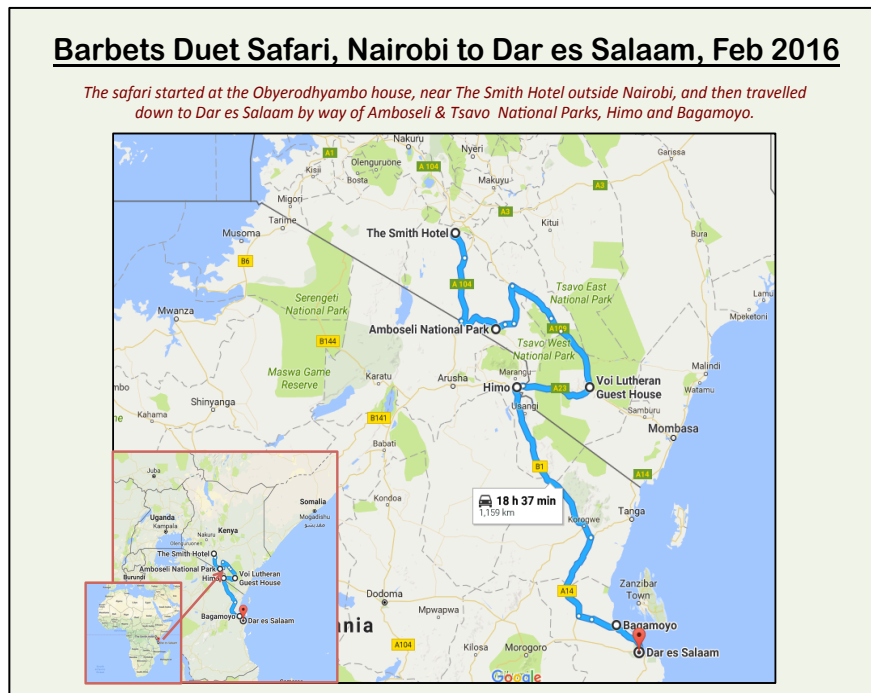


Figure 1: The travellers' route from Nairobi to Dar es Salaam, February 2016

Rose Lyimo's Learning Site at Himo

After a few years delay, while she tried to develop a different learning site, Rose decided to establish her site on 3-4 acres of land she owned in Himo, near Moshi and Mount Kilimanjaro. As a young single mother, she had bought the land several decades earlier to provide for her children, but then left it for other relations to farm. After taking back the

¹ For the full report, go to the [Barbets page](#) on Barbara Heinzen's website.

management of the land, she first built a house. The house was finished by December 2012 when she and her son, Hans Mtika, hosted the 2012 Barbets Convention.

When the Barbet partners met at the new house in December 2012, the plot was still largely a bare building site with nearby abandoned fields. After a buying spree by all at a local nursery, the partners spent their last morning together planting trees in front of Rose's house. Everyone imagined this would become a small arboretum, and encouraged Rose to specialize in native species, medicinal plants and trees. They also encouraged her to work with a nearby school, to create a '*shamba darasa*' - or garden classroom - like one Mwajuma Masaiganah was developing at the Mwasama School in Bagamoyo. Things did not work out as planned, however. When the Barbet travellers arrived in Himo four years later, only a few of the trees had survived.

Before discussing what had happened, Hans Mtika showed the visitors around, explaining how the customary canal system worked to bring water from Kilimanjaro to local residents and their crops. He also showed the visitors the new crops being planted in the fields near the house. There were bananas, maize, beans, cassava and other foods, as well as a small number of pigs. Rather than the arboretum imagined in 2012, the site had become a traditional *shamba* with some medicinal plants and trees. So what had happened?

Hans explained that he and his mother both live in Dar es Salaam, a day's drive away, and are unable to get to Himo very often. After the Convention in 2012, the people they hired to look after things did not always tend or water the new trees. If we had come last year, said Hans, "*it would have looked like the 2012 pictures*" - a patch of bare ground in front of a new house, with abandoned small fields at the side and back.

