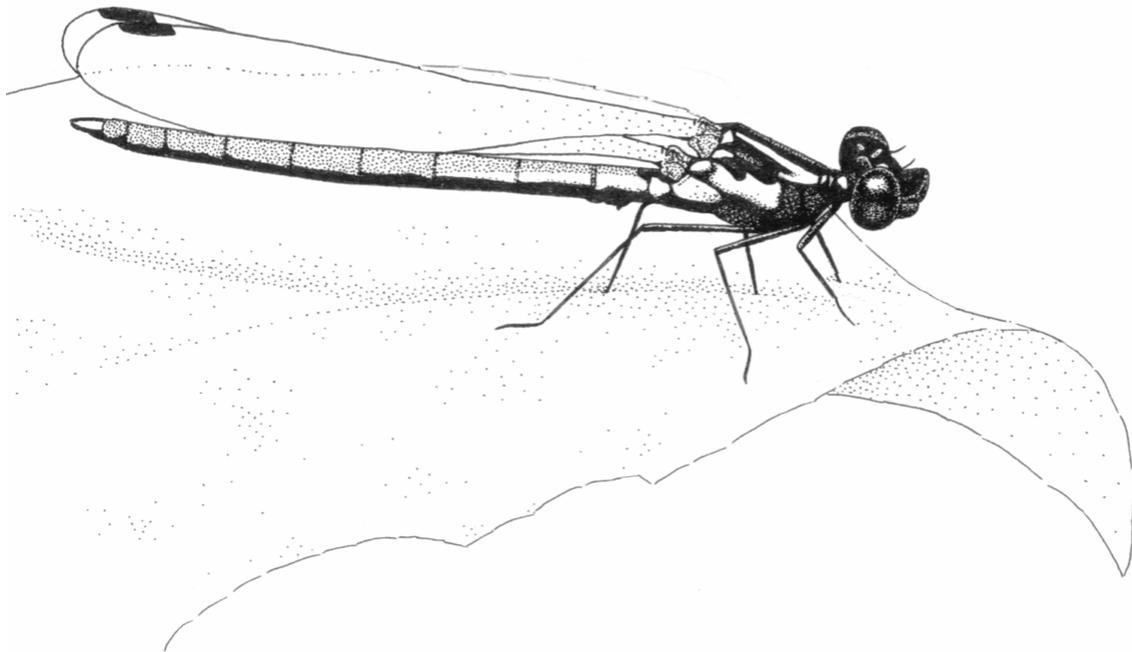


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Front cover: Chlorocypha tenuis, a species of damselfly found in Kakamega Forest. Drawing by K.-D. B. Dijkstra.



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ANNOTATED CHECKLIST OF THE PLANTS OF ARABUKO-SOKOKE FOREST, COASTAL KENYA

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ABSTRACT

A total of 605 vascular plant species, including flowering plants, gymnosperms and ferns, are included in this annotated checklist for Arabuko-Sokoke Forest Reserve in Kilifi County in the Coast Region of Kenya. Out of these 491 are supported by a voucher specimen in the East African herbarium, and 106 are sight records, whereas an additional 8 are cited from the Flora of Tropical East Africa (FTEA). This total represents approximately 9% and 18% respectively of the flora of Kenya and the coastal region (K7 of FTEA). Taxa are distributed in 103 families and 389 genera, the largest families being Leguminosae (Fabaceae) with 62 taxa, Rubiaceae with 53 and Malvaceae with 26. The largest genera include *Grewia*, *Cyperus*, *Ficus* and *Ipomoea*. For each record a name, a cited specimen or sight record, a short general description, and its known phylogeographic distribution is provided. Globally threatened species are also indicated. The conservation importance of Arabuko-Sokoke is discussed.

Keywords: eastern african, swahilian, endemism, intactness, conservation.

INTRODUCTION

Arabuko-Sokoke Forest Reserve is located in Kilifi County in the Coast Region of Kenya, approximately 90 kilometres north of Mombasa, the main port and regional headquarters. The demarcated area of the reserve is 41 764 ha lying within the co-ordinates 3°11'-3° 29'S and 39°48'-40°00'E (figure 1).

The forest stretches approximately 20 km from east to west at its widest point, and is about 35 km from north to south. It is easily accessible, bounded on its eastern side by the main road from Mombasa to Malindi town, and other roads on the northern and southern side. Arabuko-Sokoke is possibly the largest continuous block of indigenous forest remaining on the Eastern African coast (Burgess & Muir, 1994). The Reserve extends to the Indian Ocean sea-shore at Mida Creek, thus presenting a wide range of habitats from terrestrial to inter-tidal. It is regarded as the second most important forest site for bird conservation on mainland Africa (Collar & Stuart, 1988).

Geology and topography

Arabuko-Sokoke is located within two of the four main physiographic zones of the Coast Region as described by the Geological Survey of Kenya (Thompson, 1955; Caswell, 1956) which form parallel bands to the shoreline. From Mida Creek up to the 30 meter contour the forest lies on the 'Coastal Plain', consisting of flat bedded coral reefs, lagoonal deposits of coral breccia and calcareous beach sands of Pleistocene origin. Alluvial and windblown deposits from higher elevations are also found in this zone which is characterized by light coloured soils.

From the plain the forest rises to a ridge with an elevation of approximately 160 m corresponding to the 'Foot Plateau', a seaward sloping peneplain (Moomaw, 1960). In Arabuko-Sokoke this zone is composed of a low ridge of red Magarini sands deposited in the Pliocene period, overlying Jurassic marine shales, mudstones and limestone. In places large and visually striking erosional scarps occur on this formation known locally as 'Nyari' (Robertson & Luke, 1993). About eight kilometres to the west of Arabuko-Sokoke rises Mwangia Hill (520 m), part of the 'Coastal Range' system consisting of Mazeras sandstone, with a covering of red soil on its slopes (Thompson, 1955).

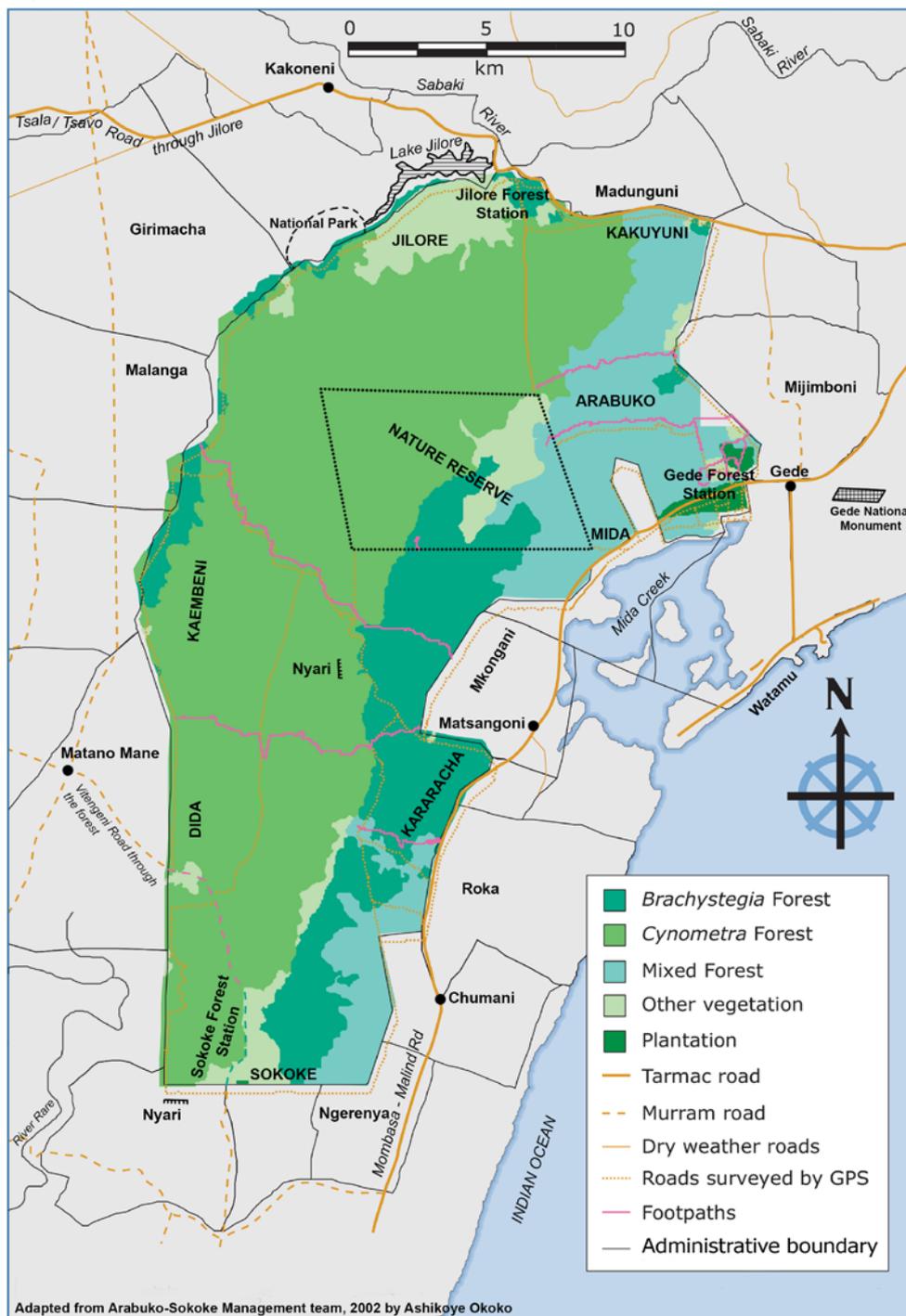


Figure 1. Map of Arabuko Sokoke Forest and environs.

Arabuko-Sokoke notably contains no significant rivers or streams, possibly due to its relatively flat topography. However, it is bounded in the north by the Sabaki River basin, and in the southwest to some extent by River Rare. A number of small mostly seasonal pools occur along the base of the red sand ridge described above, which appear to be served by run-off or underground flows from that formation. The pools occur in grassy glades that may have been perpetuated by regular burning for hunting purposes (Robertson & Luke, 1993). Extreme seasonal flooding events, such as those attributed to the 'El Niño' weather phenomenon in the last few decades, could also have prevented establishment of large trees in these clearings. Just outside the reserve boundary in the northwest is a larger more permanent swamp known as 'Lake' Jilore occurring in a local depression.

Legal status and management

Although 1932 is the date most often cited in the literature, the first formal declaration of Arabuko-Sokoke as a Forest Area with a demarcated boundary was actually in 1914 through Proclamation No.4 of that year. According to this recently traced Proclamation, made under the Forest Ordinance, its area is indicated as 132 sq. miles or 34 180 ha. The better known 1932 declaration added new areas and made adjustments to the boundary which now enclosed 39 089 ha. Kararacha block measuring 2675 ha was added on its eastern side in 1968 bringing the total area to 41 764 ha which it remains to date. A Nature Reserve was established within Arabuko-Sokoke in 1977 and expanded in 1979 to its present area of 4334 ha. Under the Forest Act no exploitation of any kind is permitted in a Nature Reserve, though it appears that this was never strictly adhered to here and the site cannot be regarded as pristine or untouched (Robertson & Luke, 1993).

In 2004 the Government published a gazette notice (No 1106) of intention to declare Madunguni a Forest Area to add to the main Reserve. This was a wooded strip of land of approximately 951 hectares between the northern boundary of the Reserve, and a scarp falling to the Sabaki River basin. Shortly thereafter Madunguni was almost completely occupied by people claiming land there and the matter is still in abeyance. Most of the forest vegetation has been cleared in the meantime. An area of 600 ha immediately northwest of the forest reserve near Jilore was declared the Arabuko Sokoke National Park in 1990 consisting mostly of bushland and thicket with some woodland. Elephants frequently visit this location on the southern side of 'Lake' Jilore especially during the dry season.

The primary purpose of gazettelement of Arabuko-Sokoke was to enable controlled utilization of forest resources, although in recent years biodiversity conservation has increased in importance. As a forest reserve the statutory authority for Arabuko-Sokoke is the Kenya Forest Service (KFS) mandated by the Forest Act. Three forest stations are located at Jilore, Gede and Sokoke, in the north, east and south respectively. Owing to a significant elephant population and important avifauna in Arabuko-Sokoke, the Kenya Wildlife Service (KWS) is active in the forest. This agency has an office at Gede forest station, where the Kenya Forest Research Institute (KEFRI) also has a regional centre. The National Museums of Kenya (NMK) frequently undertakes species monitoring in the forest in collaboration with conservation bodies like Nature Kenya and A Rocha Kenya. It also supports the renowned Kipepeo butterfly farming project, an important source of livelihood for local communities living around Arabuko-Sokoke. Kipepeo is based at Gede Ruins not far from the forest station.

The four State agencies above, together with NGOs including NatureKenya, A Rocha Kenya and Friends of Arabuko-Sokoke, as well as community groups, form the Arabuko-Sokoke Forest Management Team (ASFMT). This is a forum that supports KFS in the protection and conservation of the forest and has been in existence since the early 1990s.

Vegetation

There is broad agreement that Arabuko-Sokoke consists of at least three distinct forest types that are closely related to geology and soils (Britton & Zimmerman 1979; Robertson & Luke 1993). On the low-lying plain with mostly coral rag and calcareous soils and the highest rainfall (annual average 1000 mm) is mixed semi-deciduous forest. This comprises a diverse tree flora in which *Azelia quanzensis*, *Hymenaea verrucosa*, *Combretum schumannii*, *Drypetes reticulata*, *Dialium orientale* and *Manilkara sansibarensis* are common. The canopy is up to 20 m high and typically close and dense with a tangled understory of shrubs and small trees. This mixed semi-deciduous zone occupies approximately 16% of the area of the reserve. Many authors recognize drier and wetter variants with some referring to the latter as 'rain forest'. *Terminalia sambesiaca* and *Gyrocarpus americanus* occur with *Adansonia digitata* in a small area along the southern boundary that may indicate underlying coral rock (Robertson & Luke, 1993).

Mixed forest contrasts markedly with *Brachystegia* forest further west and south in a zone of very infertile, white sandy soil. This type, approximately 18% of the reserve, is dominated by *Brachystegia spiciformis* and *Julbernardia magnistipulata*, with some *Azelia* and *Cassipourea euryoides* present. The forest averages 15-18 m in height with a limited understory and an open appearance. The greater height, canopy closure and fire exclusion of the *Brachystegia* and *Julbernardia* stands in Arabuko-Sokoke differentiate this vegetation from 'woodland' (e.g. miombo) with which they are more commonly associated with elsewhere (Clarke & Robertson, 2000).

The low ridge of ancient Magarini sands in the north and west of the reserve, with the characteristic red soil, is covered mainly by dense stands of *Cynometra webberii* averaging 6-8 m in height, interspersed with *Manilkara sulcata* and *Oldfieldia somalensis*. *Brachylaena huillensis* occurs here but has largely disappeared due to logging, and the cycad *Encephalartos hildebrandtii* is also common. The *Cynometra* forest zone covers

the largest area (66%) of Arabuko-Sokoke though it is closer to thicket in the more arid north and west. The average annual rainfall in this zone is 600 mm.

The forest habitats of Arabuko-Sokoke have been categorized as ‘evergreen dry forest’ by Dale (1939); and ‘lowland dry forest’ and ‘woodland’ by Moomaw (1960). Within the more recent classification of Eastern African coastal forests by Clarke (2000) the vegetation assemblages of Arabuko-Sokoke fall within the broad ‘coastal dry’ forest type, which encapsulates ‘legume-dominated forest’, ‘mixed dry forest’, ‘mixed scrub forest’ and ‘coastal *Brachystegia* forest’. Eastern African coastal forests are dominated by tree species endemic to the Swahilian regional centre of endemism, which stretches from coastal southern Somalia to northern Mozambique (Clarke, 1998). Dry forest, though highly variable, is the most extensive vegetation type of this floristic region (Clarke & Robertson, 2000).

There are approximately 700 ha of tree plantations within the Forest Reserve, mostly exotics, including *Casuarina equisetifolia*, *Gmelina arborea*, *Araucaria cunninghamii*, *Azadirachta indica* and *Eucalyptus* species. The plantations are in variable condition, some poorly stocked and overgrown (Arabuko Sokoke Forest Management Team, 2002) and mostly found in the vicinity of the forest stations.

Fauna

A significant number of invertebrate and vertebrate faunal species, some of them rare and endemic, are known to occur in Arabuko-Sokoke. Three hundred and twenty species of butterfly, including three near-endemics, are recorded for the forest (Ayiemba, 1995; Burgess & Clarke, 2000). There is notable diversity in other arthropod groups including rare termites though more studies are needed in this area (Bagine *et al.*, 1992). The critically endangered snail *Incertihydrobia teesdalei* Verdcourt, 1958 is endemic to ‘Lake’ Jilore.

Arabuko-Sokoke is home to 88 species of reptiles and 30 species of amphibians (Taylor *et al.*, 2019) including the Endangered *Phrynobatrachus ungujae* Pickersgill, 2007 and is thought to be one of the richest sites for frogs in the country (Fanshawe, 1995).

The forest is in particular noted for its bird life. Apart from the high number of bird taxa (261), six of the species are endemic or near endemic including Clarke’s weaver *Ploceus gollandi* (Clarke, 1913); Sokoke scops owl *Otus ireneae* Ripley, 1966; Amani sunbird *Hedydipna pallidigaster* (Sclater & Moreau, 1935); Sokoke pipit *Anthus sokokensis* van Someren, 1921; spotted ground thrush *Geokichla guttata* (Vigors, 1831) and East Coast akalat *Sheppardia gunningi* Haagner, 1909. The East Coast akalat is classified on the IUCN Red List as Near Threatened, and the other five species as Endangered. Arabuko-Sokoke has consequently been listed as a globally Important Bird Area (Britton & Zimmerman, 1979; Kelsey & Langton, 1984; Fanshawe, 1995; Jackson *et al.*, 2018a; Birdlife International, 2019).

Seventy-three mammal species have been recorded in Arabuko-Sokoke (Thomas, 1988; Kanga, 2002; Jackson *et al.*, 2018b). These include large mammals such as the savanna elephant *Loxodonta africana* (Blumenbach, 1797) (Vulnerable), African buffalo *Syncerus caffer* (Sparrman, 1779) and leopard *Panthera pardus* (Linnaeus, 1758) (Vulnerable); as well as bushbuck *Tragelaphus scriptus* (Pallas, 1766), yellow baboon *Papio cynocephalus* (Linnaeus, 1766) and vervet monkey *Chlorocebus pygerythrus* (F. Cuvier, 1821). The red bush squirrel *Paraxerus palliatus* (Peters, 1852) and Sokoke bushy-tailed mongoose *Bdeogale omnivora* Heller, 1913 (Vulnerable) also occur here. Aders’s duiker *Cephalophus adersi* Thomas, 1918 (Vulnerable) which is rare has been sighted, though not in the recent past, and the golden-rumped giant sengi *Rhynchocyon chrysopygus* Günther, 1881 (Endangered) is almost endemic to the forest and its environs (Fitzgibbon, 1994).

Estimates for the size of the elephant herd at Arabuko-Sokoke vary between 100 and 150 (Fanshawe, 1994; Kenya Wildlife Service, 2013) but its imprint on the forest is large. As the Reserve is now completely enclosed by electric fencing to protect surrounding farms and crops, the elephants are more restricted in their movement than before. This has resulted in significant damage to forest vegetation, especially during droughts when watering holes in the forest dry up and the elephants uproot and strip the bark off shrubs and trees for moisture.

Human environment

There are 54 villages directly bordering on the forest reserve, which fall in 18 administrative units (Locations) around Arabuko-Sokoke. This forest - adjacent population was estimated at 104 000 in 2002 (ASFMT, 2002) and may be at least 170 000 today assuming a conservative annual growth rate of 3%. The majority are of the Giriama ethnic group and engage in small-scale rain-fed subsistence farming, growing maize, cassava and beans.

However, the low fertility of local soils, combined with erratic and unreliable rainfall patterns ensure that crop yields are low. Coconut, cashew and mango trees are maintained as cash crops in many of the farms,

and along with wage employment when it can be found, are the main source of income (ASFMT, 2002). The local population struggle to meet their basic needs on a regular basis.

Poverty prevalence in Kilifi County as a whole has been estimated at about 70 % compared to the national average of 45.9% (Kenya Inter-Agency Rapid Assessment, 2014). The result is a high dependence on local natural resources and Mogaka (1991) estimated that over half of Arabuko-Sokoke forest-adjacent households regularly obtained fuelwood, poles, wild foods and water from the forest. A range of small businesses are found in local market centres along the Malindi highway such as Tezo, Chumani, Matsangoni and Gede.

History of utilization

The first people to occupy and use Arabuko-Sokoke for millennia were probably small itinerant groups who hunted and collected honey and other wild foods. These hunter-gatherers traded game and forest products with more settled communities in the vicinity (Kassam & Bashuna, 2002), but their mode of life and low population ensured that the impact of their activities on the forest was very limited. Their descendants variously known as Wa-Atha or Wa-Sanya, were active in Arabuko-Sokoke well into the twentieth century (Fitzgerald, 1898; Mogaka, 1991) and still live around the forest today though extensively intermarried with other groups.

Archaeological evidence along the Eastern African coastal strip points to sedentary metal working communities existing there from as early as the 4th century AD (Burgess & Clarke, 2000). A number of stone towns of the coastal Swahili (Afro-Arab) culture, including Malindi and Gede, were already established near Arabuko-Sokoke early in the second millennium. They were maritime in character exporting products such as ivory, grain, gum copal, fibres, timber and slaves by sea (Moomaw, 1960). Arabuko-Sokoke was probably an important source of timber for shipbuilding from those times, as well as other products, including ivory and honey supplied by the Wa-Atha.

The effect of this utilization appears to have been generally low though detailed records are lacking (Kelsey & Langton, 1984). An account of Arabuko-Sokoke by Fitzgerald (1898) at the end of the 19th century, describes extensive areas of closed forest with very limited human activity. He observed a small number of clearings and farms near the sea, and also met the Wa-Atha, but saw almost no logging. Tapping of *Landolphia kirkii* for rubber and *Hymenaea verrucosa* for resin (gum copal) was taking place to supply traders in the Swahili towns, as well as collection of lichens used in the manufacture of dyes.

With gazettelement of the forest area by the British colonial government early in the twentieth century, systematic timber extraction began at Arabuko-Sokoke, and increased steadily. Firms were invited to exploit the forest and supply a broader national (and export) timber market. A number of timber saw-mills were established starting in the 1920s at Mida, Arabuko, Kararacha, Sokoke and Dida (Robertson & Luke, 1993). The main tree species removed were *Azelia quanzensis*, and *Manilkara sansibarensis* from the mixed forest zone in the east, and *Brachylaena huillensis* from the *Cynometra* forest in the south and west of the reserve.

Substantial quantities of timber were harvested in the following decades continuing up to Independence in 1963 and beyond. By the mid 1960s most of the saw-mills in Arabuko-Sokoke had closed down having exhausted all the suitable material. The 'Akamba' curio carving industry which largely used *Brachylaena* wood had become established by this time. Wood-carving co-operatives from Mombasa were licensed to remove the remaining smaller diameter *Brachylaena* trees from the forest (Forest Department, 1963; 1964). This appears to have been poorly managed: accounts by Britton & Zimmerman (1979) of the effects of indiscriminate tree-felling in Arabuko-Sokoke contrast strongly with the impressions of Fitzgerald almost 100 years earlier.

