

Tanzania

Flora & Fauna of the Southern Highlands

A Greentours Trip Report

4th – 19th February 2010

Led by Rosalind Salter

Day 1 – London Heathrow

Following recent terror threats the security at Terminal 5 was worse than ever so there was not much time for pre-flight shopping before our evening BA flight.

Day 2 – Arrive in Dar-es-Salaam

We arrived on time at 7.30am and already the layers of clothing we had left the wintery UK in were quickly coming off. Of course everyone except the tour leader had been organized and already got their visas so waltzed on through to the sole baggage carousel in 'Arrivals'. It is a shame to miss the experience of obtaining a visa on arrival because the process sums up beautifully how things work in Tanzania; no order, no haste and a wonderful level of job creation.

Instead of going direct to the hotel we took the opportunity to detour through the city centre. We passed characterful German, British, Asian and Arab influenced architecture, which have over recent years been joined by smart high-rise buildings, giving the city a real up and coming modern feel. Carrying on past the port, the new and now not so smelly fish market and new ship-shaped lighthouse, we followed the coast north via the palm-fringed Coco beach and Oyster bay to Msasani peninsula, where the majority of Ambassadors, Ex-pats and rich Tanzanians are in residence. Out to sea we could see the incongruous mix of giant tankers queuing to get into Dar-es-salaams undersized port and small wooden fishing and passenger dhows gliding in between them.

Continuing north we reached the quiet area of Kawe where we found our Hotel Mediterraneo, situated amongst attractive and mature gardens overlooking the Indian Ocean. Whilst waiting for our rooms to become available we relaxed, our weariness soothed by a warm breeze and a cold drink, as we watched ibis, herons, egrets and cormorants enjoying the fishing opportunities at low tide. Another easy spot was a yellow-headed dwarf gecko running along wooden railings, separating us from the beach below.

Bongoyo Island

After a light lunch we paddled out to the Hotel boat, which took us swiftly across the bay to Bongoyo Island, which forms part of Dar-es-Salaam's Marine Reserves. In 20 minutes we arrived on this gem of an island and quickly scamper over the baking hot sand to the shade of the thicket that covers the majority of its area. The intertidal zone surrounding the island comprises small sandy beaches as well as sharp coral-based rocky flats, where we found coral rag skins, conger eels and Nile monitor lizards (unfortunately being fed as a tourist attraction). *Euphorbia candelabrum*, *Euphorbia tirucalli*, *Commiphora* sp. and *Vitex* sp dominate the bush here, where the dappled sunlight is commonly enjoyed by *Belenois* and *Colotis* butterflies. Many birds were heard but unfortunately not seen, due to

the dense undergrowth, except for one dead olive sunbird. Back at the hotel we dined on red snapper al fresco.



Day 3 - Dar-es-Salaam to Udzungwa National Park

Following a stormy night our driver plus Landrover arrived promptly at 6.00 am. An early start was necessary to avoid the traffic hell that cripples the city from 6.30 am every day. After a quick stop at Chalinze (junction to the north) to get large & colourful umbrellas (perfect walking stick come rain protector) and water, we left the urban and cultivated sprawl of the coast and the landscape opened up as we dropped down onto the plains.

Uluguru Mountains

About 3 hrs into our journey we started to get views of the spectacularly steep peaks of the Uluguru mountains, which form part of the chain of the Eastern Arc Mountains Hotspot. These forested mountains comprised of Uluguru North and Uluguru South have recently been upgraded from two Forest Reserves to a single Nature Reserve, as a result of extensive surveys that highlighted these mountains' high levels of endemism and critical importance as a water catchment area. The small town of Morogoro town lies at the foot of these mountains, which we clipped the edge of as we drove on towards Mikumi National Park.

Mikumi National Park

As we entered the park we caught glimpses of impala through the bush and grey hornbills glided gracefully overhead. As the landscape evolved we saw elephant, buffalo, zebra and uncommon sightings of bush duiker and black-bellied bustard. At Kikaboga Camp we were greeted by a murmur of superb starlings and a flutter of African Monarch butterflies. Then from the shade a Marula tree, around which a bar is built, we were lucky enough to see a herd of buffalo, warthog, elephant, impala and zebra against the impressive backdrop of the Rubeho and Udzungwa mountains.



After lunch we entered further into the park, past a herd of wildebeest and countless giraffe, to a hippo pool where we saw the contented sounding beasts wallowing alongside crocodiles, surrounded by abundant water birds, including blacksmith plover, water thick-knee, black-headed heron, collared pratincole and glossy ibis. Red bishops and pin-tailed whydahs were out in their full breeding plumage and other sightings included bateleur, lilac-breasted roller, wattled starling and long-tailed fiscal shrike. As a result of the early rains the whole park had a beautiful lushness to it and was full of life. Clouds of butterflies, including monarchs, whites, orange tips and pansies, were seen around flowering shrubs

and the usually parched earth was covered in lemon-coloured *Tricliceras* sp, *Crotalaria* sp and shocking red *Pentas bussei*, *Emilia javanica* and *Hibiscus* spp.

Udzungwa National Park

Driving on from Mikumi NP, we turned off south at Mikumi Town, a linear truck stop settlement, where Internet Hotels are advertised but actually supply neither service! We wound our way around the foothills; past the hydro-electric power station at Kilombero, where the Great Ruaha flows out of Kidatu dam; got a glance of Sanje waterfall, appearing like a ribbon running through the trees and then finally arrive at Hondo Hondo Camp, near the park HQ at Mang'ula village. Once being briefed on a likely encounter with migrating elephants we are shown to our luxury tents.

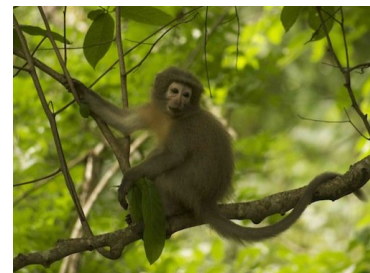
We were actually the first to try out these new tents. Comfortable beds, linen, electricity and an open air bathroom were all in order. Water comes straight off the mountain and you bath whilst looking into the forest where you can see Syke's monkeys leaping from tree to tree – not bad! That evening we dined on excellent food under the stars warmed by an open fire.

Day 4 – Udzungwa National Park

Breakfast was taken on the lawn and was filled with talk of sounds in the night. We had been told we would hear the rumble of elephant's stomachs behind our tents but actually the grumbling sounds we were hearing turned out to be that of a leopard.

Walking with the Sanje mangabey

Once we had obtained our permits from the park HQ and enjoyed observing the grooming behaviour of a large troop of yellow baboons hanging out outside, we set off with our guide to find the recently habituated group of the endemic Sanje Mangabey. Listed on the IUCN Red List as Endangered, the Sanje Mangabey are only found here in the Mwanihana forests of the National Park and further south in the Udzungwa Scarp Forest Reserve.



After a short walk through the forest following elephant tracks we found a pair of rangers who permanently follow the group to track their location and study their behaviour. The group was approximately 40 strong with eight pregnant females and numerous new borns whom we watched, along with their mothers, as they attempted to master walking (or wobbling) along narrow springy

branches. These strangely beautiful animals are incredibly graceful to watch, as they effortlessly move between every stratum of their home, from the upper canopy to the forest floor. We were very lucky to be able to walk amongst the whole group whilst they foraged on the forest floor, tearing open dead wood for insects, digging for roots and tubers and rummaging around for fallen fruits of the *Sorindeia madagascariensis* tree, as well as observing the adults sitting around grooming each other with the odd jealous spat between the males.