Things changed when they hired Baba Dan to act as a caretaker. Hans explained the arrangement. "*We hire a caretaker, not a shamba boy, but a caretaker who can grow crops and we share the profits. Baba Dan handles the marketing and the sales. The pigs are his idea. The maize and the bananas and cassava were Rose's idea. He can then plant whatever he wants: beans, onions, etc. From Baba Dan's point of view, he has always been a farmer, but does not have a shamba of his own. He has a house, but not a big area for growing things.*"



Figure 2: Good people are needed to manage a site remotely

Like many places in Tanzania, population around Himo has trebled or more since independence in the early 1960s. In recent years, pressure has further as Himo grew into a major East African transit hub. As Hans explained, *“It is very hard in Moshi to get a shamba. There is very little land available. All land is taken; it is not easy to buy. If you have land, you don’t sell it. If you have no land, you can only beg or ask someone to give you space to grow. It is a cultural thing from way back. An Mchagga can buy from an Mchagga², but it is not easy. This land was bought by Rose a long time ago. This is considered a big piece of land in this area.”*

When asked about future plans, Hans said he wanted to improve the fertility of the soil as it had had a lot of fertilisers on it and needed to recover. He is also interested in the potential of medicinal plants. *“More medicinal plants and trees are still part of the thinking. We could market the medicinal plants in Dar es Salaam. So that could be another source of income.”* The visitors backed up his thinking when he asked for their advice. Felicity Jones noted, *“the mix of crops - medicinal and others, plus leguminous plants and others - broadens the market and maintains soil fertility.”* Barbara had been impressed with how much Baba Dan seemed to know about traditional remedies, as he showed the visitors what was already growing

² An Mchagga is a person from the Chagga tribe, the main group around Mt Kilimanjaro in Tanzania.

there. Referring to Baba Dan and his son, who was also working there, she suggested that Hans and his mother should “involve them more deeply.”

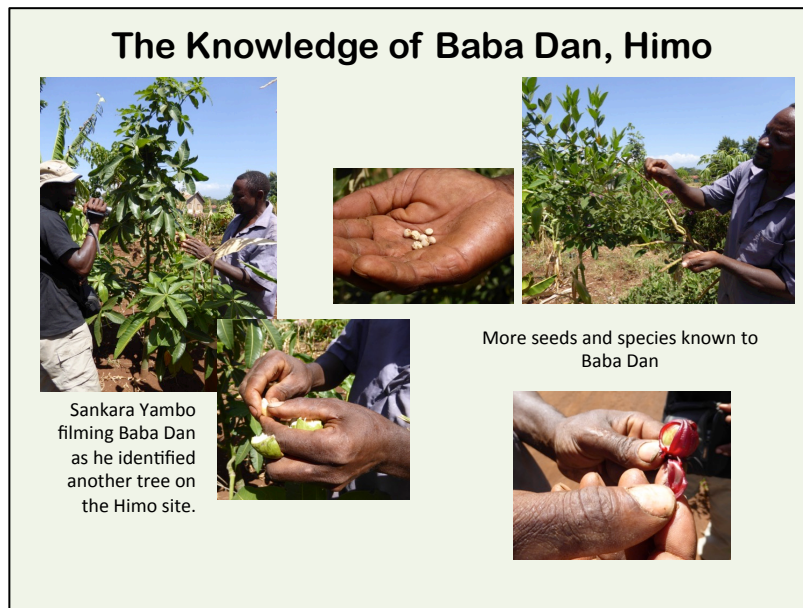


Figure 3: Medicinal plants and trees as a potential source of income

Barbara had first seen the irrigation canal that runs through the property in 2012, but none of the other visitors knew of the Chagga customary irrigation system.³ When the two English visitors, Felicity and Chris Jones, were asked if they thought people in Cornwall could ever agree on the management of a similar system, they were emphatic: “No, it would never happen.”

After seeing and discussing the Himo learning site, the group drove up to the Mt Kilimanjaro Park, but did not walk into the park because of the high entrance costs. Sankara and Felicity did talk with one of the guides about climbing the mountain. They were testing the idea that the next generation of people in the Barbets Duet could organise a small number of people to make a sponsored climb up the mountain. The climbers would ask sponsors to donate money to an ‘interns’ travel fund’ that would help younger people visit other Barbet learning sites in East Africa and abroad. In the end, the cost of making a climb was simply too high for that idea to work, as the cheapest treks cost about \$1000 per person.

³ See the [2012 Himo Convention](#) report for a fuller description of this system. The users maintain it on a regular basis, a system that may have been in operation since the 19th century.

