Biodiversity Surveys of Poorly Known Coastal Forests of Southeastern Tanzania and Zanzibar

Erythrina schliebenii Harms

Fieldwork conducted

10 Sept – 07 October 2011, Tanzania Mainland

Unguja Island, 20-23 Nov 2011

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Executive Summary:

A survey of selected coastal forests of southeastern Tanzania mainland was conducted funded through WWF and the Global Environmental Facility from 12 September through 7 October 2011. Forests visited included Pindiro, Namatibili gorge forest, Matapwa (also known as Namatapwa) forest and Mitundumbea forest. Logistical and time constraints did not permit the study of Matumbi-Kichi Hills forests, Rondo Plateau, and Ngarama forests.

A visit to Unguja Island provided information on the forests of Unguja and Pemba islands that lack sufficient information to allow proper evaluation of their status with regard to biodiversity value. The need for more detailed surveys was noted for Uzi and Vundwe Islands and in the community forest reserves at the edge of Jozani-Chwaka Bay National Park, as well as for surveys of cultivated land in these areas. For Pemba island, there is a need to survey small forest patches as well as to ascertain what species of interest may persist in local cultivation.

In our study, plants were surveyed using standard botanical techniques, 377 plant species were identified. Our surveys revealed not only information on species composition, but details of species believed to have been extinct, *Karomia gigas* and *Erythrina schliebbeni.* Thirty of the species identified are Swahelian regional centre of endemism-coastal forest endemics. This is probably an underestimate due in part to taxonomic changes making direct comparisons of various lists difficult, and also due in part to the short survey period and dry weather during which the study was conducted. Fourteen of these species were found only in Namatimbili, and 13 in Namatimbili and one other forest. Only four were found in all three forests surveyed, and only two were present in both Matapwa and Mitundumbea forests only.

Two species believed to have been extinct, *Karomia gigas* (Verbenaceae) and *Erythrina schliebbeni* (Fabaceae) were present, thus adding conservation value to the patches of coastal forest of southeastern Tanzania. The former was found only in Mitundeumbea forest, the latter in both Matapwa and Namatimbili forests.

IUCN Redlist species were distributed as follows: VU, 15: CR, 2; EN, 4; NT, 6; and LC, 4.

Smaller vertebrates (mammals, amphibians, reptiles and birds) were sampled using standard trapping and mist-netting methods. Indirect methods of detection (sign, transects, and informal discussions with local residents) were also used to assess presence of vertebrates.

Seventeen amphibian species were recorded during the survey. Few amphibians are restricted to coastal forests and none strictly so. None of the coastal forest species of amphibian surveyed is listed on the CITES Appendices, nor are any included in the IUCN Redlist.

Thirty-eight reptile species were detected in our surveys, none was endemic to coastal forests, and none was listed on the IUCN Redlist. However, Tanzania has an active trade in live reptiles and the following CITES species/groups were noted: Nile Crocodile, Appendix II; Tortoises, family

Testudinidae, Appendix II; Chameleons, Appendix II; *Python natalensis*, Appendix II; and *Cordylus tropidosternum*, Appendix II.

Ninety one species of birds were detected in the forests surveyed. The numbers of bird species detected in each forest were: Namatimbili (58), Mitundumbea (66) and Matapwa 59. According to the IUCN Redlist, one species, the Plain-backed Sunbird, is catogeorised as Near Threatened and two species, the Southern Banded Snake Eagle and Reichenow's Batis are considered Vulnerable. Seven species were detected that are considered endemic and near-endemic to the coastal forests of Eastern Africa.

Larger mammals present in the areas surveyed included elephant, lion and leopard. Evidence of poaching of elephants included carcasses observed. Other mammals such as bovid ungulates were hunted for food by local residents. Because water was a scarce resoruce in the area, large mammals were vulnerable to poaching when they entered riverine vegetation en route to and from river water. Hippopotami were present in the Pindiro area but were not seen elsewhere.

CITES listings for mammals include: African Elephant, Appendix I; Lion, Wild Cat, Leopard, Otter, Vervet Monkey, Blue Monkey, Baboon, Ground Pangolin and Hippopotamus, Appendix II. All Galagos (bushbabies) in family Galagonidae are also on Appendix II.

IUCN Redlist species include Red and black elephant shrew and Fout-toed Elephant Shrews listed as VU, Vulnerable, Wild Dog, EN, Endangered, and the Rondo Galago, listed as Critically Endangered, CR.

General conservation issues noted were lack of control over the harvest of timber and poles; poaching of larger mammals such that offtake would appear to be unsustainable, encroachment into forests for agriculture, and fire.

Suggested conservation measures include improving governance and accountability as regards responsibility for management of the forest and wildlife resources. To avoid long-term effects of isolation and fragmentation of forest patches on plants and wildlife, it is suggested that for the plateau forests, connectivity be developed and maintained.

Regarding the forests of Zanzibar, we noted that there is need for detailed survey and study of particular forest patches on the islands of Unguja and Pemba that have not yet received the attention of biologists, as well as monitoring of existing forest patches. There is also scope for extending connectivity between existing protected forest patches. In addition, because of the generally small-scale nature of cultivation on the islands, surveys on cultivated land, especially cultivation located between forest patches, might indicate the feasibility of connectivity between forest patches, and/or programmes involving local residents in conservation efforts on private land. .

This survey was of limited duration and scope and was conducted during a relatively dry season. It is suggested that surveys of longer duration in each forest during a rainy period would yield more species and provide more information on the forests and their values.

A desk top study of forests not studied in the field included: Weme, Kichi Hills, Kiwengoma, Matumbi Hills, Mchungu, Mbarawala, Ruawa, Rondo, Unguja island, Jozani-Chwaka Bay National Park forests, Pemba island and Ngezi-Vumawinbi Nature Reserve. Distributional records of plants and vertebrates reported in published or unpublished studies as well as specimens in the Biodiversity Database of the Dept. of Zoology & Wildlife Conservation were included. Many of these records are based on collections made by Frontier-Tanzania. This study indicated the importance of Jozani-Chwaka Bay National Park forests, Unguja and Ngezi-Vumawinbi Nature Reserve Forests, Pemba to conservation of coastal forest endemic species. Surveys in the past have suggested the importance of forests on the mainland, especially but not only Kiwengoma-Matumbi Hills and Rondo, to the survival of coastal forest endemic species.

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List of Institutional abbreviations

CEPF = Critical Ecosystem Partnership Fund

CITES = Convention on International Trade in Endangered Species of Wild Fauna and Flora

TFCG = Tanzania Forest Conservation Group

IUCN = International Union for the Conservation of Nature

WCS = Wildlife Conservation Society

WWF = World Wide Fund for Nature

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1. INTRODUCTION

1.1. Background

The high biodiversity values of the coastal forests of Tanzania have only relatively recently been recognised: (see Burgess& Clarke, 2000 for discussion of studies).

These earlier studies resulted in the global ranking of the coastal forests and the forests of the Eastern Arc Mountains of Kenya and Tanzania as Biodiversity Hotspots (Mittermeier *et al.*, 2004) and although the Eastern Arc Mountains have since been included in a broader Afromontane Hotspot, the Coastal Forests still stand on their own as a globally recognised Biodiversity Hotspot.

Despite surveys of many forests, however, few could be considered 'well known' as regards all aspects of their biodiversity, and some have hardly been studied in any detail by biologists. Furthermore, many forests have not received survey coverage during a rainy season, when conditions are critically important for many organisms.

To help remedy this situation, WWF through the Global Environmental Facility, GEF, initiated a survey to document biodiversity information on the plateau forests of Kilwa District as well as to document some of the lesser known forests of Unguja and Pemba islands.

1.2. Terms of Reference (TOR)

1. To undertake targeted biodiversity surveys in poorly known coastal forests in southern Tanzania and Zanzibar, aiming to fill critical data gaps and identifies the most important unprotected forests that require adequate protection.

    - The key forest areas to be surveyed in the mainland are: the plateau forests of Kilwa District (Ngarama, Mbarawara plateau, Pindiro forest, Namatimbili gorge, and Namatapwa forest);

    - The main methods to be used are detailed field survey and species inventory using a combination of mist netting and observation (for birds), botanical collection (pressing plants in the field), trapping (small mammals, reptiles and amphibians) and opportunistic sighting and capture by hand (mammals, birds, reptiles and amphibians).

    - On Zanzibar there will be linkage to the work of WCS and in southern Tanzania there will be linkage to the work of TFCG.

- The focus of the field work should be on endemic and near endemic species, and those assessed as threatened or potentially threatened on the IUCN Red List (for animals) and the lists of plants provided by Roy Gereau.

2. To suggest 1-2 species per landscape that can be monitored using project staff, students or short term consultants to assess if biodiversity values change over the period of the project's lifespan.

3. To conduct a desk review, followed by a day or two reconnaissance surveys and focused group discussions. in the other three forest landscapes - Matumbi- Kichi hills, Rondo plateau and surrounding escarpments and Zanzibar forests.

    - From this work the team should come up with an updated list of species including rare and endemics from these well studied landscapes.

    - To suggest suitable indicator species and monitoring methodologies that our project should be following and tracking over the project life time as a basis for measuring conservation impact.

Outputs

1. A report that summarises the results of field surveys in these forests, containing sections on

    a. Background and introduction

    b. Methodologies used

    c. Results of field surveys (with particular emphasis on rare, endemic and threatened species)

    d. Discussion of the significance of the results compared with other coastal forest areas in Tanzania

    e. Species lists for each of the reserves surveyed

    f. Species that could be monitored by the project to assess impact

2. Data files of the results presented in the reports

    a. Excel files of species lists

    b. Photographs

    c. Details of any specimens collected for further scientific study

Linkages

Within WWF this work will link to the M&E work of the Coastal East Africa Programme. It is important that the conservation planning work links to past efforts, in particular the CEPF-funded work that was undertaken between 2004 to date.

2. METHODS

For an itinerary of the survey, see Appendix 6.1.

2.1. Botanical Methods

2.1.1. Vegetation sampling

The following areas were sampled in detail: Namatimbili forest, Miundumbea forest, and Matapwa forest (Figure 2.1.1).

A transect technique was employed in this study. Each transect was laid out starting from the forest boundary with its long axis running through vegetation cover. The direction of the transect was guided by compass or GPS and vegetation permitting, the length of each transect was four km.

GPS readings were taken using a Garmin 76 GPS using the WGS 84 datum. Readings were recorded at the beginning and end of each transect,

These readings are as follows:

Namatimbili forest

Transect 1: GPS reading at beginning of transect 1: 37L 525351, UTM 8992461; end, 37L 525491; UTM 8994634.

Transect 2: 37L 525332; UTM 8992422; end, 37L 523954 UTM 8991092

Transect 3: 37L 525402; UTM 8992468; end, 37L 526500, UTM 8993605

Transect 4: 37L 525352, UTM 8993305; end, 37L 527233, UTM 8992822

Mitundumbea forest:

Transect 1: GPS reading at beginning of transect 1: 37L 530974; UTM 8983453; end, 37L 5030158; UTM 8980271

Transect 2: GPS reading at beginning of transect, 37L 530082, end of transect, UTM 8982696; end 37L 530034 , UTM 8984109

Transect 3: beginning 37L 531462, UTM 8985642; end, 37L 532325; UTM 8984247

Matapwa forest:

Transect 1: beginning 37L 542525, UTM 8930851; end 37L 541666; UTM 8932331

Transect 2: beginning 37L 538177, UTM 8927280; end 37L 540407; UTM 8929155

Transect 3: beginning 37L 541826, UTM 89 30 582; end 37L 538643, UTM 8931320

Along each transect, a series of nested plots as recommended by Stohlgren *et al.,* (1995) was systematically established. The sampling plots were positioned on alternating sides of the transect following the method of Kasenene (1987). Three levels of sampling were employed in the field: (a) 20m x 50m plots for trees with >10cm diameter at breast height (DBH) (b) 5m x 2m plots nested in the larger plot for shrubs and saplings (c) 2m x 0.5m plots nested in the 5m x 2m plots for herbs and grasses. The information recorded was the species name of plant, for trees, diameter at breast height (DBH), and for grasses and herbs the percentage cover. Most plants were identified to species level in the field. Others that were difficult to identify were collected, pressed and taken to the herbarium in the Department of Botany, University of Dar es Salaam for identification either by matching with herbarium specimens or by using floras such as Flora of Tropical East Africa and Flora Zambesiaca.

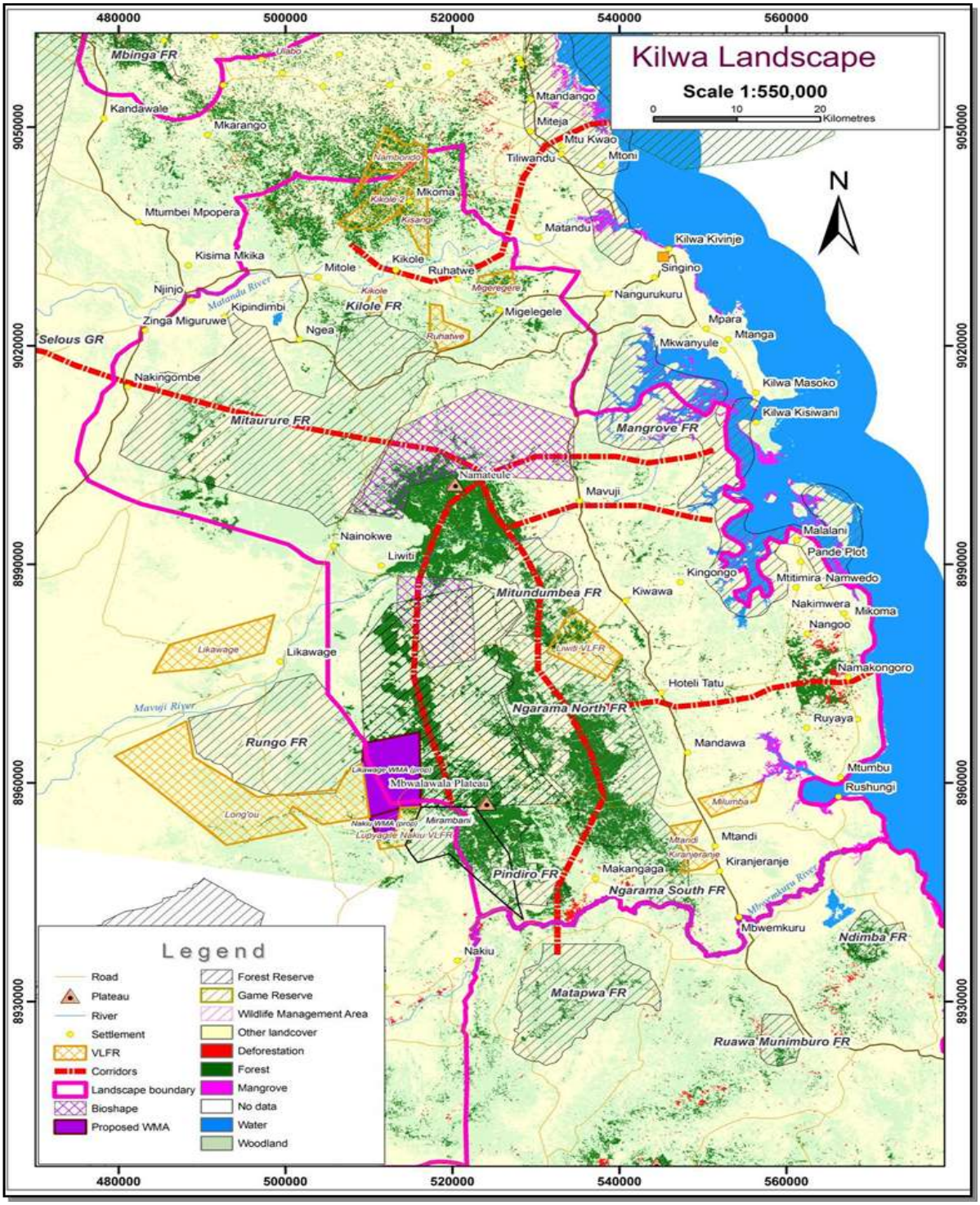

Figure 2.1.1 Map of the Kilwa forests (provided by WWF)

2.1.2. Zanzibar Forest Study

Discussions were held on Unguja island with Dr. T. Davenport of Wildlife Conservation Society, (WCS) an organisation that is conducting surveys and monitoring on Zanzibar and Pemba islands. Two of us, KMH and CAM, have experience conducting surveys on both Pemba and Unguja. A visit was made to Jozani – Chwaka National Park and nearby forest and shamba areas so that we were able to familiarise ourselves with the current ecological as well as the socio-economic situation of the protected and non-protected areas on the island. Using maps provided by Dr. T. Davenport, it was possible to identify forest areas in need of survey and monitoring.

2.2. Zoological Methods

2.2.1. Small vertebrates

2.2.1.1. General survey methods

Standard techniques were used to assess the presence of and obtain an index of abundance of mammals, amphibians, reptiles and birds. Small mammals, amphibians and reptiles were assessed using standard capture techniques shown to have been effective elsewhere in East Africa (Davies & Howell, 2002; Howell, 2002) including a drift fence array with bucket pitfall traps and Sherman traps and snap (breakback) traps. Bats were sampled using mist nets. Birds were sampled by observation, mist-netting and the use of Timed Species Counts (TSCs).

2.2.1.2. Bucket pitfall traps with drift fence array

Bucket Pitfall Lines (BPFLs) are time consuming to set yet very effective once in place and one is almost guaranteed to capture of small mammals and amphibians and reptiles that would not otherwise be detected. Furthermore they also allow for a quantitative analysis of the results.

Each pitfall drift fence array consisted of eleven 20 litre bucket pitfall traps (internal diameter 30 cm, depth 33 cm) set at an interval of five metres. These buckets were buried such that their rims were level with the ground. A drift fence made of transparent plastic sheeting approximately 0.5 m high and supported by wooden stakes to which the plastic was stapled served to guide animals encountering the fence into the buckets. Buckets were checked for captures in the morning and in the evening. Studies by Stanley *et al*., (1996); Davies & Howell (2002) and Howell (2002) indicate that a minimum of seven trap nights, and preferably ten, is needed to adequately sample the smaller terrestrial vertebrates. Ideally such trapping should be carried out at least twice a year, once in the dry season and during a wet season; this obviously was not possible in this brief survey.

2.2.1.3. Sherman traps

Sherman live traps (collapsible, aluminium live traps) were used to capture small mammals that either were large enough to jump out of the buckets or that for one reason or another were not captured by the bucket pitfall traps. At each sampling site Sherman traps were set on either side of the bucket pitfall trap line ten m away from it. These Sherman traps were set parallel to and about 10 m from either side of each bucket pitfall trap line, at 5 m intervals. Two sets of Sherman traps were used at each site: 10 larger ones with the dimensions of 30 cm x 10 cm x 8 cm, and 10 smaller ones with the dimensions of 23 cm x 9 cm x 8 cm. The two types of traps were set in an alternating manner along the trapline; between each was a snap trap. Traps were baited in late afternoon using equal sized pieces of fresh coconut that had been lightly fried and rolled in peanut butter.

2.2.1.4. Snap or Break-back Traps

Standard Rat or Snap Traps were used to capture larger rodents that were not sampled in the BPFLs or the Sherman traps. These Snap traps were set in the same manner as Sherman traps, parallel to the BPFL. All traps were checked in the morning, and re-baited after 15:30 hrs. Old bait was removed and discarded away from the trapline..

2.2.1.5. Mist netting for birds and bats

Mist nets were used to capture birds so as to allow identification and to allow data to be collected on reproductive status, especially the presence or absence of a brood patch.

The nets were erected at each site along clear-cut runs about 1 m wide at each site. After being set, the nets were checked each hour but more frequently during the morning and evening hours for 12 daylight hours. Birds captured were placed in cloth "bird-bags" for holding for identification and photographing. Each bird was marked with a blue or black permanent felt tipped marker pen at the base of its toes on one of the tarsi for identification if recaptured, and thereafter released. Birds were identified with the aid of Stevenson & Fanshawe (2002).

The same nets used to sample birds were employed to sample bats, during the non daylight hours. GPS readings were taken near each mist net site; using a Garmin 60 CSx GPS unit, set to the WGS 84 Datum (Table 2.1).

Table 2.1 GPS readings for bird and bat mist net sites

Site	Coordinates	Remarks on nets set
Namatimbili	37 L 0525362, 8993612	63 m of nets used for 26 daylight hours
Mitundumbea	37L 0531101, 8983520	A total of 90 m of mist netting for 24 daylight hours for both Mitundembea netting sites
Mitundumbea	37 L 0531310, 8983480	
Matapwa	37L 0542537, 8930842	93 m of nets used for 41 daylight hours.

2.2.1.6. Handling and identification of animals

Animals caught in bucket pitfalls and Sherman traps were removed, identified and marked with a felt tipped marker pen on the tail (mammals) so as to avoid double counting in the event they were captured again before releasing them at the site of capture. Snakes were removed from traps with the aid of snake sticks and snake tongs. Amphibians were not marked but were released away from the trapline. They were identified using the standard regional guide (Channing and Howell, 2006). Reptiles were identified using Spawls *et al*., 2004. Mammals were identified using Kingdon (1997).

NB, Caveat as regards the identification of small vertebrates

The small vertebrate fauna of Tanzania is relatively poorly known. Particular groups such as the shrews and small mammals generally require a detailed examination of the features of the skull and teeth before a positive identification to the species level can be made. A photograph of a single animal may be insufficient information on which to make identification to species level. In some cases, there are only a very few taxonomists globally who are able and willing to attempt such identifications. In many instances, the identification of even a common species may involve years of detailed study and taxonomic revision. The identification to species level of reptiles and amphibians often requires preserving a series of individuals for detailed examination and increasingly, molecular studies. While birds are the best known of the vertebrates, species new to science are still being discovered in Tanzania. In this study, some identifications to species level were of necessity preliminary in nature.

This caveat does not limit or affect the value of the results of the study, but rather, indicates the need for further field surveys and taxonomic research in Tanzania and the need for improved field guides that will allow identifications.

2.2.2. Non-capture survey methods

A number of methods for detecting animals do not involve capture, these are briefly indicated below:

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2.2.2.1. Sign: tracks, scats, etc.

These were recorded as observed and where possible, photographed.

2.2.2.2. Timed Species Counts (TSCs) for birds

Timed Species Counts were used to determine the relative abundance of birds. In this method, no definite path or transect is used. GPS readings were taken at each site the TSCs were conducted; using a Garmin 60 CSx GPS unit, set to the WGS 84 Datum (Table 2.2). Each series of Timed Species Counts was conducted for one hour. In order to have scores for the relative abundance of birds, each one hour of counting was divided into six ten-minute intervals. In the first ten-minute interval, all birds seen or heard at a distance of 50 metres from the observer were recorded and given a score of 6. The birds not seen or heard in the first ten-minute interval and recorded in the second ten-minute interval were given a score of 5. This was continued in the subsequent ten-minute intervals and the scores decreased such that in the last ten-minute interval, birds seen were given a score of 1. To determine the relative abundance of birds, the average scores for each species was calculated (Pomeroy, 1992).

Table 2.2 GPS readings for bird Timed Species counts

Namatimbili		**Time spent**
From	**To**	
37 L 0525343, 8993620	37 L 0525122, 8993025	2 hours
37 L 0525122, 8993025	37 L 0523442, 8992321	2 hours
37 L 0523442, 8992321	37 L 0521353, 8992530	2 hours
Mitundumbea		
Timed Species Counts		
From	**To**	
37L 531105, 8983516	37L 530015, 8982871	2 hours
37L 530015, 8982871	37L 529666, 8984828	1 hour
37L 529666, 8984828	37L 529917, 8986298	1 hour
37L 532275, 8984270	37L 531487, 8985601	1 hour
37L 531105, 8983516	37L 532275, 8984270	1 hour
Matapwa		
Timed Species Counts		
From	**To**	
37L 0542537, 8930842	37L 542734, 8931773	2 hours
37L 542656, 8931446	37L 544799, 8932334	2 hours
37L 0543091, 8931766	37L 0541501, 8930461	2 hours

2.2.2.3. Informal interviews

The local residents of an area (some of whom we employed to help establish the trap lines) often have an intimate and unique knowledge of local animals and plants. Through informal interviews, we were able to obtain information on such aspects of biodiversity as trapping methods, bush meat utilisation, and how plants may be utilised.

2.2.2.4. Photographs

Digital photographs were taken to record habitat as well as presence of plants and animals and their sign (Appendix 6.5.

2.3. Forest information gathered on Zanzibar forests

A brief visit to Unguja Island permitted us to gain information on the current situation in the field at Jozani-Chwaka National Park and environs, and interviews and discussions with Dr. Tim Davenport, Director, Wildlife Conservation Society (Tanzania office) provided us with information on the status of various forests on Unguja and Pemba islands.

2.4. Desk top study of forests not surveyed in the field work session

A desk top study covering: Weme, Kichi Hills, Kiwengoma, Matumbi Hills, Mchungu, Mbarawala, Rondo, Unguja Island, Jozani-Chwaka forests, Pemba island and Ngezi forest was conducted. Distributional records of plants and vertebrates reported in published or unpublished studies as well as specimens in the Biodiversity Database of the Department of Zoology & Wildlife Conservation were included. Many of the coastal forest specimens are the result of collecting done under the Frontier Tanzania Coastal Forests Project.