After a light lunch back at Hondo Hondo some of the group relaxed at camp, whilst the others went for a wander through the forest behind the park HQ and down to the Prince Bernard waterfall where we were treated with the sightings of large and colourful butterflies such as *Palilio desmondi usambarensis* and *Salamis temora virescens*. On the way back to Camp we passed by the Udzungwa Ecological Monitoring Centre where we saw a Palm-nut Vulture sat in the top of a large dead tree whilst trumpeter and crowned hornbills flew noisily overhead back to their roosts on the edge of the forest.

Day 5 – Udzungwa National Park

Walk up Sanje waterfall

After a wet night the cloud lifted in time for us to start our ascent to Sanje waterfall. The walk is no further than 3 km but it is quite steep in parts so a steady pace with lots of butterfly and primate spotting stops was in order. One is unlikely to see Sanje mangabey on this trail as unhabituated groups are incredibly shy, however, the also endemic Udzungwa red colobus, with their conspicuous heads of red spiky hair, are a likely sighting and we saw several groups along with the striking Angolan black and white colobus displaying their fantastic long white epaulets. We also heard the distinctive call of Syke's monkeys but they were only seen from afar.



Reaching the halfway point we were rewarded with probably the best view en route of the falls and being a sunny spot it is great for butterflies including *Papilio nireus*, *Amauris ochlea*, *Bebearia cocalia*, *Acraea natalica* and several *Euphedra* species. Continuing on up the forest canopy gets higher and denser with species such as *Parkia filicoidea* displaying huge buttress roots, which are used by locals as a natural drum. Other distinctive species seen included *Tabernaemontana elegans*; a small tree with large glossy leaves and sweet smelling creamy flowers that littered the path; *Albizia gummifera* with their long flattened pods; and *Anthocleista grandiflora* displaying extremely large cabbage like leaves clustered at the ends of branches. Memorable ground flora included several species of *Impatiens*, *Begonias*, wild ginger, *Pentas bussei* and *Piper capense*.

Once at the top we walked out on to the rocks where this time the reward was a stunning view looking out over the Kilombero Valley towards the Selous Game Reserve and the Uluguru Mountains. Lunch was well timed to coincide with a short but rather heavy down pour. Scout, the Hondo Hondo chef, had beaten us up the mountain to a simple shelter where he served us with a hearty meal of rice and beans. After lunch we continued up stream where there were several more waterfalls with attractive pools surrounded by *impatiens* and *saintpaulias* (unfortunately the latter not in flower) before heading steadily back.

Having returned to Hondo Hondo we enjoyed a cold beer whilst witnessing the migrations of thousands of tiny butterflies, identified as *Andronymus neander*, passing right through the camp. A late afternoon explore was hampered by light rain but we did enjoy sightings of open-billed storks feeding in the rice paddies, red bishops amongst the maize as well as bronze mannikins, African pied wagtails and black-backed puffbacks. A splendid final meal with good wine and spectacular stars ended a great stay.

Day 6 – Udzungwa NP – Kisolanza

Boabab Valley

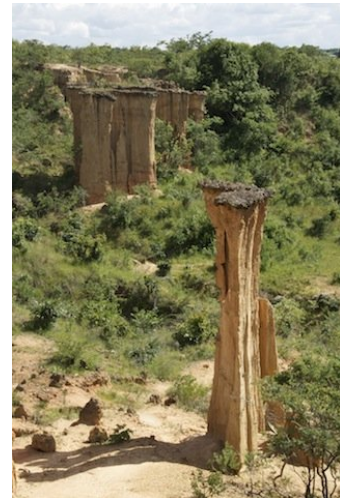
After a pleasant breakfast in the early morning sunshine we headed off on the Tazam highway towards the Southern Highlands. The road winds its way down into Boabab Valley where the mighty Great Ruaha River, at this time of year high and a muddy orange colour, flows along the northern edge of the Udzungwa range. The forest here is much drier and where the wooded valley floor opens out you are presented with hundreds of eerie-looking Boabab trees in a very remote-feeling and breathtaking landscape. Again because of the recent rain everything was fresh and in flower and busy with butterflies and birds for which we took time to stop and enjoy. Baboons were frequently seen scavenging on the roadside. Further on we stopped where a bridge crosses the Ruaha and found a colony of black-headed weavers and a red-headed rock agama.

Iringa

Leaving the valley we ascended up the dramatic Ruaha gorge to approx. 1500m and entered into a landscape strewn with granite boulders. At Iringa, an attractive town perched on a steep escarpment studded with old German and Asian buildings, we dined in the popular Hasty Tasty, which keeps to its name.

Isimila Stone Age Site

Detouring from the tour itinerary we spontaneously decided to visit Isimila Stone Age site just a few miles on from Iringa. Approximately 200,000 yrs old Stone Age tools are displayed in a small shelter in the middle of an attractive depression from where they were found. A short walk also uncovers a surprisingly impressive gorge filled with sandstone pinnacles capped with basalt. Within the gorge we found common but attractive species such as flame lilly, stonecrops, aloes and cacti. Acacia species were also common with the whistling Acacia displaying an interesting symbiotic relationship with ants that occupy the swollen bases of the thorns. Vervet monkeys hung out around the picnic area, whilst red-headed rock agamas chased each other along the walls of the entrance hut. The new museum onsite was also very interesting and well set out. Future visits will be part of the itinerary!



Kisolanza

Just half an hour on from Isimila we arrived at Kisolanza farm where you almost feel you could be in the English countryside with the rolling hills and cool evening air – which has a wonderful clarity. After a very civilized afternoon tea of passion fruit cake decorated with edible flowers and tea from a china pot, we took a short walk around the farm. The attractive cottages in which we stayed are found amongst Brachystegia woodland where the Miombo double-collared and variable sunbirds were observed. The evening meal was served in the converted ruins of an old mud building, which was very atmospheric and we were served with excellent home cooked food.

Day 7 – Kisolanza – Mbeya

Breakfast was taken on the restaurant veranda overlooking a beautiful and colourful garden where variable sunbirds were also enjoying their breakfast. Before getting back on the road we visited the farms new flower project. Here they are growing flowers such as thistle and carnation on a small scale for export.

Continuing south-west along the Tazam highway we passed the tea growing region of Mafinga and Makambako, where geographically the Eastern Arc mountains end and the Southern Rift mountains

begin. As a result of the fertile volcanic soils found in this area there is intensive cultivation as well as pine and wattle plantations. Past Makambako we returned into Miombo woodland and got a wonderful view of the Lugala escarpment which reaches 2300m. This makes up part of Kipengere-Mpanga Game Reserve, a critical water catchment area, to the south of the road and stretching out, to what seems like infinity, to the north are the Usangu flats; these flats ultimately leading into Ruaha National Park and the Great Ruaha River.

Mbeya

On reaching Mbeya we had lunch in the old leafy part of town, which is nestled beneath the Mbeya mountain range. Right on the edge of town we visit the Wildlife Conservation Society (WCS) project office where the Southern Highlands Conservation Project (SHCP) is based. Michele Menagon, a well-known herpetologist showed us the only live specimen of rare Barbour's Short-headed Viper as well as the rare Mt. Rungwe Bush Viper. A group of scientists from SHCP were the first to discover the newly described primate Kipunji. Posters found throughout the office showoff their extensive conservation programme, which focuses on protecting the natural habitats and associated biodiversity of the Southern Highlands.