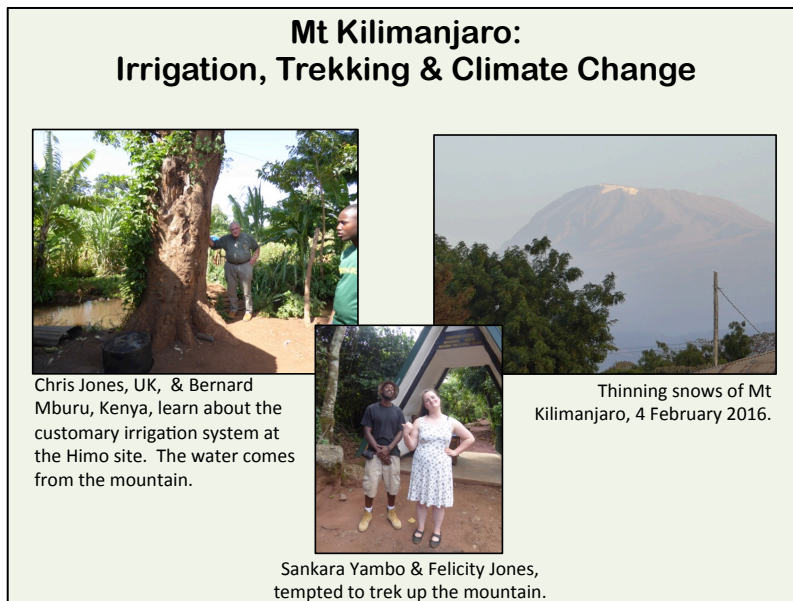


Figure 4: The irrigation system depends on the slow release of water from Mt Kilimanjaro

The travellers were in Himo at the end of the dry season, so there was little snow on Mt. Kilimanjaro, but researchers report that the mountain’s glaciers have been melting fast in recent years. Once they are gone, there could be a serious impact on the customary irrigation system, fed by the slowly melting snows of the mountain.

Mwajuma Masaiganah’s Learning Site, Mwasama School, Bagamoyo

After a long day’s drive from Himo to Bagamoyo, Mwajuma Masaiganah welcomed everyone at the Mwasama Old School site where she now lives.



Figure 5: Barbet travellers arrive in Bagamoyo, at the Mwasama Old School site

The following morning, Mwajuma took the travellers to see the new Mwasama School. As it was a weekend, the children were not in class. Day pupils were at home, while the boarders were cleaning, doing laundry, relaxing or attending classes at the mosque.



Figure 6: Saturday activities at the Mwasama School

The new Mwasama School has been slowly taking shape for many years and continues to grow. Since she first acquired the site, Mwajuma Masaiganah has been steadily planting trees and shrubs throughout the campus as well as growing vegetables and fruit for the children. In 2012, she brought back numerous trees from the Himo Convention, which were then planted by the students and their teachers. Children have also brought plants from home to grow in the school grounds. All this activity became part of what grew into the Mwasama School's own Barbet learning site: the *Shamba Darasa* - loosely translated as the Garden Classroom.⁴

⁴ *Shamba* is kiSwahili for cultivated ground, a small farm, or plot of land. A *Darasa* is a classroom.



Figure 7: Mwasama's Barbet site is an experiment called the "Shamba Darasa" - garden classroom.

From the beginning Mwajuma Masaiganah has been hosting or attending the Barbet Conventions on behalf of, or with, the Msi Choke Seaweed Farmers Cooperative, but did not have a learning site of her own. Gradually, as a committed gardener, she started thinking about creating a learning site at the Mwasama School. One of the teachers came up with the name *Shamba Darasa* as a way to teach the pupils the skills of cultivation and the value of living with the natural world. One of their first crops was sugar cane, which the younger students proudly taught older students from Germany how to chew. The Mwasama pupils also work with the school gardener to plant and tend the growing inventory of trees, shrubs and food crops. In time, the new Mwasama will become a school in a botanical garden.