Basic references used for the desk top study include: Vegetation, Beentje, no date; Burgess & Clarke, 2000; Clarke, 1995 a,b; Clarke et al., 2000; Clarke & Dickinson, 1995; Hall *et al.*, 2004; Mwasumbi *et al.*, 2000; Nahonyo et. al, 2002; Nahonyo et al., 2005; Rodgers *et al.*, 1986; Rodgers *et al.*, 1988; Spawls *et al.*, 2004. Amphibians: Channing & Howell. 2006; Frost *et al.*, 2006; Msuya et al., 2004; Msuya *et al.*, 2006; Nahonyo et. al, 2002; Nahonyo et al., 2005; Pakenham, 1983; Pickersgill, 2007; Poynton, 2000; Waters & Burgess, 1994. Reptiles: Broadley, 2003; Broadley & Howell, 1991 ; Broadley & Howell, 2000; Broadley & Wallach, 2007a; Broadley & Wallach, 2007b; Broadley, D.G. & Wallach, 2009; Moreau & Pakenham, 1941; Nahonyo *et. al*., 2002; Nahonyo *et al*., 2005; Pakenham, 1983; Waters & Burgess, 1994; Birds: Haldane, 1946; Jensen *et al.*, 2005; Mlingwa *et al.*, 2000; Stanley, 2008; Stevenson, & Fanshawe, 2002;

Mammals: Goldman & Winther-Hanen, 2003; Kock & Stanley, 2009; Kingdon, 1997; Nahonyo *et. al*, 2002; Nahonyo *et. al*., 2005; Pakenham,1984; Perkin, 2004; Waters & Burgess, 1994; Wilson & Reeder, 2005.

The following websites were accessed as part of the study: www.iucn.org; www.tfcg.org; www.redlist.org.

3**. RESULTS**

3.1. Botanical

3.1.1. General overview of vegetation from the forests

A total of 377 plant species were identified and recorded from the forests that were surveyed Namatimbili Forest (including Namatimbili gorge), Mitundumbea and Namatapwa Forests (see Table 3.1). Specimens collected with Mligo field numbers are indicated in Table 3.2.

Of the total of 377 plant species, 313 were recorded in Namatimbili forest including Namatimbili gorge, 202 in Matapwa Forest and 151 in Mitundumbea. Thirty of these are on the IUCN redlist (Table 3.3).

Table 3.1 Checklist of plant species detected in forests surveyed

Names follow Tropical Flora of East Africa (TFEA). Familes and genera are arranged alphabetically; x = present in a forest. - = not detected during this field survey. CF = Endemic to Coastal Forest (See Burgess & Clarke, 2000)

S/n	Family	Plant species names	Author	Matapwa	Mitundumbea	Namatimbili
1	Acanthaceae	Asystasia gangetica	(L.) T. Anderson	-	-	x
2	Acanthaceae	Barleria spinulosa	Klotzsch	-	-	x
3	Acanthaceae	Blepharis affinis	Lindau	x	-	x
4	Acanthaceae	Blepharis ciliaris	(L.) B. L. Burtt	-	-	x
5	Acanthaceae	Blepharis maderaspatensis	Heine ex Roth.	x	-	-
6	Acanthaceae	Dicliptera aculeata	C. B. Clarke	-	-	x
7	Acanthaceae	Justicia stachytarphetoides	(Lindau) C. B. Clarke	-	-	x
8	Adiantaceae	Acrostichum aureum	L.	-	-	x
9	Amaranthaceae	Achyranthes aspera	L	x	-	-
10	Anacardiaceae	Lannea stuhlmannii	(Engl.) Engl.	x	x	x
11	Anacardiaceae	Lannea schimperi	(A. Rich.) Engl.	-	x	x
12	Anacardiaceae	Rhus glaucescens	A. Rich.	-	-	x
13	Anacardiaceae	Rhus natalensis	Krauss	-	-	x
14	Anacardiaceae	Ozoroa insignis	Delile	-	x	-
15	Anacardiaceae	Sclerocarya birrea	A. Rich.	x	x	x
16	Anacardiaceae	Sorindeia madagascariensis	DC.	x	-	x
17	Annonaceae	Annona senegalensis	Pers.	-	x	x
18	Annonaceae	Artabotrys modestus	Diels	x	-	-
19	Annonaceae	Asteranthe asterias	(S. Moore) Engel. & Diels	-	-	x
20	Annonaceae	Asteranthe lutea	Vollesen	-	-	x
21	Annonaceae	Cleistochlamys kirkii	(Benth.) Oliv	x	x	x
22	Annonaceae	Lettowianthus stellatus	Diels	-	-	x
23	Annonaceae	Monanthotaxis buchananii	(Engl.) Verdc.	x	x	x

S/n	Family	Plant species names	Author	Matapwa	Mitundumbea	Namatimbili
24	Annonaceae	Monanthotaxis trichocarpa	(Diels & Engl.) Verdc	-	x	x
25	Annonaceae	Monanthotaxis trichantha	(Diels) Verdc.	-	-	x
26	Annonaceae	Mkilua fragrans	Verdc.	-	-	x
27	Annonaceae	Monodora grandidieri	Baill.	-	-	x
28	Annonaceae	Ophrypetalum odoratum	Diels	-	x	x
29	Annonaceae	Uvaria acuminata	Oliv.	-	-	x
30	Annonaceae	Uvaria kirkii	Hook. f.	-	-	x
31	Annonaceae	Uvaria lucida	Benth.	x	-	x
32	Annonaceae	Uvariodendron gorgonis	Verdc.	-	-	x
33	Annonaceae	Xylopia latipetala	Verdc.	-	-	x
34	Amaryllidaceae	Boophone disticha	(L. f.) Herb.	-	-	x
35	Apocynaceae	Ancylobothrya petersiana	(Kl.) Piarre	x	x	x
36	Apocynaceae	Dictyophleba lucida	(K. Schum.) Pierre	-	x	-
37	Apocynaceae	Diplorhynchys condylocarpon	(Mull. Arg) Pichon	-	x	x
38	Apocynaceae	Holarrhena pubescens	G. Don	x	-	x
39	Apocynaceae	Landolphia buchananii	(Hallier f.) Stapf	x	-	x
40	Apocynaceae	Landolphia kirkii	Dyer	x	-	x
41	Apocynaceae	Pleiocarpa pycnantha	(K. Schum.) Stapf	-	-	x
42	Apocynaceae	Saba comorensis	(A. DC.) Pichon	x	-	x
43	Apocynaceae	Schizozygia coffaeoides	Baill.	-	-	-
44	Apocynaceae	Strophanthus kombe	Oliv.	x	-	x
45	Apocynaceae	Strophanthus petersianus	Klotzsch	x	x	-
46	Araliaceae	Cussonia arborea	A. Rich.	x	-	x
47	Araceae	Zamioculcas zamiifolia	(Lodd.) Engl.	-	-	x
48	Asclepidiaceae	Secamone parvifolia	(Oliv.) Bullock	x	x	x
49	Asclepidiaceae	Parquetina nigrescens	(Afz.) Bullock	-	-	x
50	Liliaceae	Asparagus africanus	Lam.	x	x	x
51	Liliaceae	Asparagus falcatus	Lam.	x	x	x
52	Liliaceae	Asparagus aethiopicus	Lam.	x	x	x
53	Balanitaceae	Balanites aegyptiaca	(L.) Delile	x	-	x
54	Balanitaceae	Balanites maughamii	Sprague	-	-	x
55	Baringtoniceae	Baringtonia racemosa	(L.) Spreng	-	-	x
56	Bignoniaceae	Kigelia africana	(Lam.) Benth.	-	-	x
57	Bignoniaceae	Markhamia lutea	(Benth.) K. Schum.	-	x	x
58	Bignoniaceae	Markhamia obtusifolia	(Baker) Sprague	x	-	x
59	Bignoniaceae	Markhamia zanzibarica	(DC.) K. Schum.	-	x	x
60	Bignoniaceae	Stereospermum kunthianum	Cham.	x	-	x
61	Bombacaceae	Adansonia digitata	Lim.	x	-	x
62	Bombacaceae	Bombax rhodognaphalon	K. Schum.	x	x	x
63	Boraginaceae	Ehretia amoena	Klotzsch.	-	x	-
64	Burseraceae	Commiphora africana	(A. Rich.) Engl.	x	-	x
65	Burseraceae	Commiphora madagascariensis	Jacq.	x	x	x
66	Burseraceae	Commiphora zanzabarica	(Baill.) Engl.	-	-	x
67	Capparaceae	Boscia salicifolia	A. Rich.	x	-	x

S/n	Family	Plant species names	Author	Matapwa	Mitundumbea	Namatimbili
68	Capparaceae	Boscia angustifolia	A. Rich.	x	x	x
69	Capparaceae	Pseudocladosternon kirkii	Oliv. Pax & Gilg	x	-	x
70	Capparaceae	Maerua angolensis	DC.	-	-	x
71	Capparaceae	Maerua grantii	Oliv.	-	x	x
72	Capparaceae	Maerua kirkii	(Oliv.) F. White	x	x	-
73	Capparaceae	Maerua triphylla	A. Rich.	-	-	x
74	Capparaceae	Thylachium densiflorum	Gilg-Ben. & Benedict	-	-	x
75	Capparaceae	Thylachium paradoxum	Gilg	x	x	-
76	Capparaceae	Thylachum africanum	Lour.	-	x	-
77	Capparaceae	Capparis tomentosa	Lam.	x	-	x
78	Capparaceae	Capparis fascicularis	DC.	-	-	x
79	Capparidaceae	Cleome tenella	L.f.	x	-	-
80	Celastraceae	Elaeodendron buchananii	(Loes.) Loes.	-	-	x
81	Celastraceae	Maytenus undata	(Thunb.) Blakelock	-	-	x
82	Celastraceae	Maytenus mossambicensis	(Klotzsch) Blakelock	-	x	x
83	Celastraceae	Mystroxylon aethiopicum	(Thunb.) Loes.	-	-	x
84	Celastraceae	Salacia elegans	Oliv.	-	x	x
85	Celastraceae	Salacia leptoclada	Tul.	x	x	x
86	Celastraceae	Salacia madagascariensis	(Lam.) DC.	x	-	x
87	Chrysobalanaceae	Parinari curatellifolia	Planch. ex. Benth.	x	x	x
88	Combretaceae	Combretum aculeatum	Vent.	-	-	x
89	Combretaceae	Combretum fragrans	F. Hoffm	x	-	x
90	Combretaceae	Combretum collinum	Fresen.	-	x	x
91	Combretaceae	Combretum constrictum	(Benth.) M. A. Lawson	x	-	x
92	Combretaceae	Combretum apiculatum	Sond.	x	-	x
93	Combretaceae	Combretum hereroense	Schinz	-	x	x
94	Combretaceae	Combretum molle	G. Don	-	-	x
95	Combretaceae	Combretum pentagonum	M. A. Lawson	-	x	-
96	Combretaceae	Combretum zeyheri	Sond.	x	x	x
97	Combretaceae	Pteleopsis myrtifolia	(M.A. Lawson) Engl. & Diels	x	x	-
98	Combretaceae	Terminalia kaiserana	F. Hoffm.	-	x	x
99	Combretaceae	Terminalia sambesiaca	Engl. & Diels	x	-	x
100	Combretaceae	Terminalia sericea	DC.	-	-	x
101	Combretaceae	Terminalia boivinii	Tul.	-	-	x
102	Commelinaceae	Commelina benghalensis	Wall.	x	x	x
103	Commelinaceae	Commelina africana	L.	x	x	x
104	Commelinaceae	Cyanotis foecunda	Hassk.	x	-	x
105	Compositae	Ageratum conyzoides	L.	x	-	-
106	Compositae	Aspilia mossambicensis	(Oliv.) Wild	-	x	x
107	Compositae	Brachylaena huillensis	O. Hoffm		x	x
108	Compositae	Bidens pilosa	L.	x	-	x
109	Compositae	Dichrocephala integrifolia	(L. f.)Kuntze	-	x	x

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110	Compositae	Dicoma sessiliffloa	Harv.	x	-	-
111	Compositae	Dicoma tomentosa	Cass.	-	x	x
112	Compositae	Emilia coccinea	(Sims) Sweet	x	-	-
113	Compositae	Ethulia conyzoides	L. f.	x	-	x
114	Compositae	Pluchea dioscorides	(L.) DC.	-	-	x
115	Compositae	Sphaeranthus africanus	L.	x	-	-
116	Compositae	Sphaeranthus suaveolens	(Forsk) DC.	x	x	x
117	Compositae	Tridax procumbens	L.	x	x	x
118	Compositae	Vernonia perrottetii	Sch. Bip. ex Walp.	x	-	x
119	Compositae	Vernonia glabra	(Steetz) Vatke	x	-	x
120	Compositae	Vernonia amygdalina	Delile	x	-	x
121	Compositae	Vernonia poskeana	Vatke & Hildebr.	x	-	-
122	Convolvulaceae	Ipomoea obscura	(L.) KerGawl.	x	-	x
123	Crassulaceae	Kalanchoe lanceolata	(Forssk.) Pers.	x	-	x
124	Cycadaceae	Encephalators hildebrandtii	A. Br & Bouche var	-	-	x
125	Cyperaceae	Cyperus alopecuroides	Rottb.	x	-	x
126	Cyperaceae	Cyperus alternifolia	L.	x	-	x
127	Cyperaceae	Cyperus exaltatus	Retz.	-	-	x
128	Dichapetalaceae	Dichapetalum mossambicense	(Klotzsch) Engl.	-	-	x
129	Dichapetalaceae	Dichapetalum macrocarpum	M. Krause	-	-	x
130	Dichapetalaceae	Dichapetalum stuhlmannii	Engl.	-	-	x
131	Dichapetalaceae	Dichapetalum braunii	Engl. & K. Krause	-	-	x
132	Dilleniaceae	Tetracera boiviniana	Baill.	x	-	x
133	Dilleniaceae	Tetracera litoralis	Gilg	x	-	x
134	Ebenaceae	Diospyros consolatae	Chiov.	-	-	x
135	Ebenaceae	Diospyros mespiliforms	A. DC.	x	x	x
136	Ebenaceae	Diospyros squarrosa	Klotzsch	x	x	x
137	Ebenaceae	Diospyros verrucosa	Hiern	x	x	-
138	Ebenaceae	Diospyros kirkii	Hiern	-	x	x
139	Ebenaceae	Diospyros mafiensis	F.White	-	x	x
140	Ebenaceae	Diospyros zombensis	(B. L. Burtt) F.White	-	x	-
141	Ebenaceae	Euclea natalensis	A. DC.	-	-	x
142	Ebenaceae	Euclea racemosa	(A. DC.) F. White	-	-	x
143	Euphorbiaceae	Alchornea hirtella	Benth.	-	-	x
144	Euphorbiaceae	Alchornea laxiflora	(Benth.) Pax & K. Hoffm.	-	x	x
145	Euphorbiaceae	Antidesma venosum	Tul.	-	-	x
146	Euphorbiaceae	Bridelia cathartica	G. Bertol.	-	-	x
147	Euphorbiaceae	Cleistanthus schlechteri	(Pax) Hutch.	-	x	-
148	Euphorbiaceae	Croton megalocarpus	Hutch.	-	-	x
149	Euphorbiaceae	Croton pseudopulchellus	Pax	x	x	-
150	Euphorbiaceae	Drypetes arguta	(Müll. Arg.) Hutch.	-	-	x
151	Euphorbiaceae	Drypetes natalensis	(Harv.) Hutch.	x	-	x
152	Euphorbiaceae	Drypetes usambarica	(Pax) Hutch.	-	-	x
153	Euphorbiaceae	Euphorbia candelabrum	Kotschy	x	x	x

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154	Euphorbiaceae	Euphorbia tirucali	L.	x	-	-
155	Euphorbiaceae	Euphoribia grantii	Oliv.	-	-	x
156	Euphorbiaceae	Flueggea virosa	(Willd.) Voigt	x	-	x
157	Euphorbiaceae	Maprounea africana	Müll. Arg.	x	x	-
158	Euphorbiaceae	Pseudolachnostylis maprouneifolia	(Pax) Brenan	-	x	-
159	Euphorbiaceae	Spirostachys africana	Sond.	x	-	x
160	Euphorbiaceae	Suregada zanzibariensis	Baill.	-	-	x
161	Euphorbiaceae	Synadenium pereskiifolium	(Baill.) Guill.	x	-	-
162	Euphorbiaceae	Uapaca nitida	Mull. Arg.	-	x	x
163	Fabaceae	Abrus precatorius	L.	-	x	x
164	Fabaceae	Acacia brevispica	Harms	x	x	-
165	Fabaceae	Acacia nigrescens	Oliv.	x	-	-
166	Fabaceae	Acacia polyacantha	(A. Rich.) Brenan	x	x	x
167	Fabaceae	Acacia robusta	Burch.	x	-	-
168	Fabaceae	Acacia sieberiana	DC.	x	x	x
169	Fabaceae	Afzelia quanzensis	Welw.	x	-	x
170	Fabaceae	Albizia glaberriena	Schum. & Thomm	-	-	x
171	Fabaceae	Albizia gummifera	(J.F. Gmel) L.A.SM.	-	x	-
172	Fabaceae	Albizia petersiana	(Bolle) Oliv.	x	x	-
173	Fabaceae	Albizia versicolor	Welwex Oliv.	-	-	x
174	Fabaceae	Baphia kirkii	Baker	-	x	-
175	Fabaceae	Baphia wollastonii	Bak. f.	-	x	x
176	Fabaceae	Baphia punctulata	Harms	x	x	x
177	Fabaceae	Tylosema fassoglensis	(Schweinf.) Torre & Hillc.	x	-	x
178	Fabaceae	Bauhinia tomentosa	L.	x	-	x
179	Fabaceae	Brachystegia boehmii	Taub.	-	x	x
180	Fabaceae	Brachystegia microphylla	Harms	-	-	x
181	Fabaceae	Brachystegia spiciformis	Benth.	x	-	x
182	Fabaceae	Burkea africana	Hook.	-	x	x
183	Fabaceae	Cassia abbreviata	Oliv.	x	-	x
184	Fabaceae	Cassia astrofistula	(Holmes) Brenan	x	-	x
185	Fabaceae	Cordyla africana	Lour.	-	-	x
186	Fabaceae	Craibia brevicaudata	(Vatke) Dunn	-	-	x
187	Fabaceae	Crotalaria goodiiformis	Vatke	x	x	x
188	Fabaceae	Cynometra webberi	Baker f.	-	-	x
189	Fabaceae	Cynometra greenwayi	Brenan	-	x	-
190	Fabaceae	Cynometra gillmanii	J. Leonard	-	-	x
191	Fabaceae	Dalbergia arbusifolia	Baker	x	x	x
192	Fabaceae	Dalbergia melanoxylon	Guill & Perr	x	x	-
193	Fabaceae	Dalbergia nitidula	Baker	-	-	x
194	Fabaceae	Dialium holtzii	Harms	-	x	x
195	Fabaceae	Dolichos oliveri	Schweinf.	-	x	x
196	Fabaceae	Entada abyssinica	Steud.	-	x	x
197	Fabaceae	Erythrina sacleuxii	Hua	x	-	x

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198	Fabaceae	Erythrina schliebenii	Harms	x	x	x
199	Fabaceae	Erythrophleum suaveolens	(Guill. & Perr.) Brenan	-	x	x
200	Fabaceae	Hymenaea verrucosa	Geartn.	x	-	-
201	Fabaceae	Indigofera arrecta	Hochst. ex A.Rich.	x	-	-
202	Fabaceae	Jubernardia globiflora	(Benth).Troupin	x	x	-
203	Fabaceae	Macrotyloma axillare	(E. Mey.) Verdc.	x	-	x
204	Fabaceae	Lonchocarpus bussei	Harms	x	-	x
205	Fabaceae	Lonchocarpus capassa	Rolfe	x	-	x
206	Fabaceae	Millettia impressa	Harms	x	x	x
207	Fabaceae	Mucuna gigantea	(Willd.) DC.	x	x	-
208	Fabaceae	Mundulea sericea	(Willd.) A. Chev.	x	-	x
209	Fabaceae	Newtonia paucijuga	(Harms) Brenan	-	-	x
210	Fabaceae	Ormocarpum kirkii	S. Moore	x	x	-
211	Fabaceae	Parkia filicoides	Oliv.	x	-	x
212	Fabaceae	Pilliostigma thonningii	Schumach.	x	-	x
213	Fabaceae	Pterocarpus angolensis	DC.	-	-	x
214	Fabaceae	Pterocarpus rotundifolius	(Sond.) Druce	x	x	x
215	Fabaceae	Pericopsis angolensis	(Baker) Meeuwen	x	-	x
216	Fabaceae	Rhynchosia hirta	(Andr) Meikle & Verdc.	x	x	x
217	Fabaceae	Rhynchosia minima	(L.) DC.	x	x	x
218	Fabaceae	Scorodophloeus fischeri	(Taub.) J. Leonard	-	x	x
219	Fabaceae	Senna singueana	(Del.) Lock	x	-	x
220	Fabaceae	Sesbania sesban	L.	x	-	x
221	Fabaceae	Tamarindus indica	L.	x	x	x
222	Fabaceae	Tessmania densiflora	Harms	-	-	x
223	Fabaceae	Xerroderis stuhlmannii	(Thau.) Mendonca & Sousa	-	-	x
224	Fabaceae	Dichrostachys cinerea	(L.) Wight & Arm	x	x	x
225	Fabaceae	Millettia stuhlmannii	(Welw) C. C. Berg	x	x	-
226	Fabaceae	Millettia usaramensis	Lam.	x	-	x
227	Flacourtiaceae	Apodytes dimidiata	E. Mey ex. Arn.	x	x	x
228	Flacourtiaceae	Casearia engleri	Gilg	x	-	x
229	Flacourtiaceae	Caloncoba welwitschii	(Oliv.) Gilg	-	-	x
230	Flacourtiaceae	Dovyalis hispidula	Wild.	-	x	x
231	Flacourtiaceae	Flacourtia indica	(Burm. f.) Merr.	-	-	x
232	Flacourtiaceae	Homalium abdessammadii	Asch. & Schweinf	-	x	x
233	Flacourtiaceae	Xylotheca tettensis	(Klotzsch) Gilg	x	-	x
234	Flagellariaceae	Flagellaria guineensis	Schumach.	-	-	x
235	Gramineae	Aristida adoensis	L.	-	x	-
236	Gramineae	Bambusa vulgaris	Wenell	-	-	x
237	Gramineae	Chloris virgata	Sw.	x	-	x
238	Gramineae	Echinochloa colona	(L.) Link	x	x	x
239	Gramineae	Echinochloa haploclada	(Stapf) Stapf	x	x	x
240	Gramineae	Eleusine indica	(Kenn.-O'Byrne) S.M.Phillips	x	x	x
241	Gramineae	Eragrostis aspera	(Jacq.) Nees	x	x	x

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242	Gramineae	Hyparrhenia variabilis	Stapf	-	x	x
243	Gramineae	Heteropogon contortus	(L.) Roen & Schult	x	x	x
244	Gramineae	Hyparrhenia filipendula	(Hochst.) stapt	x	x	-
245	Gramineae	Hyparrhenia rufa	(Nees) Stapf	x	x	-
246	Gramineae	Hyparrhenia variabilis	Stapf	x	-	x
247	Gramineae	Imperata cylindrica	(L.) Raeusch.	x	-	x
248	Gramineae	Loudetia simplex	(Nees) C. E. Habb.	x	-	x
249	Gramineae	Panicum maximum	Jacq.	x	-	x
250	Gramineae	Panicum trichocladum	K. Schum.	x	-	x
251	Gramineae	Panicum coloratum	L.	x	-	
252	Gramineae	Pennisetum purpureum	Schumach.	x	-	x
253	Gramineae	Phragmites mauritianus	Kunth.	x	x	-
254	Gramineae	Rottboellia exaltata	L. f.	-	x	-
255	Gramineae	Setaria sphacelata	(Schum.) M. B. Moss ex. Stapf & C. E. Hubb.	x	-	x
256	Gramineae	Themeda triandra	Forssk.	-	-	x
257	Guttiferae	Garcinia livingstonei	T. Anderson	x	-	x
258	Guttiferae	Garcinia volkensii	Engl.	x	-	x
259	Guttiferae	Vismia pauciflora	Milne-Redh.	-	-	x
260	Guttiferae	Psorospermum febrifugum	Spach	-	-	x
261	Lamiaceae	Basilicum polystachyon	(L.) Moench	x	-	x
262	Lamiaceae	Hoslundia opposita	Vahl.	x	-	x
263	Lamiaceae	Plectranthus seretii	(De Wild.) Vollesen	x	x	x
264	Liliaceae	Sansevieria gracilis	N. B. E. Br.	-	-	x
265	Liliaceae	Drimiopsis perfoliata	Baker	x	-	x
266	Liliaceae	Dracaena mannii	Baker	x	-	x
267	Liliaceae	Sansevieria fischeri	DC.	x	x	x
268	Linaceae	Hugonia castaneifolia	Engl.	x	x	-
269	Linaceae	Hugonia grandiflora	N. Robson	x	-	x
270	Loganiaceae	Strychnos cocculoides	Baker	-	-	x
271	Loganiaceae	Strychnos henningsii	Gilg	x	x	x
272	Loganiaceae	Strychnos innocua	Del.	x	-	x
273	Loganiaceae	Strychnos madagascariensis	Poir.	-	-	x
274	Loganiaceae	Strychnos panganensis	Gilg	x	x	-
275	Loganiaceae	Strychnos pototorum	L.f.	x	-	x
276	Malpighiaceae	Acridocarpus chloropterus	Oliv.	x	-	-
277	Malvaceae	Azanza garckeana	(F.Hoffm.) Exell & Hillc.	x	x	x
278	Malvaceae	Sida acuta	Burm.f.			
279	Melastomataceae	Memecylon sansibaricum	Taub.	-	-	x
280	Meliaceae	Khaya anthotheca	(Welw.) C.DC.	x	-	x
281	Moraceae	Ficus lutea	Vahl.	-	-	x
282	Moraceae	Ficus exasperata	Vahl.	x	-	x
283	Moraceae	Ficus ingens	(Miq.) Miq.	x	-	x