Utengule

Continuing further out of town and up into the hills we arrived at Utengule Lodge set within its own nature reserve and coffee estate. With a panoramic view over the mountains towards Malawi and Zambia, colourful garden and the therapeutic sound of birds singing we felt instantly relaxed. That afternoon we took a walk in the Miombo woodland up behind the lodge which provided us with an even better view of the distant mountains. However, the best birding was to be had within the gardens where common residents include spotted and dusky flycatchers, Jameson's Firefinch, white-browed robin chat, African pied wagtail and variable, olive and scarlet-chested sunbirds. We were not blessed with a spectacular sunset but sundown drinks on the terrace and good food and a visit from a moon moth was a nice way to end the day.

Day 8 – Around Utengule

Walk to Coffee farm

After breakfast on the terrace some just relaxed, whilst others wandered through the woodland down to the Coffee groves and along the river Songwe (slightly spoilt in part by road works) where we saw African black-headed oriole, paradise flycatcher, little swifts and mosque swallows as well as numerous butterflies including *Mylothris agathina*, *Colotis antevippe*, *Junonia Sophia* and *Precis antilope*.

Songwe Bat caves and hot springs



After a leisurely lunch we headed off to the nearby Pango la Popo (bat caves) found beneath an old marble quarry on the edge of the steeply carved Songwe valley. While it was still light we ventured inside the cave which had unnervingly large holes, where locals had been digging for the fertile bat guano. A couple of local children escorted us to the caves and they told us that they quite often eat bats because they are a cheap source of protein! A narrow entrance opened up into an impressive cavern where several species of bats were seen hanging and a

disturbed few flying around.

A few hundred metres further along the valley we found a small hot spring that supported several species of dragonfly including *Palpopleura jucunda* and a locally abundant species of hellebore. Trees included common coral tree *Erythrina lysistemon*, *Commiphora* sp and *Euphorbia candelabrum*. Other sightings included cinnamon-chested rock bunting, tchagra, Amur falcon, Bohm's spinetail and rock hyrax. There was a wonderful sunset, washing the entire valley orange, apart from a small dark corner where a rainbow had appeared. Returning to the bat cave we used an echolocation device to record the

species that were flying out of the cave which were thought to total five, including *Rhinolophus* and *Myotis* spp. Returning to the lodge in the dark we saw hare and a giant pouched rat in the headlights.

Day 9 – Utengule - Kitulo National Park

We made our way towards Kitulo National Park. Leaving the lower plains we climbed steeply up through Chimala Forest Reserve negotiating over 50 hair-pin bends which led us up on to the plateau with wonderful views across the Usangu flats on the way. We stopped for a picnic lunch by the Chimala River where we got our first floral display including several orchids *Holothrix nyasae* and *Disa* sp. along with *Gladiolus dalenii* and *Begonia meyeri-johannis*. On reaching Matamba village on the edge of the park we settled into the friendly Super Eden Hotel and then took the short drive up to Kitulo for a quick taster of what the park had to offer.

Kitulo National Park

The road leading to the park climbs up to the far end of Matamba ridge that forms the boundary of the park. 'Edge of the earth' views were worthy of a photographic stop and then we descended a short way, through fresh smelling pine plantations, into the park. Kitulo National Park was gazetted in 2002 for its floral diversity, most notably orchids, and rare bird species. A short walk from the track we descended into an area of marshland to find the charismatic mountain marsh (or otherwise called buff-shouldered) widowbirds which we, as expected, found displaying with their long ribbon-like tail feathers, on the red-hot pokers (*Kniphophia grantii*) and the tall bright pink orchid *Satyrium neglectum* var. *brevicalcar*. We also saw bright flashes of the malachite sunbird and several birds of prey circling overhead including pallid harrier, martial eagle, augur buzzard and brown snake eagle.

Back in Matamba we were presented with buckets of piping hot water for a very welcome evening wash. Mama Eden cooked us a tasty dinner served in her newly built and smartly decorated (albeit to slightly tacky Swahili taste) restaurant. After a good game of Progressive Rummy and a couple of Kilimanjaro beers we turned in.

Day 10 – Kitulo National Park

Matamba Ridge

As the weather was fine we decided to take a walk up onto Matamba ridge. At the base of the ridge we disturbed common and harlequin quails and heard the characteristic snapping of the wing-snapping cisticola as well as the winding cisticola and range-restricted Kipengere seedeater. Reptiles spotted and held en route included the Ukinga Mountain skink and variable skink. Forming the northern border of the national park the ridge rises to 2895m and although we only reached



around 2700m the thin air was notable. Quartzite outcrops run the length of the ridge giving rise to acidic soils which host a combination of species quite different from the damp grasslands found below. Species observed included *Crassula vaginata*, *Impatiens rosulata*, *Helichrysum tillandsifolium* and the striking pink orchid *Disa welwitschii* that littered the hillside. Other orchid species included *Schizochilus sulphureus* and *Satyrium johnstonii*. Shrubby species dominated the exposed rocky areas including *Erica mannii*, *Erica silvatica*, *Phyllica emiirnensis* and *Protea humifusa*. Butterfly species sighted included *Neocoenyra gregorii* & *Neocoenyra petersi*, the former endemic to the plateau. Tracks and droppings of mountain reedbeek were also seen. Up on the hillside we got a wonderful view stretching out along the Matamba ridge and down into the Numbe valley and the plateau beyond. As the cloud started to come

in and some legs became weary we were forced to retreat therefore sadly missing the beautiful *Morea callista* and *Aloe nuttii* commonly found further along the ridge.

Having descended from the ridge we continued down into Numbe valley which was covered in unmissable orchids including *Habenaria oclusa* and *Habenaria kyimbilae* whose green and white flowers resemble insects; the tall yellow *Satyrium sphaeranthum* and the bright red *Satyrium acutirostrum*. Other commonly occurring distinctive species included *Alepidia peduncularis*, *Helichrysum herbaceum*, *Gladiolus dalenii*, *Clematopsis uhehensis*, *Moraea schimperii* and *Delphinium leroyi*. In damper areas meanwhile, species such as *Geranium incanum*, *Cephalaria pungens* were dominant.

After a cooked lunch served on a bridge, where we saw the delicate orchid *Eulophia clavicornis*, we drove up onto the plateau. We spotted a cluster of the gorgeous canary-yellow *Morea tanzanica* and got out of the car to photograph them. Whilst our heads were in the flowers our Driver 'Bahati', which means lucky in Swahili, casually asks if we have seen the Denham's bustard! We looked up and right in front of us was this wonderful bird that on first glance looked the size of an ostrich. We happily watched as it slowly stalked amongst the flowers. Kitulo is one of the few remaining breeding sites for this bird and it is a rare sight. Continuing on we came across dense clusters of orchids along the road side including the spectacular vermilion red and orange *Disa stolzii*, attractive white *Satyrium longicauda* and delicate *Satyrium johnstonii*. Flocks of yellow-rumped Seedeater were also common flying between scattered trees.



Kitulo farm is found on the eastern border of the park. Here we could either return to Matamba on the good road we came on or take the more exciting route on rough terrain up through the Numbe valley. At this time of year this road is often impassible but with a trusty land rover, an excellent driver and prior knowledge of an old Toyota pick up making it through that morning, we thought we had to give it a go in the spirit of adventure. The road was 'exciting' and one steep section required a few run ups and was compared to going on a ride at Chessington adventures as we bumped and slid our way along. Great fun.

Day 11 – Kitulo National Park

Drive to Livingstone and Numbe Forest

Escorted by a ranger, we made our way to the Livingstone edge of the park. It was a spectacular day and we were treated to breathtaking views over the forested Livingstone Mountains, home of the newly discovered primate *Rungwecebus kipunji*. As we walked down to the forest edge dominant vegetation included various ericaceous species, a tall shrubby *Protea*, the high altitude tree *Hagenia abyssinica* and herbs such as *Geranium arabicum*, *oxalis corniculata* and *Impatiens* sp. Thick bamboo *Sinarundinaria alpina* was found bordering the forest edge. Butterfly species observed on the forest edge included *Cupidopsis cissus* and *Henotesia ubenica*.