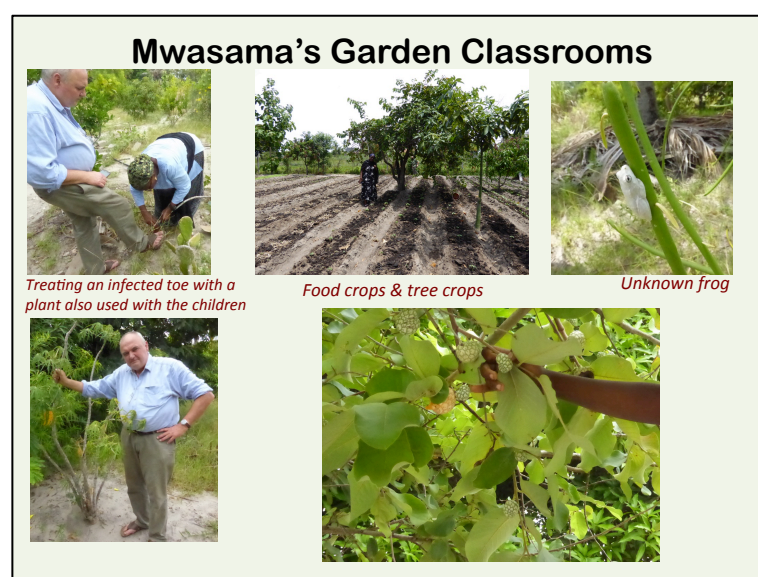


Figure 8: Medicinal plants, food crops, fruit and a curious white frog were all thriving at Mwasama

Unfortunately, by 2016, several of the people who had initiated the *Shamba Darasa* had left the school. To reinvigorate the project, Mwajuma Masaiganah invited a few of the teachers to join our tour of the school and hear about the Barbets Duet, including the pre-school teacher, Nyawale, , the gardener, Paul Tembo, and the IT teacher.

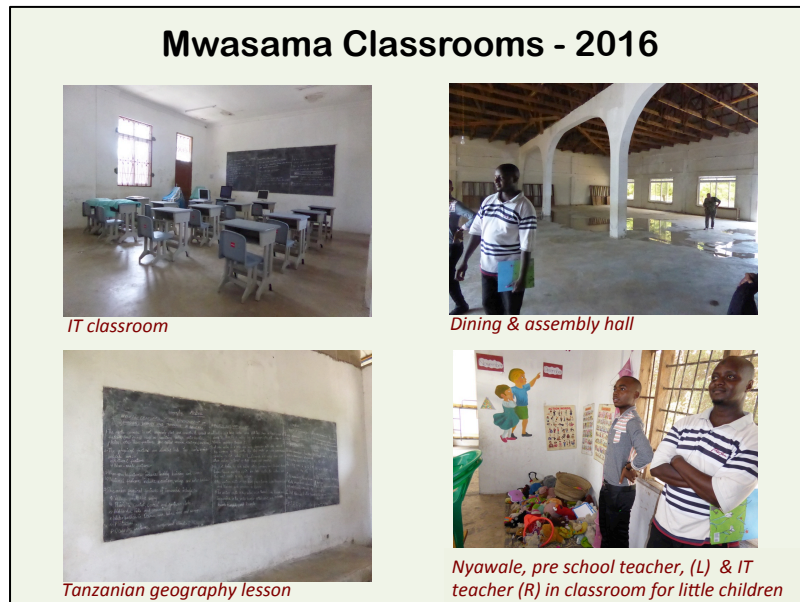


Figure 9: Visiting Mwasama classrooms with a few teachers

Afterwards, everyone met in Mwajuma’s office, together with Machano Ali, of the Msi Choke Seaweed Farmers Cooperative. Both Nyawale, who teaches the little ones, and the gardener, Paul Tembo, were excited about developing Mwasama’s *Shamba Darasa*. As Sankara Yambo from Kenya said, Mwasama is the most important Barbet site of all because it introduces environmental thinking to children at an early age.



Figure 10: Barbet partners talking with Mwasama teachers about the Barbets Duet’s value

After sending her guests off for a relaxing afternoon swim in the Indian Ocean, Mwajuma Masaiganah hosted a gathering of Mwasama teachers and others from Bagamoyo at the old school site. Music was provided by Maembe, good food was served, and all the Barbet visitors spoke about the work they were doing, with Sankara Yambo producing a rap song to sum it all up. The evening ended with dancing and more music. Among the visitors was Natalia Skowronek, a Swiss student who later wrote her final paper on the Barbets Duet as a different development model. This party was the second occasion in a month when Barbet partners shared their work with a wider group.