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284	Moraceae	Ficus natalensis	Hochst.	-	-	x
285	Moraceae	Ficus sur	Forssk.	x	-	-
286	Moraceae	Maclura africana	(Bureau) Corner	x	x	-
287	Moraceae	Milicia excelsa	(Welw.) Benth & Hook f.	x	-	x
288	Myrtaceae	Syzygium guineense	(Welw.) C.C. Berg	x	x	x
289	Ochnaceae	Ochna holstii	Engl.	x	x	x
290	Ochnaceae	Ochna mossambicensis	Klotzsch	x	-	x
291	Olacaceae	Olax dissitiflora	Oliv.	x	-	x
292	Olacaceae	Olax petandra	Sleumer	-	x	x
293	Olacaceae	Ximenia americana	L.	-	-	x
294	Oleaceae	Schrebera trichoclada	Welw.	x	-	-
295	Onagraceae	Ludwigia stolonifera	(Gill. & Perr.) P. H. Raven	x	-	x
296	Orchidaceae	Microcoelia exilis	Lindl.	-	-	x
297	Palmae	Borasuss aethiopum	Mart.	x	x	x
298	Palmae	Phoenix reclinata	Jacq.	x	x	x
299	Palmae	Hyphaene compressa	H.Wandl.	x	x	x
300	Passifloraceae	Schlechterina mitostemmatoides	Harms	-	-	x
301	Rhamnaceae	Ziziphus mucronata	Willd.	-	-	x
302	Rubiaceae	Breonadia macrocephala	(Del.) Ridsdale	x	-	-
303	Rubiaceae	Catunaregam spinosa	(Thunb.) Tirvengadum	x	-	x
304	Rubiaceae	Coffea sessiliflora	Bridson	-	-	x
305	Rubiaceae	Coffea pseudozanguebariae	Bridson	x	-	-
306	Rubiaceae	Chassalia umbraticola	Vatke	-	x	-
307	Rubiaceae	Crossopteryx febrifuga	(G. Don) Benth.	x	x	x
308	Rubiaceae	Gardenia transvenulosa	Verdc.	x	-	x
309	Rubiaceae	Hymenodictyon parvifolium	Oliv.	-	x	x
310	Rubiaceae	Keetia venosa	(Oliv.) Bridson	x	x	x
311	Rubiaceae	Keetia zanzibarica	(Klotzsch) Brindson	x	-	x
312	Rubiaceae	Lamprothamnus zanguebaricus	Hiern	-	-	x
313	Rubiaceae	Leptactina platyphylla	(Hern)Wernham	x	x	x
314	Rubiaceae	Leptactina delagoensis	K. Schum.	-	-	x
315	Rubiaceae	Leptactina papyrophloea	Verdc.	-	-	x
316	Rubiaceae	Mitragyna rubrostipulata	(K. Schum.) Havil	-	-	x
317	Rubiaceae	Oxyanthus pyriformis	(Hochst.) Skeels	-	-	x
318	Rubiaceae	Oxyanthus speciosus	DC.	-	x	x
319	Rubiaceae	Polysphaeria multiflora	Hiern	x	-	x
320	Rubiaceae	Rothmania whitfieldii	(Lindl.) Dandy	-	-	x
321	Rubiaceae	Rystignia decussata	(K. Schum.) Robyns	-	x	x
322	Rubiaceae	Uncaria africana	G. Don	-	-	x
323	Rubiaceae	Vangueria infausta	Burch.	x	-	x
324	Rutaceae	Vepris lanceolata	(Lam.) G. Don	x	x	x
325	Rutaceae	Vepris nobilis	(Delile) Mziray	x	x	x
326	Rutaceae	Vepris glomerata	(F. Hoffm.) Engl.	-	x	x
327	Rutaceae	Clausina anisata	(Willd.) Benth	-	x	x

S/n	Family	Plant species names	Author	Matapwa	Mitundumbea	Namatimbili
328	Rutaceae	Teclea nobilis	Delile	x	-	x
329	Rutaceae	Teclea simplicifolia	(Engl.) Verd.	-	x	x
330	Rutaceae	Zanthoxylum chalybeum	Engl.	x	-	x
331	Rutaceae	Zanthoxylum holtzianum	(Engl.) P.G.Waterman	-	-	x
332	Salvadoraceae	Dobera loranthifolia	(Warb.) Harms	-	-	x
333	Salvadoraceae	Salvadora persica	L.	x	-	-
334	Sapindaceae	Allophyllus africanus	P. Beauv.	x	x	x
335	Sapindaceae	Blighia unijugata	Baker	-	x	-
336	Sapindaceae	Deinbollia borbonica	Scheff.	x	x	x
337	Sapindaceae	Haplocoelum africana	F.G.Davies ined.	-	x	-
338	Sapindaceae	Haplocoelum inopleum	Radlk.	-	-	x
339	Sapindaceae	Haplocoelum foliosum	(Hiern) Bullock	x	-	x
340	Sapindaceae	Lepisanthes senegalensis	(Poir.) Leenh.	-	-	x
341	Sapindaceae	Macphersonia gracilis	O. Hoffm	-	-	x
342	Sapindaceae	Majidea zanguebarica	J.Kirk	-	-	x
343	Sapindaceae	Pancovia golungensis	(Hiern) Exell & Mendonça	-	-	x
344	Sapindaceae	Paullinia pinnata	L.	-	x	x
345	Sapindaceae	Zanha africana	(Radlk.) Exell	x	-	x
346	Sapotaceae	Englerophytum natalense	(Sond.) T. D. Penn.	-	x	x
347	Sapotaceae	Malacantha alnifolia	(Baker) Pierre	-	-	x
348	Sapotaceae	Manilkara discolor	(Sond.) J. H. Hemsl	x	-	x
349	Sapotaceae	Manilkara sansibarensis	engl.	-	-	x
350	Sapotaceae	Mimusops fruticosa	Lam.	x	-	x
351	Sapotaceae	Mimusops kummer	A. DC.	x	-	x
352	Sapotaceae	Mimusops schliebenii	Mildbr. & G. M. Schulze	x	x	x
353	Sapotaceae	Synsepalum brevipes	(Baker) Pennington	-	-	x
354	Schizaeaceae	Lygodium microphyllum	(Cav.) R. Br.	-	-	x
355	Simaroubaceae	Harrisonia abyssinica	Oliv.	x	-	x
356	Sterculiaceae	Cola discoglyoremnophylla	Brenan & A. P. D. Jones	x	-	x
357	Sterculiaceae	Cola microcarpa	Brenan	x	x	-
358	Sterculiaceae	Cola greenwayi	Brenan	x	-	x
359	Sterculiaceae	Dombeya rotundifolia	(Hochst.) Planch	-	-	x
360	Sterculiaceae	Dombeya shupangae	K. Schum.	x	x	x
361	Sterculiaceae	Pterygota perrieri	Hochr.	x	-	x
362	Sterculiaceae	Sterculia appendiculata	K. Schum. ex. Engl.	x	x	x
363	Sterculiaceae	Sterculia quinqueloba	(Garcke) K. Schum.	-	x	x
364	Tiliaceae	Carpodiptera africana	Mast.	x	x	-
365	Tiliaceae	Grewia bicolor	A. Juss.	-	x	x
366	Tiliaceae	Grewia conocarpa	K. Schum.	-	x	x
367	Tiliaceae	Grewia forbesii	Mast.	-	x	-
368	Tiliaceae	Grewia microcarpa	K. Schum.	-	x	x
369	Tiliaceae	Grewia platyclada	Mast.	x	-	x

370	Tiliaceae	Grewia similis	K. Schum.	x	x	x
371	Tiliaceae	Triumfetta rhomboidea	Jacq.	x	-	x
372	Ulmaceae	Celtis africana	Burm. f.	-	x	-
373	Ulmaceae	Trema orientalis	(L.) Blume	-	x	x
374	Verbenaceae	Karomia gigas	(Faden) Verdc.	-	-	x
375	Verbenaceae	Vitex doniana	Sweet	-	x	-
376	Verbenaceae	Vitex mombassae	Vatke	-	-	x
377	Verbenaceae	Vitex zanzibariensis	Vatke	x	x	x
				202	151	313

Table 3.2 Botanical specimens deposited/collected and associated C. Mligo (MC) field numbers

Reference number	Family	Plant species names	Author
MC 77	Verbenaceae	*Karomia gigas*	(Faden) Verdc.
MC 78	Euphorbiaceae	*Alchornea hirtella*	Benth.
MC 79	Oleaceae	*Schrebera trichoclada*	Welw.
MC 80	Annonaceae	*Cleistochlamys kirkii*	(Benth.) Oliv
MC 81	Annonaceae	*Lettowianthus stellatus*	Diels
MC 82	Annonaceae	*Ophrypetalum odoratum*	Diels
MC 83	Rutaceae	*Zanthoxylum chalybeum*	Engl.
MC 84	Sapindaceae	*Lepisanthes senegalensis*	(Poir.) Leenh.
MC 85	Annonaceae	*Monanthotaxis trichocarpa*	(Diels & Engl.) Verdc
MC 86	Rubiaceae	*Oxyanthus pyriformis*	(Hochst.) Skeels
MC 87	Euphorbiaceae	*Drypetes usambarica*	(Pax) Hutch.
MC 88	Rubiaceae	*Mitragyna rubrostipulata*	(K. Schum.) Havil
MC 89	Rubiaceae	*Leptactina delagoensis*	K. Schum.
MC 90	Sapindaceae	*Macphersonia gracilis*	O. Hoffm
MC 91	Malpighiaceae	*Acridocarpus chloropterus*	Oliv.
MC 92	Annonaceae	*Artabotrys modestus*	Verdc.
MC 93	Euphorbiaceae	*Cleistanthus schlechteri*	(Pax) Hutch.
MC 94	Sterculiaceae	*Cola microcarpa*	Brenan
MC 95	Guttiferae	*Garcinia livingistonei*	T. Anderson
MC 96	Ebenaceae	*Diospyros verrucosa*	Hiern
MC 97	Fabaceae	*Hymenaea verrucosa*	Geartn.
MC 98	Rubiaceae	*Breonadia macrocephala*	(Del.) Ridsdale
MC 99	Apocynaceae	*Strophanthus petersianus*	Kloyzsch
MC 100	Rubiaceae	*Uvaria kirkii*	G. Don
MC 101	Sapotaceae	*Manilkara sansibarensis*	Engl.
MC 102	Sapotaceae	*Mimusops kummel*	A. DC.
MC 103	Dichapetalaceae	*Dichapetalum macrocarpum*	M. Krause
MC 104	Combretaceae	*Terminalia boivinii*	Tul.
MC 105	Adiantaceae	*Acrostichum aureum*	L.
MC 106	Tiliaceae	*Carpodiptera africana*	Mast.
MC 107	Fabaceae	*Erythrina sacleuxii*	Hua
MC 108	Sterculiaceae	*Pteriogota perrieri*	Hochr.
MC 109	Annonaceae	*Uvariodendron gorgonis*	Verdc.
MC 110	Fabaceae	*Erythrina schliebenii*	Harms

Table 3.3: Plant species identified in the study area found on the IUCN Redlist

S/N	Genus	Species	author	Red List status	Red List criteria	Red List criteria version	Year assessed
1	*Baphia*	*Kirkii*	Baker	VU	B1+2b	2.3	1998
2	*Cynometra*	*webberi*	Bak.f.	VU	B1+2b	2.3	1998
3	*Cynometra*	*gillmanii*	Leon	CR	B1+2abcde, C2b	2.3	1998
4	*Encephalartos*	*hildebrandtii*	A.Braun & C.D.Bouché	NT		3.1	2009
5	*Erythrina*	*Sacleuxii*	Hua	VU	B1+2b	2.3	1998
6	*Erythrina*	*schliebenii*	Harms	EN	B1+2c, C2a	2.3	1998
7	*Gardenia*	*transvenulosa*	Verdc.	VU	B1+2b	2.3	1998
8	*Khaya*	*anthotheca*	(Welw.) C. DC.	VU	A1cd	2.3	1998
9	*Lettowianthus*	*Stellatus*	Diels	NT		3.1	2006
10	*Milicia*	*Excels*	(Welw.) C.C. Berg	LR/nt		2.3	1998
11	*Newtonia*	*paucijuga*	(Harms) Brenan	VU	B1+2b	2.3	1998
12	*Pterocarpus*	*angolensis*	DC.	LR/nt		2.3	1998
13	*Uvariodendron*	*Gorgonis*	Verdc.	EN	B2ab(iii)	3.1	2006
14	*Vitex*	*zanzibarensis*	Vatke	VU	B1+2c	2.3	1998
15	*Zanthoxylum*	*holtzianum*	(Engl.) Waterm.	VU	B1+2d	2.3	1998
16	*Asteranthe*	*Asterias*	(S.Moore) Engl. & Diels	NT		3.1	2006
17	*Artabotrys*	*modestus*	Diels	LC		3.1	2006
18	*Mkilua*	*fragrans*	Verdc.	VU	B1ab(iii)	3.1	2006
19	*Monanthotaxis*	*trichocarpa*	(Engl. & Diels) Verdc.	LC		3.1	2006
20	*Ophrypetalum*	*odoratum*	Diels	VU	B1ab(ii,iii,v)	3.1	2006
21	*Uvaria*	*acuminata*	Oliv.	LC		3.1	2006
22	*Sphaeranthus*	*africanus*	L.	LC		3.1	2010
23	*Vismia*	*Pauciflora*	Milne-Redh.	EN	B1+2c	2.3	1998
24	*Karomia*	*gigas*	(Faden) Verdc	CR	B1+2abcde,D	ver. 2.3	2011
25	*Cynometra*	*suaheliensis*	(Taub.) Bak. f.	VU	B1+2b	2.3	1998
26	*Dialium*	*holtzii*	Harms	VU	B1+2b	2.3	1998
27	*Tessmannia*	*densiflora*	Harms	EN	B1+2c, C2a	2.3	1998
28	*Coffea*	*pseudozanguebariae*	Bridson	VU	B1+2b	2.3	1998
29	*Gardenia*	*transvenulosa*	Verdc.	VU	B1+2b	2.3	1998
30	*Vitex*	*zanzibarensis*	Vatke	VU	B1+2c	2.3	1998
			Total VU species	15			
			Total CR species	2			
			Total EN species	4			
			Total NT species	5			
			Total LC species	4			

3. 2. Vegetation types in each forest surveyed

3.2.1. Namatimbili Forest (Mbarawala plateau)

Msuya *et al.* (2004) noted that the Namatimbili Forest lies between $38^0$57 to 39^0 16' E and $08^0$59 to $09^0$10'S which is within the eastern part of the Mitarure Forest and has been called Mbarawala plateau. It is dissected by the River Mavuji. This river meanders in the valley bottoms and eventually narrows in the Namatimbili Gorge close to the point where it leaves the forest at Mchakama village. The river supports the most critical riparian habitat. It is also important to the livelihoods of those who live in and near Mchakama village, including those who reside along its upstream portions. The forest currently is not gazetted as a Central Government Forest Reserve.

The forest differs significantly in structure from the surrounding vegetation types. It is a complex forest type with regard to vegetation community types. It is supported by the undulating landscape covered with six vegetation types identified in this forest 1. Evergreen forest 2. Mixed forest 3. Riverine forest 4. Bushland 5. Scrub forest 6. Woodland (closed and open). These are described below.

3.2.1.1. Evergreen Forest

This was a relatively large patch of vegetation in the southwest within Namatimbili Forest at an altitudinal range of between 136 and 164 above sea level. It was centred at 37L 523954/8991092 and UTM 524321/8991978. The vegetation type begins as mixed forest on the southern side of the Mbarawala plateau covering about $10km^2$. This evergreen forest is dense with emergent trees, characterized by dominant species such as *Dialium holtzii, Haplocoelum inopleum, Hymenaea verrucosa, Strychnos henningsii, Pteleopsis myrtifolia, Markamia zanzibarica, Vitex zanzibariensis, Suregada zinsibariensis, Afzelia quanzensis, Holarrhena pubescens, Pericopsis angolensis* and *Memecylon sansibaricum,* at the upper canopy layer. *Dichapetalum mossambicense, Euphorbia nyikae, Alchornea laxiflora, Drypetes arguta, Tetracera litoralis, Dichapetalum stuhlmannii, Salacia magascariensis, Salacia leptoclada* and *Uvaria cuminata* were dominant at the shrub layer and the understorey. This evergreen forest type was also identified on the Namatimbili hillsides and the escarpments where *Cynometra greenwayi* and *Cynometra gillmanii,* (both endemic to Lind region) were found on rocky outcrops coexisting with *Scorodophloeus fischeri, Cynometra webberi and Tessmannia densiflora* at 37L 526203 UTM 8993078 at 87m.a.s.l.

3.2.1.2. Mixed Forest

This was identified on the ridge tops from the northern woodland of the forest where bushland, evergreen thicket and woodland co-existed. This type of forest covers the largest portion of the

Namatimbili on ridge tops, deep slopes and slopes of moderate moist rocky hills. Trees in these areas were up to 30m high. Common species in the mixed forest include *Grewia cornocapa, Lettowianthus stellatus, Elaeodendron buchananii, Bombax rhodognaphalon, Sterculia appendiculata, Sterculia quinqueloba, Milicia excelsa, Pterocarpus angolensis, Pteleopsis myrtifolia, Celtis Africana* and *Zanthoxylum chalybeum*. The shrub layer is dominated by *Scorodophloeus fischeri, Drypetes usambarica, Salacia madagascariensis, Hugonia castaneifolia, Rhoicissus tridentata* and *Strychnos henningsii.*

3.2.1.3. Riverine forest

This vegetation type consists of trees with a height of between 20-30 m and higher. These were recorded along Mavuji River and the moist tributaries draining to the Mavuji River system. The dominant species in these forests were *Khaya anthotheca, Sorindeia madagascariensis, Baringtonia racemosa, Milicia excelsa, Encephalators hildebrandtii, Ficus sur, Pachystella brevipens, Ziziphus mucronata, Drypestes arguta, Garcinia livingstonei, Erythrina schliebenii, Diospyros squarrosa* and *Mimusops kummel*. Aquatic plants and wetland plants such as *Phragmites mauritianus, Cyperus exaltatus, Polysphaeria multiflora* and *Syzygium guineense* were also found.

3.2.1.4. Bushland

This was commonly distributed on the hillsides along the Mavuji River and hilltops of the plateaux. The trees are of small size classes because it appeared that the larger trees had all been exploited. However, a closed canopy bush matrix remains in most parts. The common species in these areas were *Sclerocarya birrea, Afzelia quanzensis, Bombax rhodognaphalon, Grewia cornocarpa, Strychnos henningsii, Xylopia latipetala, Lannea stuhlmannii, Haplocoelum inopleum, Zanthoxylum chalybeum* and *Vitex zanzibariensis*.

3.2.1.5. Woodland

Woodlands are found on the periphery of the Namatimbili forest in the northern and southern portions and consist of *Acacia robusta, Combretum apiculatum* and *Millettia stuhlmannii*. *Brachystegia microphylla, Pterocarpus angolensis, Afzelia quanzensis, Pteleopsis myrtifolia, Sterculia appendiculata* and *Bombax rhodognaphalon* dominated these areas. The woodland types begin as a scattered open woodland in the valley bottoms or the peripheral parts of the forest and then form closed or dense woodland/bushland and then evergreen vegetation types. The vegetation therefore in the woodland consists of heterogeneous communities that are characterised by diverse plant species associations.

3.2.1.6. Scrubland

This type of vegetation was scattered throughout the portion of the forests that were not riverine, evergreen types and pure miombo woodland types. All other vegetation types contained species associated as thickets or scrub forms and their surrounding areas are characterized by annual burns which maintain the scrub habitats. The common species in scrub forests were *Uvaria acuminata, Strychnos henningsii, Ochna holstii, Strychnos panganiensis, Pericopsis angolensis* and *Hugonia castaneifolia.*

3.2.2. Mitundumbea Forest Reserve

Mitundumbea Forest is located at $39^0$13' to $39^0$19'E and $09^0$06' to $09^0$14'S (based on the map in Msuya *et al.*, (2004). On the topographic sheets we examined in the field, it appeared to be designated as a Centraol Government Forest Reserve. The forest is bordered by Ngarama to the south and Namatimbili to the northwest. Mchakama and Kiwawa villages form the eastern boundary. The forest is dominated by heterogeneous miombo woodlands that are both open and closed. The evergreen forests are found on the ridges and escarpments. Mixed forests are scattered widely on the ridge tops. The Brachystegia forest is dominated by two species, *Brachystegia microphylla* and *Brachystegia boehmii.* The latter exists as a pure stand on the Mitundumbea ridge. Scrub forest exists with patches of specialized habitats which consisted of evergreen vegetation types in some parts of the forest. Based on field observations there were five vegetation types identified: 1. Mixed forest , 2. Brachystegia forest, 3. Scrub Forest, 4. Woodlands (closed and open), 5. Evergreen forest. These are described below.

3. 2. 2. 1. Mixed Forest

This was common in the southern part of Mitundumbea Forest Reserve portions of which were closed woodland, open woodland and forest patches. This appears in a very small vegetation stratum which occurs at 231 m.a.s.l. (GPS reading 37L 531462; UTM 8985642). The species common within this forest include *Strychnos innocua, Spirostachys africana, Euphorbia tirucalli* and *Commiphora africana* is found in patches but *Combretum apiculatum, Brachystegia boehmii*, and *Euclea racemosa* occur in the open wooded grasslands

3. 2. 2. 2. Brachystegia forest

This was identified at GPS reading of 37L530077, UTM 89831791 and 37L 052984, UTM 8983552. It is an intermediate between evergreen forest and closed miombo woodland. It was

located on the escarpment to the southwest of Mtundumbeya Forest. The dominant tree species in the area was *Brachystegia microphylla* covering about 95% of the sample area. This was followed by *Pteleopsis myrtifolia, Strychnos henningsii, Grewia cornocapa, Haplocoelum africana, Afzelia quanzensis, Lannea stuhlmannii* and *Hugonia castaneifolia.*

3. 2. 2. 3. Scrub Forest

This is found near the periphery of the forest and up to 5 km within. The large patches join with grassland cover and wooded grassland, both vegetation types that have been expanded by frequent burning.

3. 2. 2. 4. Woodlands

There were two vegetation types in this area based on canopy structure. The closed woodland was identified east of the escarpment in Brachystegia forest (GPS reading of 37L 0530766, UTM 8983076) on the Mitundumbea plateau. This was represented *by Albizia versicolor, Pteleopsis myrtifolia, Xerroderis stuhlmannii, Hlarrhena pubescens, Terminalia sambesiaca, Combretum molle, Milicia excelsa, Millettia stuhlmannii, Boscia salicifolia*, and *Markhamia obtusifolia*. The open woodland was dominated by *Pseudlacnotylis rotundifolia, Millettia stuhlmannii, Acacia nigrescens, Pteleopsis myrtifolia* and *Dombeya rotundifolia, Annona senegalensis, Crossopteryx febrifuga* and *Zanthoxylum chalybeum*

3.2.2.5. Evergreen forest

Evergreen forest was identified on the Mitundumbea ridge particularly on the scarp slopes adjacent to the Brachystegia forest southwest of Mitundumbea at 332 m.a.s.l. (GPS Reading 37L 0530075, UTM 8982691) The upper stratum was dominated by *Cynometra webberi, Scorodophloeus fischeri, Croton megalocarpoides* whereas the understory was characterized by shrubs and lianas including *Uvaria acuminata* and *Uvaria lucida, Drypetes arguta, Strychnos henningsii, Gardenia transvenulosa* and *Dichapetalum stuhlmannii.*

Unique evergreen patches were identified along the plateau west of Mitundumbea ridge. These had specialized habitat suitable for the survival of a species formerly regarded as extinct, *Karomia gigas* and the associated species *Scorodophloeus fischeri, Hymenaea verrucosa, Vitex zanzibarensi, Millettia usaramensis* and *Dichapetalum stuhlmannii.*

3. 2. 3. Matapwa Forest reserve

Based on the map in Msuya *et al.*. (2004), this forest is located between longitude $39^0$20' to $39^0$30'E and Latitude $09^0$45' to $09^0$54'S. It is less diverse when compared with the other forests we surveyed; four vegetation types were identified: 1. Mixed forest, 2. Riverine forest 3. Scrub forest and 4. Woodland (closed and open).

3. 2. 3. 1. Mixed Forest

This covered the largest part of the forest from the miombo woodland of the northern portion to the south where the riverine forest begins.

3. 2. 3. 2. Riverine forest

This vegetation type occurs along the Mchinjidi River in the southern part of the forest. This river marks the boundary of the southern portion of the forest near Matapwa Village. The identified species include *Khaya anthotheca, Garcinia livingstonei, Sorindeia madagascariensis, Euphorbia tirucalli, Ficus sur, Kigelia africana, Azantha garckeana, Polysphaeria multiflora, Pennisetum purpureum, Parkia filicoides, Albizia glaberriena, Afzelia quanzensis, Tamarindus indica, Saba comorensis,* and *Erythrina schliebenii* were widely distributed.