After a picnic lunch we drove along a grassy track following a ridge-line which crossed the plateau above the Numbe valley. Along much of this track the grass was lush and fresh as a result of seasonal natural burning due to lightning strikes. Orchid species dominated including *Satyrium sphaeranthum*, *Satyrium acutirostrum* and *Disa stolzii*. The elegant white *Delphinium leroyi* was also



common. Following a trio of Shelley's francolin we continued down into Numbe Forest Reserve along more exciting tracks. Here thick forest was found, swirling in the mist, on steep slopes dominated by easily recognizable species such as *Juniperus* sp., *Bersama abyssinica*, and *Hagenia abyssinica*. As we made our way slowly back to Matamba via the Numbe valley we saw grassland pipit, yellow-throated longclaw, common waxbills, African stonechat, African marsh harrier and the white belly of the augur buzzard which we saw in many a dead tree.

Day 12 - Kitulo NP – Kimani – Utengule

We left the plateau and descended towards Kimani, passing through the south-western edge of the Kipengere-Mpanga Game reserve. The road clinging to the valley edge we slowly descended back into Miombo woodland with extensive views over the back of the Lugala escarpment of the Kipengere range.

Kimani waterfall

For lunch we headed towards Kimani Waterfall found further within the Reserve. Down a lonely valley several streams had to be forded, as we made our way along another exciting road through Miombo woodland, which made for satisfying butterfly spotting including numerous charaxes species. Commonly heard bird calls included that of the ring-necked dove, emerald spotted wood dove and grey-headed bush shrike. The road ended at the edge of the valley where we looked down on a magnificent stepped waterfall, enveloped in lush vegetation. After taking in the view over lunch we took a short walk to the base of the waterfall where we came across a Nile monitor, well-known to take shelter under rock ledges surrounding the falls, and mud-puddling butterflies including *Graphium policenes*, *Charaxes achaemenes* and *Charaxes guderiana*.

We arrived back at Utengule in time for a bit of casual bird watching and the opportunity for a swim in the pool, although shamefully no-one did. Bird sightings included attractive species such as yellow white-eye, miombo tit, green-winged pytilia and yellow-breasted apalis.

Day 13 – Mporoto Crater Lake/Daraja ya Mungu

At a civilised hour we headed off towards Malawi although Malawi was not our destination. Half of the group bound for the Mporoto crater lake and the other for Daraja la Mungu. It should be noted here that slight changes in the itinerary whilst in the Mbeya region were necessary due to the temporary closure of Mt. Rungwe, due to a forest fire. Also, alternative options were made available for those who did not fancy walking too far.



Mporoto Crater is flanked by highland forest, forming a Forest Reserve, and at this time of year is a good place to see flowering plants. Along the trail we saw dozens of the large and very handsome purple orchid *Calanthe sylvatica*, as well as *Streptocarpus* sp and bright orange *Crocoshmia aurea* which were found along the craters ridge. From here the beautiful lake was clearly visible within the steep caldera walls. We lunched on the ridge

and then descended to meet the others at the forest edge. At the foot of the mountain we stopped for a cup of tea at a temporary research camp, set up by Michele Menagon, who we had met previously at the WCS office in Mbeya. He showed us live specimens of rocket frog *Ptychadena* sp. and vermiculated

tree frog *Leptopelis vermiculatus*. The track leading out of the forest on disturbed ground was laced with numerous striking flame lilies *Gloriosa superba*.

Having left the Mporoto group at the foot of the mountain, the others had continued a short distance south to 'Daraja ya Mungu' meaning 'Bridge of God' which is a natural bridge crossing the Kiriwa River. The bridge is thought to have been formed around 180 million years ago by water flowing through cooling lava that spewed out from the nearby Rungwe volcano. It proved to be a popular alternative to the Mporoto trip.

That evening back at Utengule we enjoyed pre-dinner bottle of wine whilst watching the sunset over the distant mountains from the balcony of one of the rooms.

Day 14 – Train departs to Dar-es-Salaam

The morning was spent relaxing at Utengule before heading down to the TAZARA train Station after lunch. Our Land Rover had behaved perfectly for the whole trip but decided to break down, luckily only 50 m from the Station and right next to a flap-necked chameleon wondering along the side of the road. Leaving poor Bahati to fix the car before his long drive back to Dar-es-Salaam, we showed our tickets and crossed the platform (through another train) to wait for our train coming from Lusaka in Zambia, which was apparently on time. Amazingly it was on time and we easily found our cabins, towards the end of the train next to the buffet car, just before it started to rain.

Although this journey is billed as one of the best railway journeys of the world, first class on an African train is not what you would expect from experiencing first class in other parts of the world. However, the carriages were clean and not over crowded. The buffet car provided a nice change from the 4-berth cabins providing good views as we chugged and swayed past the Kipengere mountains towards the Makambako plateau. Not being the quietest of trains, earplugs were a good idea if you wanted a good nights sleep. The frequent jolts, as the train entered remote stations, did not help matters but most of us managed to sleep ok.

Day 15 – Train journey through Selous - Dar-es-Salaam

As the day broke we were presented with the lush Miombo woodland of the southern part of Mikumi National Park, and the peaks of the southern Uluguru Mountains which led into the more open, but still lush woodland and savannah of the Selous Game Reserve. Although the train was traveling at a fair speed we still managed to see hippos wallowing in pools, topi, impala, wildebeest and zebra grazing, elephant tracks in dried up river beds as well as majestic fish eagles and open-billed storks. Finally the bush gave way to cultivated land and we knew we were re-entering the populated coastal area again. One last gem was the view of Kazimzumbwi Forest Reserve, one of the few remaining remnant patches of coastal forest found in East Africa.

We returned to the tranquility of Mediterraneo, where we rested up and took a walk along the beach. Our final meal of the trip, was taken overlooking the lit-up beach where ghost crabs were going about their business.

Day 16 – Depart for London Heathrow

We departed the warmth of Dar-es-Salaam at 9am arriving in London Heathrow Terminal 5 on time before 5pm.

SYSTEMATIC LIST NUMBER 1 MAMMALS

Primates

- Angolan black and white colobus - *Colobus angolensis palliatus* (Udzungwa NP)
- Blue monkey - *Cercopithecus mitis cf moloneyi* (Udzungwa NP)
- Sanje mangabey - *Cercocebus sanjei* (Udzungwa NP)
- Udzungwa red colobus - *Procolobus gordonorum* (Udzungwa NP)
- Vervet monkey - *Chlorocebus aethiops* (Isimila)
- Yellow Baboon - *Papio cynocephalus* (Udzungwa, Mikumi NP, Boabab Valley, Kipengere-Mpanga GR)

Ungulates

- African buffalo - *Syncerus caffer* (Mikumi NP)
- Bush duiker - *Sylvicapra grimmia* (Mikumi NP)
- Bushbuck - *Tragelaphus scriptus* (Mikumi NP)
- Masai giraffe - *Giraffa camelopardalis tippelskirchi* (Udzungwa NP)
- Hippopotamus - *Hippopotamus amphibius* (Mikumi NP, Selous GR)
- Impala - *Aepyceros melampus* (Mikumi NP, Selous GR)
- Mountain reedbuck - *Redunca fulvorufula* (Kitulo NP, signs)
- Topi - *Danaliscus lunatus* (Selous GR)
- Warthog - *Phacochoerus africanus* (Mikumi NP)
- Wilderbeest - *Connochaetes taurinus* (Mikumi NP, Selous GR)
- Zebra - *Equus quagga* (Mikumi NP, Selous GR)