Eventually all logging in the forest was discontinued in the early 1990s particularly due to concern about the disappearance of *Brachylaena* from Arabuko-Sokoke. Today, only collection of dry firewood headloads by forest adjacent households is permitted for domestic use. However, some illegal cutting of poles and small trees still takes place for local use and possibly sale, as evidenced by periodic sample surveys of the forest (Jackson *et al.*, 2017). Cases of charcoal burning have been documented within the reserve, and it is believed that wood is also taken outside the forest to make charcoal (Waters *et al.*, 2007), for which there is ever-increasing demand.

Pure silica sand deposits were discovered in Arabuko-Sokoke at Gede in the 1950s and quarried to supply glass manufacturers, but this ceased towards the end of the 1980s. Entry fees for recreational activities, particularly bird-watching, constitute the main revenue of the forest reserve today, as well as limited harvesting of the exotic plantations.

A large area of forested land possibly equal to that of the reserve itself had been left outside the reserve boundary on gazettelement (Fanshawe, 1995). On the eastern, seaward side this was used to establish a number of settlement schemes for the landless starting in the 1950s including Matsangoni, Mijomboni, Ngerenya, Roka and Tezo (Mogaka, 1991). A smaller scheme at Mida known as Mahaji had been established much

earlier in 1914 to settle freed slaves and appears as a finger-like indentation in the eastern boundary line. The process of settlement to the west of Arabuko-Sokoke took place later and was less structured as people moved in and staked out claims in unoccupied land held by the local government. As the schemes and other farms were gradually occupied and cleared, almost all the natural forest vegetation gave way to coconut and cashew stands or thicket.

Background of the checklist

Botanical collectors have been active in Arabuko-Sokoke since the 1920s. Names such as R.M. Graham, G.W. Jeffery, I. Dale, R. Polhill, G.W. Sangai, R.B. Faden, J.M. Kimeu, S.A. Robertson, W.R.Q. Luke and S.P. Kibua occur frequently on specimen vouchers from Arabuko-Sokoke. Their profiles can be found in Polhill & Polhill (2016).

The earliest available plant checklist for Arabuko-Sokoke is an annex in a publication on the vegetation of Gedi National Monument by Gerhardt & Steiner (1986). The list, which was not annotated, contains 268 species. An unpublished report on Arabuko-Sokoke by Thomas (1988) contained a list of 207 plant species from surveys in the forest. Mutangah & Mwaura (1992) also compiled a checklist of 211 species in their report of a KIFCON biodiversity survey there. Robertson & Luke (1993) presented a schedule of 511 taxa (collected and noted) from their fieldwork in Arabuko-Sokoke for the WWF/NMK Coast Forest Survey (CFS). Robertson later drew from the CFS list, Mutangah & Mwaura (1992), and her own work to develop a list of 475 taxa in 100 families (Robertson, 1999) which, though unpublished, has been the main Arabuko-Sokoke plant reference for many years. She suggested that any publication of the list in future should include annotation, with a specimen cited for each record, and the plant form noted (A. Robertson, pers. com.).

A Rocha Kenya more recently published a plant checklist dataset of 512 taxa authored by Luke *et al.* (2019) on the GBIF online platform. This document combines CFS data of the 1990's, specimens in the East African herbarium, and additions by W.R.Q. Luke from later work. All the existing lists were therefore closely related and provided an adequate basis for this assignment.

Aims of the checklist

As indicated above, a significant number of plant species have been recorded from Arabuko-Sokoke forest over the years. However, the lists of these finds do not include corresponding voucher specimen details, which would be required for scientific publication and wider use of the information. The existence of a verifiable specimen of a recorded plant in a publicly accessible collection, is now almost a universal standard for plant-related publications (Culley, 2013). Such a specimen, identified by an expert, should be available for re-examination by others if the need arose (Culley, 2013). It also provides physical proof of collection of a plant at a particular site.

This paper aims to fill the gap in existing Arabuko-Sokoke plant records by providing details of a curated voucher specimen to support each record from the forest. The annotated plant list published by Luke (2005) for the Shimba Hills, the other major coastal forest ecosystem in Kenya provides a notable precedent. Such a document for Arabuko-Sokoke would be of value, not just for scientists, but for anyone with an interest in plants generally and coastal plants in particular. It should also serve as a sound foundation, or springboard, for future botanical fieldwork at the site.

MATERIALS AND METHODS

A working 'master' list was compiled of all known plant records from Arabuko-Sokoke forest. The lists by Gerhardt & Steiner (1986), Thomas (1988), Mutangah & Mwaura (1992), Robertson & Luke (1993), Robertson (1999) and Luke *et al.* (2019) were combined and collated. No new collections were made in the field but Fungomeli (2019) supplied a list of species identified in Arabuko-Sokoke during coastal forest fieldwork she was undertaking at the time. Voucher specimens from Arabuko-Sokoke were subsequently located in the East African herbarium (EA) in Nairobi in respect of each record on the master list. Although strongly advocated by S.A. Robertson (pers. com.), there is unfortunately no local reference herbarium.

A search was also made in the EA herbarium for Arabuko-Sokoke representatives of families and species not on the master list, but featuring in the literature on coastal forests. A significant number of records were added to the list in this way. Only one voucher specimen was selected for each taxon listed. Information including collection locality, plant description, the collector's name and collection number were duly noted.

Often the descriptions of the vouchered specimens were not sufficiently detailed and reference was also made to literature sources. These included Beentje (1994), Luke (2005), Flora of Tropical East Africa (FTEA), and online plant databases including Global Plants (2020), Useful Tropical Plants Database, (2019)

and Plants of the World Online (2020). The taxon description provided in the checklist is therefore a 'common' rather than specific one. Although a simple indication of growth habit and size would have sufficed for the checklist, the author favoured inclusion of a more detailed description as in Luke (2005). While unavoidably variable and difficult to standardize, there may be some cognitive benefit for readers who are not botanists or plant specialists in having a 'word picture' of the plant. For a fieldworker with some knowledge of the plants, the descriptions may also be of use, as a ready source of diagnostic features.

Local and global distribution of the species were obtained from the same literature sources. The primary reference for taxonomy was the online African Plant Database (African Plant Database, 2019). Globally threatened taxa were ascertained by consulting the IUCN Red List of Threatened Species (IUCN, 2019).

Although only one specimen is cited per taxon in the checklist, collecting locality details were felt to be of value where available, offering a good starting point for repeat collection or other research. For a large number of species in any case, the single specimen was the only one from Arabuko-Sokoke available in the herbarium. Where voucher labels merely indicated 'Arabuko-Sokoke forest' as the locality with no elaboration using local landmarks or co-ordinates, it was entered generically in the checklist as 'Arabuko-Sokoke'. This should not be confused with 'Arabuko' or 'Sokoke' cited singly which refer to specific areas within the forest (see map).

A number of plant specimens collected in the field and reportedly identified/confirmed by the EA herbarium particularly for Thomas (1988) and Mutangah & Mwaura (1992) were apparently not retained in the collection. Robertson & Luke (1993) also indicated in their report that species that were familiar to them from previous work were noted and listed, but not always collected. Although voucher specimens in the above instances were not available, the taxa were included in our list as 'sight records' (s.r.), with an indication of the source reference *e.g.* "s.r. (Thomas, 1988)". Luke (2005) employed this category in the Shimba Hills checklist for plants with which he was familiar or had collected elsewhere.

Specimens from Arabuko-Sokoke cited in FTEA, the primary flora for the region, but not seen at EA herbarium were also listed. The vouchers for such cases would be either at the herbarium of the Royal Botanical Gardens, Kew, (UK), or in other herbaria with African collections studied by the authors of the various fascicles of FTEA.

Area of the checklist

As noted earlier, large tracts of forest had existed outside the formal reserve boundaries for many decades. In fact, as they occurred on Crown or Trust land these forest areas were also managed by the Forest Department. Plant collectors were not always familiar with the boundaries and it is just possible that some specimens were not obtained within the designated reserve, though indicated as such (Luke, 2019). It was decided not to confine the checklist coverage strictly to the current forest reserve boundaries, which in any case are an arbitrary construct. The area between the eastern reserve boundary and the sea was therefore included, though it is no longer forested.

A number of plant collections had been made along a motorable track following the southern and western boundary of the reserve and a peripheral strip of 50 metres was included here for purposes of the checklist, similarly along the Mijomboni-Kakuyuni boundary line in the northeast. Directly north, the checklist encompasses the Madunguni area up to the scarp falling to the Sabaki River flood plain, as well as 'Lake' Jilore. In the south-west, the Nyari between Dida and Sokoke just outside the boundary was included. The total extent of the checklist area as outlined above is estimated at about 60 000 ha.

Checklist structure

All listed families and genera follow the Pteridophyte Phylogeny Group classification (PPG, 2016) for ferns (now lycophytes and monilophytes); Christenhusz *et al.* (2011) for gymnosperms, and the Angiosperm Phylogany Group IV system (APG, 2016) for angiosperms. The fern families are listed alphabetically. However, in order to facilitate tracing of the specimens, the angiosperms are listed according to the family numbering currently employed at the EA herbarium, which is based on the Hutchinson system (Hutchinson, 1973). This sequence is likely to be still used for some time while a review takes place in line with current taxonomic trends (P. Musila, pers. com.). EA Family numbers shown in brackets indicate that materials from the families (or genera) listed underneath are found in that numbered section at present, pending relocation to conform with the APG circumscription. Genera are listed alphabetically within their families, and likewise species within genera.

Each species in the list is represented by short notes in a specific sequence. The top lines contain the taxon name, and one cited specimen (or reference in case of sight records). The following lines contain a collection locality, if available, and a brief description of the plant. The final line shows the phytogeographic distribution of the taxon, as well as its extinction risk status if it appears in the IUCN Red List of threatened

species (IUCN, 2020). The IUCN Red List categories include ‘Critically Endangered’, ‘Endangered’, ‘Vulnerable’ and ‘Near Threatened’. A question mark ‘?’ preceding a name signifies some doubt about an identification or statement.

Distribution terms refer to the phytochoria (floristic regions) of Africa as defined by White (1983), and modified by Clarke (1998). The ‘Swahilian’ regional centre of endemism of Clarke is understood here in its broadest sense (*sensu lato*) as stretching from southern Somalia to northern Mozambique. Lindi sub-centre covering south-eastern Tanzania and north-eastern Mozambique is however now regarded as a major centre of plant endemism in its own right (Burrows & Timberlake, 2011). ‘Swahilian endemic+’ indicates a Swahilian endemic also found in an adjacent floristic region, such as Somalia-Masai, Zambesian, Tongaland-Pondoland. Other categories include ‘Pan-African’ (in which category for convenience we include Madagascar and the Arabian Peninsula), and ‘Pan-Tropical’.

RESULTS

A final total of 605 plant species are included in this annotated checklist for Arabuko-Sokoke (appendix 1), out of which 491 are supported by voucher specimens in the East African herbarium and 106 are sight records. An additional 8 are cited from *Flora for Tropical Eastern Africa*. This total represents approximately 9% and 18% of the flora of Kenya and the coastal region (K7 of FTEA) respectively. The species are distributed in 103 families and 389 genera, with the largest represented families being Fabaceae/Leguminosae (62 species), Rubiaceae (53) and Malvaceae (26). The largest genera are *Grewia* (7 species), *Ficus* (6), *Cyperus* (5) and *Ipomoea* (5).

Growth forms

The table below provides the distribution of growth forms among the taxa. Such groupings apply only in a broad sense as individual collectors have tended to use varying criteria resulting in significant overlap, for example between trees and shrubs, and shrubs and herbs (Clarke *et al.*, 2000).

Table 1. Growth forms.

Form	No. spp.	% of total
Trees	120	20
Shrubs	147	24
Lianas, climbers, scandent shrubs	84	14
Herbs	202	33.3
Woody herbs	33	5.4
Parasites	8	1.3
Epiphytes	11	2
Total	605	100

Although the forest ecosystem is dominated physically by woody plants, herbs are the most species-rich growth form, followed by shrubs and trees.

Phytogeographic affinities

Phytogeographic affinities of the species of Arabuko-Sokoke are indicated in table 2 below. The proportion of Swahilian regional endemics (including Kenya coast and site endemics) is approximately 28 percent.

Table 2. Phytogeographic affinities

Phytogeographic Spread	No. spp.	% of total
AS Site endemic	1	0.2
Kenya Coast endemic	13	2.0
Swahilian Region endemic	154	25.5
Swahilian endemic + one other region	116	19.0
Somalia-Masai Region endemic	2	0.3
Pan-African	170	28.0
Pan-Tropical	149	25.0
Total	605	100

Conservation concern

Occurrence of species of conservation concern in Arabuko-Sokoke which are included in the IUCN Red List of threatened species is as in table 3 below.

Table 3 Threatened species.

IUCN Red List Category	No.
Critically endangered	3
Endangered	8
Vulnerable	26
Near threatened	14
Total	51

Threatened species in Arabuko-Sokoke include 3 Critically Endangered, 8 Endangered and 26 Vulnerable. As the conservation assessment of the complete flora of the region is still limited the numbers are likely to be higher.

DISCUSSION

Analysis of the checklist reveals patterns which are fairly consistent with other data on Kenyan, and Eastern African coastal forests developed over the last 30 years (*e.g.* Robertson & Luke, 1993; Clarke, 1995; Clarke *et al.*, 2000; Timberlake, 2011; Darbyshire, 2019; Ngumbau, 2020). They also point to a need for further collecting in Arabuko-Sokoke, as recommended by Robertson (1999) and Luke (2019). For example, though most of the angiosperms have been captured in the checklist, the ferns (monilophytes) are under-represented, and fern-allies (lycophytes) do not appear at all. Among the flowering plants, Robertson (1999) singles out Commelinaceae, Cyperaceae and Poaceae as needing more attention.

Species richness

With 605 species the plant checklist of Arabuko-Sokoke is sizeable, although not comparable with Shimba Hills, the other major Kenyan coastal forest ecosystem, with 1396 records from a similar collecting area (Luke, 2005). The two areas, however, harbour fundamentally different forest types, with Shimba classified as ‘moist’ forest (after Hawthorne, 1993), whereas Arabuko-Sokoke consists of ‘dry’ forest assemblages. Arabuko-Sokoke is more similar to other coastal dry forests in the Swahilian region. Forests in Cabo Delgado, north-east Mozambique, for example, seem to be in a similar range of species richness with 738 plant species recorded from 40 000 ha (Timberlake *et al.*, 2010). Most coastal dry forests in Eastern Africa are considerably smaller in area than this, but a general pattern of having comparatively fewer species than moist forests is observable from the literature (*e.g.* Clarke & Dickinson, 1995; Lehmann & Kioko, 2005).

A number of studies have shown that wetter conditions support the establishment of a wider range of species in tropical forest systems (Gentry, 1988; Givnish, 1999; Laurance *et al.*, 2010; Nunes Santos, 2018). Eastern African coastal moist forests usually occur on sites of significant precipitation (at least 1000 mm) due to higher elevation, but also on lower-lying areas with a high-water table (Moomaw, 1960; Hawthorne, 1993). In the Kenyan coastal zone, Shimba Hills and Jibana Forests exemplify the former scenario and Gongoni Forest the latter, all sites of notable species richness (Robertson & Luke, 1993; Malombe *et al.*, 2010). The relative topographic evenness and hence limited ‘habitat availability’ (after Hawthorne, 1993), of Arabuko-Sokoke, combined with the highly infertile soils observed there by Moomaw (1960), may also conspire against greater species diversity.

Families and genera

The Leguminosae, Rubiaceae and Malvaceae are the largest families represented in Arabuko-Sokoke, followed by Apocynaceae, Acanthaceae and Poaceae. Leading genera in terms of species numbers include *Grewia*, *Ficus*, *Cyperus* and *Ipomoea*. These families and genera also dominate the plant checklists of other forests in the Swahilian region (*e.g.* Robertson & Luke, 1993; Clarke, 1995; Luke, 2005; Timberlake, 2011; Ngumbau, 2020).

Members of the Leguminosae family are particularly notable for their successful occupation of areas with sandy and infertile soils, possibly owing to their ability to form fungal mycorrhizal associations and fix nitrogen. Trees of *Brachystegia spiciformis*, *Julbernardia magnistipulata* and *Cynometra* species form almost

pure stands in many dry forests including Arabuko-Sokoke (Clarke & Robertson, 2000). The largest proportion (20%) of species in the shrub or sub-canopy layer of the forest are in the Rubiaceae family, while the majority of lianas are from Apocynaceae and Celastraceae.

Endemic species

From an analysis of the checklist, approximately 28% of the plant taxa of Arabuko-Sokoke are Swahilian regional endemics (including Kenya Coast and site endemics). The proportion of regional endemics in the Kenya coastal forest flora as a whole is estimated at 33% (Ngumbau, 2020). There is however considerable variation between individual sites in the fraction of endemic species, which range between 25 to 40% (e.g. Robertson & Luke, 1993; Luke, 2005; Lehmann & Kioko, 2005).

Approximately 70% of the regional endemic species in Arabuko-Sokoke are woody (trees, shrubs or lianas) reflecting a common pattern in the Swahilian region (Hawthorne, 1993; Clarke *et al.*, 2000), with herbs accounting for 24%. Being mostly trees and shrubs, the endemics are naturally more vulnerable to extraction as timber and poles for human use (Lehmann & Kioko, 2005).

The one site endemic of Arabuko-Sokoke is *Taxillus wiensii*, a woody parasite of the Loranthaceae, which is found in *Cynometra* forest. Single-site endemics are more numerous in forests such as Shimba Hills as well as Litipo, Kazimzumbwi and other forest sites in Tanzania (Clarke & Dickinson, 1995; Clarke *et al.*, 2000). Remarkably high levels of strict site endemism have been uncovered by recent surveys in the dry forests of north-east Mozambique, in addition to significant species turnover (variation) between sites (Timberlake *et al.*, 2011; Darbyshire *et al.*, 2019).

Threatened Species

Three Critically Endangered, 8 Endangered, 26 Vulnerable and 14 Near Threatened plant species on the IUCN Red List are found in Arabuko-Sokoke, making a total of 51. This is a clear indication of the importance of the site for protection of globally threatened plants. The majority of Red Listed species in Arabuko-Sokoke (80 %) are regional or Kenya Coast endemics. Most are trees or shrubs and can be regarded as forest-dependant.

Among the Vulnerable and Near Threatened species at the site are *Encephalartos hildebrandtii*, *Cynometra webberii*, *Cynometra suahiliensis*, *Julbernardia magnistipulata*, *Dalbergia melanoxylon* and *Craibia brevicaudata*. Such species are still considered widespread in the Eastern African coastal region but facing an increasing threat from the destruction of forest and woodland habitats for settlement, agriculture and infrastructural development (Ngumbau *et al.*, 2020).

Conservation value of Arabuko-Sokoke

As noted above, Arabuko-Sokoke is undoubtedly important for the protection of globally threatened plants. The species richness of the site though significant is however only moderate compared to other forests in the Kenya and Eastern African coast in general, particularly those of the moist type. Local site endemism is also limited.

Robertson & Luke (1993) suggested that the distinctiveness of Arabuko-Sokoke is in its size and relative intactness. Available data seem to confirm that Arabuko-Sokoke at 41 764 ha is one of the largest remaining continuous blocks of the dry forest type in the Swahilian region *sensu lato*. No site among the coastal dry forest areas of Tanzania compares in size (Critical Ecosystem Partnership Fund, 2003). The approximately 40 000 ha of closed-canopy dry forest (as distinct from extensive *Julbernardia* or *Brachystegia* woodland) of north-eastern Mozambique, is distributed over multiple sites and described as only 'moderately' intact by Timberlake *et al.* (2011). These forests have no formal state protection and face an increasing threat of clearance for subsistence agriculture (Timberlake *et al.*, 2011).

It is estimated that between 80 and 90% of the original Eastern African Coastal Forest habitat largely composed of dry forest, has been lost in the last 150 years (Hawthorne, 1993; Timberlake, 2011). Forested land has been converted to settlement, urban and infrastructure development, commercial agriculture and mining among other uses (CEPF, 2003; World Wildlife Fund, 2011). As a substantial and stable protected remnant of a once widespread but highly threatened habitat type, Arabuko-Sokoke is of immeasurable value, both in a local and global context.

Although the coastal dry forests are complex and varied, the vegetation zones of Arabuko-Sokoke exemplify many of their key features, subtypes and variants including typical genera and species. For example, all of the twenty most common woody plant species of Kenya Coastal forests as identified by Fungomeli *et al.* (2020) are present in the forest. The importance of Arabuko-Sokoke for the conservation of limited-range and globally threatened bird species has already been noted, also for small but significant numbers of globally threatened mammals, amphibians, gastropods and insects.

Arabuko-Sokoke compares well in terms of forest condition with other coastal forests in the region as documented for example in Tanzania (Burgess *et al.*, 1992; CEPF, 2003; Mkwiru *et al.*, 2016). While some illegal extraction activities by forest adjacent communities goes on (Jackson *et al.*, 2017), the Reserve has not suffered from significant encroachment, loss of vegetation cover and conversion to other land-uses within its boundaries for some time (see Tabor *et al.*, 2010).

State management has been in place at Arabuko-Sokoke for over 100 years. This did not spare the forest from unsustainable timber harvesting practices in the past, but the period of state protection is longer than for most sites in the Eastern African region. The primary policy objective for the forest is now conservation, as reflected by the activities permitted and undertaken there. In the last three decades the forest has attracted considerable research and investment in conservation and income-generating activities for forest-adjacent communities.

The Kenya Government has encouraged strong inter-departmental co-operation and stakeholder involvement in the management of the Arabuko-Sokoke (ASFMT, 2002). A sizeable community and NGO constituency for protection of this unique forest has also built up over the last few decades which shows no sign of abating. Arabuko-Sokoke has been placed on the official 'Tentative List' for Kenya as a candidate for UNESCO World Heritage status (whc.unesco.org). The forest is already part of the Malindi Watamu Arabuko Sokoke Biosphere Reserve (Kenya National Commission for UNESCO, 2019).

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APPENDIX 1. ANNOTATED CHECKLIST OF THE PLANTS OF ARABUKO SOKOKE FOREST

MONILOPHYTES

Davalliaceae

- Davallia chaerophylloides* (Poir.) Steud. Rawlins S 746
 var. *chaerophylloides*
 ‘Arabuko-Sokoke’. Herb, rhizome to 15 mm wide, fronds widely spaced, basal pinnae largest.
 Pan-African.

Polypodiaceae

- Microsorium scolopendria* (Burm.f.) Copel. Polhill R & Paulo S 858
 (*Phymatosorus scolopendria* (Burm.f.) Pic. Serm)
 Jilore. Herb, rhizomatous, fronds to 40 cm.
 Pan-Tropical

Pteridaceae

- Cheilanthes involuta* (Sw.) Schelpe & N.C. Anthony Beentje H 2313
 var. *involuta*
 Nature Reserve. Herb, fronds to 30 cm, with dense chestnut scales.
 Swahilian endemic +.
- Cheilanthes viridis* (Forssk.) Sw. s.r. (Mutangah & Mwaura, 1992)
 ‘Arabuko-Sokoke’. Herb, Fronds to 50 cm, petiole dark brown or black.
 Pan-African.

SPERMATOPHYTES

GYMNOSPERMS

Zamiaceae

- Encephalartos hildebrandtii* A.Braun. & C.D.Bouché Perdue RE & Kibuwa SP 10014
 Jilore. Tree, to 2 m, leaves frond-like, in whorls, stiff and shiny, leaflets spiny.
 Swahilian endemic. Near threatened.