3. 2. 3. 3. Scrub Forest

This vegetation type was recorded in patches within the mixed woodland, particularly areas that are prone to frequent burning. It was also identified along valley bottoms in tributaries of the main Mchinjidi River in the Matapwa area.

3. 2. 3. 4. Woodland

Woodland includes vegetation in the northern part of the forest that is commonly a heterogenous miombo community. *Millettia usaramensis, Monanthotaxis buchananii, Pterocarpus angolensis, Albizia pertesiana, Bombax rhodognaphalon, Strophanthus petersianus, Combretum apiculatum* and *Bambusa vulgaris* were commonly found in the area.

3.3. Zoological: Summarised Results

3.3.1. Amphibians

The summarised results for amphibians are presented in Table 3.4. Results from Trapping are presented in Appendix 6.2.

Table 3.4: Amphibians detected and forest sampled.

No Amphibian detected is listed on CITES. Poynton (2000) notes the difficulties of identifying any Coastal Forest endemics. Names generally follow Channing & Howell (2006) but families follow Frost et al., (2006). *=specimen collected; other methods of detection as indicated.

Group and Threat Status		**Namatimbili**	**Mitundumbea**	**Matapwa**
Arthroleptidae				
Arthroleptis stenodactylus *	Common Squeaker	x	x	x
*Arthroleptis xenodactyloides**	Dwarf Squeaker	x		
Leptopelis flavomaculatus	Yellow-spotted Tree Frog	x (seen)		
Brevicipitidae				
Breviceps mossambicus	Mozambique Rain Frog	x		
Bufonidae				
*Mertensophryne loveridgei**	Loveridge's Forest Toad	x	x	
Schismaderma carens	Red Toad	x		
*Amietophrynus maculatus**	Flat-backed Toad	x		
*Amietophrynus gutturalis**	Guttural Toad	x		x
Phrynobatrachidae				
*Phrynobatrachus acridoides**	East African Puddle Frog	x		x
Pyxicephalidae				
Pyxcicephalus adspersus ? (identification not confirmed)	African Bullfrog	Local informants		x
Ptychadenidae				

Group and Threat Status		Namatimbili	Mitundumbea	Matapwa
Ptychadena anchietae	Anchieta's Ridged Frog	x	x	x
Ptychadena mossambicus	Mozambique Ridged Frog	x	x	x
Ptychadena mascareniensis	Mascarene Ridged Frog	x	x	x
Hyperoliidae				
Afrixalus fornasinii	Fornasini's Spiny Reed Frog	x		
*Hyperolius mitchelli**	Mitchell's Reed Frog	x		x
Hyperolius tuberilinguis	Tinker Reed Frog	x		
Rhacophoridae				
Chiromantis xerampelina	Southern Foam-nest Frog	x		x

3.3.2. Reptiles

The summarised results for reptiles are presented in Table 3.5 Results from Trapping are presented in Appendix 6.2.

Table 3.5: Reptiles detected by forests sampled.

Names follow Spawls et al. (2004) *=specimen collected; other methods of detection as indicated. Note: Reptiles have not been recently evaluated using the www.redlist.org criteria.

Reptiles	Common name	Namatimbili	Mitundumbea	Matapwa
Group and threat and CITES Appendix status				
Crocodiles				
Crocodylus niloticus				
(Tanzania has a quota; the species is on CITES II)	Nile Crocodile	x (li)		
Tortoises (all on CITES II)				
Geochelone pardalis	Leopard Tortoise	x	x	x
Kinixys belliana	Bell's Hinged Tortoise	x	x	x
Lizards				
Triceros melleri CITES II	Meller's Giant Chameleon	x		

Reptiles	**Common name**	**Namatimbili**	**Mitundumbea**	**Matapwa**
Chamaeleo dilepis CITES II	Flap-necked Chameleon	x		x
*Agama mossambica**	Mozambique Agama	x	x	x
*Hemidactylus platycephalus**	Tree Gecko	x	x	x
Lygodactylus luteopicturatis	Yellow-headed Dwarf Gecko	x	x	x
*Lygodactylus capensis**	Cape Dwarf Gecko	x	x	x
Cnemaspis sp	Forest Gecko	x		
*Trachylepis megalurus**	Grass top skink		x	
Trachylepis striata	Striped Skink	x		x
*Trachylepis maculilabris**	Speckle-lipped Skink	x	x	x
*Trachylepis varia**	Variable Skink		x	
Trachylepis boulengeri	Boulenger's Skink	x		
*Panaspis wahlbergi**	Wahlberg's Snake-eyed Skink	x	x	x
Sepsina tetradactylus	Four-toed Fossorial Skink	x		
*Lygosoma sundevalli**	Sundevall's Writhing Skink			x
Holaspis laevis (CF and EAM endemic)	Blue-tailed Gliding lizard		x	
*Heliobolus neumanni**	Neumann's Sand Lizard		x	
Nucras boulengeri	Boulenger's Scrub Lizard		x	
*Cordylus tropidosternum**CITES II	Tropical Girdled Lizard	x	x	
Gerrhosaurus nigrolineatus	Black-lined Plated Lizard		x	x
Gerrhosaurus major	Greater Plated Lizard	x	x	x
Snakes				
Typhlops sp (visual)	Blind Snake	x		
Leptotyphlops sp*	Thread Snake	x	x	x
Aparallactus capensis	Cape Centipede Eater			
Dasypeltis scabra	Common Egg-eater			x
*Crotaphopeltis hotamboeia**	White-lipped Snake	x	x	x
Hemirhagerris nototaenia	Southeastern Bark Snake	x		x
Mehelya capensis	Cape File Snake			x
Philothamnus hoplogaster	Southeastern Green Snake	x	x	x
Dispholidus typus	Boomslang	x	x	x
Thelotornis mossambicanus	Eastern Vine Snake	x		
Python natalensis CITES II	Southern African Rock Python	x	x	x
Dendroaspis anguisticeps	Green Mamba	x		x
Naja melanoleuca	Forest Cobra	x	x	x
Bitis arietans	Puff Adder	x	x	x
*Causus defilippi **	Snouted Night adder	x		

3.3.3. Birds

Ninety- one species of birds were detected from all the three forests. The numbers of species in each forest reserve are: Namatimbili 58, Mitundumbea 66 and Matapwa 59. The summarised results for birds and the forests in which each species was detected are presented in Table 3.6

Data for mist netting and Timed Species Counts are presented in Appendix 6.3 and 6.4, respectively.

Table 3.6: Birds by forests sampled.

Names follow Stevenson & Fanshawe (2002). *= endemic or Near-endemic to Coastal Forest (Mlingwa *et al*., 2000); IUCN Redlist categories indicated as VU (Vulnerable) and NT (Near Threatened)

Group, Threat status and CITES Appendix.	**English Name**	**Namatimbili**	**Mitundumbea**	**Matapwa**	**Global Threat Status**
Ciconiiformes					
CICONIIDAE					
Bostrychia hagedash	Hadada Ibis	x	-	-	
Falconiformes					
ACCIPITRIDAE					
Macheiramphus alcinus	Bat Hawk	-	-	x	
**Circaetus fasciolatus*	Southern Banded Snake Eagle	x	x	x	VU
Terathopius ecaudatus	Bateleur	-	x	x	
Polyboroides radiatus	Gymnogene	-	-	x	
Accipiter tachiro	African Goshawk	x	x	x	
Kaupifalco monogrammicus	Lizard Buzzard	-	x	-	
Stephanoaetus coronatus	Crowned Eagle	x	x	x	
Galliformes					
PHASIANIDAE					
Francolinus sephaena	Crested Francolin	x	x	x	
Guttera pucherani	Crested Guineafowl	x	x	x	
Columbiformes					
COLUMBIDAE					
Streptopelia semitorquata	Red-eyed Dove	-	x	x	
Turtur chalcopilos	Emerald-spotted Wood Dove	-	x	x	
Turtur tympanistria	Tambourine Dove	x	x	x	
Treron calv a	Green Pigeon	x	x	-	
Psittaciformes					
PSITTACIDAE					
Poicephalus cryptoxanthus	Brown-headed Parrot	x	x	x	
Poicephalus robustus	Brown-necked Parrot	x	x	x	
Cuculiformes					
MUSOPHAGIDAE					
Tauraco livingstonii	Livingstone's Turaco	x	x	-	
CUCULIDAE					

Group, Threat status and CITES Appendix.	**English Name**	**Namatimbili**	**Mitundumbea**	**Matapwa**	**Global Threat Status**
Chrysococcyx klaas	Klaa's Cuckoo	x	x	x	
Centropus superciliosus	White-browed Coucal	-	-	x	
Strigiformes					
STRIGIDAE					
Strix woodfordii	African Wood Owl	x	x	x	
Bubo africanus	Spotted Eagle Owl	-	-	x	
Glaucidium capense	African Barred Owlet	-	x	-	
Caprimulgiformes					
CAPRIMULGIDAE					
Caprimulgus pectoralis	Fiery-necked Nightjar	-	x	x	
Apodiformes					
APODIDAE					
Neafrapus boehmi	Boehm's Spinetail	-	x	-	
Trogoniformes					
TROGONIDAE					
Apaloderma narina	Narina's Trogon	x	-	-	
Coraciiformes					
ALCEDINIDAE					
Ispidina picta	Pygmy Kingfisher	-	x	x	
Halcyon albiventris	Brown-hooded Kingfisher	-	-	x	
MEROPIDAE					
Merops pusillus	Little Bee-eater	-	x	-	
Merops boehmi	Boehm's Bee-eater	x	x	x	
UPUPIDAE					
Phoeniculus purpureus	Green Wood Hoopoe	x	x	x	
Rhinopomastus cyanomelas	Common Scimitarbill				
BUCEROTIDAE					
Tockus alboterminatus	Crowned Hornbill	x	x	x	
Ceratogymna bucinator	Trumpeter Hornbill	x	x	x	
Bucorvus cafer	Southern Ground Hornbill	x	x	x	
Piciformes					
CAPITONIDAE					
Pogoniulus bilineatus	Yellow-rumped Tinkerbird	x	x	x	
Buccanodon olivaceum	Green Barbet	x	-	-	
INDICATORIDAE					
Indicator minor	Lesser Honeyguide	-	x	-	
PICIDAE					
Campenthera abingoni	Golden-tailed Woodpecker	x	-	-	
Dendropicos fuscescens	Cardinal Woodpecker	x	x	x	
Passeriformes					
EURYLAIMIDAE					
Smithornis capensis	African Broadbill	x	x	x	
CAMPEPHAGIDAE					
Campephaga flava	Black Cuckoo-shrike	x	-	-	

Group, Threat status and CITES Appendix.	**English Name**	**Namatimbili**	**Mitundumbea**	**Matapwa**	**Global Threat Status**
Coracina pectoralis	White-breasted Cuckoo-Shrike	x	-	-	
PYCNONOTIDAE					
Andropadus importunus	Zanzibar Sombre Greenbul	x	-	x	
Chlorocichla flaviventris	Yellow-bellied Greenbul	x	x	x	
**Phyllastrephus fischeri*	Fischer's Greenbul	-	x	x	
Phyllastrephus flavostriatus	Yellow-streaked Greenbul	x	x	-	
**Phyllastrephus debilis*	Tiny Greenbul	x	-	-	
Pycnonotus tricolor	Common Bulbul	x	x	x	
Nicator gularis	Eastern Nicator	x	x	x	
TURDIDAE					
Neocossyphus rufus	Red-tailed Ant Thrush	x	-	-	
Cossypha natalensis	Red-capped Robin Chat	x	x	x	
Cercotrichas quadrivirgata	Eastern Bearded Scrub Robin	x	x	x	
SYLVIIDAE					
**Macrosphenus krestchmeri*	Krestchmer's Longbill	x	-	-	
Cisticola fulvicapillus	Piping Cisticola (Tabora)	-	x	-	
Prinia subflava	Tawny-flanked Prinia	-	x	-	
Apalis flavida	Yellow-breasted Apalis	x	-	x	
Camaroptera brachyura	Grey-backed Camaroptera	x	x	x	
MUSCICAPIDAE					
Batis mixta	Forest Batis	-	-	x	
Batis capensis	Cape Batis	-	x	x	
**Batis reichenowi*	Reichenow's Batis	-	x	x	VU
Platysteira peltata	Black-throated Wattle-eye	-	x	x	
Erythrocercus livingstonei	Livingstone's Flycatcher	x	x	x	
Trochocercus cyanomelas	Crested Flycatcher	x	x	x	
Muscicapa caerulescens	Ashy Flycatcher	x	x	x	
Terpsiphone viridis	African Paradise Flycatcher	x	-	-	
Bias muscus	Black and White Shrike Flycatcher	-	-	x	
Zosterops senegalensis	Yellow White-eye	x	-	-	
NECTARINIIDAE					
Cyanomitra veroxii	Mouse-coloured Sunbird	-	x	-	
Anthreptes collaris	Collared Sunbird	x	x	x	
**Anthreptes reichenowi*	Plain-backed Sunbird	x	x	x	NT
Chalcomitra senegalensis	Scarlet-chested Sunbird	-	x	-	
Chalcomitra amethystina	Amethyst Sunbird	x	x	x	
Nectarinia olivacea	Olive Sunbird	x	x	x	
ORIOLIDAE					
Oriolus larvatus	Black-headed Oriole	x	-	x	
PRIONOPIDAE					
**Prionops scopifrons*	Chestnut-fronted Helmet Shrike	-	x	-	
Prionops retzii	Retz's Helmet Shrike	x	x	x	
MALACONOTIDAE					

Group, Threat status and CITES Appendix.	English Name	Namatimbili	Mitundumbea	Matapwa	Global Threat Status
Dryoscopus cubla	Black-backed Puffback	x	x	x	
Laniarius aethiopicus	Tropical Boubou	x	x	x	
Lanius afer	Brubru	x	-	-	
Tchagra australis	Brown-crowned Tchagra	x	x	-	
Malaconotus sulfureopectus	Sulphur-breasted Bush Shrike	x	-	x	
DICRURIDAE					
Dicrurus ludwigii	Square-tailed Drongo	x	x	x	
CORVIDAE					
Corvus albus	Pied Crow	-	x	x	
Corvus albicollis	White naped Raven		x	x	
STURNIDAE					
Lamprotornis corruscus	Black-breasted Starling	x	-	-	
PLOCEIDAE					
Ploceus bicolor	Dark-backed Weaver	x	x	x	
ESTRILDIDAE					
Hypargos niveoguttatus	Peters' Twinspot	x	x	x	
Uraeginthus cyanocephalus	Blue-capped Cordonbleu	-	x	-	
Lonchura bicolor	Black and White Mannikin	-	x	-	
Lonchura cucullata	Bronze Mannikin	-	x	-	
FRINGILLIDAE					
Serinus mozambicus	Yellow-fronted Canary	-	x	-	
Total number of species per each forest reserve	Total number of species in all forest reserves = 91	58	66	59	

3.3.4. Mammals

The summarised results for mammals detected in each forest are presented in Table 3.7. Results from Trapping are presented in Appendix 6.2.

Table 3.7: Mammals documented by forest area

Names follow Kingdon (1997); Orders and families follow Wilson & Reeder (2005). IUCN redlist threat status is indicated when greater than Least Concern. x= present in forest indicated. * = captured; other detection methods as indicated as follows: h=heard, li=local informant,photo=photographed; s=seen; sign=track, burrow, scat, etc. .

Group and conservation status		**Namatimbili**	**Mitundumbea**	**Matapwa**
Order Primates				
CERCOPITHECIDAE				
Yellow Baboon CITES Appendix II	*Papio cynocephalus* (s)	x	x	x
Blue Monkey CITES Appendix II	*Cercopithecus mitis*(s)	x		x
Vervet Monkey CITES Appendix II	*C. pygerythrus* (s)	x	x	x
GALAGONIDAE All on CITES Appendix II				
Greater Galago	*Otolemur crassicaudatus* (s,h)	x	x	x
Rondo Galago CR	*Galagoides rondoensis* (s,h)	x	x	x
Zanzibar Galago	*Galagoides zanzibaricus*(s,h)	x	x	x
Order Chiroptera				
RHINOLOPHIDAE				
Horseshoe Bat	*Rhinolophus landeri*	x		x
PTEROPODIDAE				
Epauletted Fruit Bat	Epomophorus sp*	x		x
Order Lagomorpha				
LEPORIDAE				
Hare	Lepus sp(s)	x	x	x
Order Soricomorpha				
SORICIDAE	*Crocidura* sp.*	x	x	x
Order Rodentia				
Gliridae				
African Dormice	*Graphiurus* sp (s)	x	x	x
HYSTRICIDAE				
Purcupine	*Hystrix* sp. (sign)	x	x	x
MURIDAE				
East African Spiny Mouse	*Acomys* sp. *	x	x	x
Narrow-footedWoodland Mouse	*Grammomys dolichurus**	x	x	x
Zebra mice	*Lemniscomys* sp*		x	
Giant Rat	*Cricetomys gambianus*(li)	x		x
Gerbil	*Tatera leucogaster**	x	x	x
Lesser Pouched Rat	*Beamys hindei* *	x		
SCIURIDAE				
Red-bellied Squirrel	*Paraxerus palliatus* *	x	x	x
Ochre Bush Squirrel	*Paraxerus ochraceus (s)*	x	x	x
THRYONOMYIDAE				

Group and conservation status		**Namatimbili**	**Mitundumbea**	**Matapwa**
Marsh cane-rat	*Thryonomys swinderianus* (photo)	x	x	x
Order Macroscelidea				
MACROSCELIDIDAE				
Four-toed Elephant Shrew	*Petrodromus tetradactylus**	x	x	x
Black and Rufous Elephant Shrew, VU	*Rhynchocyon petersi* (s)	x		x
Order Carnivora				
CANIDAE				
Black-backed Jackal	*Canis mesomelas*(li)		x	
Wild Dog				
EN C2a(i)	*Lycaon pictus* (li)		x	
MUSTELIDAE				
African clawless otter CITES Appendix II	*Aonyx capensis* (sign)	x, scats		
HERPESTIDAE				
Slender Mongoose	*Herpes sanguinea* (s)	x	x	x
Banded Mongoose	*Mungos mungo* (s)	x	x	x
Bushy-tailed Mongoose	*Bdeogale crassicauda* (s)	x	x	x
VIVERRIDAE				
African Civet	*Civettictis civetta* (s)	x	x	x
Blotched Genet	*Genetta tigrina* (s)	x	x	x
HYAENIDAE				
Spotted Hyaena	*Crocuta crocuta* (h, li)	x	x	x
FELIDAE				
Wild cat CITES Appendix II	*Felis sylvestris**			x
Leopard CITES Appendix II, NT	*Panthera pardus* (s,h)	X, in camp with cubs	x	x
Lion CITES Appendix II, VU	*Panthera leo* (li)	x, tracks	x	x
ORYCTEROPODIDAE				
Aardvark	*Orycteropus afer* (sign)	x	x	x
MANIDAE				
Ground Pangolin (CITES Appendix II)	*Smutsia temminckii* (li)	x	x	x
Order Proboscidea				
ELEPHANTIDAE				
African Elephant CITES Appendix I, VU	*Loxodonta africana* (s)	x	x	x
Order Hyracoidea				
PROCAVIIDAE				
Bush Hyrax	*Heterohyrax brucei* (s)	x	x	x
Order Perissodactyla				
EQUIDAE				
Common Zebra	*Equus burchelli* (s)		x	x
Order Artiodactyla				
HIPPOPOTAMIDAE				
Hippopotamus,CITES II, VU	*Hippopotamus amphibious*(s)	x		

Group and conservation status		**Namatimbili**	**Mitundumbea**	**Matapwa**
SUIDAE				
Bush Pig	*Potamochoerus larvatus*(s, sign)	x	x	x
Warthog	*Phacochoerus africanus* (li)	x	x	x
BOVIDAE				
African Buffalo	*Syncerus caffer* (sign, li)	x	x	x
Bushbuck	*Tragelaphus scriptus* (s)	x	x	x
Greater Kudu	*T. strepsiceros* (s)	x (game scout)	x (game scout)	x
Eland	*Taurotragus oryx*(s)		x	x
Common Duiker	*Cephalopus natalensis* (s)	x	x	x
Sharpe's Grysbok	*Raphicerus sharpei* (li)	x	x	x
Suni	*Neotragus moschatus* (s)	x	x	x
Sable Antelope	*Hippotragus niger* (s)	x	x	x
Hartebeest	*Alcelaphus bucelaphus lichtensteini* (s)	x	x	x
Wildebeest	*Connochaetes taurinus* (s)		x	x
Klipspringer	*Oreotragus oreotragus*(li)	x		
Impala	*Aepyceros melampus*(s)			x

3.4 Desk top Study

Our desk top study of forests that we were unable to visit included the following sites: Weme, Kichi Hills, Kiwengoma, Matumbi Hills, Mchungu, Mbarawala, Ruara, Rondo, Unguja island, Jozani-Chwaka forests, Pemba island and Ngezi forest. The islands of Zanzibar (Unguja) and Pemba were included because many faunal references may not mention forests specifically, but rather these larger entities; a species presently known from a particular forest might well occur outside that forest and it is good to be aware of this possibility; also, a species not known from a forest but endemic to the island in question might well be found in a forest at some future date.

It will be appreciated that these species lists are based on surveys often conducted by non-specialists and not necessarily in seasons propitious for the detection of all groups. In addition, there are certainlytaxonomic difficulties. In many cases we have used the names provided in unpublished reports, as it has not been possible to verify identifications of individual specimens. Nonetheless, the records are indicative of the species present and therefore are useful baselines.

The results of this study are presented in Tables 3.8 (vegetation), 3.9 (amphibians), 3.10 (reptiles), 3.11 (birds) and 3.12 (mammals).