Bats

- Hairy bat - *Myotis* sp (Songwe bat cave, ID by ecolocation)
- Horseshoe bat sp1 - *Rhinolophus* sp. (Songwe bat cave, ID by ecolocation)
- Horseshoe bat sp2 - *Rhinolophus* sp. (Songwe bat cave, ID by ecolocation)
- Pipistrelle - *Pipistrellus* sp (Songwe bat cave, ID by ecolocation)

Other

- African elephant - *Loxodonta africana* (Mikumi NP, Selous GR (Prints in river beds)
- Bush hyrax - *Heterohyrax brucei* (Songwe bat caves)
- Giant pouched rat - *Cricetomys gambianus* (Songwe bat cave)
- Hare - *Lepus* sp. (Songwe bat caves)
- Leopard - *Panthera pardus* (Hondo Hondo, Udzungwa NP, heard in the night behind tents)
- Silky blesmol - *Heliophobius argenteocinereus* (Kitulo NP, signs)

SYSTEMATIC LIST NUMBER 2 BIRDS

Cormorants, Herons, Egrets, Storks & Ibises

- African Open-billed stork - *Anastomus lamelligerus* (Udzungwa NP, edge; Selous NP)
- Black-headed heron - *Ardea melanocephala* (Mikumi NP)
- Cattle egret - *Bubulcus ibis* (Widespread)
- Glossy ibis - *Plegadis falcinellus* (Dar es Salaam)
- Grey heron - *Ardea cinerea* (Dar es Salaam)
- Intermediate egret - *Egretta intermedia* (Dar es Salaam, Mikumi NP)
- Little egret - *Egretta garzetta* (Dar es Salaam)
- Long-tailed cormorant - *Phalacrocorax africanus* (Dar es Salaam)
- Sacred ibis - *Threskiornis aethiopicus* (Dar es Salaam)
- Great white egret - *Casmerodius albus* (Mikumi NP)

Ducks

- White-faced whistling-duck - *Dendrocygna viduata* (Mikumi NP)

Eagles, Buzzards, Vultures etc

- African marsh-harrier - *Circus ranivorus* (Kitulo NP)
- Amur falcon - *Falco amurensis* (Songwe bat caves)
- Augur buzzard - *Buteo augur* (Kitulo NP)
- Bateleur - *Terathopius ecaudatus* (Mikumi NP)
- Black kite - *Milvus migrans* (Mikumi NP, Morogoro)
- Brown snake-eagle - *Circaetus cinereus* (Utengule, Kitulo NP)
- Eurasian buzzard - *Buteo buteo* (Kitulo NP)
- Fish eagle - *Haliaeetus vocifer* (Selous GR)
- Little sparrowhawk - *Accipiter minullus* (Mporoto FR)
- Martial eagle - *Polemaetus bellicosus* (Kitulo NP)
- Pallid harrier - *Circus macrourus* (Kitulo NP)
- Palm-nut vulture - *Gypohierax angolensis* (Udzungwa NP, edge)

Quails, Franklin setc

- Common quail - *Coturnix coturnix* (Kitulo NP)
- Harlequin quail - *Coturnix delegorguei* (Kitulo NP)
- Helmeted guineafowl - *Numida meleagris* (Mikumi NP)
- Shelley's francolin - *Francolinus shelleyi* (Kitulo NP)

Bustards

- Black-bellied bustard - *Lissotis melanogaster* (Mikumi NP)
- Denham's bustard - *Neotis denhami* (Kitulo NP)

Pratincoles, Thick-knees, Plovers & Sandpipers

- Blacksmith plover - *Vanellus armatus* (Mikumi NP)
- Common sandpiper - *Actitis hypoleucos* (Mikumi NP)
- Collared pratincole - *Glareola pratincola* (Mikumi NP)
- Water thick-knee - *Burhinus vermiculatus* (Mikumi NP)

Gulls & terns

- Sooty gull - *Larus hemprichii* (Dar-es-Salaam)
- Tern - *Sterna* sp. (Dar-es-Salaam)

Doves and Pigeons

- Emerald-spotted wood-Dove - *Turtur chalcospilos* (Kipengere-Mpanga GR)

Laughing dove - *Streptopelia senegalensis* (Songwe bat cave)
Ring-necked dove - *Streptopelia capicola* (Utengule, Kipengere-Mapanga GR)

Swifts & Spinetails

African palm-swift - *Cypsiurus parvus* (Utengule)
Alpine swift - *Tachymarptis melba* (Utengule)
Bohm's spinetail - *Neafrapus boehmi* (Songwe bat caves)
Little swift - *Apus affinis* (Utengule)

Mousebirds

Speckled mousebird - *Colius striatus* (Udzungwa NP, edge; Utengule)

Kingfishers

Pied kingfisher - *Ceryle rudis* (Udzungwa NP, edge)

Rollers

Lilac-breasted roller - *Coracias caudata* (Mikumi NP)

Hornbills

African grey hornbill - *Tockus nasutus* (Mikumi NP)
Crowned hornbill - *Tockus alboterminatus* (Udzungwa NP)
Trumpeter hornbill - *Ceratogymna bucinator* (Udzungwa NP)

Swallows

Barn (European) swallow - *Hirundo rustica* (Mikumi NP, Matamba, Kitulo NP)
Mosque swallow - *Cecropis senegalensis* (Utengule)

Wagtails, Longclaws & Pipits

African Pied wagtail - *Motacilla aguimp* (Utengule, Udzungwa NP)
Grassland pipit - *Anthus cinnamomeus* (Kitulo NP)
Yellow-throated longclaw - *Macronyx croceus* (Kitulo NP)

Bulbuls

Black-capped bulbul - *Pycnonotus melanicterus* (Utengule)
Common bulbul - *Pycnonotus barbatus* (Widespread)

Chats, Wheatears & Robins

African stonechat - *Saxicola torquata* (Kitulo NP)
Capped wheatear - *Oenanthe pileata* (Mikumi NP)
Northern wheatear - *Oenanthe oenanthe* (Mikumi NP)
White-browed robin-chat - *Cossypha heuglini* (Utengule, Kitulo NP)

Cisticolas, Warblers & Apalises

Sedge warbler - *Acrocephalus schoenobaenus* (Kitulo NP)
Winding cisticola - *Cisticola galactotes* (Kitulo NP)
Wing-snapping cisticola - *Cisticola ayresii* (Kitulo NP)
Yellow-breasted apalis - *Apalis flavida* (Utengule)

Flycatchers

African dusky flycatcher - *Muscicapa adusta* (Utengule)
Paradise flycatcher (Utengule, Songwe bat caves)
Spotted flycatcher - *Muscicapa striata* (Utengule)

Tits and White-eyes

African yellow white-eye - *Zosterops senegalensis* (Utengule)
Miombo tit - *Melaniparus griseiventris* (Utengule)

Sunbirds

Malachite sunbird - *Nectarinia famosa* (Kitulo NP)
Miombo double-collared sunbird - *Cinnyris manoensis* (Kisolanza)
Olive sunbird - *Cyanomitra olivacea* (Bagamoyo Is. Individual had distinctive red spot at edge of beak which seems atypical of this species; Utengule)
Scarlet-chested sunbird - *Chalcomitra senegalensis* (Utengule)
Variable sunbird - *Cinnyris venustus* (Kisolanza, Utengule)