ANGIOSPERMS

008

Annonaceae

- Annona senegalensis* Pers. Sangai GW EA15586
 subsp. *senegalensis*
 Mida-Jilore track (?). Shrub to 3.5 m, flowers cream yellow, extra-axillary, fruit syncarpous,
 to 4 cm.
 Pan-African.
- Artabotrys modestus* Diels. s.r. (Robertson & Luke, 1993)
 subsp. *macranthus* Verdc.
 ‘Arabuko-Sokoke’. Shrub (climbing), or liana to 4 m, flowers greenish-yellow, fruit red.
 Swahilian endemic.
- Asteranthe asterias* (S.Moore) Engl. & Diels Simpson BL 378
 subsp. *asterias*
 ‘Arabuko-Sokoke’. Shrub, or small tree, to 4 m, leaves densely white-hairy when young,
 flowers white to cream.
 Swahilian endemic. Near threatened.
- Huberantha stuhlmannii* (Engl.) Chaowasku Faden RB 71/697
 (*Polyalthia stuhlmannii* (Engl.) Verdc.)
 Mida-Jilore track. Shrub, to 4 m, petals greenish, maroon at base.
 Swahilian endemic. Near threatened.

- Monanthes faulknerae* Verdc. Robertson SA & WRQ Luke 2601
A-S Nature Reserve west boundary. Shrub, or climber, leaves pubescent beneath, to 5 cm, flowers solitary, yellow, monocarps reddish.
Swahilian endemic. Endangered.
- Monanthes fornicata* (Baill.) Verdc. Gardner RM 1426
Mida. Shrub/climber to 4 m, leaves glaucous beneath, to 11 cm, spotty, flowers greenish-yellow.
Swahilian endemic.
- Monodora grandidieri* Baill. Beecher 22/10/63
'Arabuko-Sokoke'. Shrub, or small tree, to 3 m, flowers appearing before young leaves, petals yellow spotted with red, droopy, fruit green with white marks.
Swahilian endemic.
- Monodora junodii* Engl. & Diels Mwadime TN 058
Mbarakachembe. Shrub, to 3 m, flowers solitary, appearing with young leaves, yellow-green turning purple-brown, fruit green with brown marks.
Swahilian endemic.
- Sphaerocoryne gracilis* (Engl. & Diels) Verdc. Luke WRQ & Robertson SA 2597
subsp. *gracilis*
Mida/Arabuko. Shrub, or liana, to 12 m, outer petals to 14 mm, fruit monocarps crimson.
Swahilian endemic.
- Uvaria acuminata* Oliv. Verdcourt B 1187 (cited in FTEA)
Kakuyuni. Shrub, sometimes scandent, to 4 m, branchlets with coarse brownish hairs, flowers pubescent, yellow or cream, monocarps sessile, round, orange.
Swahilian endemic.
- Uvaria lucida* Benth. Saufferer S & Muchai SM SS-1608
subsp. *lucida*
Kakuyuni. Shrub, or liana, to 3 m, stamens pinkish or orange, monocarps pedicelled, constricted.
Swahilian endemic.
- Uvaria puguensis* D.M.Johnson Luke WRQ & Robertson SA 2604
Nature Reserve west boundary. Shrub, or climber to 6 m, leaves dark green, monocarp with densely pubescent pedicel, slightly constricted.
Swahilian endemic. Critically endangered.
- Uvariadendron kirkii* Verdc. Luke WRQ 1945
Dida/Sokoke Nyari. Shrub, to 3 m, flowers mostly on old wood, cream tinged maroon, monocarp oblong.
Swahilian endemic. Vulnerable.
- Xylopia arenaria* Engl. Trump EC 96 (cited in FTEA)
Sokoke. Shrub, or small tree to 3 m, bark greyish white, leaves hairy on margin, petals grey-green hairy.
Swahilian endemic. Vulnerable.
- Xylopia holtzii* Engl. Muhra PC W95
'Arabuko-Sokoke'. Tree, to 10 m, erect with open crown, petals yellow or greenish, monocarps 10, red or green.
Pan-African.

011**Lauraceae**

- Cassytha filiformis* L. Kuchar P 9974
Mida Creek. Climber/liana, to 8 m, parasitic, flowers yellow.
Pan-Tropical.

018**Nymphaeaceae**

- Nymphaea nouchali* Burm.f. Luke WRQ & PA 4731
var. ? *caerulea* (Savigny) Verdc.
'Arabuko-Sokoke'. Herb, aquatic, from tuberous rootstock, flowers blue.
Pan-African.

023

Menispermaceae

Cissampelos pareira L. Graham RM 1535

var. *hirsuta* (Buch.–Ham. ex DC.) Forman
Arabuko. Creeper/climber, to 2 m, leaves sub-peltate, pubescent.
Pan-Tropical.

Tiliacora funifera (Miers) Oliv. s.r. (Robertson & Luke, 1993)

‘Arabuko-Sokoke’. Liana, to 20 m, leaf petiole with swelling and bend below blade, flowers clustered on old wood.
Pan-African.

Tinospora oblongifolia (Engl.) Troupin Kabuye C et al. 84/65

Sokoke. Climber/liana, to 2 m, leaves oblong.
Swahilian endemic.

(026)

Aristolochiaceae

Hydnora sinandevu Beentje & Q.Luke Luke WRQ 3033A

Mida. Root parasite on *Commiphora africana*, to 16 cm, partly below ground, flower fleshy, four-lobed, reddish or pale pink inside.
Swahilian endemic +.

036

Capparaceae

Boscia angustifolia A.Rich. Perdue RE & Kibuwa SP 10092

var. *angustifolia*
Jilore Forest Station. Tree, to 8 m, leaves very coriaceous, dark green with mucro, fascicled on old wood.
Pan-African.

Cadaba farinosa Forssk. Jeffery GW K373

subsp. *farinosa*
Sokoke. Shrub, to 2 m, young twigs covered with powdery scales, flowers yellowish green, petals 4.
Pan-Tropical.

Capparis fascicularis DC. Luke WRQ & Robertson SA 2236

var. *scheffleri* (Gilg & Gilg-Ben.) DeWolf
‘Arabuko-Sokoke’. Shrub, or climber to 4 m, leaf apex obtuse, flowers clustered in leaf axils, fruit globose ca. 20 mm.
Swahilian endemic +.

Capparis septaria L. s.r. (Robertson & Luke, 1993)

‘Arabuko-Sokoke’. Shrub/climber to 6 m, spines recurved, in pairs at nodes, infl. terminal on short shoots, fruit globose < 15 mm.
Pan-Tropical.

Capparis tomentosa Lam. Splint R 3951

Jilore/Sabaki erosion scarp. Climber/liana, to 10 m, young stems green, densely velvety, flowers terminal, fruit globose > 15 mm.
Pan-Tropical.

Capparis viminea Hook.f. & Thomson ex Oliv. s.r. (Robertson & Luke, 1993)

var. *viminea*
‘Arabuko-Sokoke’. Shrub/climber to 5 m, leaf apex acuminate, infl. in axillary fascicles, stamens to 3 cm.
Pan-African.

Cladostemon kirkii (Oliv.) Pax & Gilg Watson F 14340

Jilore. Tree, to 4 m, leaflets dark green, flowers white/yellow with purple androgynophore, fruit globose on thick stalk.
Pan-African.

- Maerua angolensis* DC. s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Shrub, or small tree, to 6 m, deciduous, petiole as long as leaf, flowers white, fruit ‘beaded’.
 Pan-African.
- Maerua kirkii* (Oliv.) F.White Trump EC 95
 ‘Arabuko-Sokoke’. Shrub, or small tree, leaves simple, stiff, flowers white in dense corymbs, fruit orange, round with pointed apex.
 Swahilian endemic+.
- Maerua macrantha* Gilg s.r. (Thomas, 1988)
 ‘Arabuko-Sokoke’. Shrub, scandent, to 2 m, or liana, leaves fleshy, fruit orange-yellow, cylindrical, knobbly, to 7 cm.
 Swahilian endemic+.
- Maerua triphylla* A.Rich. Kuchar P 9970
 var. *calophylla* (Gilg) DeWolf
 Mida Creek. Shrub to 3 m, leaves simple or trifoliolate, fruit ‘beaded’.
 Pan- African.
- Ritchiea capparoides* (Andrews) Britten Spjut RW 3907
 Jilore Forest Station. Shrub, scrambling to 2 m, trifoliolate, fruit cylindrical, grooved.
 Pan-African.
- Thilachium africanum* Lour. Graham RM.1536B
 Mida. Shrub, or tree, to 2.5 m, leaves fleshy elliptic-obovate, fruit cylindrical 6-8 ribbed.
 Pan-Tropical.
- Thilachium thomasi* Gilg s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Shrub, to 2 m, leaves fleshy, nearly round, fruit 5-7 ribbed.
 Swahilian endemic.

Cleomaceae

- Sieruela briquetii* (Polhill) Roalson & J.C.Hall Simpson BL 361
 (*Cleome briquetii* Polhill)
 A-S *Brachystegia* woodland. Herb, to 1 m, stalk with glands, leaves pinkish, flowers purple.
 Swahilian endemic+.
- Sieruela usambarica* (Pax ex Engl.) Roalson & J.C.Hall s.r. (Thomas, 1988)
 (*Cleome usambarica* Pax)
 ‘Arabuko-Sokoke’. Herb, to 1 m, stalk glabrous, flowers pink/magenta.
 Pan-African.

040

Violaceae

- Afrohybanthus enneaspermus* (L.) Flicker s.r. (Thomas, 1988)
 A-S *Brachystegia* woodland. Herb, perennial, to 30 cm, not branched above, flowers purple, spade-shaped.
 Pan-Tropical
- Rinorea ilicifolia* (Welw. ex Oliv.) Kuntze Luke WRQ & Robertson SA 2611
 var. *ilicifolia*
 Big Nyari. Shrub, to 2.5 m, leaf margins spiny, flowers greenish cream to dull yellow in terminal (axillary) panicles.
 Pan African.
- Rinorea squamosa* (Boivin ex Tul.) Baill. Luke WRQ & Robertson SA 2235
 subsp. *kaessnerii* (Engl.) Grey-Wilson
 ‘Arabuko-Sokoke’. Shrub, or small tree to 4 m, leaf margins serrate-dentate, flowers in very short axillary racemes, fruit subglobose.
 Swahilian endemic+.

042**Polygalaceae**

- Carpolobia goetzei* Gürke Graham RM 2329
Arabuko. Shrub, to 2 m, flowers with red/purple mark on lateral petals.
Pan-African.
- Polygala amboniensis* Gürke s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody, leaves linear, infl. terminal, of few - flowered racemes.
Swahilian endemic+.
- Polygala fischeri* Gürke Langridge WP 13
'Arabuko-Sokoke'. Herb, upright, to 1 m, flowers pink/purple, in dense lateral racemes.
Swahilian endemic+.
- Polygala kilimandjarica* Chodat s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody, scandent, to 1.5 m, flowers pink/purple.
Swahilian endemic+.
- Polygala sansibarensis* Gürke Luke WRQ & Robertson SA 2590
Mida. Herb, annual, to 60 cm, stems branched in upper half, flowers pinkish in lateral racemes.
Swahilian endemic.
- Polygala sphenoptera* Fresen. Luke WRQ 3023
Mida. Herb, woody, to 50 cm, semi-scandent, flowers purplish in long lateral racemes.
Pan-African.

045**Crassulaceae**

- Kalanchoe ballyi* Raym.-Hamet ex Cufod. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, succulent, to 1.2 m, flowers pink to brick-red, corolla lobes mucronate.
Swahilian endemic.
- Kalanchoe glaucescens* Britten Bamps P 6353
'Arabuko-Sokoke'. Herb, succulent, to 1 m, glabrous/glaucous all over, flowers yellow-orange.
Pan-African.
- Kalanchoe lateritia* Engl. Simpson BL 158
var. *lateritia*
'Arabuko-Sokoke'. Herb, succulent, to 60 cm, glandular, flowers bright crimson.
Pan-African. Least concern.
- Kalanchoe obtusa* Engl. Graham RM 2029
Arabuko. Herb, succulent, to 15 cm, glabrous, leaf apex obtuse, flowers bright red with light green tube.
Swahilian endemic.

047**Vahliaceae**

- Vahlia dichotoma* (Murray) Kuntze Thulin 303 (cited in FTEA)
Mida Creek. Herb, to 70 cm, leaves linear, flowers white to yellow, two per peduncle.
Pan-African.

053**Caryophyllaceae**

- Polycarpaea grahamii* Turrill Faden RB & AJ 72/42
Nature Reserve NW corner. Herb, annual, to 30 cm, flowers white.
Kenya Coast Endemic. Endangered

(054)**Gisekiaceae**

- Gisekia pharnaceoides* L. s.r. (Thomas, 1988)
var. *pharnaceoides*
'Arabuko -Sokoke'. Herb, prostrate/procumbent, to 60 cm, fleshy, flowers creamy white.
Pan-Tropical.

Molluginaceae

- Glinus oppositifolius* (L.) Aug.DC. Simpson BL 162
 ‘Arabuko-Sokoke’. Herb, scrambler, to 50 cm, leaves in whorls, flowers axillary, white.
 Pan-Tropical.

056

Portulacaceae

- Portulaca quadrifida* L. Graham RM 2332
 Arabuko. Herb, prostrate, succulent, rooting at nodes, flowers yellow.
 Pan-Tropical.

Talinaceae

- Talinum portulacifolium* (Forssk.) Asch. ex Schweinf. Spjut RW & Enson PD 2602
 Jilore. Herb, creeping, succulent, flowers lavender/pink.
 Pan-Tropical.

057

Polygonaceae

- Oxygonum salicifolium* Dammer Gillet JB & Kibua SP 20035
 Mida. Herb, creeping to 40 cm, flowers white.
 Swahilian endemic.
- Persicaria decipiens* (R.Br.) K.L.Wilson. Simpson BL 259
 ‘Arabuko-Sokoke’. Herb, creeping, flowers white.
 Pan-Tropical.

063

Amaranthaceae

- Achyranthes aspera* L. Sangai GW EA15585
 Kakuyuni. Herb, woody, to 1 m, flowers > 5 mm.
 Pan-Tropical.
- Aerva lanata* (L.) Juss. ex Schult. Kuchar P 9999
 Mida Creek. Herb, woody, to 50 cm, erect or trailing, infl. woolly, white.
 Pan-Tropical.
- Atriplex farinosa* Forssk. Kuchar P 9953
 subsp.? *keniensis* (Brenan) Friis & M.G.Gilbert
 Mida Creek. Shrub, or woody herb, white mealy, flowers in dense terminal fascicles.
 Swahilian endemic.
- Celosia hastata* Lopr. Langridge WP 118
 Sokoke. Herb, woody, to 2.5 m, erect or scrambling, leaves hastate, infl. terminal, flowers
 white and brown.
 Swahilian endemic.
- Gomphrena celosioides* Mart. Simpson BL 227
 ‘Arabuko-Sokoke’. Herb, prostrate, to 20 cm, infl. silvery white.
 Pan-Tropical. (introduced/naturalized).
- Psilotrichum majus* Peter s.r. (Mutangah & Mwaura, 1992)
 ‘Arabuko-Sokoke’. Herb, to 1.5 m, tepal nerves 7-9.
 Pan-African.
- Psilotrichum scleranthum* Thwaites Kabuye CH, Gilbert VC & Robertson SA 84/17
 Nature Reserve. Herb, woody, to 1.2 m, tepal nerves obscure.
 Pan-Tropical.
- Pupalia lappacea* (L.) Juss. s.r. (Robertson & Luke, 1993)
 var. *velutina* (Moq.) Hook.f.
 ‘Arabuko-Sokoke’. Herb, woody, to 60 cm, young leaves silvery below, bristles straw-
 coloured.
 Pan-Tropical.

Salicornia pachystachya Bunge ex Ung.-Sternb. s.r. (Roberston & Luke, 1993)
'Arabuko-Sokoke'. Herb, annual to 25 cm, strongly segmented, fertile spikes many.
Swahilian endemic.

Suaeda monoica Forssk. ex J.F.Gmel. Kuchar P 10053
Mida Creek. Shrub, succulent, much branched.
Pan-Tropical.

Tecticornia indica (Willd.) K.Sheph. & Paul G.Wilson Kuchar P 10054
(*Arthrocnemum indicum* (Willd.) Moq.)
Mida Creek. Herb, succulent, forming mats.
Pan-Tropical.

069**Oxalidaceae**

Biophytum umbraculum Welw. Jeffery GW K342
(*Biophytum petersianum* Klotszch)
Sokoke. Herb, to 25 cm, leaves in terminal crown, touch-sensitive, topmost leaflets largest,
flowers pink.
Pan-Tropical.

072**Lythraceae**

Ammannia radicans (Guill. & Perr.) S.A.Graham & Gandhi Polhill R & Paulo S 891
var. *floribunda* (Sond.) S.A.Graham & Gandhi
Mida. Herb, to 50 cm, stems decumbent, flowers pink.
Pan-African.

Pemphis acidula J.R.Forst. & G.Forst. Kuchar P 10004
Mida Creek. Shrub, or small tree, to 7 m, on beach locations, densely branched, leaves fleshy,
flowers pink, axillary.
Pan-Tropical.

Sonneratia alba Sm. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 15 m, in the intertidal zone (mangrove), with aerial breathing
roots, fruit a globose berry with persistent style and sepals.
Pan-Tropical.

077**Onagraceae**

Ludwigia jussiaeoides Desr. Graham RM 2099 (cited in FTEA)
(*Jussiaea jussiaeoides* (Desr.) Brenan)
Mida. Herb, woody, to 3 m, leaves linear, sepals 4, petals yellow > 10 mm.
Pan-Tropical.

081**Thymelaeaceae**

Gnidia latifolia (Oliv.) Gilg. Graham RM 197
(*Lasiosiphon latifolius* (Oliv.) Brenan)
Sokoke. Tree, to 5 m, much branched, stems reddish when young, flowers orange in dense
heads.
Swahilian endemic+.

Synaptolepis kirkii Oliv. s.r. (Thomas, 1988)
'Arabuko-Sokoke'. Liana, to 2 m, from tuber, with climbing hooks, flowers in axillary
fascicles, white with tube widening near top, fruit orange.
Swahilian endemic+.

083**Nyctaginaceae**

Boerhavia diffusa L. s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Herb, creeping, flowers pink, fruit sticky.
Pan-Tropical.

Boerhavia erecta L. s.r. (Mutangah & Mwaura, 1992)
 ‘Arabuko-Sokoke’. Herb, erect to 1 m, stems branch mainly from base, flowers pink/white.
 Pan-Tropical.

085

Dilleniaceae

Tetracera litoralis Gilg Tweedie 2383
 Kaembeni-Dida. Climber/liana, to 8 m, young branches reddish brown, leaves not woolly
 under, flowers white.
 Swahilian endemic.

101

Passifloraceae

Adenia cissampeloides (Planch. ex Hook.) Harms Moggridge GM 386
 ‘Arabuko-Sokoke’. Climber/liana, to 10 m, flowers green, leaves semi-succulent.
 Pan-Tropical.

Adenia kirkii (Mast.) Engl. Luke WRQ & Robertson SA 2557
 Arabuko. Climber/liana, to 2 m, leaves digitately compound, base glands two.
 Swahilian endemic+.

Schlechterina mitostemmatoides Harms Sangai GW EA15724
 Jilore. Climber/liana, to 3 m, leaves dimorphic, flowers white.
 Swahilian endemic.

103

Cucurbitaceae

Coccinia grandis (L.) Voigt Luke WRQ & Robertson SA 2622
 Forest Reserve south boundary. Climber/liana, to 8 m, leaves digitate, flowers yellow-orange,
 fruit green striped white turning to red.
 Pan-Tropical.

Coccinia trilobata (Cogn.) C. Jeffrey Simpson BL 383
 ‘Arabuko-Sokoke’. Creeper, to 4 m, fruit bright red with green markings.
 Swahilian endemic+.

Momordica boivinii Baill. Simpson BL 338
 A-S *Brachystegia* woodland. Climber/liana, to 2 m, flowers orange, fruit yellow.
 Pan-African.

Momordica trifoliolata Hook.f. Spjut RW 3933
 Jilore/Sabaki scarp. Climber/liana, flowers yellow, fruit scarlet.
 Swahilian endemic+.

Zehneria pallidinervia (Harms) C. Jeffrey Rawlins S 748
 Jilore. Climber/liana, to 2 m, leaves triangular fleshy with white nerves, flowers white on long
 stems.
 Swahilian endemic+.

114

Ochnaceae

Ochna atropurpurea DC. Langridge WP 37
 (*Ochna mossambicensis* Klotzsch)
 ‘Arabuko-Sokoke’. Shrub, to 2 m, leaves small-toothed, with cuneate base, calyx red, carpels
 black.
 Swahilian endemic.

Ochna holtzii Gilg s.r. (Robertson & Luke, 1993)
 ‘Arabuko -Sokoke’. Shrub, in understory, leaves on one plane, long-spinulose especially near
 (cuneate) base, sepals pinkish.
 Swahilian endemic+.

Ochna thomasiana Engl. & Gilg Greenway PJ 10445
 Arabuko. Shrub, to 2 m, leaves leathery, long-spinulose especially near (cordate) base.
 Swahilian endemic.

118

Myrtaceae

- Eugenia capensis* (Eckl. & Zeyh.) Harv. s.r. (Robertson & Luke, 1993)
 subsp. *multiflora* Verdc.
 ‘Arabuko-Sokoke’. Shrub, to 2 m (?), leaves elliptic, broader than 2 cm, pubescent on midrib below, male flowers white, hairy.
 Swahilian endemic.

120

Melastomataceae

- Antherotoma debilis* (Sond.) Jacq.-Fél. s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Herb, perennial, to 1 m, with multiple stems pinkish hairy, flowers pink/mauve.
 Pan-African.
- Memecylon fragrans* A.Fern. & R.Fern. Perdue RE & Kibua SP 10010
 Jilore. Shrub, to 1.5 m, leaves stiff, veins invisible, infl. many flowered.
 Kenya coastal endemic. Vulnerable.
- Warneckea melindensis* (A.Fern. & R.Fern.) R.D.Stone & Q.Luke Graham RM K2162
 Arabuko. Shrub, or small tree, flowers white/mauve.
 Kenya Coastal endemic. Endangered.
- Warneckea mouririfolia* (Brenan) Borhidi Graham RM 1527
 Arabuko. Shrub, to 1.5 m, leaf base subcordate, veins visible, flowers white.
 Swahilian endemic. Vulnerable.
- Warneckea sansibarica* (Taub.) Jacq.-Fél. Robertson SA & Luke WRQ 4620
 Dida-Kararacha track. Tree, to 10 m, leaf base cuneate, veins visible, flowers electric-blue.
 ? Swahilian endemic+.

121

Combretaceae

- Combretum apiculatum* Sond. Robertson SA & Luke WRQ 4629
 subsp. *apiculatum*
 Forest Reserve NW boundary. Tree, to 8 m, leaves and fruit present from ground up, fruit red, 4 - winged.
 Pan-African.
- Combretum falcatum* (Welw. ex Hiern) Jongkind Robertson SA 3715
 (*Quisqualis littorea* (Engl.) Exell)
 ‘Arabuko-Sokoke’. Shrub, scrambling, young branchlets yellowish pubescent, petioles persisting as blunt spine, flowers greenish, fruit 5 - winged.
 Pan-African.
- Combretum homalioides* Hutch. & Dalziel Luke WRQ 1937
 Forest Reserve south-west corner. Shrub, to 4 m, flowers in terminal fascicles.
 Pan-African.
- Combretum illairii* Engl. Dale IR 1048
 Arabuko. Liana, to 5 m, or shrub, fruit 4 - angled in clusters, brown when ripe.
 Swahilian endemic.
- Combretum schumannii* Engl. Ndakala J 339
 ‘Arabuko-Sokoke’. Tree, or shrub to 15 m, bark flaking or peeling, leaves opposite, flowers yellow, fruit 4-winged 3.5 cm.
 Pan-African.
- Lumnitzera racemosa* Willd. Polhill R & Paulo S 899
 var. *racemosa*
 Mida Creek. Shrub, or small tree to 8 m, in the intertidal zone (mangrove), with spatulate emarginated leaves and white flowers.
 Pan-Tropical.