Table 3.8: Desktop study Plant species distribution in coastal forests of Tanzania

X = present, IUCN status: CR=Critically Endangered; EN=Endangered; VU=Vulnerable; NT=Near threatened; LC =Least Concern

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1	Acanthaceae	*Asystasia*	*gangetica*	(L.) T. Anderson	x	x						x			x	x	
2	Acanthaceae	*Asystasia*	*multiflora*	(L.) T. Anderson					x	x			x			x	
3	Acanthaceae	*Asystasia*	*pinguifolia*	T.J. Edwards											x		
4	Acanthaceae	*Adhatoda*	*englerana*	(Lindau) C.B. Clarke									x				
5	Acanthaceae	*Barleria*	*grandicalyx*	Lindau										x			
6	Acanthaceae	*Barleria*	*holstii*	Lindau			x		x	x						x	
7	Acanthaceae	*Barleria*	*prionitis*	L.											x		
8	Acanthaceae	*Barleria*	*repens*	Nees											x		
9	Acanthaceae	*Blepharis*	*maderaspatensis*	Heine ex Roth		X			x	x					x	x	
10	Acanthaceae	*Blepharis*	*ciliaris*	Lindau			x		x	x						x	
11	Acanthaceae	*Crossandra*	*pungens*	Lindau			x										
12	Acanthaceae	*Dicliptera*	*aculeata*	C.B. Clarke			x										
13	Acanthaceae	*Dicliptera*	*lingulata*	C.B. Clarke				x									
14	Acanthaceae	*Ecbolium*	*amplexicaule*	S. Moore											x		
15	Acanthaceae	*Ecbolium*	*amplexicaule*	S. Moore			x										
16	Acanthaceae	*Hypoestes*	*forskaolii*	(Vahl) R. Br.				x						x	x		
17	Acanthaceae	*Isoglossa*	*lactea*	Lindau ex Engl.	x	x											
18	Acanthaceae	*Justicia*	*euosmia*	Lindau			x										
19	Acanthaceae	*Justicia*	*glabra*	Roxb.			x								x		
20	Acanthaceae	*Justicia*	*inaequifolia*	Brummitt			x							x			
21	Acanthaceae	*Justicia*	*matammensis*	(Schweinf.) Oliv.			x										
22	Acanthaceae	*Justicia*	*sansibarensis*	Lindau											x		
23	Acanthaceae	*Justicia*	*tenella*	(Nees) T. Anderson									x				
24	Acanthaceae	*Lankesteria*	*alba*	Lindau			x	x									
25	Acanthaceae	*Megalochlamys*	*tanzaniensis*	Vollesen			x										

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
26	Acanthaceae	*Mellera*	*lobulata*	S. Moore			x										
27	Acanthaceae	*Monothecium*	*aristatum*	(Nees) T. Anderson			x										
28	Acanthaceae	*Nelsonia*	*canescens*	(Lam.) Spreng.			x							x			
29	Acanthaceae	*Phaulopsis*	*imbricata*	(Forssk.) Sweet											x		
30	Acanthaceae	*Pseuderanthemum*	*tunicatum*	(Afz.) Milne-Redn									x				
31	Acanthaceae	*Rhinacanthus*	*gracilis*	Klotzsch										x			
32	Acanthaceae	*Ruellia*	*tuberosa*	L.			x										
33	Acanthaceae	*Ruspolia*	*seticalyx*	(C.B. Clarke) Milne-Redh.			x										
34	Acanthaceae	*Ruspolia*	*sp.*										x				
35	Acanthaceae	*Thunbergia*	*alata*	Bojer ex Sims											x		
36	Acanthaceae	*Thunbergia*	*holstii*	Lindau			x										
37	Acanthaceae	*Whitfieldia*	*elongata*	(P. Beauv.) De Wild. & T. Durand			x						x				
38	Adiantaceae	*Achrosticum*	*aureum*	L.								x					
39	Aizoaceae	*Glinus*	*opposifolius*	(L.) A.DC.											x		
40	Aizoaceae	*Sesuvium*	*portulacastrum*	(L.) L.											x		
41	Alangiaceae	*Alangium*	*salviifolum*	(L.f.) Wangerin									x				
42	Amaranthaceae	*Achyranthes*	*aspera*	L.								x	x		x		
43	Amaranthaceae	*Aerva*	*lanata*	(L.) Juss. ex Schult.								x					
44	Amaranthaceae	*Alternanthera*	*sessilis*	(L.) R. Br. ex DC.											x		
45	Amaranthaceae	*Amaranthus*	*caudatus*	L.			x										
46	Amaranthaceae	*Amaranthus*	*dubius*	Mart. ex Thell.											x		
47	Amaranthaceae	*Amaranthus*	*viridis*	L.								x					
48	Amaranthaceae	*Amaranthus*	*hybridus*	L.			x										
49	Amaranthaceae	*Celosia*	*hastata*	Lopr.			x									x	
50	Amaranthaceae	*Celosia*	*schweinfurthiana*	Schinz			x										

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
51	Amaranthaceae	*Celosia*	*trigyna*	L.											x		
52	Amaranthaceae	*Cyathula*	*braunii*	Gilg ex Schinz							x					x	
53	Amaranthaceae	*Cyathula*	*prostrata*	(C.B. Clarke) Cavaco									x				
54	Amaranthaceae	*Psilotrichum*	*cyathuloides*	Suess. & Launert												x	
55	Amaranthaceae	*Psilotrichum*	*fallax*	C.C. Towns.			x									x	
56	Amaranthaceae	*Psilotrichum*	*scleranthum*	Thwaites	x	x	x										
57	Amaranthaceae	*Psilotrichum*	*sericeum*	(Roxb.) Dalz.											x		
58	Amaranthaceae	*Psilotrichum*	*vollesenii*	C.C. Towns.							x					x	
59	Amaranthaceae	*Pupalia*	*lappacea*	C.C. Towns.			x						x		x	x	
60	Amaryllidaceae	*Hypoxis*	*angustifolia*	Lam.			x								x		
61	Amaryllidaceae	*Boophone*	*disticha*	(L.f.) Herb.					x	x						x	
62	Amaryllidaceae	*Scadoxus*	*multiflorus*	(Martyn) Raf.			x					x	x	x			
63	Anacardiaceae	*Anacardium*	*occidentale*	L.			x	x				x			x		
64	Anacardiaceae	*Lannea*	*antiscorbutica*	(Hiern) Engl.			x	x			x		x				
65	Anacardiaceae	*Lannea*	*humilis*	(Engl.) Engl.			x										
66	Anacardiaceae	*Lannea*	*schweinfurthii*	(Engl.) Engl.	x	x	x	x	x	x		x		x	x	x	
67	Anacardiaceae	*Lannea*	*schimperi*	(Engl.) Engl.								x				x	
68	Anacardiaceae	*Ozoroa*	*obovata*	(Oliv.) A. Fern. & R. Fern.			x					x					
69	Anacardiaceae	*Ozoroa*	*insignis*	Delile		x									x		
70	Anacardiaceae	*Rhus*	*longipes*	Engl.			x					x				x	
71	Anacardiaceae	*Rhus*	*natalensis*	Engl.	x	x			x	x		x			x	x	
72	Anacardiaceae	*Rhus*	*pyroides*	Burch.			x										
73	Anacardiaceae	*Sclerocarya*	*birrea*	(A. Rich.) Hochst.			x	x				x			x		
74	Anacardiaceae	*Sorindeia*	*madagascariensis*	Thouars ex DC.	x		x	x	x	x	x	x	x		x	x	
75	Anacardiaceae	*Trichoscypha*	*uluguruensis*	Mildbr.									x				
76	Annonaceae	*Annona*	*senegalensis*	Pers.		x	x		x	x		x			x	x	
77	Annonaceae	*Artabotrys*	*brachypetalus*	Benth.		x	x	x	x							x	
78	Annonaceae	*Artabotrys*	*modestus*	Diels	x	x											LC

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
79	Annonaceae	*Asteranthe*	*asterias*	(S.Moore) Engl. & Diels			x		x								NT
80	Annonaceae	*Asteranthe*	*lutea*	Vollesen		x			x	x						x	EN
81	Annonaceae	*Cleistoclamys*	*kirkii*	(Benth.) Oliv.		x											
82	Annonaceae	*Isolona*	*cauliflora*	Verdc.			x										EN
83	Annonaceae	*Isolona*	*heinsenii*	Engl. & Diels		x	x									x	EN
84	Annonaceae	*Lettowianthus*	*stellatus*	Diels	x	x	x	x	x	x	x				x	x	NT
85	Annonaceae	*Mkilua*	*fragrans*	Verdc.			x		x	x		x		x		x	VU
86	Annonaceae	*Monanthotaxis*	*buchananii*	(Engl.) Verdc.	x		x		x	x							
87	Annonaceae	*Monanthotaxis*	*ferruginea*	(Oliv.) Verdc.								x					
88	Annonaceae	*Monanthotaxis*	*faulkerae*	(Oliv.) Verdc.								x				x	EN
89	Annonaceae	*Monanthotaxis*	*fornicata*	(Baill.) Verdc.			x								x	x	LC
90	Annonaceae	*Monanthotaxis*	*trichantha*	(Diels) Verdc.					x	x						x	VU
91	Annonaceae	*Monanthotaxis*	*trichocarpa*	(Engl. & Diels) Verdc.			x								x	x	LC
92	Annonaceae	*Monodora*	*grandidieri*	Baill.			x		x	x		x				x	
93	Annonaceae	*Monodora*	*hastipetala*	Couvreur			x									x	CR
94	Annonaceae	*Monodora*	*hastipetala*	Couvreur												x	
95	Annonaceae	*Monodora*	*junodii*	Engl. & Diels	x		x									x	
96	Annonaceae	*Monodora*	*minor*	Engl. & Diels												x	NT
97	Annonaceae	*Melodorum*	*gracile*	(Engl. & Diels) Verdc.											x		
98	Annonaceae	*Ophrypetalum*	*odoratum*	Diels		x	x		x	x						x	VU
99	Annonaceae	*Polyalthia*	*stuhlmannii*	(Engl.) Verdc.			x									x	VU
100	Annonaceae	*Polyalthia*	*tanganyikensis*	Vollesen		x											EN
101	Annonaceae	*Uvaria*	*acuminata*	Oliv.		x	x		x	x		x				x	LC
102	Annonaceae	*Uvaria*	*decidua*	Diels							x					x	CR
103	Annonaceae	*Uvaria*	*kirkii*	Oliv. ex Hook. f.									x				
104	Annonaceae	*Uvaria*	*leptocladon*	Oliv.												x	LC
105	Annonaceae	*Uvaria*	*lucida*	Benth.												x	LC
106	Annonaceae	*Uvariodendron*	*gorgonis*	Verdc.			x		x							x	EN

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107	Annonaceae	*Uvariodendron*	*kirkii*	Verdc.			x									x	VU
108	Annonaceae	*Xylopia*	*aethiopica*	(Dunsl.) A.Rich									x				
109	Annonaceae	*Xylopia*	*collina*	Diels			x										EN
110	Annonaceae	*Xylopia*	*latipetala*	Verdc.							x					x	
111	Annonaceae	*Xylopia*	*longipetala*	De Wild. & T. Durand			x										
112	Annonaceae	*Xylopia*	*parviflora*	(A. Rich.) Benth.	x	x	x				x						
113	Apiaceae	*Heteromorpha*	*trifoliata*	(H.L. Wendl.) Eckl. & Zeyh.			x									x	
114	Apocynaceae	*Adenium*	*obesum*	(Forssk.) Roem. & Schult.			x									x	
115	Apocynaceae	*Adenium*	*multiflorum*	Klotzsch											x	x	
116	Apocynaceae	*Ancylobotrys*	*petersiana*	(Klotzsch) Pierre			x		x	x		x		x	x	x	
117	Apocynaceae	*Alafia*	*caudata*	Stapf									x				
118	Apocynaceae	*Carissa*	*tetramera*	(Sacleux) Stapf			x								x	x	
119	Apocynaceae	*Catharanthus*	*roseus*	(L.) G.Don											x	x	
120	Apocynaceae	*Dictyophleba*	*lucida*	(K. Schum.) Pierre	x		x		x	x						x	
121	Apocynaceae	*Diplorhynchus*	*condylocarpon*	(Müll. Arg.) Pichon			x		x	x						x	
122	Apocynaceae	*Diplorhynchus*	*angustifolia*	Stapf							x					x	
123	Apocynaceae	*Holarrhena*	*pubescens*	Wall. ex G. Don	x		x		x	x						x	LC
124	Apocynaceae	*Hunteria*	*zeylanica*	(Retz.) Gardner ex Thwaites											x		
125	Apocynaceae	*Landolphia*	*buchananii*	(Hallier f.) Stapf					x	x						x	
126	Apocynaceae	*Landolphia*	*kirkii*	Dyer	x	x									x		
127	Apocynaceae	*Landolphia*	*sp.*										x				
128	Apocynaceae	*Mascarenhasia*	*arborea*	A.DC.											x		
129	Apocynaceae	*Pleiocarpa*	*pycnatha*	(K.Schum.) Stapf					x	x						x	
130	Apocynaceae	*Rauvolfia*	*caffra*	Sond.									x				

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131	Apocynaceae	*Rauvolfia*	*mannii*	Stapf			x								x		
132	Apocynaceae	*Rauvolfia*	*mombasiana*	Stapf	x		x					x		x			
133	Apocynaceae	*Saba*	*comorensis*	(Bojer ex A. DC.) Pichon		x	x					x	x		x		
134	Apocynaceae	*Saba*	*comorensis*	(Bojer ex A. DC.) Pichon									x				
135	Apocynaceae	*Sapium*	*armatum*	Pax & K.schum.		x	x	x									
136	Apocynaceae	*Secamone*	*parvifolia*	(Oliv.) Bullock					x	x							
137	Apocynaceae	*Schizozygia*	*coffaeoides*	Baill.	x		x						x		x		
138	Apocynaceae	*Strophanthus*	*courmontii*	Sacleux ex Franch.	x		x										
139	Apocynaceae	*Strophanthus*	*eminii*	Asch. & Pax			x										
140	Apocynaceae	*Strophanthus*	*kombe*	Oliv.	x				x	x						x	
141	Apocynaceae	*Strophanthus*	*petersianus*	Klotzsch											x		
142	Apocynaceae	*Strophanthus*	*zimmermannii*	Monach.								x					
143	Apocynaceae	*Strophanthus*	*sp.*										x				
144	Apocynaceae	*Tabernaemontana*	*elegans*	Stapf				x					x				
145	Apocynaceae	*Tabernaemontana*	*pachysiphon*	Stapf							x						
146	Apocynaceae	*Tabernaemontana*	*ventricosa*	A.DC.							x	x	x				
147	Apocynaceae	*Voacanga*	*africana*	Stapf									x		x		
148	Araceae	*Amorphophallus*	*abyssinicus*	(A. Rich.) N.E. Br.			x										
149	Araceae	*Amorphophallus*	*stuhlmannii*	(Engl.) Engl. & Gehrm.			x										EN
150	Araceae	*Anchomanes*	*abbreviatus*	Engl.			x					x					LC
151	Araceae	*Culcasia*	*orientalis*	Mayo							x	x				x	
152	Araceae	*Culcasia*	*scandens*	P.Beauv.									x				
153	Araceae	*Culcasia*	*orientalis*	Mayo			x									x	
154	Araceae	*Gonatopus*	*boivinii*	(Decne.) Engl.								x	x				
155	Araceae	*Gonatopus*	*sp.*												x		
156	Araceae	*Pistia*	*stratiotes*	L.											x		LC

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157	Araceae	*Stylochiton*	*natalensis*	Schott	x												
158	Araceae	*Stylochiton*	*euryphyllus*	Mildbr.			x									x	VU
159	Araceae	*Stylochiton*	*salaamicus*	N.E. Br.			x									x	LC
160	Araceae	*Stylochiton*	*sp.*												x		
161	Araceae	*Typhonodorum*	*lindleyanum*	Schott									x				
162	Araceae	*Zamioculcas*	*sp*										x				
163	Araceae	*Zamioculcas*	*zamiifolia*	(Lodd.) Engl.											x		
164	Araliaceae	*Cussonia*	*arborea*	Hochst. ex A. Rich.			x										
165	Araliaceae	*Cussonia*	*zimmermannii*	Harms		x	x				x	x	x		x		LC
166	Araliaceae	*Polyscias*	*fulva*	(Hiern) Harms.									x				
167	Fabaceae	*Isolberlinia*	*scheffleri*	(Harms) Greenway			x										
168	Clusiaceae	*Calophylum*	*inophylium*	L.								x	x		x		
169	Asclepiadaceae	*Calotropis*	*gigantea*	(L.) R. Br.											x		
170	Asclepiadaceae	*Calotropis*	*procera*	(Aiton) W.T. Aiton			x										
171	Asclepiadaceae	*Cynanchum*	*validum*	N.E. Br.											x		
172	Asclepiadaceae	*Cynanchum*	*tetrapterum*	(Turcz.) R.A. Dyer ex Bullock											x		
173	Asclepiadaceae	*Mondia*	*whitei*	(Hook. f.) Skeels			x										
174	Asclepiadaceae	*Pentarrhinum*	*insipidum*	E. Mey.			x										
175	Asclepiadaceae	*Pergularia*	*daemia*	(Forssk.) Blatt. & MacOwan			x										
176	Asclepiadaceae	*Pleurostelma*	*cernuum*	(Decne.) Bullock											x		
177	Asclepiadaceae	*Sarcostemma*	*viminale*	(L.) R.Br.											x		
178	Asclepiadaceae	*Secamone*	*gracilis*	N.E. Br.			x										
179	Aspleniaceae	*Asplenium*	*nidus*	L.								x					
180	Asteraceae	*Acanthospermum*	*hispidum*	DC.											x		
181	Asteraceae	*Ageratum*	*conyzoides*	L.	x		x								x		
182	Asteraceae	*Ambrosia*	*maritiama*	L.											x		

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183	Asteraceae	*Aspilia*	*mossambicensis*	(Oliv.) Wild					x	x					x	x	
184	Asteraceae	*Bidens*	*pilosa*	L.					x	x							
185	Asteraceae	*Blepharispermum*	*brachycarpum*	Mattf.			x									x	
186	Asteraceae	*Blepharispermum*	*zanguebaricum*	Oliv. & Hiern										x		x	
187	Asteraceae	*Blumea*	*viscosa*	(Mill.) Badillo											x		
188	Asteraceae	*Brachylaena*	*huillensis*	O. Hoffm.					x								LR/nt
189	Asteraceae	*Crassocephalum*	*crepidioides*	(Benth.) S. Moore			x								x		
190	Asteraceae	*Crassocephalum*	*rubens*	(Jacq.) S. Moore	x												
191	Asteraceae	*Dicoma*	*sessiliflora*	Harv.			x		x								
192	Asteraceae	*Elephantopus*	*scaber*	L.	x												
193	Asteraceae	*Emilia*	*coccinea*	(Sims) G. Don								x					
194	Asteraceae	*Emilia*	*javanica*	(Burm. f.) C.B. Rob.								x					
195	Asteraceae	*Emilia*	*abyssinica*	(A. Rich) C. Jeffrey								x					
196	Asteraceae	*Ethulia*	*faulknerae*	C. Jeffrey								x					
197	Asteraceae	*Flaveria*	*trinervia*	(Preng). C. Mohr											x		
198	Asteraceae	*Gutenbergia*	*pembensis*	S. Moore											x		
199	Asteraceae	*Launaea*	*intybacea*	(Hochst. ex Oliv. & Hiern) C. Jeffrey								x			x		
200	Asteraceae	*Launaea*	*sarmentosa*	(Willd.) Kuntze											x		
201	Asteraceae	*Laggera*	*brevipes*	Oliv & Hiern								x					
202	Asteraceae	*Laggera*	*crispata*	(Vahl) Hepper & T. R. I. Wood								x					
203	Asteraceae	*Mikania cordata*	*cordata*	Robins								x			x		
204	Asteraceae	*Microglossa*	*pyrifolia*	(Lam.) Kuntze			x								x		
205	Asteraceae	*Pluchea*	*dioscoridis*	(L.) DC.											x		
206	Asteraceae	*Pluchea*	*sordida*	(L.) DC.								x	x		x		
207	Asteraceae	*Psiadia*	*punctulata*	(DC.) Vatke								x					

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208	Asteraceae	*Sphaeranthus*	sp.												x		
209	Asteraceae	*Sphaeranthus*	*gomphrenoides*	O.Hoffm.					x	x							
210	Asteraceae	*Sphaeranthus*	*suaveolens*	(Forssk.) DC.					x	x							
211	Asteraceae	*Synedrella*	*nodiflora*	(L.) Gaertn.								x					
212	Asteraceae	*Tridax*	*procumbens*	L.					x	x					x	x	
213	Asteraceae	*Vernonia*	*amygdalina*	Delile								x					
214	Asteraceae	*Vernonia*	*cinerea*	(L.) Less.			x								x		
215	Asteraceae	*Vernonia*	*colorata*	(Willd.) Drake											x		
216	Asteraceae	*Vernonia*	*hildebrandtii*	Vatke			x		x	x						x	
217	Asteraceae	*Vernonia*	*glabra*	Vatke					x	x		x				x	
218	Asteraceae	*Vernonia*	*perrottetii*	Vatke					x	x						x	
219	Asteraceae	*Vernonia*	*poskeana*	Vatke					x	x					x	x	
220	Asteraceae	*Vernonia*	*zanzibarensis*	Less.								x	x				
221	Balsaminaceae	*Impatiens*	*engleri*	Gilg										x		x	
222	Balsaminaceae	*Impatiens*	*nana*	Engl.			x										
223	Balsaminaceae	*Impatiens*	*walleriana*	Hook. f.			x					x	x				
224	Baringtoniceae	*Baringtonia*	*racemosa*	(L.) Spreng				x									
225	Begoniaceae	*Begonia*	*humilis*	Dryand.			x										
226	Bignoniaceae	*Fernandoa*	*lutea*	(Verdc.) Bidgood							x					x	
227	Bignoniaceae	*Fernandoa*	*magnifica*	Seem.	x	x	x										
228	Bignoniaceae	*Kigelia*	*africana*	(Lam.) Benth.	x	x	x										
229	Bignoniaceae	*Markhamia*	*lutea*	(Benth.) K. Schum.	x		x					x					
230	Bignoniaceae	*Markhamia*	*acuminata*	Klotzsch.)K. Schum.		x						x					
231	Bignoniaceae	*Markhamia*	*obtusifolia*	(Baker) Sprague	x	x	x										
232	Bignoniaceae	*Markhamia*	*zanzibarica*	(Bojer ex DC.) K. Schum.								x			x		
233	Bignoniaceae	*Spathodea*	*campanulata*	P.Beauv.			x										
234	Bignoniaceae	*Stereospermum*	*kunthianum*	Cham.	x		x		x	x						x	

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235	Bignoniaceae	*Tabebuia*	*pentaphylla*	(Bertol.) A. DC.									x				
236	Blechnaceae	*Stenoclaena*	*tenufolia*	(Desv.) Moore								x					
237	Bombacaceae	*Adansonia*	*digitata*	L.			x		x	x		x			x	x	
238	Bombacaceae	*Bombax*	*rhodognaphalon*	K. Schum.			x	x	x	x	x					x	
239	Bombacaceae	*Rhodognaphalon*	*schumannianum*	A.Robyns									x				
240	Bombacaceae	*Ceiba*	*pentandra*	(L.) Gaertn.								x					
241	Bombacaceae	*Durio*	*zibethinus*	Rumph. ex Murray										x			
242	Bombacaceae	*Argusia*	*argentea*	(L.f.) Heine								x					
243	Bombacaceae	*Bourrea*	*petiolaris*	(Lam.) Thulin								x					
244	Boraginaceae	*Cordia*	*alliodora*	(Ruiz & Pav. Oken									x				
245	Boraginaceae	*Cordia*	*myxa*	L.								x	x	x			
246	Boraginaceae	*Cordia*	*subcordata*	Lam.											x		
247	Boraginaceae	*Coldenia*	*procumbens*	L.											x		
248	Boraginaceae	*Ehretia*	*amoena*	Klotzsch									x				
249	Boraginaceae	*Ehretia*	*petiolaris*	Lam.											x		
250	Boraginaceae	*Ehretia*	*cymosa*	Thonn.	x			x									
251	Boraginaceae	*Ehretia*	*glandulosissima*	Verdc.							x					x	
252	Boraginaceae	*Heliotropium*	*indicum*	L.											x		
253	Boraginaceae	*Hilsenbergia*	*nemoralis*	(G?rke) J.S. Mill.			x										
254	Boraginaceae	*Tricodesma*	*zeylanica*	(Burm. f.) R.Br.											x		
255	Boraginaceae	*Canarium*	*madagascariensis*	Engl.											x		
256	Bromeliaceae	*Ananas*	*comosus*	(L.) Merr.											x		
257	Burmanniaceae	*Burmannia*	*madagascariensis*	Mart.											x		
258	Burseraceae	*Commiphora*	*africana*	(A. Rich.) Engl.			x										
259	Burseraceae	*Commiphora*	*eminii*	(Engl.) J.B. Gillett		x	x									x	
260	Burseraceae	*Commiphora*	*fulvotomentosa*	Engl.							x						
261	Burseraceae	*Commiphora*	*lindensis*	Engl.										x	x		

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262	Burseraceae	*Commiphora*	*madagascariensis*	Jacq.												x	
263	Burseraceae	*Commiphora*	*pteleifolia*	Engl.											x		
264	Burseraceae	*Commiphora*	*serrata*	Engl.							x						
265	Burseraceae	*Commiphora*	*serrata*	Engl.		x											
266	Burseraceae	*Commiphora*	*zanzibarica*	(Baill.) Engl.		x	x		x	x						x	
267	Cactaceae	*Opuntia*	*vulgaris*	Mill.											x		
268	Campanulaceae	*Wahlenbergia*	*abyssinica*	(A. Rich.) Thulin											x		
269	Capparaceae	*Boscia*	*angustifolia*	A. Rich.			x		x	x						x	
270	Capparaceae	*Boscia*	*salicifolia*	Oliv.					x	x							
271	Capparaceae	*Capparis*	*erythrocarpos*	Isert			x		x	x					x		
272	Capparaceae	*Capparis*	*sepiaria*	(Gilg) DeWolf	x	x									x		
273	Capparaceae	*Capparis*	*sepiaria*	(Oliv.) DeWolf										x			
274	Capparaceae	*Capparis*	*tomentosa*	Lam.											x		
275	Capparaceae	*Capparis*	*viminea*	(Gilg-Ben.) DeWolf			x										
276	Capparaceae	*Capparis*	*viminea*	Hook. f. & Thomsen ex Oliv.			x										
277	Capparaceae	*Capparis*	*viminea*	Hook. f. & Thomsen ex Oliv.			x										
278	Capparaceae	*Cladostemon*	*kirkii*	(Oliv.) Pax & Gilg					x	x			x		x		
279	Capparaceae	*Cleome*	*stricta*	(Klotzsch) R.A. Graham								x			x		
280	Capparaceae	*Cleome*	*strigosa*	(Boj.) Oliv.											x		
281	Capparaceae	*Maerua*	*angolensis*	DC.					x	x					x		
282	Capparaceae	*Maerua*	*acuminata*	Oliv.							x					x	
283	Capparaceae	*Maerua*	*calantha*	Gilg			x										
284	Capparaceae	*Maerua*	*grantii*	Oliv.					x	x							
285	Capparaceae	*Maerua*	*edulis*	Pax					x	x							
286	Capparaceae	*Maerua*	*holstii*	Pax			x										

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287	Capparaceae	*Maerua*	*kirkii*	(Oliv.) F. White	x												
288	Capparaceae	*Maerua*	*schliebenii*	Gilg-Ben.							x					x	
289	Capparaceae	*Maerua*	*triphylla*	(Gilg) DeWolf	x		x								x		
290	Capparaceae	*Ritchiea*	*capparoides*	(Andrews) Britten			x										
291	Capparaceae	*Thilachium*	*africanum*	Scott-Elliot	x				x	x							
292	Capparaceae	*Thilachium*	*densiflorum*	Gilg & Gilg-Ben.			x										
293	Capparaceae	*Thilachium*	*paradoxum*	Gilg & Gilg-Ben.					x	x		x					
294	Caryophyllaceae	*Polycarpaea*	*corymbosa*	(L.) Lam.											x		
295	Casuarinaceae	*Casuarina*	*equisetifolia*	L.											x		
296	Celastraceae	*Brexia*	*madagascariensis*	(Lam.) Ker Gawl.			x							x	x		
297	Celastraceae	*Hippocratea*	sp.										x			x	
298	Celastraceae	*Elaeodendron*	*schweinfurthianum*	(Loes.) Loes.	x							x			x		
299	Celastraceae	*Gymnosporia*	*senegalensis*	(Lam.) Loes.			x										
300	Celastraceae	*Loeseneriella*	*africana*	(Willd.) R. Wilczek ex N. Hallé	x												
301	Celastraceae	*Maytenus*	*undata*	(Thunb.) Blakelock											x		
302	Celastraceae	*Maytenus*	*heterophylla*	(Thunb.) Blakelock											x		
303	Celastraceae	*Maytenus*	*senegalensis*	(Lam.) Exell									x				
304	Celastraceae	*Maytenus*	*mossabicensis*	(Thunb.) Blakelock					x	x		x			x	x	
305	Celastraceae	*Maytenus*	*undata*	(Thunb.) Blakelock								x			x		
306	Celastraceae	*Mystroxylon*	*aethiopicum*	(Thunb.) Loes.			x	x				x	x		x		
307	Celastraceae	*Pristimera*	*graciliflora*	(Blakelock) N. Hall?			x									x	
308	Celastraceae	*Reissantia*	*indica*	(Willd.) N. Hallé			x										