Shrikes, Boubous, Puffbacks, Tchagras & Drongos

Black-backed puffback - *Dryoscopus cubla* (Udzungwa NP, edge)
Fork-tailed drongo - *Dicrurus adsimilis* (Mikumi NP, Kipengere-Mpanga GR)
Long-tailed fiscal shrike - *Lanius cabanisi* (Mikumi NP)
Tchagra - *Tchagra* sp (Songwe bat caves)
Tropical boubou - *Laniarius aethiopicus* (Udzungwa NP, Utengule)

Crows & Ravens

Somali crow - *Corvus edithae* (Dar-es-Salaam)
Pied crow - *Corvus albus* (Widespread, roadside)
White-napped raven - *Corvus albicollis* (Southern Highlands)

Orioles & Oxpeckers

African black-headed oriole - *Oriolus larvatus* (Utengule)
African golden oriole - *Oriolus auratus* (Dar-es-Salaam)
Red-billed oxpecker - *Buphagus erythrorhynchus* (Mikumi NP)

Starlings

Red-winged starling - *Onychognathus morio* (Udzungwa NP, edge; Mporoto FR)
Splendid glossy-starling - *Lamprotornis splendidus* (Mikumi NP)
Superb starling - *Lamprotornis superbus* (Mikumi NP)
Wattled starling - *Creatophora cinerea* (Mikumi NP)

Sparrows and Weavers

Black-headed weaver - *Ploceus cucullatus* (Boabab Valley, Kipengere-Mpanga GR)
Golden palm weaver - *Ploceus bojeri* (Widespread, roadside)
Grey-headed sparrow - *Passer griseus* (Dar-es-Salaam, Utengule)
White browed sparrow-weaver - *Plocepasser mahali* (Mikumi NP)

Widowbirds and Bishops

Buff-shouldered (montane marsh) widowbird - *Euplectes psammocromius* (Kitulo NP)
Red bishop - *Euplectes orix* (Mikumi NP; Udzungwa NP, edge)

Finches

Bronze mannikin - *Spermestes cucullatus* (Udzungwa NP (edge), Utengule)
Common waxbill - *Estrilda astrild* (Utengule, Kitulo NP)
Green-winged pytilia - *Pytilia melba* (Utengule)
Jameson's firefinch - *Lagonosticta rhodopareia* (Utengule)
Red-cheeked cordonbleu - *Uraeginthus bengalus* (Mikumi NP)

Whydahs

Pin-tailed whydah - *Vidua macroura* (Mikumi NP, Utengule, Kimani Waterfall)
Steel-blue whydah - *Vidua hypocherina* (Songwe bat cave)

Seed eaters and Buntings

African golden bunting - *Emberiza flaviventris* K(isolanza)

Cinnamon-chested rock bunting - *Emberiza tahapisi* (Songwe bat caves)

Kipengere seedeater - *Serinus melanochrous* (Kitulo NP)

Yellow-rumped seedeater - *Serinus striolatus* (Kitulo NP)

SYSTEMATIC LIST NUMBER 3 REPTILES

Barbour's short-headed viper - *Adenorhinos barbouri* (Live specimen at WCS office, Mbeya)
Coral rag skink - *Cryptoblepharus boutonii* (Bongoyo Is.)
Flap-necked chameleon - *Chamaeleo dilepis* (TAZARA, Mbeya)
Mt. Rungwe bush viper - *Atheris rungweensis* (Live specimen at WCS office, Mbeya)
Nile monitor lizard - *Varanus niloticus* (Bongoyo Is., Kimani Waterfall)
Red-headed agama - *Agama agama* (Boabab Valley, Isamila)
Skaapsteker - *Psammophylax* sp. (Kitulo NP)
Striped skink - *Mabuya striata* (Mikumi NP, Utengule, Kitulo NP)
Ukinga mountain skink - *Mabuya brauni* (Kitulo NP)
Yellow-headed dwarf gecko - *Lygodactylus luteopicturatus* (Mediterraneo, Dar-es-Salaam)

SYSTEMATIC LIST NUMBER 4 AMPHIBIANS

Common squeaker - *Arthroleptis stenodactylus* (Utengule)
Guttural toad - *Bufo gutturalis* (Utengule)
Rocket frog - *Ptychadena* sp. (Mporoto FR, caught by researcher M.Menagon)
Vermiculated tree frog - *Leptopelis vermiculatus* (Mporoto FR, caught by researcher M.Menagon)

SYSTEMATIC LIST NUMBER 5 BUTTERFLIES

PAPILIONIDAE

- Papilio echerioides - White banded swallowtail (Mporoto)
- Papilio nireus - Narrow green banded swallowtail (approach to Sanje Falls, Udzungwa)
- Papilio demodocus – Citrus swallowtail (Common)
- Papilio desmondi usambarensis (Forested areas, Prince Bernard's Waterfall, Udzungwa NP)
- Graphium polices - Small striped swordtail (common – Hondo Hondo, Udzungwa) and Kimani Waterfall)
- Salamis temora virescens (Forest at low elevation, Prince Bernard's Waterfall, Udzungwa NP).

PIERIDAE

- Catopsilia florella – African migrant (widespread and very common)
- Belenois creona - African caper white (widespread and very common)
- Belenois aurota - Brown-veined white (widespread and very common)
- Belenois thysa (Widespread and very common)
- Colias electo – Clouded yellow (common in all high areas)
- Pinacopteryx eriphia - Zebra white (Kimani Waterfall)
- Eurema hecabe - Common grass yellow (Common and widespread)
- Mylothris agathina – Common dotted border (Utengule and Kimani Falls)
- Mylothris sp. (Utengule)
- Nepheronia thalassina – Cambridge vagrant (Udzungwa and elsewhere).
- Colotis amata - Small salmon arab (Several places including Bongoyo Island).
- Colotis antevippe – Red tip (Utengule, on walk to Coffee Farm).
- Colotis euipe - Smoky orange tip (several places including Bongoyo Island)
- Colotis evagore - Small orange tip (Mikumi NP).

NYMPHALIDAE

Danaidae

- Amauris echeria – Chief (edge of Mporotp FR).
- Amauris ochlea – Novice (viewing point for Sanje Falls, Udzungwa NP)
- Danaus chrysippus – Common tiger/African monarch (common – seen mudpuddling and on animal dung)

Satyridae

- Bicyclus safitza safitza – Common bush brown (seen in most wooded/forested areas)
- Henotesia ubenica (Kitulo Plateau)
- Neocoenrya gregorii (Kitulo Plateau)
- Neocoenrya petersi (Endemic - Kitulo Plateau)

Charaxinae

- Charaxes achaemenes – Bushveld charaxes (mudpuddling at Kimani Falls)
- Charaxes bohemani (Brachistegia Woodland, Kipengere-Mapanga GR)
- Charaxes guderiana (mudpuddling at Kimani Falls and on dung on edge of Mpanga Kipengere GR)
- Charaxes lasti (Kimani Waterfall)
- Charaxes prettjohn (Udzungwa NP)
- Charaxes jasius (Mudpuddling at Kimani Falls)
- Charaxes varanes (Bagamoyo Island, may belong to Pemba Is. Distinct race which is un-named in Keilland)

Heliconiinae

Issoria smaragdifer – “Queen of Spain” type Fritillary (ridge top, Kitulo plateau)

Phalanta phalantha – Common leopard fritillary (widespread with at least 6 individuals seen at entrance to Mikumi NP)

Limenitinae

Aterica galena – Forest glade nymph (widespread, Udzungwa NP)

Bebearia cocalia (on approach on Sanje Falls, Udzungwa NP)