- Pteleopsis tetraptera* Wickens Robertson SA & Luke WRQ 4625A
 'Arabuko-Sokoke'. Tree, or shrub to 12 m, leaves dark green, flowers white or cream, fruit usually 4-winged.
 Swahilian endemic.
- Terminalia boivinii* Tul. Donald 96 in FD 2496 (cited in FTEA)
 Mida. Shrub or small tree, to 5 m, leaves on short shoots, inflorescence of lateral spikes, fruit ellipsoid, unwinged.
 Swahilian endemic+.
- Terminalia sambesiaca* Engl. & Diels Gardner TAM 15/12/2/176
 Kararacha. Tree, to 25 m, bark light grey, branches spread laterally, leaves spirally arranged, fruit to 9 cm.
 Swahilian endemic+.
- Terminalia spinosa* Engl. Greenway PJ 10838
 Mida. Tree, to 20 m, bark heavily fissured, leaves tufted, spines present, fruit reddish, 3 cm.
 Swahilian endemic+.

122**Rhizophoraceae**

- Bruguiera gymnorhiza* (L.) Savigny Kuchar P 903
 Mida Creek intertidal zone. Tree, to 10 m, leaves at end of branches, flowers white or red.
 Pan-Tropical.
- Cassipourea euryoides* Alston Gillet JB & Kibuwa SP 20019
 Mida-Jilore track. Tree, to 15 m, branches low, leaves slightly toothed, flowers greenish, fruit velvety.
 Swahilian endemic.
- Rhizophora mucronata* Lam. s.r. (Robertson & Luke, 1993)
 Mida Creek. Tree, to 10 m, in intertidal zone (mangrove) with stilt roots, seeds viviparous.
 Pan-Tropical.

126**Clusiaceae**

- Garcinia livingstonei* T. Anderson Jeffery GW K328
 Sokoke. Tree, to 10 m, leaves leathery, in whorls of three, flowers axillary, greenish.
 Pan-African.

Hypericaceae

- Vismia orientalis* Engl. Graham RM 1514
 'Arabuko-Sokoke'. Shrub, or small tree, to 7 m, leaves with black glands, deciduous, fruit white with pink markings.
 Swahilian endemic.

128–132**Malvaceae**

- Abutilon mauritianum* (Jacq.) Medik. s.r. (Robertson & Luke, 1993)
 subsp. *zanzibaricum* (Mast.) Verdc.
 'Arabuko-Sokoke'. Herb, woody, to 1.2 m, flowers yellow, fruits black.
 Swahilian endemic+.
- Adansonia digitata* L. s.r. (Robertson & Luke, 1993)
 'Arabuko-Sokoke'. Tree, to 20 m with massive succulent trunk and sparse crown, fruit a velvety greenish-brown capsule up to 20 cm.
 Pan-African.
- Carpodiptera africana* Mast. Graham RM 1929
 Arabuko. Tree, to 12 m, or shrub, fruit ellipsoid with 2 pairs of wings.
 Swahilian endemic.
- Cola minor* Brenan Robertson SA & Luke WRQ 4621
 Nature Reserve. Tree, to 7 m, leaves dark green, fruit ferruginous, hairy.
 Swahilian endemic. Near threatened.

- Gossypioides kirkii* (Mast.) J.B.Hutch. Perdue RE & Kibuwa SP 10039
Jilore. Shrub, scandent, to 3 m, flowers yellow, seeds embedded in woolly light brown floss.
Swahilian endemic.
- Grewia capitellata* Bojer Greenway PJ 10842
(*G. ectasicarpa* S.Moore.)
'Arabuko-Sokoke'. Shrub, climbing, or liana to 3 m, leaves 3 - nerved from base, flowers white: sepals 15 mm and petals 6 mm.
Swahilian endemic.
- Grewia forbesii* Harv. ex Mast. Robertson SA 6971
Gede Forest Station. Shrub, or liana, to 3 m, stem strongly fluted, leaves scabrous, flowers yellow: sepals 20 mm and petals 12 mm.
Swahilian endemic+.
- Grewia holstii* Burret s.r. (Thomas, 1988)
'Arabuko-Sokoke'. Small tree, or climber, to 3 m, older stems 3-4 angled, leaves not scabrous, flowers yellow with sepals 10 mm and petals 7 mm.
Swahilian endemic.
- Grewia plagiophylla* K.Schum. Simpson BL 200A
'Arabuko-Sokoke'. Shrub, or tree, to 7 m, leaves discolorous, flowers yellow with sepals 9 mm and petals 6 mm.
Swahilian endemic.
- Grewia stuhlmannii* K.Schum. Luke WRQ & Robertson SA 2582
Mida. Shrub, climbing, to 9 m, leaves glossy above, flowers white with sepals 21 mm and petals 11 mm.
Swahilian endemic.
- Grewia triflora* (Bojer) Walp. Greenway PJ EAH12518
(*G. vaughanii* Exell)
'Arabuko-Sokoke'. Shrub, or tree, leaves bright green, shiny, fruit unilobed.
Swahilian endemic.
- Grewia truncata* Mast. Kimeu JM et al. KEFRI683
Gede Forest Station. Shrub, or tree, leaf apex truncate, fruit four-lobed.
Swahilian endemic.
- Hermannia exappendiculata* (Mast.) K.Schum. Simpson BL 169
Nature Reserve. Herb, woody, to 1 m, flowers bright yellow.
Swahilian endemic+.
- Hibiscus cannabinus* L. Perdue RE & Kibuwa SP 10107
Jilore (?). Herb, to 2 m, single stemmed, prickly, flowers with purple centre.
Pan-Tropical.
- Hibiscus faulknerae* Vollesen s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody, to 2 m, stems angular, flowers yellow with dark centre.
Swahilian endemic.
- Hibiscus micranthus* L.f. Beentje H 2326
Jilore track. Herb, to 1.2 m, flowers white turning pink, seeds black.
Pan-Tropical
- Hibiscus panduriformis* Burm.f. Simpson BL 309
'Lake' Jilore. Herb, erect to 2 m, flowers yellow with dark centre.
Pan-Tropical.
- Melhanina velutina* Forssk. Polhill R & Paulo S 874
Jilore. Herb, to 1 m, leaves ovate, tomentose, to 13 cm, flowers solitary or in few-flowered cymes, pale yellow.
Pan-Tropical.
- Melochia corchorifolia* L. s.r. (Thomas, 1988)
'Arabuko-Sokoke'. Herb, upright to 1 m, flowers pink mauve with yellow centre.
Pan-Tropical.

- Nesogordonia holtzii* (Engl.) Capuron ex L.C.Barnett & Dorr Robertson SA & Luke WRQ 4615
Forest Reserve south boundary. Tree, to 10 m, branches high up, fruit capsule woody, bell-shaped.
Swahilian endemic.
- Pavonia leptocalyx* (Sond.) Ulbr. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody, to 40 cm, leaves slightly lobed, stellate hairy below, flowers white.
Swahilian endemic +.
- Rhodognaphalon schumannianum* A.Robyns Perdue RE & Kibuwa SP 10122
(*Bombax rhodognaphalon* K.Schum.)
Jilore. Tree, to 25 m, bark smooth yellow-green, seed floss light brown.
Swahilian endemic +.
- Sida cordifolia* L. Simpson BL 243
'Arabuko-Sokoke'. Herb, woody, to 60 cm, flowers solitary, pale yellow with dark red centre.
Pan-Tropical.
- Thespesia danis* Oliv. Perdue RE & Kibuwa SP 10078
Mida. Shrub, or tree, to 2 m, leaves slightly fleshy, flowers yellow with exocalyx, fruit indehiscent.
Swahilian endemic +.
- Triumfetta rhomboidea* Jacq. s.r. (Thomas, 1988)
'Arabuko-Sokoke'. Herb, woody, erect, to 1 m, flowers yellow, fruit covered with hooked spines.
Pan-Tropical.
- Waltheria indica* L. Perdue RE & Kibuwa SP 10036
Jilore. Herb, woody, to 1 m, leaves crenate, hairy, flowers yellow.
Pan-Tropical.

133**Malphigaceae**

- Acridocarpus zanzibaricus* A.Juss. Sangai GW 18/3/73
Jilore (?). Shrub, sometimes climbing, to 4 m, infl. in terminal racemes, flowers yellow, fruit
a samara.
Swahilian endemic.
- Triaspis mozambica* A.Juss. Jeffery 1
Sokoke. Climber, to 3 m, infl. terminal or axillary, bracts linear/lanceolate, flowers yellowish
green.
Swahilian endemic +.

135**Erythroxylaceae**

- Erythroxylum emarginatum* Thonn. Beentje H 2311
Nature Reserve. Shrub, to 3 m, in understory, branchlets flattened, flowers white petals
<7 mm, fruit red.
Pan-African.
- Nectaropetalum kaessneri* Engl. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Shrub, or small tree, to 6 m, leaves discolorous, petals white, fruits
cylindric.
Swahilian endemic.

Linaceae

- Hugonia castaneifolia* Engl. Graham RM 2293
Arabuko. Shrub, scandent or liana, to 3 m, younger stems with appressed yellow hairs,
climbing hooks curled in a spiral, stipules thread-like, flowers and fruit yellow.
Swahilian endemic.

136**Euphorbiaceae**

- Acalypha fruticosa* Forssk. Polhill R & Paulo S 868
var. *fruticosa*
'Arabuko-Sokoke'. Shrub, to 1.2 m, leaves with resinous smell when crushed, female flowers
below male in infl.
Pan-Tropical.

- Acalypha neptunica* Müll.Arg. Kabuye C, Gilbert VC & Robertson SA 84/32
 var. *neptunica*
 Nature Reserve. Shrub, to 1.2 m, leaves glabrous, female flowers below male in inflorescence.
 Pan-African.
- Croton pseudopulchellus* Pax Robertson SA 3864
 ‘Arabuko Sokoke’. Tree, to 2 m, leaves silvery below and dotted with glands.
 Pan-African.
- Dalechampia scandens* L. s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Creeper, to 3 m, leaves three lobed, untoothed, infl. enclosed in 2 bracts.
 Pan-Tropical.
- Dalechampia trifoliata* Peter ex Verdc. & Greenway s.r. (Robertson & Luke, 1993)
 ‘Arabuko- Sokoke’. Creeper, to 2 m, leaves trifoliolate.
 Swahilian endemic +.
- Erythrococca kirkii* (Müll.Arg.) Prain Graham RM 1911
 Arabuko. Shrub, to 1.5 m, scandent, flowers mauve, in clusters.
 Swahilian endemic +.
- Euphorbia ingens* E.May ex Boiss. s.r. (Robertson & Luke, 1993)
 (*Euphorbia candelabrum* Trémaux ex Kotschy)
 ‘Arabuko-Sokoke’. Tree, to 12 m, succulent and spiny, branches almost erect, usually 4-angled.
 Pan-African.
- Euphorbia nyikae* Pax s.r. (Robertson & Luke, 1993)
 var. *neovolkensii* (Pax) S.Carter
 ‘Arabuko-Sokoke’. Tree, to 8 m, succulent and spiny, stem 4-angled, branches spread from low down, flowers red.
 Swahilian endemic.
- Euphorbia pereskiiifolia* Baill. Robertson SA, Luke WRQ & Awimbo J 5249
 (*Synadenium pereskiiifolium* (Baill.) Guill.)
 Nature Reserve. Shrub, to 4 m, succulent, leaf midrib keeled below.
 Swahilian endemic.
- Jatropha prunifolia* Pax Simpson BL 350
 A-S *Brachystegia* forest. Herb, to 75 cm, infl. terminal, fruit three lobed and green.
 Swahilian endemic +.
- Jatropha spicata* Pax Kimeu JM KEFRI461
 Jilore. Herb, to 2 m, semi-succulent, sap clear to milky, flowers yellow or reddish - green.
 Pan-African.
- Mallotus oppositifolius* (Geiseler) Müll.Arg. Jeffery GW K366
 var. *oppositifolius*
 Sokoke. Shrub, to 2 m, or tree, leaves to 16 cm, flowers cream green.
 Pan-Tropical.
- Micrococca mercurialis* (L.) Benth. Luke WRQ 3024
 Mida. Herb, to 60 cm, leaves often purple tinged, flowers greenish-yellow, fruits bristly, three-lobed.
 Pan-Tropical.
- Mildbraedia* sp. A of FTEA. Moggridge GM 398
 Sokoke. Shrub.
 Kenya coast endemic.
- Oldfieldia somalensis* (Chiov.) Milne-Redh. Spjut RW 3903
 Jilore Forest Station. Tree, to 8 m, branching high up, leaves digitate, fruit yellow.
 Swahilian endemic. Near threatened.
- Suregada zanzibariensis* Baill. Kabuye C, Gilbert VC, & Robertson SA 84/24
 Nature Reserve. Tree or shrub, to 3 m, shiny leaves appearing glandular.
 Pan-tropical.

Phyllanthaceae

- Antidesma venosum* E.Mey. ex Tul. Greenway PJ 10843
 ‘Arabuko Sokoke’. Shrub, or small tree, to 4 m, leaves glabrescent to densely hairy, flowers yellow-green, in hanging spikes, fruit red to black.
 Pan-African.
- Bridelia cathartica* G.Bertol. Nash LT 20
 subsp. *cathartica* forma *fischeri* (Pax) Radcl.-Sm.
 Gede. Shrub, to 2 m, branches zig-zag, leaves shiny above, on one plane, flowers cream-green, sessile at nodes in dense heads.
 Pan-African.
- Flueggea virosa* (Roxb. ex Willd.) Voigt Donald GH 83
 Mida. Shrub, to 2 m, in understory, flowers yellow-green or cream, fruit white.
 Pan-Tropical.
- Margaritaria discoidea* (Baill.) G.L.Webster s.r. (Robertson & Luke, 1993)
 var. *discoidea*
 ‘Arabuko-Sokoke’. Shrub, or small tree, to 8 m, flowers green or pale yellow, fruit 3 - lobed.
 Pan-African.
- Meineckia fruticans* (Pax.) G.L.Webster Luke WRQ 1942
 var. *fruticans*
 Dida/Sokoke Nyari. Shrub, to 1.5 m, flowers greenish-white in fascicles, fruit to 5 mm across, hanging on thin pedicels.
 Swahilian endemic.
- Phyllanthus guineensis* Pax Jeffery GM K566
 Dida. Shrub, spreading, flowers yellowish-green, appearing before new leaves, dioecious.
 Pan-African.
- Phyllanthus kaessneri* Hutch. Robertson SA 3712
 ‘Arabuko-Sokoke’. Shrub, to 1.5 m, pseudo-pinnate branches to 3 cm.
 Swahilian endemic. Vulnerable.
- Phyllanthus leucocalyx* Hutch. Luke WRQ & Robertson SA 2591
 Mida. Herb, woody, to 50 cm, pseudo-pinnate branches to 11 cm.
 Pan-African.
- Phyllanthus pinnatus* (Wight) G.L.Webster Simpson BL 328
 A-S *Azelia* forest. Shrub, to 3 m, flowers yellow-green in dense fascicles on older twigs.
 Pan-Tropical.
- Phyllanthus reticulatus* Poir. Graham RM FD3/30
 var. *glaber* (Thwaites) Müll.Arg.
 Gede. Shrub, 3-4 m, flowering shoots hairless.
 Pan-Tropical.
- Phyllanthus reticulatus* Poir. Donald GH 2489
 var. *reticulatus*
 Arabuko. Shrub, 3-4 m, pseudo-pinnate branches > 12 cm, flowering shoots with short velvety hairs.
 Pan-Tropical.
- Phyllanthus welwitschianus* Müll.Arg. Kabuye C, Gilbert VC & Robertson SA 84/6
 var. *beillei* (Hutch.) Radcl.-Sm.
 Nature Reserve. Shrub, to 1.5 m, multi-stems from a woody root stock, leaves also occur on stem, monomorphic.
 Pan-Tropical.
- Thecacoris spathulifolia* (Pax) Leandri Faden RB & AJ 74/1222
 (*Cyathogyne bussei* Pax)
 Mida. Herb, woody, to 2 m, leaves crowded at apex of branches.
 Swahilian endemic+.

Picrodendraceae

- Aristogeitonia monophylla* Airy Shaw Luke WRQ & Robertson SA 76
 Dida. Shrub, or small tree to 10 m, petiole with 2 stipular 'horns', flowers yellow, in fascicles, on old wood.
 Swahilian endemic. Near threatened.

Putranjivaceae

- Drypetes natalensis* (Harv.) Hutch. Greenway PJ 10447
 var. *leiogyna* Brenan
 Arabuko. Tree, to 10 m, flowers cream-coloured, densely clustered on knobs on stem, fruit orange.
 Swahilian endemic.
- Drypetes parvifolia* (Müll.Arg.) Pax & K.Hoffm. Robertson SA, Luke WRQ & Awimbo J 5253
 Kararacha-Sokoke boundary. Tree, to 5 m, branches horizontally spreading, leaves asymmetric, flowers beneath leaves.
 Swahilian endemic +.
- Drypetes reticulata* Pax Robertson SA 4659
 Nature Reserve. Tree, to 10 m, leaves shiny, symmetric, flowers axillary, fruits green turning yellow.
 Swahilian endemic +.
- Drypetes usambarica* (Pax) Hutch. Luke WRQ 1944
 var. *mrirae* Radcl.-Sm.
 Dida/Sokoke Nyari. Tree, to 20 m, branches horizontally spreading, leaves serrate, flowers cauliflorous, fruits glabrous.
 Swahilian endemic. Vulnerable.

144**Dichapetalaceae**

- Dichapetalum fadenii* Breteler Luke WRQ & Robertson SA 2612
 Big Nyari. Shrub, scandent, or liana, branches brown to black, with lenticels, leaves densely short-hairy, flowers white, young fruit tomentose.
 Kenya Coast Endemic.
- Dichapetalum madagascariense* Poir. Langridge WP 132
 var. *madagascariense*
 'Arabuko-Sokoke'. Shrub, or climber, to 3 m, sepals > 3 mm, ovary with short hairs, fruit orange.
 Pan-Tropical.
- Dichapetalum zenkeri* Engl. Greenway PJ 9812
 Sokoke. Shrub, to 2 m, or liana, much branched, leaf veins hairy, ovary with long woolly hairs.
 Pan-African. Least concern.

146–148**Leguminosae (Fabaceae)**

- Acacia adenocalyx* Brenan & Exell Musyoki BM & Hansen OJ 1039
 Jilore Forest Station. Shrub spreading, or climber/liana, to 4 m, hooked spines scattered on internode, flowers in a white head.
 Swahilian endemic.
- Acacia nilotica* (L.) Willd. ex Delile Perdue RE & Kibuwa SP 10144
 Jilore. Tree, to 10 m, spines straight, flowers yellow, globose.
 Pan-Tropical.
- Acacia robusta* Burch. Graham RM 2063
 subsp. *usambarensis* (Taub.) Brenan
 Mida. Tree, to 15 m, bark smooth grey, spines straight, paired, flowers creamy white, globose.
 Swahilian endemic +.
- Azelia quanzensis* Welw. Kimeu JM et al. KEFRI 528
 Gede Forest Station. Tree, to 20 m, flower with single petal pink/red, bilobed at apex, pods 20 cm, woody, seeds black with bright red aril.
 Pan-African.

- Albizia anthelmintica* Brongn. Perdue RE & Kibuwa SP 10094
 Jilore. Tree, to 10 m, leaf rachis hooked at end, leaves with 2-4 pinnae, leaflets to 4 cm.
 Pan-African.
- Brachystegia spiciformis* Benth. Trump EC 115
 'Arabuko-Sokoke'. Tree, to 20 m, leaves flush pink/red with rains, flowers yellow/green,
 fragrant, in racemes.
 Pan-African.
- Caesalpinia bonduc* (L.) Roxb. Kuchar P 9995
 Mida Creek. Shrub to 2 m, or liana, prickles short and densely set, petals yellow.
 Pan-Tropical.
- Canavalia rosea* (Sw.) DC. s.r. (Robertson & Luke 1993)
 'Arabuko Sokoke'. Creeper, to 10 m, on sand dunes, leaflets round, flowers pink/purple.
 Pan-Tropical.
- Cassia abbreviata* Oliv. s.r. (Thomas, 1988)
 'Arabuko-Sokoke'. Tree, to 10 m, leaves arranged spirally, flowers yellow, pods to 90 cm, in
Brachystegia woodland.
 Pan-African.
- Cassia afrofistula* Brenan s.r. (Robertson & Luke, 1993)
 var. *afrofistula*
 'Arabuko-Sokoke'. Tree, to 10 m, leaflets dark green, infl. > 15 cm, pods to 60 cm.
 Swahilian endemic.
- Chamaecrista absus* (L.) H.S.Irwin & Barneby Kirika P et al. NMK745
 Mida Creek. Herb, sparsely branched, to 1 m, flowers yellow/orange.
 Pan-Tropical.
- Chamaecrista mimosoides* (L.) Greene Roberston SA & Brummit R 6756
 (*Cassia mimosoides* L.)
 South of Nature Reserve. Herb, to 40 cm, flowers yellow, pedicels in fruit < 1 cm.
 Pan-Tropical.
- Chamaecrista zambesica* (Oliv.) Lock. Miller G K232
 Sokoke. Herb, creeping, flowers yellow.
 Pan-African.
- Clitoria ternatea* L. s.r. (Robertson & Luke, 1993)
 'Arabuko-Sokoke'. Herb, climbing/trailing, to 2 m, flowers blue/white.
 Pan-Tropical.
- Craibia brevicaudata* (Vatke) Dunn Simpson BL 374
 subsp. *brevicaudata*
 'Arabuko Sokoke'. Tree, to 8 m, leaflets tapering at tip, petiole with distinct swelling, flowers
 white, greenish in centre, fragrant.
 Swahilian endemic. Near threatened.
- Crotalaria axillaris* Aiton Graham RM 208
 Arabuko. Shrub, to 1.5 m, flowers yellow, axillary in short racemes or fascicles.
 Pan-African.
- Crotalaria grata* Polhill Robertson SA 3731
 'Arabuko-Sokoke'. Herb, erect, to 1.5 m.
 Kenya Coast endemic. Endangered.
- Crotalaria laburnifolia* L. Simpson BL 270
 subsp. *laburnifolia*
 Madunguni. Herb, erect, to 2 m, leaves three foliate, flowers yellow.
 Pan-Tropical.
- Crotalaria retusa* L. Simpson BL 284
 'Arabuko-Sokoke'. Herb, woody, to 1 m, stem ridged, leaves simple, flowers yellow.
 Pan-Tropical.