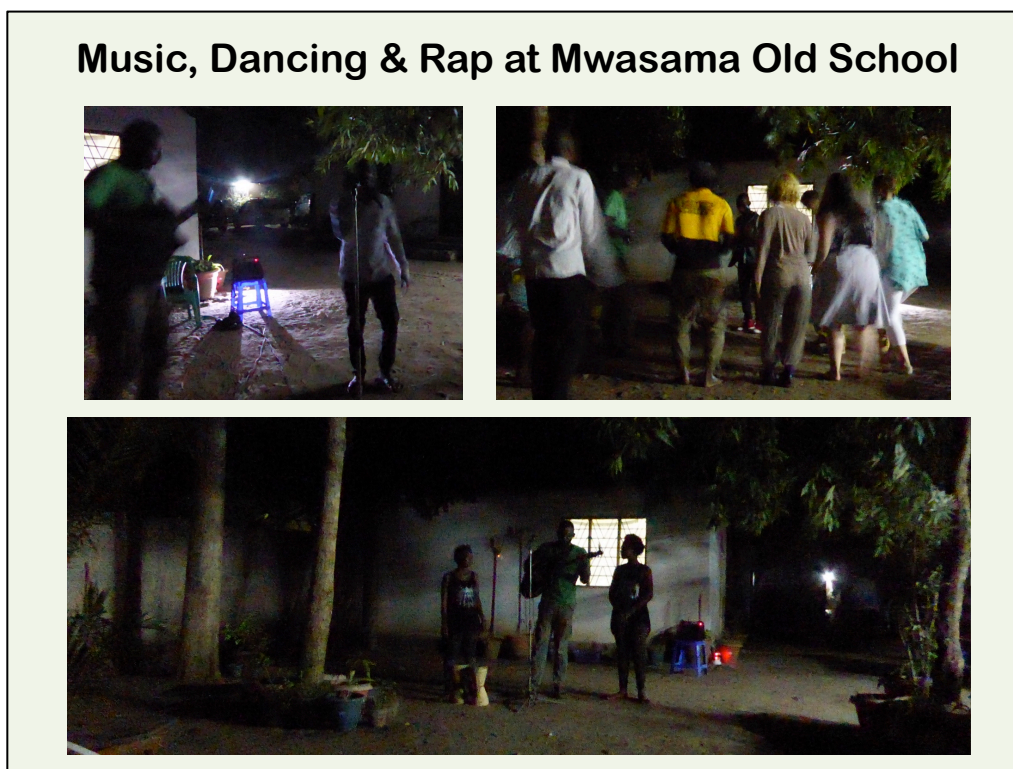


Figure 11: Party at the Mwasama Old School site - music, dancing & talk

Visiting Msi Choke Seaweed Farmers, Mlingotini village

In 2007, when Barbara Heinzen first tested the idea of the Barbets Duet, she stayed with Mwajuma Masaiganah at her home in Mlingotini village, south of Bagamoyo. Among Mwajuma's neighbours were members of the Msi Choke Seaweed Farmers Cooperative. Mwajuma described Msi Choke as a very effective community group who might be good participants in the Barbets Duet. Two years later in 2009, Mwajuma and Msi Choke hosted

the first Barbets Duet Convention, the “Invention Convention” at Mlingotini⁵, and sent representatives to every convention after that. As a cooperative, farming seaweed on public land in a lagoon, they are a very different type of learning site, so the Barbet travellers, joined by Nyawale from Mwsama, went to see what they were doing.

They arrived at Mlingotini at low tide so they could see the strings of seaweed growing in the lagoon. Machano Ali, and his son, Abdul, were their guides.



Figure 12: Strings of the seaweed farms are only visible at low tide.

The visitors were shown the two different kinds of seaweed, growing on different strings: *Euchema spinosum* and *Euchema cotoni*. These strings were growing in an area where mangrove trees had recently been cut down, leaving behind a muddy sediment.

⁵ See the Invention Convention report on the [Barbets archive page](#).

Seaweed Growing at Mlingotini



Machano Ali with two seaweed strings:
Euchemia Spinossum (L) & *Euchemia*
Contoni.



Crab, found with the
seaweed



Nyawale, from Mwasama School,
with both seaweeds



Abdul, holding a
mangrove, ready to root

Figure 13: Seaweed and its growing environment

Machano Ali also showed them a crusty bacteria growing on the red seaweed, *Euchemia Spinossum*. This bacteria was more common during the rains and seemed to be associated with decaying mangrove tree debris, muddy soils, and higher seawater temperatures.