Euphedra nephron - Gold-banded Forester (Udzungwa NP)

Euphedra sp (SanjeFalls)

Hamanumida daedalus – Guineafowl/Kanga (Swahili) (widespread, Mikumi NP)

Pseudacraea lucretia - False chief (viewing point, Sanje Falls)

Other Nymphalid

Byblia ilithya – Spotted joker (Mikumi NP)

Catuna sikorana (lower part of walk to Sanje Falls)

Junonia hierta – Yellow pansy (widespread, Mikumi NP)

Junonia natalica – Natal pansy (widespread, Mikumi NP)

Junonia oenone – Blue pansy (widespread, Mikumi NP)

Junonia sophia - Little commodore (Utengule)

Neptis sp. - Sailor (Udzungwa NP, Mporoto FR)

Precis antilope - Darker commodore (Utengule)

Precis octavia - Gaudy commodore/Persain carpet (Kitulo Plateau – wet season form)

Acraeidae

Acraea natalica (Hondo Hondo and Sanje Falls, Udzungwa)

Acraea caliba or sotikensis (seen on the dung at edge of Kipengere-Mpanga GR)

Acraea caldarena - Black tip acraea (Mikumi NP)

LYCAENIDAE

Lycaeniinae

Lycaena phlaes abbottii – Small copper (Kitulo Plateau, Livingstone Mts side).

Polyommatainae

Anthene sp. (Udzungwa NP)

Azanus sp. (Kisolanza Farm)

Cupidopsis cissus (Kitulo NP)

Eicochrysops sp.

Harpendyreus junco (Kitulo NP, Livingstone side)

Harpendyreus aequatorialis (Kitulo NP, Livingstone side)

Tuxentius calica (mudpuddling at Kimani Falls)

Uranotauma delatorum (Edge of Mporoto FR)

Zizeeria knysna – Grass blue (Hondo Hondo, Udzungwa)

Theclinae

Hypolycaena pachalica - Coast hairstreak (common in Baobab Valley)

Hypolycaena philippus - Purple-brown hairstreak (Kisolanza Farm)

HESPERIIDAE

Coeliadinae

Coeliades anchises - One pip policeman (Kimani Falls)

Coeliades forestan - Striped policeman (widespread –Hondo Hondo, Udzungwa; Kimani Falls & Utengule, on Lantana bushes)

Hesperiinae

Ampittia capenas - African bush hopper (Hondo Hondo, Udzungwa)

Andronymus caesar - White dart (Hondo Hondo, Udzungwa)

Andronymus neander - Common dart (Utengule and Hondo Hondo, where thousands were seen migrating, resembling a swarm of bees)

Heteropterinae

Metisella orientalis sp. (Kitulo Plateau (Livingstone Mts side)

Platylesches picanini - Common hopper (Utengule, on Lantana)

Teniorhinus harona (Kimani Falls)

Pyrginae

Spialia dromus - Large grizzled skipper (Hondo Hondo, Udzungwa)

Tagiades flesus - Clouded flat (Hondo Hondo, Udzungwa and Mpototo Crater Lake)

DRAGONFLIES

Palpopleura jucunda (Songwe hot springs)

SYSTEMATIC LIST NUMBER 6 TREES

Acacia drepanolobium – Whistling Acacia (Isimila – displays symbiosis with ants)
Acacia spp (Widespread)
Adonsonia digitata - Boabab (Widespread)
Azelia quanzensis - Pod Mahogany (Widespread in Woodland)
Albizia gummifera (J.F. Gmel.) C.A. Sm. (Udzungwa NP)
Anthocleista grandiflora Gilg – Cabbage Tree (Udzungwa NP)
Antiaris toxicaria Lesch. (Udzungwa NP)
Bombax rhodognaphalon K. Schum. (Udzungwa NP)
Brachystegia boehmii – Prince of Wales Feathers (Widespread in Woodland)
Brachystegia spiciformis (Widespread in Woodland)
Cassia abbreviata Oliv. subsp. *beareana* (Holmes) Brenan (Widespread)
Combretum spp. (Widespread)
Commiphora sp. (Bongoyo Is.)
Commiphora sp. (Songwe bat cave)
Dalbergia melanoxylon Guill. & Perr. – African Blackwood (Mikumi NP)
Erythrina lysistemon - Common Coral Tree (Songwe bat cave & hot springs)
Erythrophleum suaveolens (Guill. & Perr.) Brenan (Udzungwa NP)
Euphorbia candelabrum (Widespread)
Euphorbia tirucalli (Bongoyo Is.)
Ficus sp. – Fig (Widespread)
Funtumia africana (Benth.) Stapf (Udzungwa NP)
Hagenia abyssinica (Brucer) J.F. Gmel (Kitulo NP)
Kigelia africana - Sausage Tree (Widespread)
Lettowianthus stellatus Diels (Udzungwa NP - fruits are Mangabey food)
Macaranga capensis (Baill.) Sim (Udzungwa NP)
Milicia excelsa (Welw.) C.C. Berg (Udzungwa NP)
Parinari excelsa Sabine (Udzungwa NP - fruits are Mangabey food)
Parkia filicoidea Welw. ex Oliv. (Udzungwa NP)
Pterocarpus angolensis DC (Widespread in Woodland)
Sclerocarya birrea – Marula (Mikumi NP)
Sorindeia madagascariensis Thouars ex DC. (Udzungwa NP – fruits are Mangabey food)
Sterculia appendiculata K. Schum. (Udzungwa NP – elegant pale & soft bole)
Strychnos madagascariensis Poir - Black Monkey Orange (Widespread in Woodland)
Tabernaemontana elegans Stapf (Udzungwa NP)
Vitex mossambicensis Gurke (Udzungwa NP)
Vitex sp. (Bongoyo Is.)

SYSTEMATIC LIST NUMBER 7 FLOWERS

Monocots

Acanthaceae

Justica sp. (Udzungwa NP)

Thunbergia alata (Widespread)

Aloaceae - ALOE FAMILY

Aloe sp. Widespread

Anthericaceae – SPIDER-LILY FAMILY

Chlorophytum affine Baker var. *affine* (Kitulo NP)

Asphodelaceae – ASPHODEL FAMILY

Bulbine abyssinica A. Rich. (Kitulo NP)

Kniphofia grantii Bak. (Kitulo NP)

Kniphofia thomsonii (Kitulo NP)

Colchicaceae – COLCHICUM FAMILY

Gloriosa superba L. (Mporoto FR, Isimila)

Cyperaceae – SEDGE FAMILY

Ascolepis capensis (Kunth.) Ridl. (Kitulo NP)

Gesneriaceae

Streptocarpus sp. (Mporoto FR)

Hyacinthaceae – HYACINTH FAMILY

Albuca abyssinica Jacq (Kitulo NP)

Iridaceae - IRIS FAMILY

Crocasmia aurea. (Mporoto FR)

Dierama pendulum (L.f.) Bak (Kitulo NP)

Gladiolus dalenii Van Geel subsp. *dalenii* Van Geel (Kitulo NP)

Moraea schimperi (Hochst.) Pic.-Serm. (Kitulo NP)

Moraea tanzanica Goldblatt (Kitulo NP)

Orchidaceae - ORCHID FAMILY

Calanthe sylvatica (Thou.) Lindl. (Mporoto FR)

Disa stolzii Schltr. (syn. *D. erubescens*) Rendle (Kitulo NP)

Disa welwitschii Rchb. f. vel sp. aff. (Kitulo NP)

Eulophia clavicornis Lindl. var. *nutans* (Sond.) A.V. Hall (Kitulo NP)