- Crotalaria vasculosa* Wall ex Benth. Robertson SA & Luke WRQ 2596
Mida/Arabuko. Herb, bushy.
Pan-African.
- Cynometra suaheliensis* (Taub.) Baker f. Robertson SA, Vollesen K & Mwachala G 6743
Kararacha pools. Tree, to 10 m, bark smooth, peeling, leaflets 4, asymmetrical, flowers white,
pod beaked at apex.
Swahilian endemic. Vulnerable.
- Cynometra webberi* Baker f. Graham RM 2168
Arabuko. Tree, to 10 m, bark smooth, peeling, leaflets 6-8.
Swahilian endemic. Vulnerable.
- Dalbergia melanoxyton* Guill. & Perr. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 7 m, much branched, branchlets clustered at nodes, spine-tipped,
leaflets obovate.
Pan-Tropical. Near threatened.
- Dalbergia vacciniifolia* Vatke Spjut RW 2625
Jilore. Climber, woody, leaflet apex obtuse, rounded, 10-16 per leaf.
Swahilian endemic. Vulnerable.
- Dialium orientale* Baker f. Greenway PJ 10452
Arabuko. Tree, to 15 m, with flattened crown, branches drooping, flowers apetalous, greenish
white, stamens 2, pods red-brown.
Swahilian endemic. Near threatened.
- Dichrostachys cinerea* (L.) Wight & Arn. s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Shrub, spiny, thicket - forming, infl. an axillary spike with yellow flowers
above white ones.
Pan-Tropical.
- Erythrina saclexii* Hua s.r. (Robertson & Luke, 1993)
'Arabuko Sokoke'. Tree, to 20 m, trunk with corky spine tipped knobs, flowers red with white
wings, pod not constricted.
Swahilian endemic. Near threatened.
- Hymenaea verrucosa* Gaertn. Perdue RE & Kibuwa SP 10045
Mida. Tree, to 20 m, flat crowned, evergreen, flowers white, pods ovoid, warty.
Pan-Tropical.
- Indigofera kirkii* Oliv. Luke WRQ 3032
Mida. Herb, woody, prostrate or upright to 1 m, stem reddish.
Swahilian endemic.
- Indigofera longiracemosa* Boivin ex Baill. Kirika P, Nyamongo D & Sanyani S 04/12/2008
Gede. Herb, prostrate, to 1 m, pod beaked, 2 cm.
Swahilian endemic+.
- Indigofera strobilifera* (Hochst.) Hochst. ex Baker Robertson SA 6993
subsp. *lanuginosa* (Taub. ex Baker.f.) J.B.Gillett
Kararacha. Herb, flowers pink with soft silky hairs.
Swahilian endemic+.
- Indigofera tinctoria* L. Simpson BL 307
'Lake' Jilore. Herb, to 2 m, many branched, flowers purple in axillary racemes.
Pan-Tropical.
- Indigofera trita* L.f. Robertson SA, Schrire BD & Stirton CH 2569
Mida. Herb, climbing, to 1.5 m, woody, leaves trifoliolate, pod tetragonal 2.5 cm.
Pan-Tropical.
- Indigofera vohemarensis* Baill. Jeffery GW K296
'Arabuko Sokoke'. Herb, to 1 m, flowers pink, leaves musky, pods > 18 mm.
Swahilian endemic+.

- Indigofera wituensis* Baker f. Polhill R & Paulo S 889
 var. *wituensis*
 Mida. Herb, woody, flower standard and wings pink/red.
 Pan-Tropical.
- Julbernardia magnistipulata* (Harms) Troupin Polhill R 4824
 Kararacha. Tree, to 20 m, leaves flush red with rains, stipules leaf-like and persistent, to 5cm.
 Swahilian endemic. Vulnerable.
- Lablab purpureus* (L.) Sweet Jeffery GW K260
 subsp. *uncinatus* Verdc.
 Sokoke. Creeper, leaves light green, flowers white.
 Pan-Tropical.
- Mimosa pigra* L. Simpson BL 239
 'Arabuko-Sokoke'. Tree, to 5 m, stem ridged, prickles present, flowers pinkish.
 Pan-Tropical (introduced/naturalized).
- Mundulea sericea* (Willd.) A.Chev. Williams JG EAH12535
 Sokoke. Shrub, to 3 m, flowers purplish-blue, fruit velvety often with persistent corolla.
 Pan-Tropical.
- Neptunia oleracea* Lour. Robertson SA & Luke WRQ 2510
 Kararacha. Herb, trailing, aquatic, flowers yellow.
 Pan-Tropical (introduced/naturalized).
- Newtonia paucijuga* (Harms) Brenan Lea JD 3
 'Arabuko -Sokoke'. Tree, to 20 m branching high up, leaf pinnae 2 pairs, leaflets up to 3
 pairs, pods dark brown.
 Swahilian endemic. Near threatened
- Ormocarpum kirkii* S.Moore Simpson BL 367
 Dida. Shrub, to 2 m, flowers pinkish/purple, pod coiled in persistent corolla.
 Pan-African.
- Ormocarpum sennoides* (Willd.) DC. Gisau Sok 23
 subsp. *zanzibaricum* Brenan & J.B.Gillet
 Sokoke. Tree, to 5 m, branches drooping, flowers white, pods constricted and bristly.
 Swahilian endemic. Vulnerable.
- Paramacrolobium coeruleum* (Taub.) J.Léonard Robertson SA, Luke WRQ & Awimbo J 5255
 Kararacha. Tree, to 10 m, trunk straight, with spreading crown and drooping branches, bark
 pale pinkish-grey, flowers blue/purple.
 Pan-African.
- Philenoptera bussei* (Harms) Schrire Greenway PJ 10820
 (*Lonchocarpus bussei* Harms)
 Mida Creek. Tree, to 6 m, Uppermost leaflet largest, flowers mauve in many-flowered
 panicles, appearing before the leaves.
 Pan-African
- Pseudovigna argentea* (Willd.) Verdc. Graham RM K1906
 Arabuko. Herb, trailing, to 2 m, flowers pale pink, pod 3 cm hairy.
 Pan-African.
- Rhynchosia congensis* Baker Graham RM 2111
 subsp. *orientalis* Verdc.
 Mida. Herb, trailing, flowers yellow, seeds blue.
 Swahilian endemic +.
- Rhynchosia velutina* Wight & Arn. Simpson BL 147
 var. *velutina*
 'Arabuko Sokoke'. Herb, climbing or trailing, flowers yellow.
 Pan-Tropical.

- Senna occidentalis* (L.) Link Graham RM OX329
 (*Cassia occidentalis* L.)
 Mida. Shrub, to 3 m, flowers yellow in racemes from upper axils.
 Pan-Tropical (introduced/naturalized).
- Senna siamea* (Lam.) H.S.Irwin & Barneby Perdue RE & Kibuwa SP 10168
 Jilore Forest Station. Tree, to 12 m. Flowers yellow.
 Pan-Tropical (introduced/naturalized). Least concern.
- Sesbania bispinosa* (Jacq.) W. Wight. Graham RM 842
 var. *bispinosa*
 Mida. Shrub, flowers yellow with greyish spots.
 Pan-Tropical.
- Stuhlmannia moavi* Taub. Robertson SA & Brummit R 6757
 (*Caesalpinia insolita* (Harms.) Brenan & J.B. Gillet)
 Nature Reserve boundary pools. Tree, to 12 m, leaves with up to 10 pairs of pinnae, flowers yellow.
 Swahilian endemic +. Vulnerable.
- Stylosanthes fruticosa* (Retz.) Alston Faden RB & AS 74/1220
 Sokoke. Herb, erect, to 50 cm, flowers yellow.
 Pan-African.
- Tamarindus indica* L. Perdue RE & Kibuwa SP 10072
 Mida-Jilore track. Tree, to 15 m with spreading crown, pod rusty brown, indehiscent, sub-cylindrical to 14 cm.
 Pan-Tropical.
- Tephrosia noctiflora* Bojer ex Baker Langridge WP 14
 Sokoke. Herb, woody, to 1.5 m, flowers white with purple blotches, pod to 5 cm upcurved.
 Pan-Tropical.
- Tephrosia pumila* (Lam.) Pers. Greenway PG 10457
 var. *aldabrensis* (J.R.Drumm. & Hemsl.) Brummitt
 Mida Creek. Herb, prostrate, seed spacing < 4 mm.
 Pan-Tropical.
- Tephrosia subtriflora* Hochst. ex Baker Brennan JPM, Gillet JB et al. 14680
 Mida. Herb, to 1 m, semi-prostrate, flowers pinkish-purple.
 Pan-Tropical.
- Tephrosia villosa* (L.) Pers. Simpson BL 229
 subsp. *ehrenbergiana* (Schweinf.) Brummitt
 'Arabuko Sokoke'. Herb, woody, to 60 cm, flowers mauve, pod strongly curved, silvery hairy.
 Pan-African.
- Vigna membranacea* A. Rich. Polhill R & Paulo S 877
 subsp. *hapalantha* (Harms) Verdc.
 'Arabuko Sokoke'. Herb, climbing/trailing, flowers mauve/blue.
 Kenya Coast endemic.
- Zornia apiculata* Milne-Redh. Luke WRQ 3022
 Mida. Herb, perennial, leaflets 2, flowers yellow, pod to 16 mm.
 Swahilian endemic +.
- Zornia capensis* Pers. Robertson SA 6096
 subsp. *tropica* Milne-Redh.
 Sokoke. Herb, leaflets 4, broadly lanceolate, pods reticulate.
 Swahilian endemic +.
- Zornia glochidiata* Rchb. ex DC. Robertson SA, Stirton CH & Schrire BD 6999
 Mida Creek. Herb, prostrate, leaves 2-foliolate, pods with small bristles.
 Pan-African.

154

Buxaceae

- Buxus obtusifolia* (Mildbr.) Hutch. Robertson SA & Luke WRQ 4616
Sokoke. Shrub, to 3 m, leaves stiff, flowers yellow, female above male in axillary infl.
Swahilian endemic. Vulnerable.

156

Salicaceae

- Dovyalis hispidula* Wild Robertson SA & Luke WRQ 4607
Forest Reserve southeast corner. Shrub, to 2 m, spines 5 cm, leaves hairy, fruit orange,
dangling.
Swahilian endemic.
- Dovyalis keniensis* E.V. Williams Donald FD 23(24)
(*Dovyalis* sp A of FTEA)
Arabuko. Tree, small, spiny, fruit globular, dark brown, velvety.
Kenya Coast endemic. Vulnerable.
- Dovyalis macrocalyx* (Oliv.) Warb. Sangai GW EA15650
Kaembeni-Dida. Shrub, to 2 m, spines to 6 cm, leaves glabrous, fruit red to orange.
Pan-African.
- Flacourtia indica* (Burm.f.) Merr. Faden RB & AJ 74/1253
Gede-Jilore track. Shrub, to 2.5 m, spines to 12 cm, leaves crenate shiny above, flowers
yellow-green, fruit red to orange.
Pan-Tropical.
- Ludia mauritiana* J.F. Gmel. Kabuye C, Gilbert VC & Robertson SA 84/11
(*L. sessiflora* Lamb.)
Nature Reserve. Tree, to 8 m, evergreen, leaves with slanting veins, flowers whitish-yellow,
fruit red.
Swahilian endemic.

(165)

Cannabaceae

- Trema orientalis* (L.) Blume Musyoki BM & Hansen OJ 8/6/73
Sokoke Forest Station. Tree, to 8 m, with drooping branches, leaves finely toothed, semi
scabrous above, fruit black.
Pan-Tropical.

167

Moraceae

- Dorstenia hildebrandtii* Engl. s.r. (Robertson & Luke, 1993)
var. *hildebrandtii*.
'Arabuko-Sokoke'. Herb, succulent, to 70 cm, from bulb, leaves spirally arranged, flowers on
star-shaped receptacle.
Swahilian endemic +. Near threatened.
- Ficus bubu* Warb. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 25 m, bark smooth yellow, leaves ca. 20 cm, shiny bright green,
rounded.
Pan-African.
- Ficus lingua* Warb. ex De Wild. & T. Durand s.r. (Robertson & Luke, 1993)
subsp. *depauperata* (Sim) C.C. Berg.
'Arabuko-Sokoke'. Tree, to 25 m, hemi-epiphytic, leaves spirally arranged, fruit axillary in
pairs.
Swahilian endemic.
- Ficus polita* Vahl Moggridge GM 392
subsp. *polita*
Sokoke. Tree, to 10 m, leaves heart-shaped with tip acuminate, bracts persistent, fruit on old
wood in small clusters.
Pan-Tropical.

- Ficus sansibarica* Warb. s.r. (Robertson & Luke, 1993)
 subsp. *sansibarica*
 ‘Arabuko-Sokoke’. Tree, to 25 m, or strangler, leaves lanceolate, glabrous, flowers cauliflorous, fruit green with pink spots.
 Swahilian endemic+.
- Ficus tremula* Warb. Robertson SA, Luke WRQ & Awimbo J 5250
 subsp. *tremula*
 Kararacha. Tree, to 10 m, or strangler, leaf petiole with red mark on apex, fruit spotted white, in clusters on old wood.
 Swahilian endemic.
- Ficus usambarensis* Warb. Luke WRQ 1943
 Dida/Sokoke Nyari. Shrub, or small tree, to 5 m, male flowers in ‘catkins’, fruit 1 cm.
 Swahilian endemic+.
- Streblus usambarensis* (Engl.) C.C.Berg. s.r. (Robertson & Luke, 1993)
 ‘Arabuko Sokoke’. Shrub, or small tree, to 5 m, latex cloudy, male flowers in spikes, female solitary, fruit black.
 Pan-African.
- 173**
- Celastraceae**
- Elachyptera parvifolia* (Oliv.) N.Hallé Faden RB & AJ 71/750
 Sokoke Forest Station. Shrub, scandent, or liane to 4 m, flowers yellow-green, fruit paddle shaped.
 Pan-African.
- Elaeodendron schweinfurthianum* (Loes.) Loes. Luke WRQ & Robertson SA 2609
 Dida/Sokoke Nyari. Tree, to 4 m, much branched, flowers yellow/green, fruits white.
 Swahilian endemic+.
- Gymnosporia gracilis* Loes. Simpson BL 67
 subsp. *gracilis*
 (*Maytenus mossambicensis* (Klotsch) Blakelock var. *ambonensis* (Loes.) N.Robson)
 ‘Arabuko-Sokoke’. Shrub, spiny, stems reddish when young, flowers white.
 Swahilian endemic+.
- Loeseneriella africana* (Willd.) N.Hallé s.r. (Robertson & Luke, 1993)
 var. *africana*
 ‘Arabuko-Sokoke’. Liana, to 4 m, flowers yellow green, buds conical.
 Pan-African.
- Loeseneriella africana* (Willd.) N.Hallé Sangai GW 15 648
 var. *richardiana* (Cambess.) N.Hallé
 Kaembeni-Dida. Climber/liana, to 4 m, branchlets green, 4 angled when young.
 Pan-African.
- Maytenus undata* (Thunb.) Blakelock Graham RM 173
 Arabuko. Shrub, to 3 m, bark grey/brown, spines absent, leaves crenate/dentate, flowers greenish yellow, fruit a 3 lobed capsule, reddish-brown.
 Pan-Tropical.
- Mystroxydon aethiopicum* (Thunb.) Loes. Faden RB & AJ 74/1248
 Mida-Jilore track. Shrub, to 6 m, extremely variable, spines absent, flowers greenish-yellow, fruit orange-red.
 Pan-Tropical.
- Pleurostylia africana* Loes. Robertson SA, Luke WRQ & Awimbo J 5256
 Kararacha. Tree, to 12 m, leaves almost rhomboid, leathery, tinged red when young, flowers axillary, greenish-yellow.
 Swahilian endemic+.
- Pristimera andongensis* (Welw. ex Oliv.) N.Hallé s.r. (Robertson & Luke, 1993)
 var. *volkensii* (Loes.) N.Hallé & B.Matthew
 ‘Arabuko-Sokoke’. Climber or liana, to 4 m, petals white with dark veins.
 Pan-African.

- Salacia elegans* Welw. ex Oliv. Robertson SA & IAD 4935
Nature Reserve. Shrub, scandent or liana to 10 m, stem ridged, leaf margin serrate or crenate, latex present, flowers yellow-green, fruit orange.
Pan-Tropical.
- Salacia erecta* (G.Don) Walp. Luke WRQ & Robertson SA 2610
Dida/Sokoke Nyari. Shrub, scandent or liana to 4 m, petiole margin wavy, leaf margin serrulate, latex absent.
Pan-African.
- Salacia leptoclada* Tul. Perdue RE & Kibuwa SP 10017
Jilore. Liana, to 10 m, petiole margin straight, leaf margin entire, latex absent, fruit orange-red when ripe.
Pan-African.
- Salacia madagascariensis* (Lam.) DC. Kimeu JM, et al. KEFRI470
Track to big Nyari. Tree, or liana to 5 m, stems lenticellate, latex present, fruits yellowish – orange when ripe.
Swahilian endemic +.

(179)**Icacinaceae**

- Pyrenacantha kaurabassana* Baill. Smith S 599
'Arabuko-Sokoke'. Climber, or liana, to 3 m, from underground tuber to 30 cm across, flowering when leafless.
Pan-African.

Metteniusaceae

- Apodytes dimidiata* E.Mey. ex Arn. Graham RM 203
Arabuko. Tree, to 5 m, crown bushy, leaves glossy, black when dry, flowers white in panicles to 12 cm, fruit black with red lobe.
Pan-Tropical.

180**Salvadoraceae**

- Azima tetracantha* Lam. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Shrub, scrambler to 3 m, young stems green, leaves leathery, spines four at node, flowers in axillary catkins, fruit green turning white.
Pan-Tropical.
- Dobera glabra* (Forssk.) Poir. Sangai GW EA1564
Kaembeni-Dida. Tree, to 7 m with rounded crown, leaves slightly fleshy, fruit orange, ellipsoid with acute apex, to 24 mm.
Pan-Tropical.
- Dobera loranthifolia* (Warb.) Harms s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 10 m, leaves slightly fleshy often with galls, fruit ellipsoid, yellow < 16 mm.
Swahilian endemic +.
- Salvadora persica* L. s.r. (Robertson & Luke, 1993)
var. *cyclophylla* (Chiov.) Cuf.
'Arabuko-Sokoke'. Tree, to 6 m with drooping branches, young stems green, leaves slightly fleshy, flowers miniscule, fruits red or white.
Swahilian endemic +.

(182)**Olacaceae**

- Ximenia americana* L. Spjut RW 2612
var. *caffra* (Sond.) Engl.
Jilore. Shrub, to 5 m, with axillary spines, flowers in cream/green heads, fruit yellow when ripe.
Pan-Tropical.

183

Opiliaceae

- Opilia amentacea* Roxb. Musyoki BM & Hansen OJ 1018
Sokoke. Climber, to 6 m, old stems with corky lenticels, flowers cone-like due to bracts, fruit yellow.
Pan-Tropical.
- Pentarhopalopilia umbellulata* (Baill.) Hiepko Simpson BL 330
'Arabuko-Sokoke'. Shrub, scandent, or climber, young branches greenish, infl. an umbel, fruit yellow.
Swahilian endemic.

185

Loranthaceae

- Agelanthus kayseri* (Engl.) Polhill & Wiens Robertson SA, Wiens D & Calvin C 5450
Mida Creek. Shrub, hemi-parasitic, to 50 cm, flowers tubular, with pink, green and red bands.
Swahilian endemic +.
- Agelanthus longipes* (Baker & Sprague) Polhill & Wiens Musyoki & Hansen 999
Sokoke Forest Station. Shrub, hemi-parasitic, to 1 m, flowers tubular, with pink, green and yellow bands.
Swahilian endemic. Vulnerable.
- Agelanthus heteromorphus* (A.Rich.) Polhill & Wiens Robertson SA 6959
(*Agelanthus scassellatii* (Chiov.) Polhill & Wiens)
Mida track. Shrub, hemi-parasitic, flowers red in upper half.
Swahilian endemic +.
- Emelianthe panganensis* (Engl.) Danser Robertson SA, Wiens D & Calvin C 5448
subsp. *commiphorae* Wiens & Polhill
Mida Creek. Shrub, to 1 m, hemi-parasitic on *Lannea stuhlmanii*, flower tubular, green at base and yellow at tip.
Swahilian endemic.
- Spragueanella rhamnifolia* (Engl.) Balle Robertson S, Wiens D & Calvin C 5455
(*Oncocalyx rhamnifolius* (Engl.) Tiegh.)
Jilore, 5 km south of forest station. Shrub, to 1 m, hemi-parasitic, flowers to 1.2 cm, white with pink and green bands.
Pan-African.
- Taxillus wiensii* Polhill Robertson SAR, Wiens D & Calvin C 5453
Jilore, 5 km south of station. Shrub, hemi-parasitic, to 30 cm, leaves leathery and rounded, flowers dull purple, green and red.
Arabuko-Sokoke endemic. Critically endangered.

Santalaceae

- Viscum triflorum* DC. Robertson SA & Luke WRQ 2618
Kararacha. Shrub, hemi - parasitic, leaves slightly fleshy, forms globose clusters on host trees to 30 cm, flowers white, fruit white.
Pan-African.

190

Rhamnaceae

- Colubrina asiatica* (L.) Brongn. Kuchar P 1011
Mida Creek. Shrub, scrambler, to 3 m, branches zig-zag, leaves bright green and shiny above, flowers yellow in axils, fruit slightly lobed, with persistent calyx.
Pan-Tropical.
- Helinus mystacinus* (Aiton) E.Mey. ex Steud. s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Climber, to 10 m, branchlets and leaves densely pubescent, flowers whitish.
Pan-African.

- Lasiodiscus pervillei* Baill. Robertson SA & Luke WRQ 2234
 subsp. *ferrugineus* (Verdc.) E.Figueiredo
 ‘Arabuko-Sokoke’. Shrub, or tree to 10 m, young twigs densely hairy, flowers white.
 Swahilian endemic. Vulnerable.
- Ziziphus mauritiana* Lam. Gisau 94
 ‘Arabuko-Sokoke’. Tree, to 10 m, branches zig-zag, thorns 2 at nodes, one curved one straight, leaves elliptic/round, flowers greenish, fruit yellow.
 Pan-Tropical.
- Ziziphus mucronata* Willd. s.r. (Robertson & Luke, 1993)
 subsp. *mucronata*
 ‘Arabuko-Sokoke’. Tree, to 10 m, thorns paired at nodes, leaf apex mucronate.
 Pan-Tropical.
- 193**
- Vitaceae**
- Cissus aralioides* (Baker.) Planch. Kimeu JM et al. KEFRI527
 subsp. *?orientalis* Verdc.
 Kakuyuni. Climber, to 3 m with succulent stem, leaves 5-digitately divided.
 Pan-African.
- Cissus integrifolia* (Baker.) Planch. Unknown ‘B’
 Gede. Climber, succulent, to 15 m, tendrils once forked, leaf simple and entire, flowers yellow-green, ripe fruit red.
 Pan-African.
- Cissus phymatocarpa* Masinde & L.E.Newton Sangai GW EA15652
 Kaembeni-Dida. Climber, succulent, stems jointed, segments 4-5 angled.
 Swahilian endemic.
- Cissus rotundifolia* (Forssk.) Vahl Jeffery GW K69
 var. *rotundifolia*
 Sokoke. Climber, succulent, to 9 m, tendrils once forked, leaves round, fleshy, crenate.
 Pan-Tropical.
- Cissus sylvicola* Masinde & L.E.Newton Sangai GW EA15735
 Jilore. Climber, semi-succulent, to 4 m, stems 5-angled.
 Swahilian endemic.
- Cissus quadrangularis* L. s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Climber, semi-succulent, to 5 m, stem 4-angled, leaves trilobed with tendrils opposite.
 Pan-Tropical.
- Cyphostemma adenocaula* (Steud. ex A.Rich.) Desc. Kabuye C, Gilbert VC & Robertson SA 84/59
 ex Wild. & R.B.Drumm.
 Sokoke. Climber to 7 m, from tuber, leaves 5-7 foliate.
 Pan-African.
- Cyphostemma duparquetii* (Planch.) Desc. s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Climber, to 8 m, leaves 5-foliate, stems with grey hairs, some red-tipped.
 Swahilian endemic.
- Cyphostemma hildebrandtii* (Gilg) Desc. ex Wild. & R.B.Drumm. Graham RM 1933
 Mida. Climber, or scandent shrub, semi-succulent, striated, with short grey and long red-tipped hairs, leaves 3-5 foliate.
 Pan-African.
- Cyphostemma kirkianum* (Planch.) Desc. ex Wild. & R.B.Drumm. s.r. (Mutanga & Mwaura, 1992.)
 subsp. *kirkianum*
 ‘Arabuko-Sokoke’. Herb, climber, flowers greenish.
 Swahilian endemic.