Seaweed, mangroves & diseases



This seaweed has been infected by a bacteria that creates a crust around the plant stems. Nearby mangroves had been cut down, leaving muddy sediment behind. Machano Ali associated this bacteria with rain, mud and decaying mangrove vegetation.

Figure 14: A crusty bacteria growing on the *spinossium* seaweed

After visiting the seaweed farm with Abdul and Machano Ali, the visitors returned to the Msi Choke office in Mlingotini village. For the benefit of Msi Choke members who had been at Molo, the discussion largely repeated the site reports made at the Convention. Msi Choke members then showed the visitors their soap making molds and discussed techniques with Chris Jones and Sankara Yambo whose families are also making soap at their sites.



Figure 15: Barbet visitors meet with coop members at the at Msi Choke Office in Mlingotini

There was one important discussion. Given the presence of three Westerners (Barbara Heinzen plus Chris Jones and his daughter, Felicity) one of the younger Msi Choke members asked Barbara Heinzen what the Westerners would do for Msi Choke. The question went to the heart of the Barbets Duet experiment since everyone participates on an equal footing, but the young man’s question reflected the fact that most Western visitors to Mlingotini offer, rather than receive, aid and advice. Mwajuma Masaiganah, Barbara and Mama Gishindo drew on the experience of working together to explain the difference. Barbara also told a more personal story about a time when she kept wanting someone else to solve her problems. *“Finally I realized,”* she said *“that there is no rescue, there is only escape.”* If she wanted things to change, she had to do it herself.

After the meeting broke up the visitors had a late lunch at the [Bomani Beach](#) resort in Mlingotini, before driving back to Bagamoyo to prepare for the next stage of their travels.

Dar es Salaam - Mwenge Carving Centre & Anne Outwater's Garden

The next morning, 8 February, Sankara Yambo and Bernard Mburu were up before dawn to drive back to Nairobi in a single day, crossing the border at Namanga. The three other visitors, from the UK and USA, then drove with Mwajuma Masaiganah and Mwajuma Mabewa from Msi Choke, down to Dar es Salaam, where they all stayed at a house owned by Anne Outwater, a long-term American resident in Tanzania.

Before reaching Dar, however, the group stopped at the Mwenge Carving Centre. Chris took advantage of the stop to buy a few gifts to take home, while Barbara wanted to visit a carver, Joseph Nyunga, who had been interviewed by the Tanzanian scenarios team in 2001. During that interview he asked the Tanzanians, "Why is there no university of Tanzanian knowledge?" That interview contributed to the thinking behind the Barbets Duet. Joseph Nyunga is also a member of the [Tanzanian Carvers Association](#) which has begun planting their own trees, including ebony trees, to ensure they will always have a supply of carving wood. He now has a number of apprentices working with him and was completing a very large [Kimbunga](#) carving which links people to the natural world.



Figure 16: Joseph Nyunga was interviewed in 2001 by the Tanzanian scenarios team

The tour of Anne's garden took place as dusk was falling on the last evening before Chris and Barbara flew back to the UK. When Anne bought her place, it was a very bare garden, but she began planting local plants and trees - including mvule, ebony and others - which grew

much faster than she had expected. “People say these are slow-growing trees,” said Anne, “but they are not! Just look at that one!” Anne also asked the gardeners to sweep the jackfruit leaves close to the tree, as if it were a forest, rather than tidying them away. As the leaves decayed, termites and mushrooms grew in the new soil, creating a richer medium for the tree which then produced larger, more numerous fruit.