Habenaria kyimbilae Schltr. (Kitulo NP)

Habenaria oclusa Summerh. (Kitulo NP)

Habenaria xanthochlora Schltr. (Kitulo NP)

Holothrix nyasae Rolfe (Chimala River, Kitulo NP)
Satyrium acutirostrum Summerh. (Kitulo NP)
Satyrium johnstonii Rolfe. (Kitulo NP)
Satyrium longicauda Lindl. (Kitulo NP)
Satyrium neglectum Schltr. var. brevicar Summerh. (Kitulo NP)
Satyrium sphaeranthum Schltr. (Kitulo NP)
Schizochilus sulphureus Schltr. (Kitulo NP)

Poaceae – TRUE GRASS FAMILY

Sinarundinaria alpina – African alpine bamboo (Kitulo, Livingstone; Mporoto FR)

Dicots

Apiaceae (Umbelliferae) - CARROT FAMILY

Alepidia peduncularis A. Rich. (Kitulo NP)
Pimpinella caffra (Eckl. & Zeyh.) D.Dietr.subsp. conopodioides C.C.Towns. (Kitulo NP)

Asteraceae - DAISY FAMILY

Aspilla sp. (Widespread)
Berkheya echinacea (Harv.) O.Hoffm. ex Burt-Davy subsp. polyacantha (Baker) Roessler (Kitulo NP)
Cirsium buchwaldii O. Hoffm. (Kitulo NP)
Emilia tenera (O. Hoffm.) C. Jeffrey (Kitulo NP)
Emilia javanica (Disturbed ground)
Helichrysum forskahlii (J.F. Gmel.) Hilliard & B.L. Burt var. forskahlii (Kitulo NP)
Helichrysum herbaceum (Andrews) Sweet (Kitulo NP)
Helichrysum nitens Oliv. & Hiern (Kitulo NP)
Helichrysum tillandsifolium O. Hoffm. (Kitulo NP)
Inula stolzii Mattf. (Kitulo NP)
Senecio purpureus L. (Kitulo NP)

Balsaminaceae - TOUCH-ME-NOT FAMILY

Impatiens gomphophylla Bak. f. (Kitulo NP)
Impatiens rosulata Grey-Wilson. (Kitulo NP)
Impatiens spp. (Udzungwa NP)

Begoniaceae – BEGONIA FAMILY

Begonia meyeri-johannis Engl. (Kitulo & Udzungwa NP)

Boraginaceae – FORGET-ME-NOT FAMILY

Cynoglossum amplifolium A. DC. (Kitulo NP)
Lobelia mildbraedii Engl. (Kitulo NP)

Campanulaceae – BELLFLOWER FAMILY

Wahlenbergia abyssinica (A. Rich.) Thulin subsp. abyssinica (A. Rich.) Thulin (Kitulo NP)
Wahlenbergia capillacea (L.f.) A.DC. subsp. tenuior (Engl.) Thulin (Kitulo NP)

Commelinaceae – SPIDERWORT FAMILY

- Commelina africana* L. (Kitulo NP)
- Commelina elgonensis* Bullock (Kitulo NP)
- Commelina kituloensis* Faden (Kitulo NP)
- Commelina latifolia* (Udzungwa NP)
- Cyanotis speciosa* (L.f.) Hassk. (Kitulo NP)

Crassulaceae – STONECROP FAMILY

- Crassula alba* Forssk Engl. (Isimila, Kitulo NP)
- Crassula vaginata* Eckl. & Zeyh. (Kitulo NP)

Dipsacaceae - SCABIOUS FAMILY

- Cephalaria goetzei* Engl. (Kitulo NP)
- Cephalaria pungens* Szabó (Kitulo NP)

Ericaceae - HEATH FAMILY

- Erica kingaensis* Engl. subsp. *kingaensis* Engl. (Kitulo NP)
- Erica silvatica* (Engl.) Beentje (syn. *Blaeria breviflora* Engl.) (Kitulo NP)
- Erica whyteana* Britten (Kitulo NP)

Geraniaceae – GERANIUM FAMILY

- Geranium arabicum* Forssk. subsp. *arabicum* Forssk. (Kitulo NP)
- Geranium incanum* Burm.f. subsp. *incanum* Burm.f. (Kitulo NP)

Gunneraceae – GUNNERA FAMILY

- Gunnera perpensa* L. (Kitulo NP)

Lamiaceae – DEAD-NETTLE/MINT FAMILY

- Plectranthus schizophyllus* Baker (Kitulo NP)

Leguminosae - PEA FAMILY

Subfamily Papilionaceae

- Adenocarpus mannii* (Hook.f.) Hook.f. (Kitulo NP)
- Aeschynomene abyssinica* (A.Rich.) Vatke (Kitulo NP)
- Crotalaria* sp. (Widespread)
- Trifolium simense* Fresen. (Kitulo NP)
- Trifolium wenzelianum* Harms var. *stolzii* (Harms) Gillett (Kitulo NP)

Onagraceae – WILLOWHERB FAMILY

- Epilobium salignum* Hausskn. (Kitulo NP)

Oxalidaceae - SORREL FAMILY

- Oxalis obliquifolia* Steud. ex A. Rich. (Kitulo NP)
- Oxalis corniculata* (Kitullo, Livingstone)

Malvaceae - MALLOW FAMILY

Hibiscus vitifolius (Widespread)
Hibiscus sp. (Widespread)

Piperaceae – PEPPER FAMILY
Piper capense L.F. (Udzungwa NP)

Proteaceae - PROTEA FAMILY
Protea humifusa Beard (Kitulo NP)
Protea sp (Kitulo NP)

Ranunculaceae - BUTTERCUP FAMILY
Clematopsis uhehensis (Engl.) Staner & Leonard (Kitulo NP)
Delphinium leroyi Franch. (Kitulo NP)
Helleborus sp. (Songwe hot springs)
Ranunculus volkensis Engl. (Kitulo NP)

Rhamnaceae - BUCKTHORN FAMILY
Phylica emirnensis (Tul.) Pillans (Kitulo NP)

Rubiaceae - COFFEE FAMILY
Galium bussei K. Schum & K. Krause (Kitulo NP)
Pentas purpurea Oliv. (Kitulo NP)
Pentas bussei (Udzungwa NP, Mikumi NP)

Scrophulariaceae - FIGWORT FAMILY
Buchnera cryptocephala (Baker) Philcox (Kitulo NP)
Gerardiina angolensis Engl. (Kitulo NP)
Hebenstretia angolensis Rolfe (Kitulo NP)
Sopubia sp (Kitulo NP)

Turneraceae
Tricliceras sp. (Mikumi NP)

Zingiberaceae - GINGER FAMILY
Siphonochilus sp. (Udzungwa NP)

EXOTICS/INVASIVE SPECIES

Bougainvillea sp (Utengule)
Callistemon rigidus - Bottlebrush tree (Utengule, Isimila)
Ipomoea sp. - Morning Glory (Utengule)
Lantana camara - Curse of India (Utengule)
Nerium oleander – Oleander (Utengule)
Pinus patula (Kitulo NP – spread from nearby plantations)
Pulmeria sp. - Frangipani (Utengule)
Senna didymobotrya (Utengule)
Tectona sp. - Teak (Udzungwa NP – Boundary tree)

Thevetia peruviana (Utengule)

OTHER

Conger Eel - Conger sp. (Bongoyo Is.)

Brittle Star (Bongoyo Is.)

Chiton (Bongoyo Is.)

Ghost Crab - Ocypode sp. (Dar-es-Salaam)

Net Fungus (Udzungwa NP, approach to Sanje waterfall)