Rhoicissus revoilii Planch. Robertson SA 6960
 Mida-Jilore track. Shrub, or climber to 10 m, leaves 3-foliolate, hairy under, veins not reaching margin, flowers in dense heads, yellow-green.
 Pan-African, Arabia.

194–195**Rutaceae**

Clausena anisata (Willd.) Hook.f. ex Benth. Robertson SA 3884
 ‘Arabuko-Sokoke’. Shrub, or small tree up to 6 m, leaves strongly scented, flowers cream white, fruit shiny black.
 Pan-African.

Harrisonia abyssinica Oliv. Simpson BL 271
 Madunguni. Shrub, to 6 m, bark with corky bosses bearing prickles, branches also with prickly stipules, flowers cream or yellow.
 Pan-African.

Vepris sansibarensis (Engl.) Mziray Moomaw JC 1674
 (*Toddaliopsis sansibarensis* (Engl.) Engl.)
 Mida. Shrub, to 5 m, bark smooth, flowers white, fruit brown 4-angled, warty.
 Swahilian endemic. Vulnerable.

Vepris trichocarpa (Engl.) Mziray Greenway PG 10826
 (*Teclea trichocarpa* (Engl.) Engl.)
 Arabuko? Shrub, to 6 m, much branched, leaves trifoliolate, fruit red, hairy.
 Pan-African.

Zanthoxylum chalybeum Engl. s.r. (Robertson & Luke, 1993)
 var. *chalybeum*
 ‘Arabuko-Sokoke’. Tree, to 10 m, trunk with corky growths, branchlets with recurved spines, flowers below the new leaves.
 Pan-African.

195**Balanitaceae**

Balanites maughamii Sprague Robertson SA & Luke WRQ 4612
 ‘Arabuko-Sokoke’. Tree, to 25 m with high buttresses, leaves two-foliolate, spines forked, flowers yellow-green.
 Swahilian endemic +.

196**Burseraceae**

Commiphora africana (A.Rich.) Engl. Luke WRQ 3033
 var. *glaucidula* (Engl.) J.B.Gillet
 Mida. Tree, to 3 m, bark peeling, spines present, 3-foliolate, laterals much shorter than apical, petals with curved hairs, fruit obovate.
 Somali-Masai endemic.

Commiphora edulis (Klotzch) Engl. s.r. (Robertson & Luke, 1993)
 subsp. *boiviniana* (Engl.) J.B.Gillet
 ‘Arabuko-Sokoke’. Tree, to 10 m, spines absent, leaves 3-11 foliate, densely pubescent below, flowers greenish/yellow, fruit globose.
 Swahilian endemic +.

Commiphora kua (R.Br. ex Royle) Vollesen Spjut RW 3820
 (*Commiphora lindensis* Engl.)
 Jilore. Shrub, much branched, spine present, lateral leaflets very small, flowers yellow-green.
 Swahilian endemic +.

197

Meliaceae

- Turraea floribunda* Hochst. Robertson SA 6973
 ‘Arabuko-Sokoke’. Shrub, or scrambler to 10 m, leaf apex acuminate, flowers fragrant, petals 80–100 mm, fruit ribbed, orange-red.
 Swahilian endemic+.
- Turraea holstii* Gürke Kimeu JM et al. KEFRI645
 Kakuyuni. Tree, to 10 m, bark grooved in older trees, flowers white to cream, petals 18-25 mm, fruit yellow.
 Pan-African.
- Turraea mombassana* Hiern ex C.DC. Graham RM 1947
 subsp. *mombassana*
 Sokoke. Shrub or scrambler, to 4 m, leaves on short lateral shoots, sub-acuminate, flowers white to yellow on very short peduncles, petals 24–45 mm, seeds red.
 Swahilian endemic+.
- Turraea wakefieldii* Oliv. Dale IR K2035
 Sokoke. Shrub, scandent, or tree, to 4 m, leaf apex sub-acuminate, petals 50–75 mm, seeds red.
 Swahilian endemic.

198

Sapindaceae

- Allophylus pervillei* Blume Faden AB & AJ 74/1223
 Mida-Jilore track. Shrub, to 1 m, or small tree, leaves unifoliate or with tiny lateral leaflets, glabrous, flowers greenish, fruits bright red.
 Swahilian endemic+.
- Allophylus rubifolius* (Hochst. ex A.Rich) Engl. Spjut RW 2665
 var. *alnifolius* (Baker) Friis & Vollesen
 ‘Lake’ Jilore. Shrub, to 4 m, much branched, leaves trifoliate, sparsely to densely pubescent beneath, often with domatia.
 Swahilian endemic+.
- Deinbollia borbonica* Scheff. Polhill R & Paulo S 861
 f. *arenicola* Capuron
 Jilore. Shrub, to 2 m, or small tree, branching limited, leaves in whorls towards top, young branchlets golden hairy, infl. terminal.
 Swahilian endemic+.
- Haplocoelum inoploeum* Radlk. Robertson SA & Luke WRQ 4614
 Roka. Shrub, or small tree to 4 m, leaflets 2-4, flowers greenish - cream, fruits triangular in cross-section.
 Swahilian endemic.
- Lecaniodiscus fraxinifolius* Baker. Jeffery GW K173
 subsp. *scassellatii* (Chiov.) Friis
 Sokoke. Tree, to 6 m, densely branched, leaves obtuse or rounded at apex, flowers greenish, fruits pink-cream.
 Swahilian endemic.
- Lecaniodiscus fraxinifolius* Baker Nash LT 1
 subsp. *vaughanii* (Dunkley) Friis
 Gede. Tree, to 6 m, leaves twice as long as wide, narrow acuminate, flowers greenish.
 Swahilian endemic+.
- Pancovia golungensis* (Hiern) Exell & Mendonça Dale IR 3875
 Mida. Shrub, to 2 m, leaflets 3–4 pairs, inflorescence from old wood, dioecious.
 Swahilian endemic.

205

Anacardiaceae

- Lannea schweinfurthii* (Engl.) Engl. Polhill R & Paulo S 875
 var. *acutifoliata* (Engl.) Kokwaro
 Jilore. Tree, to 10 m, with spreading crown, leaflets elliptic, apex caudate.
 Swahilian endemic +. Near threatened.
- Lannea schweinfurthii* (Engl.) Engl. Simpson BL 149
 var. *stuhlmannii* (Engl.) Kokwaro.
 ‘Arabuko-Sokoke’. Tree, to 10 m, leaves at end of branches, leaflets ovate, apex
 obtuse/acuminate.
 Swahilian endemic +.
- Ozoroa obovata* (Oliv.) R.Fern. & A.Fern. McNaughton G 154
 Arabuko. Tree, to 8 m, leaves in whorls of 3, dark green above, silvery below, fruit kidney
 shaped.
 Swahilian endemic.
- Searsia natalensis* (Bernh. ex C.Krauss) F.A.Barkley Kuchar P 10037
 (*Rhus natalensis* Bernh. ex C.Krauss)
 Mida Creek. Shrub, to 3 m, leaves 3-foliolate median leaf obovate, flowers axillary and
 terminal, yellow-green in dense heads, fruit red.
 Pan-African.

206

Connaraceae

- Ellipanthus madagascariensis* (G.Schellenb.) Capuron ex Keraudren Kimeu JM et al. KEFRI522
 (*E. hermandradenoides* Brenan)
 Gede. Shrub, unifoliolate, flowers white in few-flowered panicles, fruits velvety, brown.
 Swahilian endemic.
- Rourea coccinea* (Schumach. & Thonn.) Benth. Robertson SA, Luke WRQ & Awimbo J 5236
 subsp. *boiviniana* (Baill.) Jongkind
 Nature Reserve. Shrub, scandent, or liana to 3 m, leaflets 5-9, fruits yellow.
 Swahilian endemic.
- Rourea orientalis* Baill. Jeffery GW K166 (cited in FTEA)
 (*Byrsocarpus orientalis* (Baill.) Baker)
 Sokoke? Shrub, scandent, or small tree, leaflets 12-28, flowers white to yellow, fruit red.
 Pan-African

212

Araliaceae

- Cussonia zimmermannii* Harms Greenway PG EAH12216
 ‘Arabuko-Sokoke’. Tree, to 12 m, bole straight, leaves digitately compound at end of
 branches.
 Swahilian endemic.

221

Ebenaceae

- Diospyros abyssinica* (Hiern) F.White Graham RM 2014
 subsp. *abyssinica*
 Mida. Tree, to 10 m, leaves glabrous with wavy margin, flowers yellow, calyx glabrous.
 Pan-African.
- Diospyros consolatae* Chiov. Robertson SA & Luke WRQ 4628
 Forest Reserve NW boundary. Tree, to 8 m, leaf margin revolute, fruit depressed globose.
 Swahilian endemic +.
- Diospyros natalensis* (Harv.) Brenan Trump EC 116
 subsp. *natalensis*
 ‘Arabuko-Sokoke’. Tree, to 8 m, leaves to 4 cm, with ciliate margins, flowers white, fruit
 with cup-like calyx in lower third.
 Pan-Tropical.

Diospyros squarrosa Klotzsch Kirika P, Nyamongo O & Sanyanyi S 04/15/2008
Mida. Tree, to 10 m, trunk smooth, fruit with persistent four-lobed calyx.
Swahilian endemic+.

Euclea natalensis A.DC. Gardner HM 1417
subsp. *obovata* F.White
Arabuko. Tree, to 10 m, leaves leathery, hairy under, flowers axillary, scented.
Swahilian endemic+.

222**Sapotaceae**

Manilkara sansibarensis (Engl.) Dubard Graham RM 2161
Arabuko. Tree, to 12 m, crown bushy, bark strongly grooved, leaves with veins impressed above, sepals in 2 whorls of three.
Swahilian endemic.

Manilkara sulcata (Engl.) Dubard Graham RM 2145
Arabuko. Tree, to 8 m, bark slightly grooved, leaves glabrous < 5 cm.
Swahilian endemic.

Mimusops obtusifolia Lam. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 15 m, bark grooved, flowers in axillary fascicles, sepals in 2 whorls of 4, fruit orange or red.
Swahilian endemic+.

Sideroxylon inerme L. s.r. (Robertson and Luke, 1993)
subsp. *diospyroides* (Baker) J.H.Hemsl.
'Arabuko-Sokoke'. Tree, to 15 m, leaves spiral, elliptic to obovate, glabrous, flowers fascicled in old leaf axils.
Swahilian endemic+.

Vitellariopsis kirkii (Baker) Dubard Karisa R 43
Sokoke. Shrub, or scrambler to 2.5 m, evergreen, thicket forming, leaves crowded on short shoots, fruit brown, velvety.
Swahilian endemic. Vulnerable.

228**Gelsemiaceae**

Mostuea brunonis Didr. Graham RM 199
var. *brunonis*
Sokoke. Shrub, to 1.5 m, or climber, corolla white with a yellow base, fruit flattish, bilobed.
Pan-African.

Mostuea brunonis Didr. s.r. (Robertson & Luke, 1993)
var. *obcordata* Leeuwenb.
'Arabuko-Sokoke'. Shrub, leaves smaller than *brunonis*, fruit densely hairy.
Swahilian endemic.

Loganiaceae

Strychnos decussata Gilg s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 10 m, branchlet pairs decussate (alternating), infl. axillary or terminal, fruit yellow one seeded berry.
Swahilian endemic+.

Strychnos henningsii Gilg Robertson SA, Luke WRQ & Awimbi J 5241
Mida-Jilore track. Shrub, to 3 m, leaves glossy and leathery, flowers white, fruit yellow to red.
Pan-African.

Strychnos madagascariensis Poir. Kuchar P 10019
Mida Creek. Tree, to 4 m, leaves elliptic at end of short shoots, infl. axillary, fruit yellow.
Swahilian endemic+.

Strychnos panganensis Gilg Robertson SA 3885
'Arabuko-Sokoke'. Shrub, or liana, branchlets grey velvety, tendrils 2-forked, flowers white.
Swahilian endemic.

- Strychnos spinosa* Lam. Cunningham-Van Someren GR 54?
Mida Creek. Tree, to 5 m, spines paired, flowers greenish white in terminal cymes, fruit up to 10 cm, green shiny.
Pan-African.
- Strychnos xylophylla* Gilg Luke WRQ & Robertson SA 2172
Mida Creek. Tree, to 3 m, bark pale, leaves stiff.
Swahilian endemic. Endangered.
- 229**
- Oleaceae**
- Jasminum punctulatum* Chiov. Graham RM 2147
Arabuko. Climber, to 2 m, young stems densely pubescent, leaves simple, spirally arranged, flowers white, star shaped.
Swahilian endemic.
- Jasminum streptopus* E.Mey. s.r. (Robertson & Luke, 1993)
var. *streptopus*
Forest Reserve south boundary. Climber/liana, to 2 m, stems glabrous, leaves with domatia.
Pan-African.
- 230–231**
- Apocynaceae**
- Adenium obesum* (Forssk.) Roem. & Schult. Purdue RE & Kibuwa SP 10 026
Jilore. Shrub, to 1.5 m with swollen stem, flowers pink.
Pan-African.
- Ancylobothrys petersiana* (Klotzsch) Pierre Beentje H 2286
Nature Reserve. Liana, to 3 m, latex present, leaves rounded or acute, veins 4–9 pairs, flowers white.
Pan-African.
- Ancylobothrys tayloris* (Stapf) Pichon Spjut RW 3939
Kakuyuni. Liana, to 8 m, leaf apex acuminate, veins numerous.
Swahilian endemic.
- Baissea myrtifolia* (Benth.) Pichon Musyoki BM & Hansen OJ 1004
Jilore Forest Station. Shrub scandent, to 4 m, or liana, with white latex, petiolar glands and domatia present, flowers yellow with pink throat.
Swahilian endemic.
- Carissa tetramera* (Sacleux) Stapf Omino EA 66
Kabateni, at forest edge. Shrub, to 2 m, spines forked, leaves glossy, flowers white tinged pink, petals 4.
Swahilian endemic.
- Ceropegia nilotica* Kotschy Musyoki BM & Hansen OJ 1030
var. *nilotica*
Jilore Forest Station. Climber, or liana, sparsely branched to 2 m, flowers constricted in the middle, cream with maroon markings on top part.
Swahilian endemic +.
- Cryptolepis apiculata* K.Schum. Robertson SA 6896
Matsangoni. Liana, to 3 m, leaves leathery, base cuneate or rounded, flowers yellow-green.
Swahilian endemic +.
- Cryptolepis hypoglauca* K.Schum. Faden RB, Evans TM & Rathbun G 71/680
Gede. Liana, to 6 m, leaves sessile, glaucous beneath, flowers pink-purple.
Swahilian endemic.
- Cynanchum gerrardii* (Harv.) Liede Kuchar P 10 028
subsp. *gerrardii*
Mida. Creeper, semi-succulent, leaves scale-like, flowers greenish-white, scented.
Pan-Tropical.

- Cynanchum viminale* (L.) L. Simpson BL 112
(*Sarcostemma viminale* (L.) R.Br.)
A-S *Brachystegia* woodland. Climber, leafless, succulent, latex present, flowers in spherical umbels cream-green and white.
Pan-African.
- Dictyophleba lucida* (K.Schum.) Pierre s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Liana, to 15 m, with milky sap, tendrils present, leaf base cordate, flowers white in terminal panicles.
Pan-African.
- Gymnema sylvestris* (Retz.) R.Br. ex Schult. Graham RM 1970
'Arabuko-Sokoke'. Liana to 2 m, leaves tomentellous below, flowers yellow-green 3.5 mm, fruit 70x80 mm.
Pan-Tropical.
- Hunteria zeylanica* (Retz.) Gardner ex Thwaites Kirika P et al. GBK26
'Arabuko-Sokoke'. Shrub, to 3 m with milky latex, flowers terminal, fruit yellow to orange.
Pan-Tropical.
- Landolphia kirkii* Dyer Simpson BL 247
'Arabuko-Sokoke'. Liana, to 6 m, latex present, leaves with close straight veins, flowers yellow or white in dense cymes, fruit dull green.
Pan-African.
- Marsdenia rubicunda* (K.Schum.) N.E.Br. Kimeu JM et al. KEFRI698
Mida Creek. Climber/liana, to 4 m, leaves mealy underneath, flowers white, fruit 4-winged, hairy.
Pan-African.
- Pentatropis nivalis* (J.F.Gmel.) D.V.Field & J.R.I.Wood Malombe M et al. 1146
subsp. *nivalis*
Mida. Creeper/twiner, semi-succulent, leaves with conical glands at base.
Pan-Tropical.
- Saba comorensis* (Bojer ex A.DC.) Pichon Simpson BL 112
'Arabuko-Sokoke'. Climber/liana, to 20 m, tendrils to 12 cm, leaf blades to 20 cm, flowers white with yellow throat, fruit yellow to orange.
Pan-African.
- Secamone parvifolia* Bullock Kimeu JM KEFRI684
Uyombo. Creeper/twiner to 5 m, old stems two-winged, flowers cream, stigma not dilated.
Pan-African.
- Secamone retusa* N.E.Br. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Climber, or liana to 3 m, leaf margins inrolled, apex round/retuse.
Swahilian endemic.
- Strophanthus courmontii* Sacleux ex Franch. Langridge WP 85
Sokoke. Shrub, or liana, stem with corky ridges, flowers cream/purple, petals without 'tails'.
Swahilian endemic+.
- Strophanthus kombe* Oliv. Meso M et al. KEFRI664
Gede. Liana, to 8 m, leaves and branches hairy, flowers red and yellow, petals with 'tails', fruit 'T' shaped.
Pan-African.
- Tabernaemontana elegans* Stapf Sangai GW EA15576
Jilore-Kakuyuni. Tree, to 6 m, flowers white, fragrant, fruit up to 8 cm, paired, ridged with warty skin.
Pan-African.
- Vincetoxicum tenuipedunculatum* (K.Schum.) Meve & Liedtke Polhill R & Paulo S 863
(*Tylophora tenuipedunculata* K.Schum.)
Jilore. Creeper/twiner to 3 m, infl. delicate, flowers pink and red.
Swahilian endemic+.

232

Rubiaceae

- Afrocanthium kilifiense* (Bridson) Lantz Musyoka BM & Hansen OJ 1012
Sokoke Forest Station. Shrub, to 2 m, stipules to 6 mm, fruit bilobed.
Kenya Coast endemic. Near threatened.
- Afrocanthium pseudoverticillatum* (S.Moore) Lantz Faden RB & AJ 74/1232
Jilore. Shrub, to 2 m, leaves with scabrid edges, on short shoots, flowers yellow or greenish.
Swahilian endemic.
- Agathisanthemum bojeri* Klotzsch Boyle B 131
subsp. *bojeri*
'Arabuko-Sokoke'. Herb, woody to 75 cm, flowers white, petals and sepals 4.
Pan-African.
- Bullockia mombazensis* (Baill.) Razafim., Lantz & B.Bremer Musyoki BM & Hansen OJ 1012
(*Canthium mombazense* Baill.)
Kararacha. Shrub, to 3 m, leaves to 13 cm, stipules to 11 mm, flowers white.
Swahilian endemic.
- Canthium glaucum* Hiern Simpson BL 348
subsp. *glaucum*
'Arabuko-Sokoke'. Tree, to 2.5 m, arching branches, with spines to 25 mm.
Kenya Coast endemic. Endangered.
- Canthium mrimaense* (Verdc.) Lantz s.r. (Robertson & Luke, 1993)
(*Rytigynia mrimaensis* Verdc.)
'Arabuko-Sokoke'. Shrub, to 3 m, spines supra-axillary, leaf base rounded, flowers axillary
solitary, greenish.
Kenya Coast endemic.
- Catunaregam nilotica* (Stapf) Tirveng. Spjut RW 3953
Kakoneni. Shrub, to 2 m, multi-stemmed, with spines to 25 mm, leaves obovate on short
shoots, usually glabrous, flowers white.
Pan-African.
- Chassalia parvifolia* K.Schum. s.r. (Thomas, 1988)
A-S *Brachystegia* forest. Shrub, or small tree, to 4.5 m, leaves elliptic oblong, flowers white
often tipped with pink, corolla tube 4-6 mm, panicles with dense sub-heads.
Pan-African.
- Chassalia umbraticola* Vatke Faden RB & AJ 74/1250
subsp. *umbraticola*
Mida-Jilore track. Shrub, to 2 m, peduncles wine coloured, flowers pink/white, tube to 20 mm.
Swahilian endemic.
- Chazaliella abrupta* (Hiern) E.M.A.Petit & Verdc. Graham RM 290
var. *abrupta*
Mida. Shrub, to 1.5 m, leaves glabrous < 4 cm, flowers bright yellow in small stalked
terminal heads.
Swahilian endemic +.
- Coffea sessiliflora* Bridson s.r. (Robertson & Luke, 1993)
subsp. *sessiliflora*
'Arabuko-Sokoke'. Shrub, to 3 m, stipule limbs triangular, flowers singular on leaf axils, fruit
to 1cm.
Kenya Coast endemic.
- Coptosperma graveolens* (S.Moore) Degreef s.r. (Robertson & Luke, 1993)
(*Tarenna graveolens* (S. Moore) Bremek var. *graveolens*)
'Arabuko-Sokoke'. Tree, to 6 m, leaves elliptic to 12 cm, stipules to 9 mm, infl. terminal,
flowers white/yellow, fruit black when ripe.
Swahilian endemic.