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309	Celastraceae	*Salacia*	*elegans*	Welw. ex Oliv.			x		x	x			x				
310	Celastraceae	*Salacia*	*leptoclada*	Tul.		x											
311	Celastraceae	*Salacia*	*madagascariensis*	(Lam.) DC.	x	x	x	x	x	x	x	x	x		x		
312	Celastraceae	*Salicornia*	*pachystachya*	Unge-Sternb.											x		
313	Chenopodiaceae	*Suaeda*	*monoica*	Forssk. ex J.G. Gmel.											x		
314	Chenopodiaceae	*Holosarcia*	*indica*	(willd.) P.G.Wils											x		
315	Chrysobalanaceae	*Hirtella*	*zanzibarica*	Oliv.			x						x				
316	Chrysobalanaceae	*Parinari*	*curatellifolia*	Planch. ex Benth.				x			x		x		x		
317	Chrysobalanaceae	*Parinari*	*exelsa*	Sabine													
318	Clusiaceae	*Garcinia*	*buchananii*	Baker			x							x			
319	Clusiaceae	*Garcinia*	*kingaensis*	Engl.			x										
320	Clusiaceae	*Garcinia*	*livingstonei*	T. Anderson	x		x	x					x				
321	Clusiaceae	*Garcinia*	*volkensii*	Engl.					x	x					x	x	
322	Clusiaceae	*Harungana*	*madagascariensis*	Lam. ex Poir.		x							x		x		
323	Clusiaceae	*Mammea*	*americana*	L.			x										
324	Clusiaceae	*Psorospermum*	*febrifugum*	Spach			x								x		
325	Clusiaceae	*Vismia*	*orientalis*	Engl.			x		x	x	x					x	
326	Clusiaceae	*Vismia*	*pauciflora*	Milne-Redh.							x					x	
327	Combretaceae	*Combretum*	*aculeatum*	Vent.			x										
328	Combretaceae	*Combretum*	*adegonium*	Sond.			x	x									
329	Combretaceae	*Combretum*	*apiculatum*	Sond.			x		x	x						x	
330	Combretaceae	*Combretum*	*fragrans*	Sond.												x	
331	Combretaceae	*Combretum*	*collinum*	Sond.					x	x						x	
332	Combretaceae	*Combretum*	*constrictum*	(Benth.) Laws.											x	x	
333	Combretaceae	*Combretum*	*hereroense*	Schinz			x		x	x						x	
334	Combretaceae	*Combretum*	*holstii*	Engl.			x									x	
335	Combretaceae	*Combretum*	*microphyllum*	Klotzsch			x										
336	Combretaceae	*Combretum*	*molle*	R. Br. ex G. Don			x		x	x							
337	Combretaceae	*Combretum*	*paniculatum*	Engl.			x		x	x		x					

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338	Combretaceae	*Combretum*	*fragrans*	Vent.			x		x	x							
339	Combretaceae	*Combretum*	*pentagonum*	M.A. Lawson		x	x							x			
340	Combretaceae	*Combretum*	*racemosum*	P. Beauv.			x										
341	Combretaceae	*Combretum*	*zeyheri*	Sond.	x	x											
342	Combretaceae	*Lumnitzera*	*racemosa*	Willd.											x		
343	Combretaceae	*Pteleopsis*	*apetala*	Vollesen			x				x					x	
344	Combretaceae	*Pteleopsis*	*myrtifolia*	(M.A. Lawson) Engl. & Diels					x	x	x					x	
345	Combretaceae	*Terminalia*	*boivinii*	Tul.								x		x	x		
346	Combretaceae	*Terminalia*	*catappa*	Tul.								xc	x				
347	Combretaceae	*Terminalia*	*sambesiaca*	Engl. & Diels					x	x	x		x				
348	Combretaceae	*Terminalia*	*spinosa*	Northr.			x										
349	Combretaceae	*Terminalia*	*sericea*	DC.	x	x			x	x							
350	Combretaceae	*Terminalia*	*superba*	Engl. & Diels									x				
351	Commelinaceae	*Aneilema*	*aequinoctiale*	(P. Beauv.) Loudon	x	x	x										
352	Commelinaceae	*Aneilema*	*petersii*	(Hassk.) C.B.Cl.											x		
353	Commelinaceae	*Commelina*	*africana*	L.			x		x	x					x		
354	Commelinaceae	*Commelina*	*benghalensis*	L.	x	x	x		x	x							
355	Commelinaceae	*Commelina*	*forkalaei*	Vahl											x		
356	Commelinaceae	*Commelina*	*diffusa*	Burm. F								x	x				
357	Commelinaceae	*Commelina*	*erecta*	L.								x					
358	Commelinaceae	*Commelina*	*zambesica*	C.B. Clarke			x										
359	Commelinaceae	*Cyanotis*	*foecunda*	Hassk.			x										
360	Commelinaceae	*Cyanotis*	*angusta*	C.B. Clarke											x		
361	Commelinaceae	*Cyanotis*	*foecunda*	Hassk.					x	x							
362	Commelinaceae	*Murdannia*	*simplex*	(Vahl) Brenan									x				
363	Connaraceae	*Byrsocarpus*	*boivinianus*	(Baill.) Schellenb.											x		
364	Connaraceae	*Cnestis*	*confertiflora*	Gilg			x						x				
365	Connaraceae	*Connarus*	sp. nov.										x				

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366	Commelinaceae	*Ellipanthus*	*madagascariensis*	(G. Schellenb.) Capuron ex Keraudren				x									
367	Connaraceae	*Rourea*	*coccinea*	(Baill.) Jongkind			x										
368	Connaraceae	*Rourea*	*orientalis*	Baill.	x	x	x										
369	Euphorbiaceae	*Sapium*	*armatum*	Pax & K.Hoffm.			x										
370	Euphorbiaceae	*Sapium*	*ellipticm*	(Krauss) Pax			x										
371	Connaraceae	*Sapium*	*trilochulare*	Pax & K. Hoffm.							x					x	
372	Connaraceae	*Vismianthus*	*punctatus*	Mildbr.							x					x	
373	Convolvulaceae	*Aniseia*	*martinicensis*	(Jacq.) Choisy											x		
374	Convolvulaceae	*Bonamia*	*mossambicensis*	(Klotzsch) Hallier f.			x										
375	Convolvulaceae	*Evolvulus*	*nummularis*	(L.) L.											x		
376	Convolvulaceae	*Hewittia*	*malabarica*	(L.) Suresh			x										
377	Convolvulaceae	*Hewittia*	*sublobata*	(L.f.) O.Ktze.								x					
378	Convolvulaceae	*Ipomoea*	*consimilis*	Schulze-Menz							x					x	
379	Convolvulaceae	*Ipomoea*	*flavivillosa*	Schulze-Menz							x					x	
380	Convolvulaceae	*Ipomoea*	*aquatica*	Forsk.			x					x					
381	Convolvulaceae	*Ipomoea*	*babatas*	(L.) Lam.								x					
382	Convolvulaceae	*Ipomoea*	*irwiniae*	Verdc.			x										
383	Convolvulaceae	*Ipomoea*	*mauritiana*	Jacq.			x										
384	Convolvulaceae	*Ipomoea*	*obscura*	(L.) Ker Gawl.			x		x	x		x				x	
385	Convolvulaceae	*Ipomoea*	*shupangensis*	Baker								x					
386	Convolvulaceae	*Ipomoea*	*urbaniana*	(Dammer) Hallier f.			x										
387	Convolvulaceae	*Ipomoea*	*coptica*	(L.) Roem & Schult.											x		
388	Convolvulaceae	*Ipomoea*	*zanzibarica*	Verdc.												x	
389	Convolvulaceae	*Ipomoea*	sp.B of FTEA								x					x	
390	Convolvulaceae	*ipomoea*	sp.D of FTEA								x					x	

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391	Convolvulaceae	*Jacquemontia*	*paniculata*	(Burm. f.) Hallier f.											x		
392	Convolvulaceae	*Merremia*	*tridentata*	(L.) Hall. f.								x					
393	Convolvulaceae	*Metaporana*	*densiflora*	(Hallier f.) N.E. Br.			x										
394	Convolvulaceae	*Xenostegia*	*tridentata*	(L.) D.F. Austin & Staples			x										
395	Cucurbitaceae	*Coccinia*	*adoensis*	(A. Rich.) Cogn.								x					
396	Cucurbitaceae	*Coccinia*	*grandis*	(L.) Voigt											x		
397	Cucurbitaceae	*Cucumis*	*?anguria*	L.											x		
398	Cucurbitaceae	*Cucumis*	*hirsutus*	Sond.			x										
399	Cucurbitaceae	*Cucumis*	*sacleuxii*	Paill. & Bois											x		
400	Cucurbitaceae	*Luffa*	*cylindrica*	M. Roem.											x		
401	Cucurbitaceae	*Momordica*	*boivinii*	Baill.			x										
402	Cucurbitaceae	*Momordica*	*balsamina*	L.											x		
403	Cucurbitaceae	*Momordica*	sp. nov. aff.								x					x	
404	Cucurbitaceae	*Peponium*	*chirindense*	(Bak. f.) Cogn.				x									
405	Cucurbitaceae	*Zehneria*	*scabra*	(L. f.) Sond.			x										
406	Cycadaceae	*Encephalartos*	*hildebrandtii*	A. Braun & Bouch?			x					x					NT; App.1
407	Cyperaceae	*Abidgaardia*	*ovata*	(Burm. f.) Kral.											x		
408	Cyperaceae	*Abidgaardia*	*triflora*	(L.) Abeywickr.											x		
409	Cyperaceae	*Bulbostylis*	*hispidula*	(Vahl) R.Haines											x		
410	Cyperaceae	*Bulbostylis*	*transiens*	(K.Schum.) C. B. Cl.											x		
411	Cyperaceae	*Carex*	*echinochloe*	Kuntuze								x					
412	Cyperaceae	*Cyperus*	*amabilis*	Vahl											x		
413	Cyperaceae	*Cyperus*	*compressus*	L.								x					
414	Cyperaceae	*Cyperus*	*alternifolius*	L.						x							
415	Cyperaceae	*Cyperus*	*articulatus*	L.											x		
416	Cyperaceae	*Cyperus*	*crassipes*	Vahl											x		

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417	Cyperaceae	*Cyperus*	*difformis*	L.											x		LC
418	Cyperaceae	*Cyperus*	*distans*	L. f.								x			x		LC
419	Cyperaceae	*Cyperus*	*exaltatus*	Retz.	x					x							
420	Cyperaceae	*Cyperus*	*halpan*	L.											x		
421	Cyperaceae	*Cyperus*	*hemisphaericus*	Boeck.			x										
422	Cyperaceae	*Cyperus*	*holstii*	Kukenth.											x		
423	Cyperaceae	*Cyperus*	*immensus*	C.B. Clarke								x			x		
424	Cyperaceae	*Cyperus*	*involucratus*	Poir.											x		
425	Cyperaceae	*Cyperus*	*tenax*	Boeck.									x		x		
426	Cyperaceae	*Cyperus*	*maderaspatanus*	Willd.			x										LC
427	Cyperaceae	*Cyperus*	*prolifer*	Lam.			x						x		x		
428	Cyperaceae	*Cyperus*	*obtusiflorus*	Vahl								x			x		
429	Cyperaceae	*Cyperus*	*rotundus*	L.								x			x		LC
430	Cyperaceae	*Cyperus*	*geniculata*	(L.) Roem & Schult.									x				
431	Cyperaceae	*Eleocharis*	*acutangula*	(Rexb.) Schult.									x		x		
432	Cyperaceae	*Eleocharis*	*dulcis*	(Burm. f.) Henschel											x		
433	Cyperaceae	*Eleocharis*	*geniculata*	(L.) Roem & Schult.											x		
434	Cyperaceae	*Fimbristylis*	*dichotoma*	(L.) Vahl											x		
435	Cyperaceae	*Fimbristylis*	*ferruginea*	(L.) Vahl											x		LC
436	Cyperaceae	*Fimbristylis*	*longiculmis*	Steud.									x		x		
437	Cyperaceae	*Fimbristylis*	*hispidula*	(Vahl.) Kunth								x					
438	Cyperaceae	*Fimbristylis*	*miliaceae*	(L.) Vahl											x		
439	Cyperaceae	*Fimbristylis*	*polytrichoides*	(Retz.) Vahl											x		
440	Cyperaceae	*Fuirena*	*calolepis*	K. Schum.											x		
441	Cyperaceae	*Fuirena*	*claviseta*	Peter									x		x		
442	Cyperaceae	*Fuirena*	*umbellata*	Rottb.									x		x		
443	Cyperaceae	*Kyllinga*	*alba*	Nees								x					
444	Cyperaceae	*Kyllinga*	*aurata*	Nees								x					

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445	Cyperaceae	*Kyllinga*	*cartilaginea*	K. Schum.											x		
446	Cyperaceae	*Kyllinga*	*elata*	Steud.											x		
447	Cyperaceae	*Mariscus*	*luteus*	(Boeck.) C.B.Cl.	x										x		
448	Cyperaceae	*Mariscus*	*dubius*	(Rottb.) Hutch								x					
449	Cyperaceae	*Mariscus*	*mollipes*	C.B.Cl.(K. Schum.)											x		
450	Cyperaceae	*Oxycaryum*	*cubense*	(Poepp. & Kunth.) K. Lye											x		
451	Cyperaceae	*Pycreus*	*flavescens*	(L.) Reichb.											x		LC
452	Cyperaceae	*Pycreus*	*polystachyos*	(Rottb.) P. Beauv.									x		x		LC
453	Cyperaceae	*Pycreus*	*mundtii*	Nees									x		x		
454	Cyperaceae	*Rhynchospora*	*candida*	(Nees) Boeck.									x		x		
455	Cyperaceae	*Rhynchospora*	*corymbosa*	(L.C. Rich.) Herter											x		LC
456	Cyperaceae	*Rhynchospora*	*holoschoenoides*	(L.C. Rich.) Herter											x		
457	Cyperaceae	*Rhynchospora*	*rubra*	(Lour.) Mak.											x		
458	Cyperaceae	*Schoenoplectus*	*junceus*	(Willd.) J.Rayn											x		LC
459	Cyperaceae	*Scleria*	*achtenii*	De Wild.											x		
460	Cyperaceae	*Scleria*	*poaeformis*	Retz.											x		
461	Cyperaceae	*Scleria*	*racemosa*	Poir.											x		
462	Cyperaceae	*Scleria*	*foliosa*	Hochst. ex A. Rich.											x		LC
463	Cyperaceae	*Scleria*	*lithosperma*	(L.) Sw.			x										
464	Cyperaceae	*Scleria*	*racemosa*	Poir.				x									
465	Dennstaedticeae	*Pteridium*	*aquilinum*	(L.) Kuhn.								x					
466	Dichapetalaceae	*Dichapetalum*	*arenarium*	Breteler	x										x		
467	Dichapetalaceae	*Dichapetalum*	*barbosae*	Torre					x	x						x	
468	Dichapetalaceae	*Dichapetalum*	*braunii*	Engl. & K. Krause					x	x	x					x	
469	Dichapetalaceae	*Dichapetalum*	*edule*	Engl.	x	x	x	x									

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470	Dichapetalaceae	*Dichapetalum*	*mossambicense*	(Klotzsch) Engl.			x		x	x							
471	Dichapetalaceae	*Dichapetalum*	*ruhlandii*	Engl.			x										
472	Dichapetalaceae	*Dichapetalum*	*stuhlmannii*	Engl.		x	x		x	x							
473	Dichapetalaceae	*Dichapetalum*	*fischeri*	Engl.									x				
474	Dilleniaceae	*Tetracera*	*boiviniana*	Baill.	x		x										
475	Dilleniaceae	*Tetracera*	*litoralis*	Gilg.	x							x	x		x	x	
476	Dioscoreaceae	*Dioscorea*	*asteriscus*	Burkill			x										
477	Dioscoreaceae	*Dioscorea*	*dumetorum*	(Kunth) Pax			x										
478	Dioscoreaceae	*Dioscorea*	*hirtiflora*	Benth.											x		
479	Dioscoreaceae	*Dioscorea*	*sansibarensis*	Pax			x										
480	Dipterocarpaceae	*Monotes*	*africanus*	A.DC.					x								
481	Droseraceae	*Drosera*	*indica*	L.											x		
482	Ebenaceae	*Diospyros*	*amaniensis*	G?rke			x										VU
483	Ebenaceae	*Diospyros*	*brucei*	F. White			x										
484	Ebenaceae	*Diospyros*	*consolatae*	Chiov.					x			x		x	x	x	
485	Ebenaceae	*Diospyros*	*greenwayi*	F. White											x	x	VU
486	Ebenaceae	*Diospyros*	*kabuyeana*	F. White	x				x							x	
487	Ebenaceae	*Diospyros*	*kirkii*	Hiern					x	x						x	
488	Ebenaceae	*Diospyros*	*loureiriana*	(Caveney) Verdc.			x	x	x	x						x	
489	Ebenaceae	*Diospyros*	*mafiensis*	F. White					x	x					x	x	
490	Ebenaceae	*Diospyros*	*magogoana*	F. White							x					x	EN
491	Ebenaceae	*Diospyros*	*mespiliformis*	Hochst. ex A. DC.				x	x	x					x	x	
492	Ebenaceae	*Diospyros*	*natalensis*	(Harv.) Brenan								x					
493	Ebenaceae	*Diospyros*	*occulta*	F. White										x		x	DD
494	Ebenaceae	*Diospyros*	*shimbaensis*	F. White			x									x	EN
495	Ebenaceae	*Diospyros*	*squarrosa*	Klotzsch	x	x	x		x	x						x	
496	Ebenaceae	*Diospyros*	*usambarensis*	F. White			x										
497	Ebenaceae	*Diospyros*	*verrucosa*	Hiern		x	x	x									

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498	Ebenaceae	*Diospyros*	*zombensis*	(B.L. Burtt) F. White		x	x		x	x						x	
499	Ebenaceae	*Diospyros*	sp					x									
500	Ebenaceae	*Euclea*	*natalensis*	F. White								x			x		
501	Ebenaceae	*Euclea*	*racemosa*	(A. DC.) F. White					x	x		x			x	x	
502	Ericaceae	*Philippia*	*mafiensis*	Engl.									x		x		
503	Eriocaulaceae	*Eriocaulon*	*strictum*	Milne-Redh.											x		
504	Eriocaulaceae	*Eriocaulon*	*annuum*	Milne-Redh.											x		
505	Eriocaulaceae	*Eriocaulon*	*ciliipetalum*	H.Hess											x		
506	Eriocaulaceae	*Eriocaulon*	*stuhlmannii*	N.E. Br.											x		
507	Eriocaulaceae	*Mesanthemum*	*radicans*	(Benth.) Koern											x		
508	Eriocaulaceae	*Paepalanthus*	*lamarckii*	Kunth											x		
509	Erythroxylaceae	*Erythroxylum*	*emarginatum*	Thonn.	x		x		x	x					x	x	
510	Erythroxylaceae	*Erythroxylum*	*platyclados*	Bojer											x		
511	Euphorbiaceae	*Acalypha*	*engleri*	Pax			x							x	x	x	
512	Euphorbiaceae	*Acalypha*	*gillmanii*	Radcl.-Sm.		x										x	
513	Euphorbiaceae	*Acalypha*	*neptunica*	M?ll. Arg.			x										
514	Euphorbiaceae	*Acalypha*	*neptunica*	M?ll. Arg.			x										
515	Euphorbiaceae	*Acalypha*	*volkensii*	Pax			x										
516	Euphorbiaceae	*Alchornea*	*hirtella*	Benth.			x										
517	Euphorbiaceae	*Alchornea*	*laxiflora*	(Benth.) Pax & K. Hoffm.	x	x	x	x									
518	Euphorbiaceae	*Alchornea*	sp.			x	x					x					
519	Euphorbiaceae	*Alchornea*	*laxiflora*	(Benth.) Pax & K. Hoffm.								x					
520	Euphorbiaceae	*Antidesma*	*membranaceum*	M?ll. Arg.							x		x		x		
521	Euphorbiaceae	*Antidesma*	*venosum*	E. Mey. ex Tul.	x	x	x		x	x		x	x		x	x	
522	Euphorbiaceae	*Aristogeitonia*	*magnistipula*	Radcl.-Sm.			x										
523	Euphorbiaceae	*Aristogeitonia*	*monophylla*	Airy Shaw			x							x			
524	Euphorbiaceae	*Bridelia*	*cathartica*	G. Bertol.			x	x				x					

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
525	Euphorbiaceae	*Bridelia*	sp.								x						
526	Euphorbiaceae	*Bridelia*	*atroviridis*	Müll.Arg.			x				x						
527	Euphorbiaceae	*Bridelia*	*cathartica*	G. Bertol.	x			x	x	x					x		
528	Euphorbiaceae	*Bridelia*	*micrantha*	(Hochst.) Baill.			x	x				x	x		x		
529	Euphorbiaceae	*Cleistanthus*	*polystachyus*	Hook. f. ex Planch.			x										
530	Euphorbiaceae	*Cleistanthus*	sp.nov.								x					x	
531	Euphorbiaceae	*Croton*	*hirtus*	L'Hér.									x		x		
532	Euphorbiaceae	*Croton*	*pseudopulchellus*	Pax			x		x	x		x		x	x	x	
533	Euphorbiaceae	*Croton*	*scheffleri*	Pax			x						x				
534	Euphorbiaceae	*Croton*	*sylvaticus*	Hochst. ex Krauss			x	x				x					
535	Euphorbiaceae	*Croton*	*macrostachyus*	Del.	x												
536	Euphorbiaceae	*Dalechampia*	*scandens*	(Pax) Pax											x		
537	Euphorbiaceae	*Dalechampia*	*trifoliata*	Verdc. & Greenway			x										
538	Euphorbiaceae	*Drypetes*	sp					x									
539	Euphorbiaceae	*Drypetes*	*arguta*	(Müll. Arg.) Hutch.		x	x		x	x						x	
540	Euphorbiaceae	*Drypetes*	*natalensis*	Brenan	x	x			x	x	x	x	x			x	
541	Euphorbiaceae	*Drypetes*	*randinioides*	(Harv.) Hutch.					x	x							
542	Euphorbiaceae	*Drypetes*	*reticulatus*	Pax	x			x				x	x		x		
543	Euphorbiaceae	*Erythrococca*	*kirkii*	(Müll. Arg.) Prain			x					x	x				
544	Euphorbiaceae	*Erythrococca*	*usambarica*	Prain			x										
545	Euphorbiaceae	*Euphorbia*	*cuneata*	Vahl											x	x	
546	Euphorbiaceae	*Euphorbia*	*hypericifolia*	L.											x		
547	Euphorbiaceae	*Euphorbia*	*hyssopifolia*	L.											x		
548	Euphorbiaceae	*Euphorbia*	*inges*	Boiss											x		
549	Euphorbiaceae	*Euphorbia*	*grantii*	Oliv.					x	x							
550	Euphorbiaceae	*Euphorbia*	*hirta*	L.								x					

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551	Euphorbiaceae	*Euphorbia*	*nyikae*	(Pax) S. Carter	x			x				x			x	x	
552	Euphorbiaceae	*Euphorbia*	*candelabrum*	Pax	x				x	x							
553	Euphorbiaceae	*Euphorbia*	*tirucalli*	L.			x	x	x	x					x		LC
554	Euphorbiaceae	*Euphorbia*	*usambarica*	Pax						x						x	
555	Euphorbiaceae	*Flueggea*	*virosa*	(Roxb. ex Willd.) Voigt	x		x		x	x							
556	Euphorbiaceae	*Hymenocardia*	*ulmoides*	Oliv.			x	x	x	x							
557	Euphorbiaceae	*Jatropha*	*curas*	L.											x		
558	Euphorbiaceae	*Macaranga*	*capensis*	(Baill.) Sim			x	x				x	x				
559	Euphorbiaceae	*Mallotus*	*oppositifolius*	(Geiseler) Müll.Arg.								x			x		
560	Euphorbiaceae	*Maprounea*	*africana*	Müll.Arg.					x	x							
561	Euphorbiaceae	*Mallotus*	*oppositifolius*	(Geiseler) Müll.Arg.			x										
562	Euphorbiaceae	*Maprounea*	*africana*	Müll. Arg.											x		
563	Euphorbiaceae	*Margaritaria*	*discoidea*	(Pax) Radcl.-Sm.	x	x						x	x		x		
564	Euphorbiaceae	*Micrococca*	*mercurialis*	Benth.											x		
565	Euphorbiaceae	*Mildbraedia*	*carpinifolia*	(Pax) Hutch.		x						x				x	
566	Euphorbiaceae	*Neoholstia*	*tenuifolia*	Pax) Rauschert			x										
567	Euphorbiaceae	*Phyllanthus*	*amarus*	Schumach. & Thonn.								x					
568	Euphorbiaceae	*Phyllanthus*	*capillaris*	Schumach. & Thonn.			x										
569	Euphorbiaceae	*Phyllanthus*	*beillei*	hutch.											x		
570	Euphorbiaceae	*Phyllanthus*	*kaessneri*	Hutch.			x										
571	Euphorbiaceae	*Phyllanthus*	*micromeris*	Radcl.-Sm.			x									x	
572	Euphorbiaceae	*Phyllanthus*	*pinnatus*	(Wight) G.L. Webster			x										
573	Euphorbiaceae	*Phyllanthus*	*reticulatus*	Poir.		x	x								x		
574	Euphorbiaceae	*Phyllanthus*	*rhizomatosus*	Radcl.-Sm.			x									x	
575	Euphorbiaceae	*Phyllanthus*	*schliebenii*	Mansf. ex Radcl.-Sm.			x										