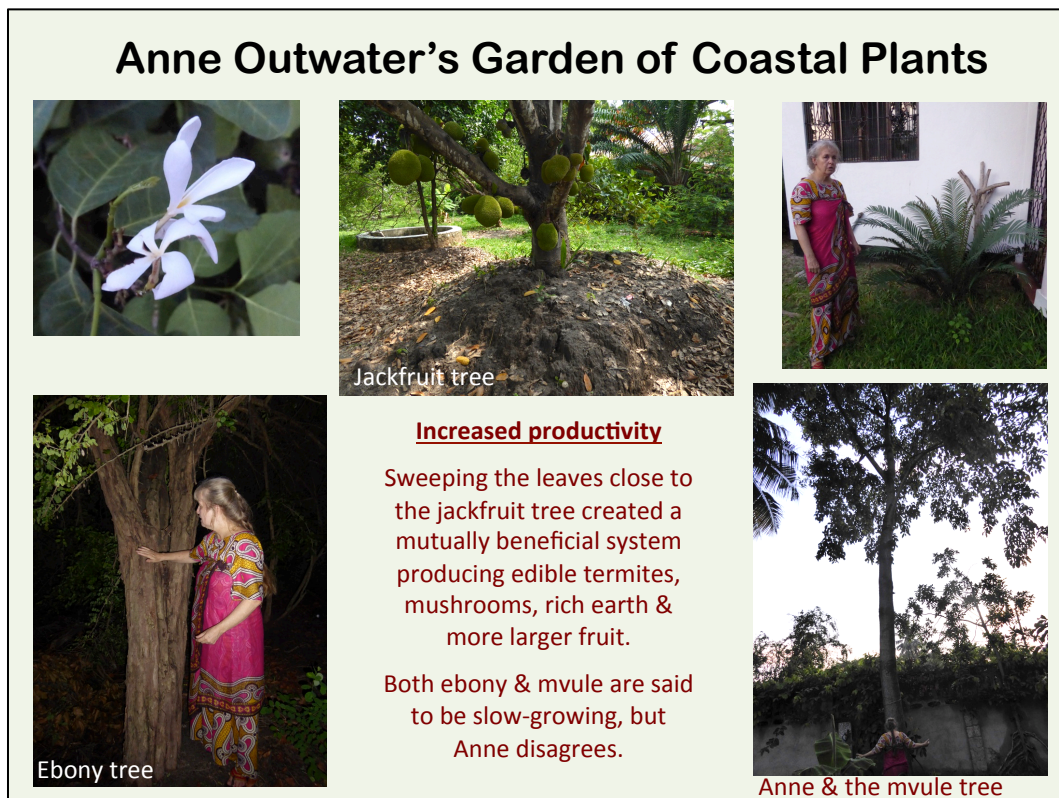
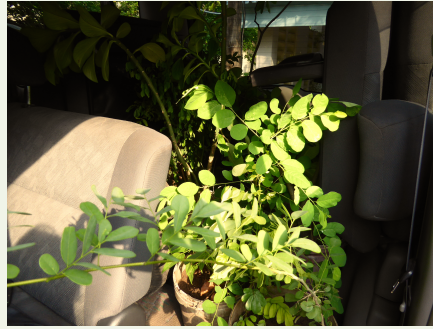


Figure 17: This garden is based on planting native species and imitating natural processes

Not only is the garden a demonstration site, Anne and the gardeners share the money that is earned by selling ‘forest soil’, fruits and pots of native trees and plants. The income from the plants, however, does not reflect their ecological value, as they compete with non-native species being sold at roadside nurseries. The non-natives are both more common and sell for less. In time, a more educated public may be willing to pay more for rare native species.

A Carload of Native Shrubs & Trees



(R) Anne Outwater and Mwajuma Masaiganah touring the garden.
(Above) Plants grown in the garden for sale, ready to travel to Bagamoyo

Figure 18: The gardeners who work for Anne share the profits of the plants, fruit and soil they sell.

While everyone was packing up to leave the next day, Mwajuma walked with one of the gardeners, pointing out the plants and trees she wanted to take back to Bagamoyo. By the time she left, the car was full.

Hans Mtika's Rift Valley Cichlid Fish - a New Barbet Site?

When the travellers met with Hans Mtika in Himo, he mentioned that he had started a new business in Dar to collect cichlid fish from Rift Valley lakes for sale to international collectors. Ultimately, he wants to breed the fish rather than just collect and sell them. To get better idea of what he is doing, Chris Jones, Felicity and Barbara Heinzen drove with Hans to see the work he has done so far and interview him about starting this new business venture.

According to Hans, there are about 3000 varieties of cichlids in the three major Rift Valley Lakes; Malawi, Tanganyika, Victoria. These fish evolve quickly, occupying different ecological niches and shorelines, and exhibiting very different characteristics wanted by collectors. *"One is the colour, the second thing [collectors] insist on looking at is the shape of the head. You might find two species having the same colours, but the shape of their heads or mouths is quite different."* The major markets for the fish are in Germany, China, Hong Kong, America and France.