- Coptosperma nigrescens* Hook.f. Dale IR K3670
(*Tarenna nigrescens* (Hook.f.) Hiern)
Mida. Shrub, to 2 m, leaves lanceolate to 8 cm, stipules to 2 mm.
Swahilian endemic.
- Coptosperma supra-axillare* (Hemsl.) Degreef Langridge WP 9
(*Tarenna supra-axillaria* (Hemsl.) Bremek.)
'Arabuko-Sokoke'. Shrub, to 1.5 m, leaves to 10 cm, infl. axillary, corolla lobes reflexed.
Swahilian endemic+.
- Cordylostigma virgatum* (Willd.) Groeninckx & Dessein Luke WRQ 3026
(*Kohautia virgata* (Willd.) Bremek.)
Mida. Herb, woody, to 40 cm, branches spreading, flowers white to pink.
Pan-African.
- Cremaspora triflora* (Thonn.) K.Schum. Mutangah J & Kamau P AS7
subsp. *triflora*
'Arabuko-Sokoke'. Shrub, to 2.5 m, pseudo stipules present, flowers fragrant, subsessile in
axis, fruit dark purple.
Pan-African.
- Diodia aulacosperma* K.Schum. Luke WRQ & Robertson SA 2586
var. *aulacosperma*
Mida. Herb, to 30 cm, leaves succulent, flowers white in dense axillary clusters, corolla tube
hairy.
Pan-Tropical.
- Empogona ovalifolia* (S.Moore) Tosh & Robbr. Simpson BL 166
var. *ovalifolia*
(*Tricalysia ovalifolia* Hiern)
Arabuko. Shrub, to 2 m, leaves leathery, corolla tube bearded at throat.
Swahilian endemic.
- Empogona ovalifolia* (S.Moore) Tosh & Robbr. Robertson SA, Luke WRQ & Awimbo J 5237
var. *taylorii* (S.Moore) Brenan
Nature Reserve. Shrub, to 1.3 m.
Swahilian endemic. Vulnerable.
- Feretia apodanthera* Delile Gisau s.n.
subsp. *keniensis* Bridson
'Arabuko-Sokoke'. Shrub, to 3 m, flowers sessile on short spurs, fruit white with purple
streaks.
Swahilian endemic.
- Gardenia transvenulosa* Verdc. Greenway PG 9809
Sokoke Forest Station. Shrub, much branched, leaves abruptly cuneate, flowers solitary in leaf
axils.
Swahilian endemic+.
- Gardenia volkensii* K.Schum. Langridge WR 3
subsp. *volkensii*
Sokoke. Tree, to 10 m, densely branched, leaves dark green, flowers white turning yellow,
fruit ridged, warty.
Swahilian endemic+.
- Heinsia crinita* (Afzel.) G.Taylor Faden AB & AJ 74/1224
subsp. *parviflora* (K.Schum. & K.Krause) Verdc.
Mida-Jilore track. Shrub, scrambling, to 2 m, flowers white, star-shaped, petals 'ridged' in
centre, solitary in terminal cymes.
Swahilian endemic.
- Hymenodictyon parvifolium* Oliv. s.r. (Robertson & Luke, 1993)
subsp. *parvifolium*.
'Arabuko-Sokoke'. Tree, to 4 m, infl. a spike, fruit a reddish-brown capsule with prominent lenticels.
Pan-African.

- Keetia zanzibarica* (Klotzsch) Bridson s.r. (Robertson & Luke, 1993)
 subsp. *zanzibarica*
 'Arabuko-Sokoke'. Shrub, scandent to 4 m, with arching branches, flowers white, in dense clusters at nodes.
 Swahilian endemic +.
- Kohautia caespitosa* Schnizl. Kuchar P 9987
 subsp. *amaniensis* (K.Krause) Govaerts
 Mida. Herb, to 1 m, leaves linear, flowers white or yellowish, stigma with 2 filiform lobes.
 Pan-Tropical.
- Meyna tetraphylla* (Schweinf. ex Hiern) Robyns s.r. (Robertson & Luke, 1993)
 subsp. *comorensis* (Robyns) Verdc.
 'Arabuko Sokoke'. Shrub, or small tree to 3 m, with spines axillary at nodes, leaves in pairs on miniscule shoots, fruit brown.
 Swahilian endemic +.
- Oldenlandia affinis* (Roem. & Schult.) DC. Kibuwa SP 20 020
 subsp. *fugax* (Vatke) Verdc.
 Mida-Jilore track. Herb, erect to 1 m, flowers bright blue.
 Pan-African.
- Oldenlandia corymbosa* L. Luke WRQ & Robertson SA 2509
 var. *caespitosa* (Benth.) Verdc.
 Mida Creek. Herb, to 30 cm, sometimes erect, flowers white.
 Pan-African.
- Oldenlandia johnstonii* (Oliv.) Engl. Luke WRQ & Robertson SA 2624
 Forest Reserve south boundary. Herb, spreading to 20 cm, flowers white or slightly pink.
 Swahilian endemic +.
- Oxyanthus zanguebaricus* (Hiern) Bridson Graham RM 1857
 Arabuko. Shrub, to 1.5 m, flowers strongly scented in subsessile panicles, corolla tube to 10 cm.
 Swahilian endemic.
- Pavetta crebrifolia* Hiern Jeffery JW K610
 var. *crebrifolia*
 Sokoke. Shrub, to 2 m, leaves glabrous, flowers white in terminal corymbs on leafy branches, corolla tube 10-22 mm, fruit black 6-8 mm.
 Swahilian endemic.
- Pavetta stenosepala* K.Schum. Graham RM K1687
 subsp. *stenosepala*
 Arabuko. Shrub, to 1 m, leaves hairy or sandpapery under, calyx lobes thread-like 12 mm long.
 Swahilian endemic.
- Pavetta uniflora* Bremek. Polhill R & Paulo S 859
 Jilore. Shrub, to 2 m, branches spreading, flowers white, solitary on leafy spurs, corolla tube 30-40 mm.
 Swahilian endemic.
- Pentas bussei* K.Krause Graham RM 2065
 Mida. Herb, woody, to 1 m, leaves > 3 cm wide, flowers scarlet in terminal/axillary cymes, 1-3 lobes of calyx longer than others.
 Pan-African.
- Pentas parvifolia* Hiern Jeffery GW K572
 f. *spicata* Verdc.
 Sokoke. Shrub, to 1.2 m, leaves < 2 cm wide.
 Swahilian endemic +.
- Pentodon pentandrus* (Schumach. & Thonn.) Vatke Simpson BL 332
 var. *minor* Bremek.
 A-S *Brachystegia* forest pools. Herb, to 30 cm, flowers white/blue/mauve, corolla tube 4 mm, lobes 1.5 mm.
 Pan-African.

- Polysphaeria parvifolia* Hiern Simpson BL 226
A-S *Brachystegia* forest. Shrub, or tree, to 6 m, bark brown splitting, flowers white in sessile nodal clusters, fruit bright red.
Pan-African.
- Psychotria amboniana* K.Schum. Faden RB, Evans TM & Rathbun G 71/664
var. *amboniana*
Kararacha. Shrub, to 1.5 m, young stems and leaves glabrous, nodules on midrib at base.
Swahilian endemic.
- Psychotria amboniana* K.Schum. Musyoki BM & Hansen OJ 1023
var. *velutina* (E.M.A.Petit) Verdc.
Gede Forest Station? Similar to var. *amboniana* but stems and leaves pubescent.
Swahilian endemic.
- Psychotria punctata* Vatke Beentje H 2302
var. *punctata*
Nature reserve. Shrub, to 1.5 m, leaves with numerous nodules, flowers white or cream in panicles 3-8 cm, fruit bright red.
Pan-African.
- Psydrax faulknerae* Bridson Langridge WP 4
Sokoke. Tree, to 5 m, leaves with domatia, infl. stalked, fruit black.
Swahilian endemic. Vulnerable.
- Psydrax polhillii* Bridson Faden RB & Evans TM 71/708
Mida-Jilore track. Tree, to 4 m, leaves on spur shoots leathery, infl. subsessile, flowers many.
Swahilian endemic+. Vulnerable.
- Psydrax recurvifolia* (Bullock) Bridson Robertson SA, Luke WRQ & Awimbo J 5246
Nature Reserve. Shrub, to 2.5 m, leaves recurved, flowers yellow few per axil, fruit one-seeded.
Swahilian endemic.
- Psydrax schimperiana* (A.Rich.) Bridson Graham RM 1995
subsp. *schimperiana*
Arabuko. Tree, to 6 m, stems square, leaves shiny, flowers greenish in dense clusters.
Pan-African.
- Pyrostria bibracteata* (Baker) Cavaco s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Tree, to 8 m, leaves >4 cm, infl. from paired bracts, flowers subsessile in dense umbellate cymes, fruit green slightly lobed.
Pan-Tropical.
- Pyrostria phyllanthoidea* (Baill.) Bridson Faden RB & Evans TM 71/712
Mida-Jilore track. Tree, to 4 m, leaves <4 cm, female flowers solitary.
Pan-African.
- Rothmannia macrosiphon* (K.Schum. ex Engl.) Bridson Gardner HM 1209
Sokoke. Tree, to 5 m, flowers terminal single, white, tubular to 15 cm, purple markings in centre.
Swahilian endemic. Vulnerable.
- Rothmannia ravae* (Chiov.) Bridson Graham RM 1985
Arabuko. Tree, to 10 m, flowers tubular to 7 cm, cream with purple spots.
Swahilian endemic.
- Rytigynia celastroides* (Baill.) Verdc. Mutanga JG & Kamau P AS1
var. *celastroides*
(*Rytigynia microphylla* (K.Schum.) Robyns)
'Arabuko-Sokoke'. Shrub, to 3 m, branches in threes, leaves hairy.
Swahilian endemic+.
- Spermacoce filituba* (K.Schum.) Verdc. Graham RM 2105
'Arabuko-Sokoke'. Herb, erect to 1 m, stem glabrous, flowers white in clusters at nodes, corolla tube very narrow.
Swahilian endemic+.

- Spermacoce subvulgata* (K.Schum.) J.G.García s.r. (Mutanga & Mwaura, 1992)
 var. *subvulgata*
 'Arabuko-Sokoke'. Herb, erect to 1 m, corolla tube not narrow.
 Pan-African.
- Vangueria randii* S.Moore Luke WRQ 1941
 subsp. *acuminata* Verdc.
 Dida/Sokoke Nyari. Shrub, to 1.5 m, leaves scabrid, calyx lobes > 3 mm, fruit yellow, globose.
 Swahilian endemic.
- 238**
- Asteraceae (Compositae)**
- Ageratum conyzoides* L. Simpson BL 317
 subsp. *conyzoides*
 'Arabuko-Sokoke'. Herb, to 30 cm, flowers mauve.
 Pan-Tropical.
- Brachylaena huillensis* O.Hoffm. Kimeu J et al. KEFRI622
 Jilore. Tree, to 7 m, bole fluted and smooth, leaves grey tomentose below, flowers white in
 terminal panicles, fruit a winged achene.
 Swahilian endemic+. Near threatened.
- Eclipta prostrata* (L.) L. Simpson BL 306
 'Arabuko Sokoke'. Herb, woody, prostrate or erect to 90 cm, stems reddish, flowers white.
 Pan-Tropical.
- Erythrocephalum marginatum* (O.Hoffm.) S.Ortíz & Cout. Moggridge GM 169
 (*Achyrothalamus marginatus* O.Hoffm.)
 Sokoke. Herb, woody, to 1 m, flowers yellow.
 Swahilian endemic+.
- Gutenbergia cordifolia* Benth. ex Oliv. Simpson BL 103
 'Arabuko-Sokoke'. Herb, to 2 m, flowers, purple/mauve.
 Pan-African.
- Gutenbergia pembensis* S.Moore Graham RM 144
 Sokoke. Herb, woody, to 30 cm, leaves discolorous, flowers purple.
 Swahilian endemic. Vulnerable.
- Gynura colorata* Peter ex F.G.Davies s.r. (Robertson & Luke, 1993)
 'Arabuko-Sokoke'. Herb, to 60 cm, decumbent at base, leaves green above, purplish below,
 florets yellow.
 Swahilian endemic. Endangered.
- Gynura scandens* O.Hoffm. Robertson SA & Luke WRQ 6577
 'Arabuko-Sokoke'. Herb, scandent, pubescent, stems reddish, flowers yellow/orange.
 Pan-African.
- Jeffreyia hildebrandtii* (Vatke) H.Rob., S.C.Keeley & Skvarla s.r. (Thomas, 1988)
 (*Vernonia hildebrandtii* Vatke)
 'Arabuko-Sokoke'. Climber/liana to 3 m, flowers pale mauve.
 Swahilian endemic+.
- Jeffreyia zanzibarensis* (Less.) H.Rob., S.C.Keeley & Skvarla Graham RM 1714
 (*Vernonia zanzibarensis* Less.)
 Arabuko. Shrub, to 3 m, sometimes scandent, leaves sandpapery, flower heads white tinged purple.
 Swahilian endemic.
- Kleinia abyssinica* (A.Rich.) A.Berger Bamps P 6355
 var. *hildebrandtii* (Vatke) C.Jeffrey
 'Arabuko-Sokoke'. Herb succulent, 30 cm, flowers red.
 Pan-African.
- Launaea cornuta* (Hochst ex Oliv. & Hiern) C.Jeffrey s.r. (Thomas, 1988)
 'Arabuko-Sokoke'. Herb, up to 1.5 m, stem hollow, flowers pale yellow.
 Pan-African.

- Orbivestus homilanthus* (S.Moore) H.Rob. Kuchar P 12019
Vernonia homilantha S.Moore
 Mida Creek. Herb, to 1 m, fleshy, flowers purple.
 Swahilian endemic.
- Pluchea sordida* (Vatke) Oliv. & Hiern Kuchar P 10050
 Mida Creek. Shrub, to 75 cm, flowers pink.
 Swahilan endemic+.
- Solanecio angulatus* (Vahl) C.Jeffrey Jeffery GW K263
 Sokoke. Herb, fleshy, climbing, to 3 m, flowers yellow.
 Pan-Tropical.
- Tridax procumbens* L. Karisa R 51
 'Arabuko-Sokoke'. Herb, to 75 cm, flowers yellow and white.
 Pan-Tropical.
- 239**
Gentianaceae
Enicostema axillare (Lam.) A.Raynal Luke WRQ &. Robertson SA 2586 A
 subsp. *axillare*
 Mida. Herb, to 40 cm, scandent, flowers white.
 Pan-Tropical.
- 241**
Plumbaginaceae
Plumbago stenophylla Wilmot-Dear Graham RM 2103
 Mida. Herb, woody, found in shade, flowers white/purple.
 Swahilian endemic. Critically endangered.
- (244)**
Campanulaceae
Lobelia fervens Thunb. Graham RM 2114
 subsp. *fervens*
 Mida. Herb, 20 cm, succulent, flowers blue.
 Pan-Tropical.
- 249**
Boraginaceae
Bouyeria petiolaris (Lam.) Thulin Faden, AB & AJ 74/1234
 Mida. Tree, to 5 m, branches easily break, leaves up to 14 cm, petioles to 6 cm, flowers 3-4
 mm fragrant, fruit red.
 Swahilian endemic+.
- Cordia subcordata* Lam. Katende A & Lye K 4814
 Mida Creek. Shrub, or small tree to 6 m with a clear bole, leaves glabrous 8-20 cm, flowers
 tubular, orange.
 Pan-Tropical.
- Cordia monoica* Roxb. Sangai GW EA15631
 Kaembeni-Dida. Tree, to 6 m, trunk smooth, leaves almost round, highly scabrous on upper
 side, flowers greenish - white.
 Pan-Tropical.
- Ehretia bakeri* Britten Simpson BL 150
 A-S *Brachystegia* forest. Tree, to 3 m, young branches glabrous, flowers white appearing
 before leaves, fruit orange - red.
 Swahilian endemic.
- Heliotropium gorinii* Chiov. Kuchar P 9964
 Mida. Herb, to 1 m, densely pubescent, flowers white.
 Somalia-Masai endemic+.
- Heliotropium steudneri* Vatke Perdue RE & Kibuwa SP 10079
 Mida. Herb, to 90 cm, flowers white, with yellow throat.
 Pan-African.

Hilsenbergia nemoralis (Gürke) J.S.Mill. s.r. (Thomas, 1988)
 (*Ehretia litoralis* Gürke)
 'Arabuko-Sokoke'. Tree, to 5 m, leaves densely hairy above.
 Swahilian endemic.

250**Solanaceae**

Solanum incanum L. s.r. (Thomas, 1988)
 subsp. *incanum*
 'Arabuko Sokoke'. Herb, woody, to 1 m, with prickles, densely stellate - hairy, fruit yellow.
 Pan-Tropical.

Solanum zanzibarens Vatke Polhill R & Paulo S 850
 var. *zanzibarens*
 Jilore. Herb, woody, to 1 m with prickles, leaves variously lobed, sparsely hairy, flowers
 racemose, fruit red or black.
 Swahilian endemic+.

251**Convolvulaceae**

Evolvulus alsinoides (L.) L. Rawlins S 741
 Jilore Forest Station. Herb, to 30 cm, leaves and stem hairy, flowers blue.
 Pan-Tropical.

Ipomoea aquatica Forssk. Simpson BL 281
 'Lake' Jilore. Herb, succulent, floating on water, flowers purple/white.
 Pan-Tropical.

Ipomoea garckeana Vatke Simpson BL 80
 Arabuko. Herb, erect or prostrate, flowers in dense heads, pink with purple centre.
 Swahilian endemic.

Ipomoea irwiniae Verdc. Mwadime N 097
 Jilore Forest Station. Herb, climbing to 3 m, leaves palmately lobed, flowers pink > 6 cm.
 Swahilian endemic.

Ipomoea pes-caprae (L.) R.Br. Van Someren s.n.
 subsp. *pes-caprae*
 Mida Creek. Creeper on sand, forming mats, rooting at nodes, leaves fleshy, emarginate,
 flowers pink-purple.
 Pan-Tropical.

Ipomoea ticcopa Verdc. Luke WRQ & Robertson SA 2595
 Mida. Creeper/twiner, stems 4 - angled, flowers white.
 Swahilian endemic.

Jacquemontia ovalifolia (Choisy) Hallier f. Simpson BL 278
 'Lake' Jilore. Herb, prostrate, to 3 m, leaves fleshy, flowers bluish-white.
 Pan-Tropical.

Jacquemontia tamnifolia (L.) Griseb. s.r. (Thomas, 1988)
 'Arabuko-Sokoke'. Herb, creeping or climbing, to 6 m, flowers blue.
 Pan-Tropical.

Xenostegia tridentata (L.) D.F.Austin & Staples s.r. (Thomas, 1988)
 (*Merremia tridentata* (L.) Hallier f.)
 A-S *Brachystegia* forest pools. Herb, prostrate or climbing, to 2 m, leaves lanceolate, flowers yellow.
 Pan-Tropical.

(252)**Orobanchaceae**

Buchnera hispida Buch.-Ham. ex D.Don s.r. (Thomas, 1988)
 'Arabuko-Sokoke'. Herb, erect, to 1 m, flowers purple or white.
 Pan-Tropical.

Buchnera leptostachya Benth. Luke WRQ. 3028
Buchnera mossambicensis Klotzsch
 Mida. Herb, erect, to 1 m, branching in upper part.
 Pan-African.

Striga gesnerioides (Willd.) Vatke Graham RM K1675
 Arabuko. Herb, hemi-parasitic (to roots of host), succulent, to 30 cm, leaves scale-like,
 flowers purple
 Pan-Tropical.

Linderniaceae

Craterostigma newtonii (Engl.) Eb.Fisch., Schäferh. & al. Polhill R & Paulo S 893
 (*Lindernia newtonii* Engl.)
 'Arabuko-Sokoke'. Herb, to 40 cm, flowers purple/white.
 Pan-Tropical.

Torenia thouarsii (Cham. & Schltdl.) Kuntze Graham RM 1704
 Arabuko. Herb, to 40 cm, stem 4 - angled, flowers purple/white.
 Pan-Tropical.

254

Lentibulariaceae

Utricularia arenaria A.DC. Polhill R & Paulo S 902
 Mida. Herb, to 20 cm, flowers pink/white.
 Pan-Tropical.

Utricularia reflexa Oliv. Robertson SA 7262
 var. *reflexa*
 Arabuko. Herb, aquatic, flowers yellow.
 Pan-Tropical.

257

Bignoniaceae

Kigelia africana (Lam.) Benth. Cunningham-Van Someren GR 2
 subsp. *africana*
 Mida Creek. Tree, to 10 m, branches spreading, flowers yellow streaked maroon, fruit
 sausage-shaped to 80 cm,
 Pan-African.

Markhamia zanzibarica (Bojer ex DC.) K.Schum. Omondi W & Obunyali C. KEFRI303
 Mida Creek. Shrub, to 3.5 m, or small tree, flowers yellow with maroon flecks, purple petals.
 Pan-African.

258

Pedaliaceae

Sesamum calycinum Welw. Graham RM 277
 subsp. *calycinum*
 Arabuko. Herb, erect, to 2 m, leaves linear, flowers bell - shaped, pink/mauve.
 Pan-African.

259, 263

Acanthaceae

Asystasia ansellioides C.B.Clarke Robertson SA & Brummit R 6721
 Nature Reserve south boundary. Herb, 20 cm, flowers white and purple.
 Swahilian endemic+.

Asystasia gangetica (L.) T.Anderson Robertson SA & Brummit R 6753
 Nature Reserve south boundary. Herb, to 1 m, weak stemmed, flowers white with purple.
 Pan-Tropical.

- Avicennia marina* (Forssk.) Vierh. Kuchar P 9038
Mida Creek. Tree, to 10 m, in intertidal zone (mangrove), with vertical breathing roots above soil level, flowers white.
Pan-Tropical.
- Barleria repens* Nees Graham RM 2012
Mida. Shrub, to 4 m, scandent or climbing, flowers carmine.
Pan-African.
- Blepharis maderaspatensis* (L.) B. Heyne ex Roth Jeffery GW K304
Sokoke. Herb, woody, to 20 cm, flowers white with pink stripes.
Pan-Tropical.
- Crossandra pungens* Lindau Graham RM K2074
Sokoke. Herb, woody, to 40 cm, flowers orange, bracts with straight mucro.
Swahilian endemic.
- Ecbolium amplexicaule* S. Moore s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody to 1.2 m, flowers pale blue/green.
Swahilian endemic.
- Elytraria minor* Dokosi Jeffery JM K338
Sokoke. Herb, prostrate, lowest leaves pressed to ground at nodes, flowers white, infl. a spike.
Swahilian endemic.
- Hygrophila schulli* (Buch.-Ham.) M.R. Almeida & S.M. Almeida Simpson BL 141
(*Hygrophila auriculata* (Schumach.) Heine)
'Arabuko-Sokoke'. Herb, to 1 m, infl. with spines, flowers purple.
Pan-African.
- Hypoestes forskaolii* (Vahl) R.Br. Polhill R & Paulo S 880
subsp. *forskaolii*
'Arabuko-Sokoke'. Herb, to 1 m, flowers white with lilac markings, held in glandular hairy bracts.
Pan-Tropical.
- Justicia brevipila* Hedrén Jeffery JM K546
'Arabuko-Sokoke'. Herb, woody, to 90 cm, flowers pink.
Swahilian endemic. Vulnerable.
- Justicia capensis* Thunb. Robertson SA & Brummit R 6759
Nature Reserve south boundary. Herb, woody, flowers white/purple with herring bone pattern on lower lip.
Swahilian endemic +.
- Justicia exigua* S. Moore Luke WRQ & Robertson SA 2603
Nature Reserve west boundary. Herb, to 40 cm, all parts pubescent.
Pan-African.
- Justicia inaequifolia* Brummit Luke WRQ 1940
Dida/Sokoke Nyari. Herb to 1 m, woody, flowers white with purple markings.
Swahilian endemic.
- Lankesteria alba* Lindau s.r. (Robertson & Luke, 1993)
Forest Reserve south boundary. Herb, prostrate with upright stems to 25 cm, flowers white.
Swahilian endemic.
- Monothecium aristatum* (Nees.) T. Anderson s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, woody, to 40 cm, flowers white, spotted brown.
Pan-Tropical.
- Phaulopsis gediensis* Manktelow Polhill R & Paulo S 882
'Arabuko Sokoke'. Herb, to 1 m, spreading and much branched, flowers white, bracts narrow at base.
Swahilian endemic.
- Ruellia patula* Jacq. Polhill R & Paulo S 871
Jilore. Herb, to 20 cm, semi-prostrate, branches rooting at nodes, flowers pink/mauve.
Pan-Tropical.

Sclerochiton vogelii (Nees.) T. Anderson Verdcourt B 1185
 subsp. *holstii* (Lindau) Napper
 Jilore. Shrub, to 1.5 m, flowers blue.
 Pan-African.

Trichaulax mwasumbii Vollesen Faden AB & AJ 71/800
 Mida-Jilore track. Herb, leaves maroon - coloured on underside.
 Swahilian endemic.