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576	Euphorbiaceae	*Phyllanthus*	sp.		x												
577	Euphorbiaceae	*Phyllanthus*	*nummulariifolius*	Poir.			x						x		x		
578	Euphorbiaceae	*Phyllanthus*	*leucocalyx*	(Muell). Arg.) Hutch.											x		
579	Euphorbiaceae	*Phyllanthus*	*muellerianus*	(Kuntze) Exell											x		
580	Euphorbiaceae	*Phyllanthus*	*niruroides*	Mulle.Arg.											x		
581	Rutaceae	*Teclea*	*trichocarpa*	(Engl.) Engl.	x		x										
582	Euphorbiaceae	*Securinega*	*virosa*	(Will)Baill.)											x		
583	Euphorbiaceae	*Pseudolachnostylis*	*maprouneifolia*	(Pax) Brenan	x	x											
584	Euphorbiaceae	*Ricinodendron*	*heudelotii*	(Müll. Arg.) J. Léonard			x	x			x				x	x	
585	Euphorbiaceae	*Ricinus*	*communis*	L.			x								x		
586	Euphorbiaceae	*Sclerocroton*	*integerrimus*	Hochst.			x										
587	Euphorbiaceae	*Spirostachys*	*africana*	Sond.	x							x					
588	Euphorbiaceae	*Suregada*	*zanzibariensis*	Baill.	x	x	x	x			x	x	x	x	x		
589	Euphorbiaceae	*Synadenium*	*glaucescens*	Pax			x										
590	Euphorbiaceae	*Tragia*	*furialis*	Bojer ex Prain		x	x										
591	Euphorbiaceae	*Tragiella*	*natalensis*	(Sond.) Pax & K. Hoffm.			x										
592	Euphorbiaceae	*Uapaca*	*guineensis*	M?ll. Arg.			x										
593	Euphorbiaceae	*Uapaca*	*sansibarica*	Pax									x		x		
594	Euphorbiaceae	*Uapaca*	*nitida*	M?ll. Arg.									x				
595	Euphorbiaceae	*Hystricophora*	*macrophylla*	mattf.							x					x	
596	Pittosporaceae	*Pittosporus*	*viridiflorum*	Sims								x					
597	Fabaceae	*Abrus*	*precatorius*	Verdc.		x	x								x		
598	Fabaceae	*Abrus*	*schimperi*	(Vatke) Verdc.			x										
599	Fabaceae	*Acacia*	*adenocalyx*	Brenan & Exell			x	x									
600	Fabaceae	*Acacia*	*amythethophylla*	Steud. ex A. Rich.			x										
601	Fabaceae	*Acacia*	*auriculiformis*	A. Cunn. ex Benth.								x					

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602	Fabaceae	*Acacia*	*hockii*	De Wild.								x					
603	Fabaceae	*Acacia*	*mearasii*	De. Wild.								x					
604	Fabaceae	*Acacia*	*nigrescens*	Oliv.	x												
605	Fabaceae	*Acacia*	*nilotica*	(Benth.) Brenan	x		x	x									
606	Fabaceae	*Acacia*	*polyacantha*	(Hochst. ex A. Rich.) Brenan			x										
607	Fabaceae	*Acacia*	*rovumae*	Oliv.											x		
608	Fabaceae	*Acacia*	*mangium*	Willd.								x					
609	Fabaceae	*Acacia*	*seyal*	Delile			x										
610	Fabaceae	*Acacia*	*sieberiana*	Brenan		x	x										
611	Fabaceae	*Aeschynomene*	*uniflora*	E.Mey.								x			x	x	
612	Fabaceae	*Afzelia*	*quanzensis*	Welw.			x	x	x	x	x	x	x		x		
613	Fabaceae	*Albizia*	*adianthifolia*	(Schumach.) W. Wight							x	x	x				
614	Fabaceae	*Albizia*	*chinensis*	(Osbeck) Merr.										x			
615	Fabaceae	*Albizia*	*glaberrima*	(Oliv.) Brenan		x						x			x	x	
616	Fabaceae	*Albizia*	*gummifera*	J.F.Gmel.) C.A.Sm.											x		
617	Fabaceae	*Albizia*	*harveyi*	E. Fourn.	x												
618	Fabaceae	*Albizia*	*lebbeck*	(L.) Benth.			x		x					x			
619	Fabaceae	*Albizia*	*petersiana*	(Bolle) Oliv.		x	x				x						
620	Fabaceae	*Albizia*	*versicolor*	Welw. ex Oliv.			x	x									
621	Fabaceae	*Albizia*	*zygia*	(DC.) Macbr.								x					
622	Fabaceae	*Alysicarpus*	*glumaceus*	(Vahl) DC.								x				x	
623	Fabaceae	*Alysicarpus*	*vaginalis*	(L.) DC.			x								x	x	
624	Fabaceae	*Amblygonocarpus*	*andongensis*	(Welw. ex Oliv.) Exell & Torre		x	x										
625	Fabaceae	*Antylosia*	*scarabaecides*	(L.) Benth.				x				x					
626	Fabaceae	*Baikiaea*	*ghesquiereana*	J. Léonard			x										EN
627	Fabaceae	*Baphia*	*kirkii*	Baker	x	x	x	x						x	x		VU
628	Fabaceae	*Baphia*	*macrocalyx*	Harms			x				x						VU

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629	Fabaceae	*Baphia*	*puguensis*	Brummitt			x										EN
630	Fabaceae	*Bauhinia*	*loeseneriana*	Harms							x					x	VU
631	Fabaceae	*Bauhinia*	*thonningii*	Schumach. & Thonn.			x										
632	Fabaceae	*Bauhinia*	*fassoglensis*	Kotschy ex Schweinf.			x	x	x	x							
633	Fabaceae	*Bauhinia*	*thonningii*	Schumach. & Thonn.			x										
634	Fabaceae	*Berlinia*	*orientalis*	Brenan			x										
635	Fabaceae	*Brachystegia*	*boehmii*	Taub.			x		x	x							
636	Fabaceae	*Brachystegia*	*longifolia*	Benth.			x										
637	Fabaceae	*Brachystegia*	*microphylla*	Harms					x	x							
638	Fabaceae	*Brachystegia*	*spiciformis*	Benth.					x	x	x						
639	Fabaceae	*Brachystegia*	*bussei*	Benth.							x						
640	Fabaceae	*Brachystegia*	sp.				x										
641	Fabaceae	*Burkea*	*africana*	Hook.			x		x	x							
642	Fabaceae	*Bussea*	*eggelingii*	Verdc.			x				x					x	
643	Fabaceae	*Caesalpinia*	*bonduc*	(L.) Roxb.													
644	Fabaceae	*Canavalia*	*rosea*	(Sw.) DC.								x					
645	Fabaceae	*Cassia*	*abbreviata*	(Holmes) Brenan			x		x	x		x				x	
646	Fabaceae	*Cassia*	*afrofistula*	Brenan					x	x		x		x			
647	Fabaceae	*Cassia*	*mimosoides*	L.								x					
648	Fabaceae	*Cassia*	*petersiana*	Bolle			x										
649	Fabaceae	*Cassia*	*burttii*	Baker f.			x										
650	Fabaceae	*Cassia*	*zambesica*	Oliv.				x									
651	Fabaceae	*Chamaecrista*	*exilis*	(Vatke) Lock													
652	Fabaceae	*Chamaecrista*	*mimosoides*	(L.) Greene			x										
653	Fabaceae	*Chamaecrista*	*occidentalis*	L.													
654	Fabaceae	*Chamaecrista*	*petersiana*	Bolle													
655	Fabaceae	*Chamaecrista*	*zambesica*	Oliv.													
656	Fabaceae	*Clitoria*	*ternatea*	L.													

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657	Fabaceae	*Clitoria*	*ternatea*	L.										x			
658	Fabaceae	*Cordyla*	*africana*	Lour.			x		x	x	x				x		
659	Fabaceae	*Craibia*	*zimmermannii*	(Harms) Harms ex Dunn			x	x							x		
660	Fabaceae	*Crotalaria*	*agatiflora*	Schweinf.			x									x	
661	Fabaceae	*Crotalaria*	*axillaris*	Aiton											x		
662	Fabaceae	*Crotalaria*	*laburnoides*	Kotsch													
663	Fabaceae	*Crotalaria*	*deserticola*	Taub. ex Baker f.								x					
664	Fabaceae	*Crotalaria*	*emarginata*	Bojer ex Benth.			x										
665	Fabaceae	*Crotalaria*	*goodiiformis*	Vatke	x	x	x					x					
666	Fabaceae	*Crotalaria*	*retusa*	L.											x		
667	Fabaceae	*Crotalaria*	*vasculosa*	Wall. ex Benth.											x		
668	Fabaceae	*Crotalaria*	*zanzibarica*	Benth.											x		
669	Fabaceae	*Cynometra*	sp.				x								x		
670	Fabaceae	*Dalbergia*	*boehmii*	Taub.							x				x	x	
671	Fabaceae	*Dalbergia*	sp.										x		x		
672	Fabaceae	*Dalbergia*	*fischeri*	Taub.			x										
673	Dichapetalaceae	*Tapura*	*fischeri*	Engl.							x						
674	Fabaceae	*Dalbergia*	*melanoxylon*	Guill. & Perr.	x		x					x			x		
675	Fabaceae	*Dalbergia*	*nitidula*	Guill. & Perr.			x		x	x							
676	Fabaceae	*Dalbergia*	*obovata*	E. Mey.			x										
677	Fabaceae	*Desmodium*	*adscendens*	(Sw.) DC.			x					x			x		
678	Fabaceae	*Desmodium*	*barbatum*	(L.) Benth. & Oerst.			x								x		
679	Fabaceae	*Desmodium*	*gangeticum*	(L.) DC.								x					
680	Fabaceae	*Desmodium*	*ramosissimum*	Gdon.													
681	Fabaceae	*Desmodium*	*salicifolium*	(Poir.) DC.								x					
682	Fabaceae	*Desmodium*	*velutinum*	(Willd.) DC.			x	x							x		
683	Fabaceae	*Desmodium*	*triflorum*	(L.)DC.											x		
684	Fabaceae	*Dialium*	*holtzii*	Harms			x				x				x		VU

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685	Fabaceae	*Dichrostachys*	*cinerea*	Brenan & Brummitt			x					x					
686	Fabaceae	*Dolichos*	*trilobus*	L.													
687	Fabaceae	*Dolichos*	*sericeus*	E. Mey.			x										
688	Fabaceae	*Entada*	*pursaetha*	DC.									x				
689	Fabaceae	*Entada*	*rheedei*	Spreng.			x										
690	Fabaceae	*Entada*	*stuhlmannii*	(Taub.) Harms			x										
691	Fabaceae	*Eriosema*	*glomeratum*	(Guill. & Perr.) Hook. f.													
692	Fabaceae	*Eriosema*	*nutans*	Schinz			x										
693	Fabaceae	*Eriosema*	*parviflorum*	E. Mey.											x		
694	Fabaceae	*Erythrina*	*variegata*	L.											x		
695	Fabaceae	*Erythrina*	*sacleuxii*	HUA	x	x											
696	Fabaceae	*Erythrophleum*	*suaveolens*	(Guill. & Perr.) Brenan								x	x		x		
697	Fabaceae	*Gigasiphon*	*macrosiphon*	(Harms) Brenan							x				x	x	
698	Fabaceae	*Guibourtia*	*schliebenii*	(Harms) J. L?onard			x										
699	Fabaceae	*Hymenaea*	*verrucosa*	Gaertn.			x	x						x	x		
700	Fabaceae	*Indigofera*	*demissa*	Taub.											x		
701	Fabaceae	*Indigofera*	*hirsuta*	L.											x		
702	Fabaceae	*Indigofera*	*dendroides*	Jacq.								x			x		
703	Fabaceae	*Indigofera*	*ormocarpoides*	Baker			x										
704	Fabaceae	*Indigofera*	*kirkii*	oliv.													
705	Fabaceae	*Indigofera*	*nummulariifolia*	(L.) Alston													
706	Fabaceae	*Indigofera*	*schimperi*	Jaub. & Spach													
707	Fabaceae	*Indigofera*	*strobilifera*	hochst. Bak.											x		
708	Fabaceae	*Indigofera*	*tinctoria*	L.													
709	Fabaceae	*Intsia*	*bijuga*	(Colebr.) Kuntze			x								x		
710	Fabaceae	*Julbernardia*	*globiflora*	(Benth.) Troupin					x	x					x		
711	Fabaceae	*Lonchocarpus*	*busei*	Harms					x	x							

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712	Fabaceae	*Lonchocarpus*	*capassa*	Rolfe	x	x											
713	Fabaceae	*Macrotyloma*	*axillare*	(Wilczek) Verdc.								x					
714	Fabaceae	*Macrotyloma*	*africanum*	(E. Mey.) Verdc.			x										
715	Fabaceae	*Millettia*	*bussei*	Harms					x	x					x		VU
716	Fabaceae	*Millettia*	*dura*	Dunn					x	x					x		
717	Fabaceae	*Millettia*	*elongatistyla*	J.B. Gillett			x								x		VU
718	Fabaceae	*Millettia*	*eetveldeana*	(Micheli) Hauman							x						
719	Fabaceae	*Millettia*	*impressa*	(Harms) J.B. Gillett			x										
720	Fabaceae	*Millettia*	*oblata*	Dunn.									x		x	x	
721	Fabaceae	*Millettia*	*stuhlmannii*	Taub.	x	x	x								x		
722	Fabaceae	*Millettia*	*usaramensis*	Taub.							x				x		
723	Fabaceae	*Mimosa*	*pigra*	L.											x		
724	Fabaceae	*Mucuna*	*pruriens*	(L.) DC.									x		x		
725	Fabaceae	*Neptunia*	*oleracea*	Lour.													
726	Fabaceae	*Newtonia*	*paucijuga*	(Harms) Brenan			x									x	VU
727	Fabaceae	*Newtonia*	*buchananii*	(Baker) G.C.C. Gilbert & Boutique		x	x				x						
728	Fabaceae	*Parkia*	*filicoidea*	Welw. ex Oliv.			x										
729	Fabaceae	*Peltophorum*	*pterocarpum*	(DC.) Backer ex K. Heyne			x										
730	Fabaceae	*Phileno*ptera	*bussei*	(Harms) Schrire			x										
731	Fabaceae	*Platysepalum*	*inopinatum*	Harms			x										
732	Fabaceae	*Pseudovigna*	*argentea*	(Willd.) Verdc.											x		
733	Fabaceae	*Pterocarpus*	*spp*	DC.			x	x									
734	Fabaceae	*Pterocarpus*	*indica*	Willd.					x	x	x		x				
735	Fabaceae	*Pterocarpus*	*rotundifolius*	(Sond.) Druce			x										
736	Fabaceae	*Pterocarpus*	*tinctorius*	Welw.			x	x			x						

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737	Fabaceae	*Rhynchosia*	*hirta*	(Andrews) Meikle & Verdc.											x		
738	Fabaceae	*Rhynchosia*	*minima*	(L.) DC.					x	x						x	
739	Fabaceae	*Rhynchosia*	*sublobata*	(Schumach.) Meikle								x					
740	Fabaceae	*Rhynchosia*	*velutina*	Wight & Arn.											x		
741	Fabaceae	*Scorodophloeus*	*fischeri*	(Taub.) J. L?onard		x	x										
742	Fabaceae	*Senna*	*petersiana*	(Bolle) Lock			x					x					
743	Fabaceae	*Sesbania*	*greenwayi*	Gillett											x		
744	Fabaceae	*Sesbania*	*sesban*	(L.) Merr.					x	x				x			
745	Fabaceae	*Sophora*	*tomentosa*	L.								x			x		
746	Fabaceae	*Stylosanthes*	*fruticosa*	(Retz.) Alston			x								x		
747	Fabaceae	*Swartzia*	*madagascariensis*	Desv.		x	x										
748	Fabaceae	*Tamarindus*	*indica*	L.	x	x	x	x				x			x		
749	Fabaceae	*Tephrosia*	*pumila*	(Lam.) Pers.								x					
750	Fabaceae	*Tephrosia*	*noctiflora*	Bojer ex Baker											x		
751	Fabaceae	*Tephrosia*	*purpurea*	(L.) Pers.											x		
752	Fabaceae	*Tephrosia*	*vogelii*	Hook. P.								x					
753	Fabaceae	*Tephrosia*	*villosa*	(L.) Pers.								x			x		
754	Fabaceae	*Teramnus*	*labialis*	(L. f.) Spreng.											x	x	
755	Fabaceae	*Tessmannia*	*densiflora*	Harms			x	x								x	EN
756	Fabaceae	*Tessmannia*	*martiniana*	Harms			x									x	
757	Fabaceae	*Tetrapleura*	*tetraptera*	(Schumach. & Thonn.) Taub.			x				x						
758	Fabaceae	*Vigna*	*pubescens*	Wilczek											x		
759	Fabaceae	*Vigna*	*marina*	(Burm.) Merrill											x		
760	Fabaceae	*Xeroderris*	*stuhlmannii*	(Taub.) Mendonça & E.C. Sousa	x	x	x										
761	Fabaceae	*Xylia*	*africana*	Harms							x						

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
762	Fabaceae	*Zenkerella*	*egregia*	J. L?onard			x									x	VU
763	Rutaceae	*Fagaropsis*	*angolensis*	(Engl.) Dale							x						
764	Euphorbiaceae	*Thecacoris*	*lucida*	(Pax) Hutch.							x					x	
765	Flacourtiaceae	*Bivinia*	*jalbertii*	Tul.	x	x	x								x		
766	Flacourtiaceae	*Buchnerodendron*	*lasiocalyx*	(Oliv.) Gilg			x										
767	Flacourtiaceae	*Caloncoba*	*welwitschii*	(Oliv.) Gilg	x	x	x	x	x	x							
768	Flacourtiaceae	*Casearia*	*gladiiformis*	Mast.							x	x	x		x		
769	Flacourtiaceae	*Casearia*	*engleri*	Gilg					x	x							VU
770	Flacourtiaceae	*Dovyalis*	*macrocalyx*	(Oliv.) War								x					
771	Flacourtiaceae	*Flacourtia*	*indica*	(Burm. f.) Merr.					x	x	x				x		
772	Flacourtiaceae	*Grandidiera*	*boivinii*	Jaub.			x										
773	Flacourtiaceae	*Lindackeria*	*bukobensis*	Gilg		x											
774	Flacourtiaceae	*Ludia*	*mauritiana*	J.F. Gmel.										x	x		
775	Flacourtiaceae	*Oncoba*	*routledgei*	Sprague			x										
776	Flacourtiaceae	*Oncoba*	*spinosa*	Forssk.	x		x					x					
777	Flacourtiaceae	*Rawsonia*	*lucida*	Harv. & Sond.									x				
778	Flacourtiaceae	*Xylotheca*	*tettensis*	(Oliv.) Wild	x	x	x	x				x		x	x		
779	Flagellariaceae	*Flagellaria*	*guineensis*	Schumach.									x	x	x		
780	Gentianaceae	*Congolanthus*	*longidens*	(N.E.Br.) A. Rayn											x		
781	Gentianaceae	*Nymphoides*	*forbesiana*	(Griseb.) Kuntze											x		
782	Gentianaceae	*Enicostema*	*axillare*	(Lam.) A. Raynal											x		
783	Gesneriaceae	*Saintpaulia*	*grotei*	Engl.			x										
784	Gesneriaceae	*Saintpaulia*	*ionantha*	H. Wendl.			x										
785	Gesneriaceae	*Saintpaulia*	*tongwensis*	B.L. Burtt									x				
786	Goodeniaceae	*Scaevola*	*sericea*	Vahl											x		
787	Goodeniaceae	*Scaevola*	*plumieri*	(L.)Vahl											x		
788	Hydrophyllacea	*Hydrolea*	*sansibarica*	Gilg											x		
789	Icacinaceae	*Apodytes*	*dimidiata*	E. Mey. ex Arn.					x	x		x	x		x		
790	Polypodiaceae	*Phymatodes*	*scolopendria*	(Burm. f.) Ching								x					

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791	Oleandraceae	*Nephrolepis*	*biserrata*	(Swartz) Schott								x					
792	Schizaeceae	*Lygodium*	*microphylum*	(Cav.R.Br.								x					
793	Thelypteridaceae	*Thelypteris*	*madagascariensis*	(Fee) Schult								x					
794	Moraceae	*Sloetiopsis*	*usambarensis*	Engl.			x										
795	Lamiaceae	*Aeollanthus*	*zanzibaricus*	S. Moore													
796	Lamiaceae	*Basilicum*	*polystachyon*	(L.) Moench					x	x					x		
797	Lamiaceae	*Hoslundia*	*opposita*	Vahl			x		x	x					x		
798	Lamiaceae	*Hyptis*	*suaveolens*	(L.) Poit.			x										
799	Lamiaceae	*Leucas*	sp.												x		
800	Lamiaceae	*Leucas*	*tsavoensis*	Sebald			x										
801	Lamiaceae	*Ocimum*	*bacilicum*	L.											x		
802	Lamiaceae	*Ocimum*	*gratissimum*	L.			x										
803	Lamiaceae	*Ocimum*	*urticifolium*	L.											x		
804	Lamiaceae	*Plectranthus*	*amboinicus*	(Lour) Spreng.											x		
805	Lamiaceae	*Plectranthus*	*seretii*	(De Wild.) Vollesen					x	x							
806	Lamiaceae	*Plectranthus*	*sphaeranthus*	Baker											x		
807	Lamiaceae	*Plectranthus*	sp.	(cf.Harris & Tadros 5945											x		
808	Lamiaceae	*Plectranthus*	sp.												x		
809	Lamiaceae	*Tetradenia*	*fruticosa*	Benth.			x										
810	Lamiaceae	*Tinnea*	*aethiopica*	Kotschy ex Hook.f.			x		x	x							
811	Lauraceae	*Cassytha*	*filiformis*	L.								x			x		
812	Lauraceae	*Cinnamomum*	*camphora*	(L.) J. Presl						x							
813	Lauraceae	*Cinnamomum*	*verum*	J. Presl										x			
814	Lecythidaceae	*Barringtonia*	*racemosa*	(Linn.) Roxb.			x	x					x		x		
815	Lentibulariaceae	*Utricularia*	*benjaminiana*	Oliv.											x		
816	Lentibulariaceae	*Utricularia*	*inflexa*	Forssk.											x		
817	Lentibulariaceae	*Utricularia*	*gibba*	L									x		x		
818	Lentibulariaceae	*Utricularia*	*livida*	E. Mey.											x		

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819	Lentibulariaceae	*Utricularia*	*reflexa*	Oliv.											x		
820	Lentibulariaceae	*Utricularia*	*subulata*	L.											x		
821	Agavaceae	*Agave*	*angustifolia*	Haw											x		
822	Liliaceae	*Albuca*	*abyssinica*	Jacq.			x										
823	Liliaceae	*Aloe*	*massawana*	Reynolds											x		
824	Liliaceae	*Anthericum*	*suffruticosum*	(Bak.) Milne - Redh											x		
825	Liliaceae	*Asparagus*	*africanus*	Lam.								x			x		
826	Liliaceae	*Asparagus*	*falcatus*	L.			x						x		x		
827	Liliaceae	*Asparagus*	*faulknerae*	Sebsebe			x							x			LC
828	Liliaceae	*Asparagus*	*flagellaris*	(Kunth) Baker											x		
829	Liliaceae	*Asparagus*	*humilis*	Engl.											x		
830	Liliaceae	*Asparagus*	*setaceus*	(Kunth) Jessop										x	x		
831	Liliaceae	*Chlorophytum*	*filipendulum*	(Engl.) Nordal & A.D. Poulsen			x										
832	Liliaceae	*Chlorophytum*	*stenopetalum*	Baker			x										
833	Liliaceae	*Dracaena*	*usambarensis*	Engl.			x	x			x				x		
834	Liliaceae	*Dracaena*	*mannii*	Baker			x										
835	Liliaceae	*Dracaena*	sp. near *D. gazensis*	Rendle											x		
836	Liliaceae	*Dracaena*	*laxissima*	Engl.									x				
837	Liliaceae	*Dracaena*	*steudineri*	Engl.								x					
838	Liliaceae	*Drimiopsis*	*perfolia*	Baker					x	x							
839	Liliaceae	*Dracaena*	*deremensis*	Engl.			x										
840	Liliaceae	*Gloriosa*	*superba*	L.			x					x			x		
841	Liliaceae	*Sansevieria*	*conspicua*	N.E. Br.			x						x		x		
842	Liliaceae	*Sansevieria*	*kirkii*	Baker								x					
843	Liliaceae	*Sansevieria*	*zanzibarica*	Gerome & Labroy											x	x	
844	Liliaceae	*Scilla*	*kirkii*	Baker											x		
845	Linaceae	*Hugonia*	*castaneifolia*	Engl.		x	x	x	x	x							