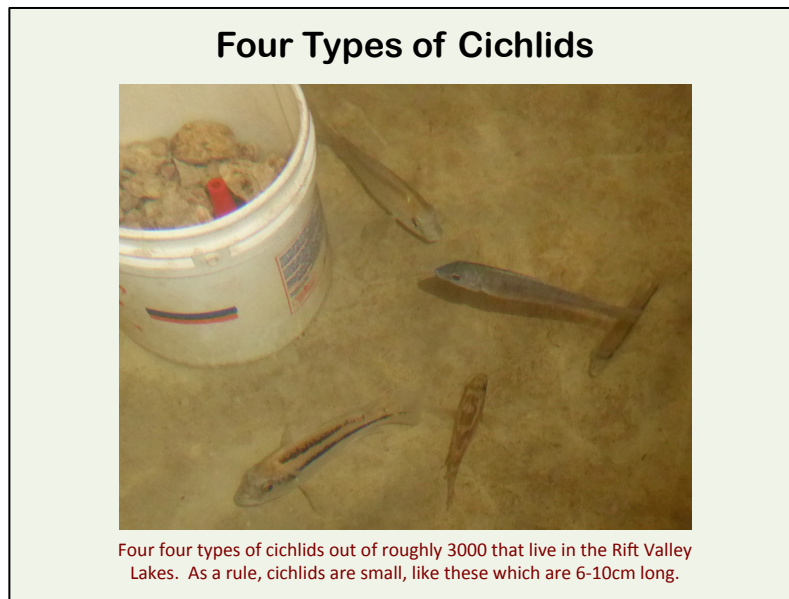


Figure 19: Of the 3000 different cichlids, about half may be tradable on the international market.

The business is fairly straightforward, but not easy to get right. In his first eighteen months, Hans has twice collected fish from Lake Malawi and brought them back to the new facility he built in Dar es Salaam to prepare them for export. To get to this stage, he required a licence to collect and a licence to export the fish. He had to learn how to buy the fish from divers at Lake Malawi, how to transport the fish to Dar es Salaam, and then how to keep them healthy and alive in his new facility. All of these lessons were hard-won.



Figure 20: This is a demanding business, but one Hans expects to master.

As he described everything he had learned over the previous eighteen months - and all he still wanted to do - it became clear that this could be a new Barbet learning site. Currently, Hans simply buys cichlids from divers at the Rift Valley Lakes and exports them abroad. As

such, it is largely an extractive business model that could reduce wild stocks of cichlids, so Hans' longer-term ambition is to become a breeder of cichlids.

Thinking of the ecological impact, Chris and Barbara asked him about the attitude of the divers at the Lake. Do they ever worry the stocks will run out? According to Hans, it never enters their minds. *"They say, 'No, no, no, they won't. Because every day they reproduce. Every day, they reproduce.'" As a article of faith, Barbara wondered if it were possible to take a routine census of the fish. It is possible, said Hans, but difficult. "Their mindset is totally different from ours," he explained. "So, say I am a business man, and I tell you, 'look, you need to take certain species and then the rest you put them back,' but then another businessman says, 'I have this money and I will give you twice the amount he has given you for those cichlids.' So, mindset! You need to slowly, slowly, groom it. Because again, this is their livelihood. You have to preserve their livelihood, because [they] don't have any other means of making any money."* Over time, a more sustainable style of thinking could be learned, *"but slowly, slowly you get to know them, speak to them, understand them."*

Hans saw this as a challenge of mentalities and wanted to see more sensitization and promotion of these sectors. *"We normally have national trade fairs where everybody goes to display their products, but I have never seen cichlids being promoted."* There was a risk, however, that if the market were promoted before the knowledge of sustaining the wild stocks it would lead to over-collecting and a collapse of the fishery. The ambition to work with the divers turns this new business into a Barbet Site learning how to reconcile ecosystem health with viable economic returns.

The Journey's End

After leaving the cichlid house, the group went to see Hans's mother, Rose Lyimo, one of the founding partners of the Barbets Duet. It was our last day in Dar es Salaam. Chris Jones and Barbara Heinzen flew back to the UK that evening, while Chris's daughter, Felicity, returning to Bagamoyo with Mwajuma to work at the Mwasama School for a month. Their travels to Tanzania had been too fast, but still rewarding in a very short period of time.