263**Verbenaceae**

Lantana camara L. Simpson BL 213
 'Arabuko-Sokoke'. Shrub, to 2.5 m, stem with prickles, leaves serrated, flowers pink and purple.
 Pan-Tropical. (introduced/naturalized).

Lantana viburnoides (Forssk.) Vahl Greenway PJ 10844
 'Arabuko-Sokoke'. Shrub, to 2.5 m, stem without prickles, flowers white or pink.
 Pan-African.

Phyla nodiflora (L.) Greene Simpson BL 286
 'Lake' Jilore. Herb, prostrate, creeping, flowers pink/mauve.
 Pan-Tropical.

Premna chrysoclada (Bojer) Gürke Faden AB & AJ 74/1229
 Mida-Jilore track. Shrub, to 1.5 m, branchlets densely pubescent yellow, flowers greenish yellow.
 Swahilian endemic.

Premna resinosa (Hochst.) Schauer Luke WRQ & Robertson SA 2584
 subsp. *holstii* (Gürke) Verdc.
 Mida. Shrub, scandent, to 2.5 m, corolla greenish yellow.
 Swahilian endemic+.

Vitex ferruginea Bojer ex Schauer Jeffery GW K152
 subsp. *amboniensis* (Gürke) Verdc.
 'Arabuko-Sokoke'. Shrub, to 2 m, lateral leaflet stalked, glabrous above, petals purple.
 Swahilian endemic+.

Vitex strickeri Vatke & Hildebr. Graham RM 2328
 'Arabuko-Sokoke'. Shrub or climber, to 3 m, young branches stem square, terminal leaflet stalked, flowers white or dull yellow.
 Swahilian endemic.

258 (264)**Lamiaceae**

Clerodendrum capitatum (Willd.) Schumach. s.r. (Mutangah & Mwaura, 1992)
 'Arabuko-Sokoke'. Herb, scrambling, to 3 m, with spine-like petiole bases, flowers in terminal globose heads.
 Pan-African.

Clerodendrum robustum Kloztsch Moggridge GM 138
 var. *fischerii* (Gürke) Verdc.
 'Arabuko-Sokoke'. Shrub, to 1 m, flowers white, corolla tube > 10 cm, scented.
 Swahilian endemic+.

Endostemon gracilis (Benth.) M. Ashby Faden RB 71/655
 Mida-Jilore track. Herb, to 30 cm, flowers blue 3-4 per cyme.
 Swahilian endemic+.

Hoslundia opposita Vahl s.r. (Mutangah & Mwaura, 1992)
 'Arabuko-Sokoke'. Herb, to 1.5 m, flowers white, fruits bright orange berries.
 Pan-Tropical.

Leucas tsavoensis Sebald Brenan JPM et al. 14677
 var. *kilifiensis* Sebald
 Arabuko. Herb, spreading, to 20 cm, corolla and filaments white, anthers red.
 Swahilian endemic.

- Ocimum basilicum* L. s.r. (Thomas,1988)
'Arabuko-Sokoke'. Herb, erect, to 80 cm, aromatic, flowers white or pale purple.
Pan-Tropical.
- Ocimum filamentosum* Forssk. Bock K EA16 686
Nature Reserve. Herb, woody, to 40 cm, flowers pink/mauve, stamens twice length of corolla.
Pan-Tropical.
- Ocimum obovatum* E.Mey. ex Benth. s.r. (Mutangah & Mwaura,1992)
(*Becium obovatum* E.Mey ex Benth. N.E.Br.)
'Arabuko-Sokoke'. Herb, to 30 cm, from woody root, flowers white to pale mauve.
Pan-African.
- Orthosiphon parvifolius* Vatke Simpson BL 366
Dida. Herb, erect, much branched, flowers purple.
Swahilian endemic +.
- Plectranthus aegyptiacus* (Forssk.) C.Chr. Simpson BL 382
A-S *Brachystegia* forest. Herb, to 1.2 m, trailing, succulent, flowers white with purple on upper lobe.
Swahilian endemic +.
- Plectranthus amboinicus* (Lour.) Spreng. Luke WRQ & Robertson SA 2617
Forest Reserve west side. Herb, to 30 cm, succulent, flowers pink, upper calyx lobe extended.
Pan-Tropical.
- Plectranthus flaccidus* (Vatke) Gürke Luke WRQ & Robertson SA 2585
Mida. Herb, to 40 cm, flowers deep blue.
Swahilian endemic +.
- Plectranthus lasianthus* (Gürke) Vollesen Robertson SA & Luke WRQ 6507
(*Plectranthus tetensis* (Baker) Agnew)
'Arabuko-Sokoke'. Herb, succulent, flowers deep purple, in spikes to 30 cm.
Swahilian endemic.
- Plectranthus longipes* Baker Robertson SA 6475
'Arabuko-Sokoke'. Herb, to 30 cm, flowers purple/pink.
Pan-African.
- Rotheca microphylla* (Blume) Callm. & Phillipson Moggridge GM 174
(*Clerodendrum incisum* Klotzsch)
Arabuko-Sokoke. Shrub, to 1.6 m, leaves toothed, corolla tube shaped like musical note symbol.
Swahilian endemic.
- Tinnea aethiopica* Kotschy ex Hook.f. Williams JG EAH12549
subsp. *litoralis* Vollesen
'Arabuko-Sokoke'. Shrub, to 1.5 m, flowers maroon.
Swahilian endemic +.
- Volkameria acerbiana* Vis. Sangai GW EA15596
(*Clerodendrum acerbianum* (Vis.) Benth. & Hook.f.)
Jilore / Kakuyuni. Shrub, erect or scrambling, densely pubescent/tomentose, flowers white in lateral and terminal clusters.
Swahilian endemic +.
- Volkameria glabra* (E.Mey.) Mabb. & Y.W. Yuan Graham RM 2077
(*Clerodendrum glabrum* E. May)
Mida. Shrub or small tree, leaves in whorls of three, flowers white.
Pan-African.

266**Hydrocharitaceae**

- Lagarosiphon cordofanus* Hochst. ex Casp. Robertson SA 7261
Kararacha pools. Herb, aquatic, leaves linear, in whorls, flowers white.
Pan-African.

280

Commelinaceae

- Aneilema aequinoctiale* (P.Beauv.) G.Don Moggridge GM 146
Sokoke. Herb, to 1 m, scrambling, scabrid, flowers yellow.
Pan-African.
- Aneilema clarkei* Rendle Simpson BL 146
'Arabuko-Sokoke'. Herb, creeper, rooting at nodes, flowers purple.
Swahilian endemic.
- Aneilema petersii* (Hassk.) C.B.Clarke Graham RM 1848
subsp. *petersii*
Nature Reserve. Herb, trailing, 1.5 m, leaves scabrid, flowers lilac.
Swahilian endemic +.
- Aneilema succulentum* Faden Robertson SA & Luke WRQ 6447
Nature Reserve. Herb, trailing, leaves scabrid.
Swahilian endemic.
- Commelina africana* L. s.r. (Thomas, 1988)
subsp. *africana*
'Arabuko-Sokoke'. Herb, more or less prostrate, to 40 cm, flowers yellow, 8 mm across.
Pan-African.
- Commelina benghalensis* L. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, prostrate, sheaths hairy, flowers bright blue, 15 mm across.
Pan-Tropical. (Introduced).
- Commelina bracteosa* Hassk. Rawlins SP T56
Jilore-Pahali peupe. Herb, trailing, flowers blue.
Pan-African.
- Commelina forskoolii* Vahl RB & AJ Faden 74/1249
'Arabuko-Sokoke'. Herb, succulent, decumbent, rooting at nodes, flowers blue.
Pan-Tropical.
- Commelina imberbis* Ehrenb. ex Hassk. s.r. (Thomas, 1988)
'Arabuko-Sokoke'. Herb, prostrate, rooting at nodes, flowers blue.
Pan-African.
- Cyanotis foecunda* Hochst. ex Hassk. s.r. (Robertson & Luke, 1993)
'Arabuko-Sokoke'. Herb, perennial, rhizomatous, to 60 cm, leaves linear, flowers blue/violet
with yellow anthers.
Pan-African.
- Murdannia simplex* (Vahl) Brenan Beentje H 2288
Nature Reserve. Herb, erect to 50 cm, flowers mauve 15 mm across.
Pan-African.

281

Flagellariaceae

- Flagellaria guineensis* Schumach. Ndakala J 351
Mida Creek. Herb, climber to 10 m, infl. white, fruit red.
Pan-African.

283

Xyridaceae

- Xyris congensis* Büttner s.r. (Robertson & Luke, 1993)
(*Xyris capensis* Baker)
'Arabuko-Sokoke'. Herb, to 30 cm, forms clumps, flowers yellow on leafless peduncle.
Pan-Tropical.

293

Asparagaceae

- Asparagus africanus* Lam. Graham RM 1590
Arabuko. Herb, climbing, woody, glabrous, roots swollen, branches with spines, fruit orange.
Pan-Tropical.
- Asparagus falcatus* L. Bjornstad 211.
Mida Creek. Herb, climbing, woody, glabrous, with recurved spines, leaves sickle shaped,
flowers white, fruit a red berry.
Pan-African.
- Asparagus humilis* Engl. Luke WRQ 3029
Mida. Herb, woody, to 50 cm, erect or prostrate, branches grooved, glabrous, without spines.
Swahilian endemic.
- Asparagus setaceus* (Kunth) Jessop Robertson SA, Luke WRQ & Awimbo J 5251
Kararacha. Shrub, climbing, to 8 m, branches grooved, with spines, flowers solitary, white,
fruit a red berry.
Pan-African.
- Chlorophytum cameronii* (Baker) Kativu Battiscombe K 771
Sokoke. Herb, tufted, to 1m, peduncle flattened, flower pink/white, favours swamps.
Pan-African.
- Chlorophytum laxum* R.Br. s.r. (Robertson & Luke, 1993).
'Arabuko Sokoke'. Herb, to 20 cm, rhizomatous, leaves linear, striped white/yellow, flowers
white, star-shaped.
Pan-Tropical.
- Chlorophytum suffruticosum* Baker s.r. (Robertson & Luke, 1993)
(*Anthericum suffruticosum* (Baker) Milne-Redh.)
'Arabuko-Sokoke'. Herb, erect, to 50 cm, leaves grass-like, at tips of branches, flowers white,
star-shaped.
Swahilian endemic +.
- Drimia altissima* (L.f.) Ker Gawl. Jeffery GW K293
Sokoke. Herb, bulbous, leaves forming rosette, flowering stem to 2 m, infl. a terminal raceme.
Pan-African.
- Sansevieria arborescens* Cornu ex Gérôme & Labroy Ngwiri SN & Newton L 5884
'Arabuko Sokoke'. Shrub, semi - succulent, to 1.2 m, leaves 'disorderly', infl. a panicle.
Swahilian endemic.
- Sansevieria conspicua* N.E.Br. Graham RM 2060
Mida. Herb, to 50 cm, semi - succulent, with aerial rhizome, flowers white, in spike.
Pan-African.
- Sansevieria forskaliana* (Schult.f.) Hepper & J.R.I.Wood s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Herb, to 60 cm, stemless, with succulent, erect, rigid leaves from rhizome.
Pan-African.
- Sansevieria gracilis* N.E.Br. Sangai GW EA15633
Kaembeni-Dida. Herb, to 30 cm, semi-succulent, rhizomatous.
Swahilian endemic +.
- Vera-duthiea macrocarpa* (Stedje) Speta Luke WRQ & Robertson SA 2592
(*Drimia macrocarpa* Stedje)
Mida. Herb, to 60 cm, bulbous, flowers white/beige.
Swahilian endemic +.

Colchicaceae

- Gloriosa superba* L. Kuchar P 9992
var. *superba*
Mida Creek. Herb, climbing, to 3 m from tuberous root, tendrils at leaf tip, flowers brilliant
flame-like yellow/orange.
Pan-Tropical.

302

Araceae

- Gonatopus boivinii* (Decne.) Engl. Moreau H 24/40
Sokoke. Herb, to 1.2 m, leaf solitary, stalk with swelling mid-way.
Pan-African.
- Gonatopus marattioides* (Peter) Bogner Luke WRQ & Robertson SA 2237
'Arabuko Sokoke'. Herb, tuberous, to 20 cm, leaf bipinnately compound.
Swahilian endemic. Endangered.
- Gonatopus petiolulatus* (Peter) Bogner Luke WRQ & Robertson SA 2170
Dida/Sokoke Nyari. Herb, to 20 cm, leaves pinnate.
Swahilian endemic. Vulnerable.
- Stylochaeton salaamicus* N.E.Br. Beentje H 2322
Mida-Jilore Track. Herb, to 25 cm, lower part of leaf blade concave.
Swahilian endemic+.

311

Dioscoreaceae

- Dioscorea asteriscus* Burkill Graham RM 1909
Jilore. Liana, to 3 m, leaves heart-shaped, alternating on flowering shoots, bulbils
purplish/brown, semi-discoid.
Pan-African.
- Dioscorea buchananii* Benth. s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Liana, to 9 m, from woody tuber, leaves heart-shaped or triangular,
bulbils absent.
Pan-African.

321

Taccaceae

- Tacca leontopetaloides* (L.) Kuntze Simpson BL 365
'Arabuko-Sokoke'. Herb, to 1 m, from tuberous rhizome, fruits large green with stringy
mane.
Pan-Tropical.

326

Orchidaceae

- Aerangis kirkii* (Rchb.f.) Schltr. Robertson SA 6452
'Arabuko-Sokoke'. Herb, epiphytic, leaves to 15 cm, flowers white, in spike to 17cm.
Swahilian endemic+.
- Bonatea rabaiensis* (Rendle) Rolfe Jeffery GW 238 (cited in FTEA)
Sokoke. Herb, terrestrial, to 50 cm, stem erect leafy, infl. 3-7 flowers, green and white.
Swahilian endemic.
- Bulbophyllum maximum* (Lindl.) Rchb. f. Perdue RE & Kibuwa SP 10121
Jilore. Herb, epiphytic, infl. to 40 cm flattened > 2 cm wide, flowers white/maroon.
Pan-African.
- Bulbophyllum scaberulum* (Rolfe) Bolus Luke WRQ & Robertson SA 2621
Sokoke. Herb, epiphytic, infl. < 20 cm, flowers maroon.
Pan-African.
- Cyrtorchis arcuata* (Lindl.) Schltr. s.r. (Robertson & Luke, 1993)
subsp. *arcuata*
'Arabuko-Sokoke'. Herb, epiphytic, clump forming, leaves fleshy, flowers cream fading to
yellow, star-shaped, scented.
Pan-African.
- Eulophia taitensis* P.J.Cribb & Pfennig s.r. (Mutangah & Mwaura, 1992)
'Arabuko-Sokoke'. Herb, terrestrial, to 1 m, leaves linear fleshy, flowers yellow-green.
Pan-African.

- Habenaria armatissima* Rchb. f. Jeffery GW 247 (cited in FTEA)
 ‘Arabuko-Sokoke’. Herb, terrestrial to 70 cm, stem erect & stout, basal leaves (2) flat on ground, flowers white.
 Pan-African.
- Habenaria trilobulata* Schltr. Robertson SA 7197
 ‘Arabuko-Sokoke’. Herb, terrestrial, basal leaves (2) flat on ground, flowers pale green.
 Swahilian endemic +.
- Microcoelia aphylla* (Thouars) Summerh. Graham RM 1637
 (*Solenangis aphylla* (Thouars) Summerh.)
 Arabuko. Herb, epiphytic or terrestrial, stem to 40 cm, leafless, flowers white with red-brown markings.
 Pan-Tropical.
- Microcoelia exilis* Lindl. Faden RB, Evans TM & Rathbun G 71/683
 Jilore track. Herb, epiphytic, leafless, flowers 3 mm, white, in spikes.
 Pan-African.
- Microcoelia smithii* (Rolfe) Summerh. Beentje H 2309
 Nature Reserve. Herb, epiphytic, flowers to 4 mm, cream/green.
 Swahilian endemic.
- Polystachya concreta* (Jacq.) Garay & H.R.Sweet Robertson SA 6970
 (*Polystachya tessellata* Lindl.)
 A-S *Brachystegia* forest. Herb, epiphytic, flowers yellow, fragrant.
 Pan-African.
- Solenangis wakefieldii* (Rolfe) P.J.Cribb & J.Stewart s.r. (Robertson & Luke, 1993)
 ‘Arabuko-Sokoke’. Herb, epiphytic, stem to 1 m with climbing roots, leaves set widely apart, bilobed at apex, flowers white, fragrant.
 Swahilian endemic +.
- Tridactyle bicaudata* (Lindl.) Schltr. s.r. (Robertson & Luke, 1993)
 Arabuko-Sokoke’. Herb, epiphytic, stems to 80 cm unbranched, leaves leathery, flowers yellow.
 Pan-African.
- Vanilla roscheri* Rchb. f. s.r. (Robertson & Luke, 1993)
 ‘Arabuko Sokoke’. Herb, epiphytic, stem cylindrical, flowers white with pink throat.
 Swahilian endemic +.

331

Cyperaceae

- Abildgaardia triflora* (L.) Abeyw. Robertson SA, Stirton CH & Schrire BD 7004
 (*Fimbristylis triflora* (L.) K.Schum.)
 Mida Creek. Herb, clumpy, stems to 1 m, 2-5 spikelets.
 Pan-African.
- Bulbostylis boeckeleriana* (Schweinf.) Beetle Boyle B 128
 var. *transiens* (K.Schum.) R.W.Haines
 ‘Arabuko-Sokoke’. Herb, to 70 cm, rhizomatous, growing in tufts.
 Pan-African.
- Cyperus betafensis* Cherm. Faden RB, Evans RB & Rathbun G 71/646
 Kararacha. Herb, to 15 cm, with large spikelets in rounded clusters.
 Pan-Tropical.
- Cyperus exaltatus* Retz. Simpson BL 285
 ‘Lake’ Jilore. Herb, to 1.5 m, forms tussocks, favours shallow water.
 Pan-Tropical.
- Cyperus luteus* Boeckeler Trump EC 142
 Sokoke. Herb, to 40 cm.
 Pan-African.
- Cyperus zollingeri* Steud. Faden RB, Evans RB & Rathbun G 71/645
 Mida-Jilore track. Herb, to 20 cm.
 Pan-Tropical.

- Fimbristylis polytrichoides* (Retz.) Vahl Robertson SA 3404
Mida Creek. Herb, tufted.
Swahilian endemic.
- Mariscus amomodorus* (K.Schum.) Cufod. Simpson BL 107
(*Cyperus mollipes* (C.B.Clarke) K.Schum.)
A-S *Brachystegia* forest. Herb, to 50 cm, growing in tufts.
Pan-African.
- Pycreus hildebrandtii* (K.Schum.) C.B.Clarke Simpson BL 362
Mida Creek. Herb, to 40 cm, infl. spreading, growing on water's edge.
Pan-Tropical.
- Pycreus polystachyos* (Rottb.) P.Beauv. Robertson SA, Stirton CH & Schrire BD 7003
var. *polystachyos*.
Mida Creek. Herb, to 60 cm, spikes open, corymbose or umbellate, red-brown.
Pan-Tropical.
- 332**
- Poaceae (Gramineae)**
- Brachiaria deflexa* (Schumach.) C.E.Hubb. ex Robyns Taylor HJ 1213
Sokoke. Herb, to 45 cm, leaves along the stem, infl. of racemes with paired spikelets
Pan-Tropical.
- Brachiaria chusqueoides* (Hack.) Clayton Faden RB & AJ 71/757
Sokoke Forest Station. Herb, to 75 cm, stems wiry, infl. of racemes.
Pan-African.
- Brachiaria lindiensis* (Pilg.) Clayton Faden RB, Evans RB & Rathbun G 71/690
Mida-Jilore track. Herb, to 60 cm, tufted, infl. often axillary.
Swahilian endemic.
- Cenchrus mitis* Andersson s.r. (Thomas,1988)
A-S *Brachystegia* forest pools. Herb, to 60 cm, panicle to 18 cm.
Swahilian endemic+.
- Cenchrus polystachios* (L.) Morrone Bogdan A AB 4719
(*Pennisetum polystachion* (L.) Schult.)
'Arabuko-Sokoke'. Herb, to 1.5 m, panicles to 25 cm long.
Pan-Tropical.
- Cynodon dactylon* (L.) Pers. s.r. (Thomas, 1988)
'Arabuko Sokoke'. Herb, prostrate, with stolons/rhizomes, forms mats.
Pan-Tropical.
- Dactyloctenium aegyptium* (L.) Willd. Taylor HJ 1217
Sokoke. Herb, to 45 cm, spikes radiate at tip of stem, 'crow's feet'.
Pan-Tropical.
- Digitaria argyrotricha* (Andersson) Chiov. Simpson BL 256
'Arabuko-Sokoke'. Herb, to 70 cm, rooting from lower nodes, infl of 3-5 digitate racemes.
Pan-African.
- Digitaria milanjana* (Rendle) Stapf Moggridge GM 1480
Sokoke. Herb, to 1.5 m.
Pan-African.
- Echinochloa haploclada* (Stapf) Stapf Simpson BL 252
A-S *Brachystegia* forest pools. Herb, to 1.5 m, spikelets purplish.
Pan-African.
- Eleusine indica* (L.) Gaertn. Sangai GW EA15849
Kakuyuni. Herb, to 50 cm, clumpy with tough root system.
Pan-Tropical.
- Enteropogon sechellensis* (Baker) T.Durand & Schinz Greenway PG 10835
'Arabuko-Sokoke'. Herb, to 1 m, tussocky, stems wiry, sheaths laterally compressed.
Swahilian endemic+.

- Eragrostis ciliaris* (L.) R.Br. Kuchar P 10003
Mida Creek. Herb, to 40 cm, tufted.
Pan-Tropical.
- Eragrostis superba* Peyr. Simpson BL 376
A-S mixed forest pools. Herb, to 1 m, tufted, spikelets large, greenish purple.
Pan-African.
- Eragrostis tenella* (L.) P.Beauv. ex Roem. & Schult. Bogdan A 4717
var. *tenella*
Gede. Herb, to 30 cm, panicle loose, to 7 cm.
Pan-African.
- Harpachne schimperi* Hochst. ex A.Rich. Robertson SA & Luke WRQ 6106
Forest Reserve western boundary. Herb, to 40 cm, tufted, panicles oval, spikelets dense.
Pan-African.
- Megastachya mucronata* (Poir.) P.Beauv. Kirika P et al. 04/13/2008
Arabuko. Herb, to 1.2 m, leaf blades lanceolate, veins laterally connected.
Pan-Tropical.
- Panicum laticomum* Nees Langridge WB 702
Sokoke. Herb, to 1 m, culms ascending.
Swahilian endemic+.
- Perotis hildebrandtii* Mez Greenway PJ 10834
'Arabuko-Sokoke'. Herb, to 30 cm, in loose tufts, spikelets loose spreading horizontally.
Pan-Tropical.
- Sacciolepis curvata* (L.) Chase Kirika P et al. NMK750
Jilore. Herb, to 45 cm, branched below, culms very slender, weak.
Pan-Tropical.
- Sporobolus apiculatus* Boechat & Longhi-Wagner Bogdan A AB4707
Mida Creek. Herb, tufted.
Pan-Tropical (introduced).
- Sporobolus stolzii* Mez Boyle B 127
Jilore Track. Herb, to 60 cm, loosely tufted.
Pan-African.
- Urochloa maxima* (Jacq.) R.D.Webster Cock MJW 016
(*Panicum maximum* Jacq.)
'Arabuko-Sokoke'. Herb, to 2 m, with open panicle to 60 cm.
Pan-African.