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846	Linaceae	*Phyllocosmus*	*lemaireanus*	(De Wild. & T. Durand) T. Durand & H. Durand			x	x									
847	Melastomataceae	*Memecylon*	*sp.nov.*								x					x	
848	Melastomataceae	*Memecylon*	*deminuta*	Brenan								x				x	
849	Lobeliaceae	*Lobelia*	*fervens*	Thaunb											x		
850	Loganiaceae	*Anthocleista*	*grandiflora*	Gilg									x				
851	Loganiaceae	*Mostuea*	sp.A of FTEA								x					x	
852	Loganiaceae	*Mostuea*	sp.B of FTEA								x					x	
853	Loganiaceae	*Strychnos*	sp.					x									
854	Loganiaceae	*Strychnos*	*angolensis*	Gilg	x	x	x					x	x				
855	Loganiaceae	*Strychnos*	*cocculoides*	Baker					x	x		x					
856	Loganiaceae	*Strychnos*	*henningsii*	Gilg					x	x							
857	Loganiaceae	*Strychnos*	*innocua*	Delile			x		x								
858	Loganiaceae	*Strychnos*	*madagascariensis*	Poir.	x	x			x	x							
859	Loganiaceae	*Strychnos*	*mitis*	S. Moore											x		
860	Loganiaceae	*Strychnos*	*panganensis*	Gilg					x	x							
861	Loganiaceae	*Strychnos*	*spinosa*	Lam.			x					x			x	x	
862	Loranthaceae	*Agelanthus*	*kayneri*	(Engl.)Baill								x					
863	Loranthaceae	*Agelanthus*	*sansibarensis*	(Engl.) Polhill & Wiens								x		x			
864	Loranthaceae	*Englerina*	*inaequilatera*	(Engl.) Gilli										x			
865	Loranthaceae	*Erianthemum*	*dregei*	(Eckl. & Zeyh.) Tiegh.								x		x			
866	Loranthaceae	*Erianthemum*	*sodenii*	(Engl.) Balle.			x					x			x		
867	Loranthaceae	*Oliverella*	*hildebrandtii*	(Engl.) Tiegh.			x										
868	Loranthaceae	*Oncella*	*ambigua*	(Engl.) Tiegh.			x										
869	Loranthaceae	*Oncella*	*curviramea*	(Engl.) Danser											x		
870	Loranthaceae	*Tapinanthus*	*subulatus*	(Engl.) Danser			x										
871	Loranthaceae	*Tapinanthus*	*sansibarensis*	(Engl.) Danser											x		

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872	Loranthaceae	*Tapinanthus*	*igneus*	(Sprague)Danser											x		
873	Loranthaceae	*Phragmanthera*	*sigensis*	(Sprague)Danser											x		
874	Loranthaceae	*Spragueanella*	*rhamnifolia*	(Engl.) Balle.											x		
875	Lythraceae	*Ammannia*	*auriculata*	Willd.			x					x					
876	Lythraceae	*Lawsonia*	*inermis*	L.											x		
877	Lythraceae	*Nesaea*	*crassicaulis*	(Guill. & Perr.) Koehne											x		
878	Lythraceae	*Nesaea*	*pedicellaris*	Hiern											x	x	
879	Lythraceae	*Nesaea*	*radicans*	Guill. & Perr.											x		
880	Lythraceae	*Pemphis*	*acidula*	J.R. Forst.										x	x		
881	Lythraceae	*Woodfordia*	*fruticosa*	(L.) S. Kurz											x		
882	Malpighiaceae	*Acridocarpus*	*alopecurus*	Nied.			x										
883	Malpighiaceae	*Acridocarpus*	*zanzibaricus*	A. Juss.									x				
884	Malpighiaceae	*Acridocarpus*	*pauciglandulosus*	Launert							x					x	
885	Malvaceae	*Abutilon*	*guineense*	(Schumach.) Baker f. & Exell											x		
886	Malvaceae	*Abutilon*	*mauritianum*	(Jacq.) Medik.										x	x		
887	Malvaceae	*Gossypioides*	*kirkii*	(Mast.) Hutch.			x						x		x		
888	Malvaceae	*Gossypium*	*arboreum*	(Mast.) Hutch.											x		
889	Malvaceae	*Gossypium*	*barbadense*	L.											x		
890	Malvaceae	*Gossypium*	*latifolium*	Murr.											x		
891	Malvaceae	*Hibiscus*	*barbosae*	Exell			x										
892	Malvaceae	*Hibiscus*	*cannabinus*	L.			x										
893	Malvaceae	*Hibiscus*	*micranthus*	L. f.											x		
894	Malvaceae	*Hibiscus*	*physaloides*	Guill. & Perr.											x		
895	Malvaceae	*Hibiscus*	*seineri*	Engl.								x					
896	Malvaceae	*Hibiscus*	*sabdariffa*	L.											x		
897	Malvaceae	*Hibiscus*	*surattensis*	L.								x					
898	Malvaceae	*Hibiscus*	*tilliaceus*	L.								x			x		
899	Malvaceae	*Hibiscus*	*schizopetalus*	(Dyer) Hook. f.			x										

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900	Malvaceae	*Hibiscus*	*surattensis*	L.	x										x		
901	Malvaceae	*Hibiscus*	*zanzibaricus*	Exell											x		
902	Malvaceae	*Sida*	*acuta*	Burm. f.								x			x		
903	Malvaceae	*Sida*	*cordifolia*	L.											x		
904	Malvaceae	*Sida*	*serratifolia*	Wilczek & Steyaert											x		
905	Malvaceae	*Thespesia*	*danis*	Oliv.					x	x							
906	Malvaceae	*Thespesia*	*populnea*	(L.) Correa											x		
907	Malvaceae	*Urena*	*lobata*	L.											x		
908	Malvaceae	*Wissadula*	*rostrata*	(Schumach.) Hook. f.											x		
909	Melastomataceae	*Clidemia*	*hirta*	(L.) D. Don			x									x	
910	Melastomataceae	*Dissotis*	*roundifolia*	(Sm.) Triana								x					
911	Melastomataceae	*Dissotis*	*debilis*	(Sond.) Triana											x		
912	Melastomataceae	*Heterotis*	*rotundifolia*	(Sm.) Jacq.-Fél.			x								x		
913	Melastomataceae	*Melastomastrum*	*segregatum*	(Benth.)									x	x	x		
914	Melastomataceae	*Memecylon*	*sansibarensis*	Taub.											x		
915	Melastomataceae	*Tristemma*	*mauritianum*	J. F.Gmel.									x				
916	Melastomataceae	*Tristemma*	*schliebenii*	Markgr.											x		
917	Melastomataceae	*Warneckea*	*sansibarica*	(Taub.) Jacq.-F?l.					x	x							
918	Meliaceae	*Khaya*	*anthotheca*	(Welw.) C. DC.			x									x	VU
919	Meliaceae	*Pseudobersama*	*mossambicensis*	(Sim) Verdc.			x				x						
920	Meliaceae	*Trichilia*	*emetica*	Vahl			x					x	x		x		
921	Meliaceae	*Turraea*	*floribunda*	Hochst.								x					
922	Meliaceae	*Turraea*	*holstii*	G?rke							x	x					
923	Meliaceae	*Turraea*	*nilotica*	Kotschy & Peyr.		x						x					
924	Meliaceae	*Turraea*	*robusta*	Kotschy & Peyr.							x						
925	Meliaceae	*Xylocarpus*	*granatum*	J. K÷nig								x			x		LC
926	Meliaceae	*Xylocarpus*	*moluccensis*	(Lam.) M.J. Roem											x		

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927	Melianthaceae	*Bersama*	*abyssinica*	Fresen.	x	x	x				x	x				x	
928	Menispermaceae	*Albertisia*	*exelliana*	(Troupin) Forman			x										
929	Menispermaceae	*Cissampelos*	*pareira*	L.			x										
930	Menispermaceae	*Cocculus*	*hirsutus*	(L.) J. Presl					x	x							
931	Menispermaceae	*Dioscoreophyllum*	*volkensii*	Engl.			x						x				
932	Menispermaceae	*Tiliacora*	*funifera*	(Miers) Oliv.								x					
933	Menispermaceae	*Tinospora*	*caffra*	(Miers) Troupin			x										
934	Menispermaceae	*Tinospora*	*oblongifolia*	(Engl.) Troupin			x		x	x							
935	Menispermaceae	*Tinospora*	*sp.nov.*								x					x	
936	Menispermaceae	*Triclisia*	*sacleuxii*	(Pierre) Diels	x		x						x				
937	Menyathaceae	*Nymphoides*	*forbesiana*	(Griseb.) Kuntze											x		
938	Montiniaceae	*Grevea*	*eggelingii*	Milne-Redh.			x										
939	Moraceae	*Antiaris*	*toxicaria*	(Engl.) C.C. Berg							x		x				
940	Moraceae	*Artocarpus*	*altilis*	(Parkinson) Fosberg									x				
941	Moraceae	*Artocarpus*	*heterophyllus*	Lam.			x					x	x				
942	Moraceae	*Bosqueiopsis*	*gilletii*	De Wild. & T. Durand			x										
943	Moraceae	*Castilla*	*elastica*	Sess? ex Cerv.			x										
944	Moraceae	*Dorstenia*	*alta*	Engl.			x										
945	Moraceae	*Dorstenia*	*kameruniana*	Engl.			x										
946	Moraceae	*Dorstenia*	*tayloriana*	(Rendle) Hijman			x						x			x	
947	Moraceae	*Ficus*	*bussei*	Warb. ex Mildbr. & Burret		x	x										
948	Moraceae	*Ficus*	*cyathistipula*	Warb.								x					
949	Moraceae	*Ficus*	*sycomorus*	L.			x										
950	Moraceae	*Ficus*	*capensis*	Vahl					x	x	x	x	x				
951	Moraceae	*Ficus*	*exasperata*	Vahl			x						x				
952	Moraceae	*Ficus*	*lutea*	Vahl.								x	x		x		

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953	Moraceae	*Ficus*	*ingens*	(Miq.) Miq.				x	x	x					x		
954	Moraceae	*Ficus*	*mucoso*	Welw. ex Ficalho					x	x							
955	Moraceae	*Ficus*	*natalensis*	Hochst.				x				x	x		x		
956	Moraceae	*Ficus*	*nekbudu*	Warb									x				
957	Moraceae	*Ficus*	*scassellatii*	Pamp.				x									
958	Moraceae	*Ficus*	*sur*	Forssk.			x					x			x		
959	Moraceae	*Ficus*	*sycomorus*	L.			x	x				x					
960	Moraceae	*Ficus*	*thonningii*	Blume							x						
961	Moraceae	*Ficus*	*tremula*	Warb.											x		
962	Moraceae	*Ficus*	sp. near *F.Stuhlmannii*	Warb											x		
963	Moraceae	*Ficus*	*uluguruensis*	Mildbr.& Burret											x		
964	Moraceae	*Ficus*	*trichopoda*	Bak.											x		
965	Moraceae	*Maclura*	*africana*	(Bureau) Corner		x	x	x							x		
966	Moraceae	*Mesogyne*	*insignis*	Engl.			x		x	x							VU
967	Moraceae	*Milicia*	*excelsa*	(Welw.) C.C. Berg		x	x	x	x	x	x		x		x	x	LR/nt
968	Moraceae	*Morus*	*australis*	Poir.			x										
969	Moraceae	*Streblus*	*usambarensis*	(Engl.) C.C. Berg			x										
970	Moraceae	*Trilepisium*	*madagascariense*	Thouars ex DC.			x				x						
971	Moraceae	*Moringa*	*olifera*	Lam.											x		
972	Myrtaceae	*Eugenia*	*capensis*	Verdc.		x						x					
973	Myrtaceae	*Psidium*	*guajava*	L.											x		
974	Myrtaceae	*Syzygium*	*aromaticum*	(L.) Merr. & L.M. Perry								x			x		
975	Myrtaceae	*Syzygium*	*cordatum*	Hochst.								x	x	x	x		
976	Myrtaceae	*Syzygium*	*cumini*	(L.) Skeels					x	x		x			x		
977	Myrtaceae	*Syzygium*	*guineense*	(Willd.) DC.				x	x						x		
978	Plumbaginaceae	*Plumbago*	*ciliata*	Wilmot-Dear							x					x	

979	Plumbaginaceae	*Plumbago*	*zeylanica*	L.											x		
S/N	**Family**	**Genus**	**Species**	**Author(s)**	**Weme**	**Kichi**	**Kiwengoma/Matumbi Hills**	**Mchungu**	**Mbara**	**Ruawa**	**Rondo**	**Jozani**	**Ngezi**	**Mrora**	**Mafia**	**CF endemic**	**IUCN status**
980	Myricaceae	*Myrica*	sp.										x				
981	Nyctaginaceae	*Boerhavia*	*diffusa*	L.											x		
982	Ochnaceae	*Brackenridgea*	*zanguebarica*	Oliv.											x		
983	Ochnaceae	*Ochna*	*holtzii*	Gilg	x				x	x					x		
984	Ochnaceae	*Ochna*	*atropurpurea*	DC.								x					
985	Ochnaceae	*Ochna*	*inermis*	(Forssk.) Schweinf. ex Penz.													
986	Ochnaceae	*Ochna*	sp						x	x							
987	Ochnaceae	*Ochna*	*mossambicensis*	Klotzsch	x		x								x		
988	Ochnaceae	*Ochna*	sp.nov.												x		
989	Ochnaceae	*Ochna*	*ovata*	F. Hoffm.										x			
990	Ochnaceae	*Ochna*	*thomasiana*	Engl. & Gilg								x					
991	Ochnaceae	*Sauvagesia*	*erecta*	L.									x	x	x		
992	Olacaceae	*Olax*	*dissitiflora*	Oliv.										x	x		
993	Olacaceae	*Olax*	*obtusifolia*	De Wild.			x				x						
994	Olacaceae	*Olax*	*pentandra*	Sleumer	x	x	x		x	x							
995	Olacaceae	*Ximenia*	*americana*	L.					x	x							
996	Olacaceae	*Ximenia*	*caffra*	Sond.	x	x		x									
997	Oleaceae	*Jasminum*	*fluminense*	Vell.			x					x			x		
998	Oleaceae	*Jasminum*	*meyeri-johannis*	Engl.			x										
999	Oleaceae	*Jasminum*	*parvifolium*	Knobl.			x										
1000	Oleaceae	*Jasminum*	*streptopus*	E. Mey.			x										
1001	Oleaceae	*Schrebera*	*trichoclada*	Welw.	x		x				x						
1002	Oleaceae	*Olea*	*woodiana*	Knobl.								x					
1003	Oleaceae	*Olea*	*europeae*	L.								x					
1004	Onagraceae	*Ludwigia*	*abyssinica*	A. Rich.			x										
1005	Onagraceae	*Ludwigia*	*mauritiana*	Gmelin									x				
1006	Onagraceae	*Ludwigia*	*jussiaeoides*	Desr.			x										
1007	Onagraceae	*Ludwigia*	*leptocarpa*	(Nutt) Hara											x		

1008	Onagraceae	*Ludwigia*	*octovalvis*	(Jacq.) Raven											x		
S/N	**Family**	**Genus**	**Species**	**Author(s)**	**Weme**	**Kichi**	**Kiwengoma/Matumbi Hills**	**Mchungu**	**Mbara**	**Ruawa**	**Rondo**	**Jozani**	**Ngezi**	**Mrora**	**Mafia**	**CF endemic**	**IUCN status**
1009	Onagraceae	*Ludwigia*	*stolonifera*	(Guill. & Perr.) P.H. Raven			x		x	x					x		
1010	Opiliaceae	*Opilia*	*amentacea*	Roxb.			x										
1011	Opiliaceae	*Opilia*	*celtifolia*	Walp.			x								x		
1012	Orchidaceae	*Acampe*	sp										x				
1013	Orchidaceae	*Aerangis*	*kirkii*	(Rchb. f.) Schltr.									x			x	
1014	Orchidaceae	*Aerangis*	*hologlottis*	(Schltr. f.) Schltr.								x	x			x	
1015	Orchidaceae	*Ansellia*	*africana*	Lindl.			x										
1016	Orchidaceae	*Eulophia*	*fridericii*	(Rchb. f.) A.V. Hall			x										
1017	Orchidaceae	*Eulophia*	*caloptera*	(Rchb. f.) Summerh											x		
1018	Orchidaceae	*Eulophia*	*horsfallii*	(Batem.) Summerh											x		
1019	Orchidaceae	*Eulophia*	*petersii*	(Rchb. f.) Rchb. f.											x		
1020	Orchidaceae	*Microcoelia*	*exilis*	Lindl.			x		x	x		x					
1021	Orchidaceae	*Nerilia*	*umbrosa*	(Reichb. f.) Schltr			x					x					
1022	Orchidaceae	*Microcoelia*	*globulosa*	(Hochst. ex A. Rich.) L. Jonsson			x							x			
1023	Orchidaceae	*Microcoelia*	*megalorrhiza*	Summerh.			x			x							
1024	Orchidaceae	*Microcoelia*	*physophora*	(Rchb. f.) Summerh			x		x	x							
1025	Orchidaceae	*Polystachya*	*tessellata*	Lindl.			x										
1026	Orchidaceae	*Vanilla*	*roscheri*	Rchb.f.								x			x	x	
1027	Orchidaceae	*Vanilla*	*zanzibarica*	Rolfe													
1028	Oxalidaceae	*Averrhoa*	*bilimbi*	L.								x					
1029	Oxalidaceae	*Biophytum*	*petersianum*	Klotzsch											x		

1030	Pandanaceae	*Pandanus*	*rabaiensis*	Rendle											x	x	
S/N	**Family**	**Genus**	**Species**	**Author(s)**	**Weme**	**Kichi**	**Kiwengoma/Matumbi Hills**	**Mchungu**	**Mbara**	**Ruawa**	**Rondo**	**Jozani**	**Ngezi**	**Mrora**	**Mafia**	**CF endemic**	**IUCN status**
1031	Pandanaceae	*Pandanus*	*kirkii*	Rendle									x		x	x	
1032	Palmae	*Borasus*	*aethiopicum*	Mart	x			x	x	x							
1033	Palmae	*Hyphaene*	*compressa*	H. Wandl.	x			x	x	x					x		
1034	Palmae	*Hyphaene*	*coriacea*	Gaertn.											x		
1035	Palmae	*Phoenix*	*reclinata*	Jacq.					x	x			x		x		
1036	Palmae	*Elaeis*	*guineensis*	Jacq.									x				
1037	Palmae	*Chrysalidocarpus*	*pembanus*	Moore									x				
1038	Palmae	*Raphia*	*farinifera*	(Gaertn.) Hylander											x		
1039	Passifloraceae	*Adenia*	*globosa*	Engl.			x									x	
1040	Passifloraceae	*Adenia*	*gummifera*	(Harv.) Harms					x	x			x				
1041	Passifloraceae	*Adenia*	*kirkii*	(Mast.) Engl.								x			x	x	
1042	Passifloraceae	*Adenia*	*lindiensis*	Harms			x										
1043	Passifloraceae	*Adenia*	*rumicifolia*	Engl.			x										
1044	Passifloraceae	*Adenia*	*schliebenii*	Harms			x										
1045	Passifloraceae	*Adenia*	*rumicifolia*	W.J. de Wilde			x						x				
1046	Passifloraceae	*Basananthe*	*lanceolata*	(Engl.) W.J. de Wilde		x	x								x	x	
1047	Passifloraceae	*Paropsia*	*braunii*	Gilg			x										
1048	Passifloraceae	*Passiflora*	*foetida*	L.			x										
1049	Passifloraceae	*Schlechterina*	*mitostemmatoides*	Harms	x	x	x		x	x				x			
1050	Pedaliaceae	*Dicerocaryum*	*zanguebarium*	(Lour.) Merr.											x		
1051	Pedaliaceae	*Ceratotheca*	*sesamoides*	Endl.											x		
1052	Pedaliaceae	*Pedalium*	*murex*	L.											x		
1053	Pedaliaceae	*Sesamum*	*indicum*	L.											x		
1054	Piperaceae	*Piper*	*umbellatum*	L.								x					
1055	Poaceae	*Aristida*	*adoensis*	Hochst.					x	x					x		
1056	Poaceae	*Aristida*	*barbicolis*	Trin. & Rupr.					x	x							
1057	Poaceae	*Aristida*	*mutabilis*	Trin. & Rupr.											x		
1058	Poaceae	*Alloteropsis*	*paniculata*	(Benth.) Stapf											x		

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1059	Poaceae	*Andropogon*	*schirensis*	Hochst. ex A. Rich.											x		
1060	Poaceae	*Bothriochloa*	*bladhii*	(Retz.) S.T. Blake											x		
1061	Poaceae	*Brachiaria*	*humidicola*	(Rendle) Schweick.											x		
1062	Poaceae	*Brachiaria*	*umbellata*	(Trin.) W.D.Clayton											x		
1063	Poaceae	*Cenchrus*	*biflorus*	Roxb.											x		
1064	Poaceae	*Cenchrus*	*mitis*	Anderss											x		
1065	Poaceae	*Cenchrus*	*pycnothrix*	Trin.											x		
1066	Poaceae	*Chloris*	*virgata*	Sw.					x	x							
1067	Poaceae	*Chloris*	*roxyburghiana*	Schult.					x	x							
1068	Poaceae	*Cymbopogon*	*caesius*	(Nees ex Hook. & Arn.) Stapf			x										
1069	Poaceae	*Cynodon*	*dactylon*	(L.) Pers.											x		
1070	Poaceae	*Dactyloctenium*	*aegyptium*	(L.) Willd.								x			x		
1071	Poaceae	*Dactyloctenium*	*ctenioides*	(Steud.) Bosser											x		
1072	Poaceae	*Dactyloctenium*	*germinatum*	Harck.											x		
1073	Poaceae	*Digitaria*	*argyrotricha*	(Andersson ex Peters) Chiov.											x		
1074	Poaceae	*Digitaria*	*comifera*	Pilg.			x										
1075	Poaceae	*Digitaria*	*ciliaris*	Retz.) Koel.											x		
1076	Poaceae	*Digitaria*	*gymnostachys*	Pilg.			x										
1077	Poaceae	*Digitaria*	*milanjiana*	(Rendle) Stapf	x										x		
1078	Poaceae	*Digitaria*	*deblis*	(Desf) Willd.											x		
1079	Poaceae	*Digitaria*	*longiflora*	Retz.) Pers.											x		
1080	Poaceae	*Diheteropogon*	*amplectens*	(Nees) Clayton													
1081	Poaceae	*Echinochloa*	*haploclada*	(Stapf) Stapf											x		
1082	Poaceae	*Echinochloa*	*colona*	(L.) Link					x	x							
1083	Poaceae	*Eleusine*	*indica*	(L.) Gaertn.											x		

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1084	Poaceae	*Enteropogon*	*sechellensis*	(Bak.) Th.Dur. & Schiz											x		
1085	Poaceae	*Eragrostis*	*ciliaris*	Byrne					x	x					x		
1086	Poaceae	*Eragrostis*	*aspera*	(jacq.) Nees					x	x							
1087	Poaceae	*Eragrostis*	*superba*	Peyr.			x										
1088	Poaceae	*Eragrostis*	*aethiopica*	Chiov.											x		
1089	Poaceae	*Eragrostis*	*chapelieri*	(Kunth.) Nees											x		
1090	Poaceae	*Eragrostis*	*gangetica*	(Roxb.)Steud.											x		
1091	Poaceae	*Eragrostis*	*inamoena*	K.Schum.											x		
1092	Poaceae	*Eragrostis*	*perbella*	K.Schum.											x		
1093	Poaceae	*Eragrostis*	*tennella*	(L.) Roem. & Schult.											x		
1094	Poaceae	*Eragrostis*	*muerensis*	Pilg.							x					x	
1095	Poaceae	*Eriochloa*	*fatmensis*	(Hochst. & Steud.											x		
1096	Poaceae	*Eriochloa*	*parvispiculata*	C.E. Hubb.											x		
1097	Poaceae	*Euclasta*	*condylotricha*	(Stud.) Stapf								x					
1098	Poaceae	*Heteropogon*	*contortus*	(L.) P. Beauv.					x	x					x		
1099	Poaceae	*Hyparrhenia*	*rufa*	(Nees) Stapf								x					
1100	Poaceae	*Hyparrhenia*	*filipendula*	(Hochst.) Stapf		x			x	x					x		
1101	Poaceae	*Hyparrhenia*	*rufa*	(Nees) Stapf											x		
1102	Poaceae	*Imperata*	*cylindrica*	(L.) Raeusch.			x		x	x							
1103	Poaceae	*Leptocloa*	*chinensis*	(I.) Nees		x											
1104	Poaceae	*Leptocloa*	*squarrosa*	Pilger											x		
1105	Poaceae	*Lepturus*	*repens*	(G. Forster) R.Br.											x		
1106	Poaceae	*Leersia*	*hexandra*	Sw.											x		
1107	Poaceae	*Loudetia*	*simplex*	(Nees) C.E. Hubb.			x		x	x		x			x		
1108	Poaceae	*Megastachya*	*mucronata*	(Poir.) P. Beauv.					x	x					x		
1109	Poaceae	*Melinis*	*repens*	(Willd.) Zizka			x		x	x							

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1110	Poaceae	*Oplismenus*	*compositus*	(L.) Beav.			x		x	x		x			x		
1111	Poaceae	*Oplismenus*	sp.										x				
1112	Poaceae	*Olyra*	*latifolia*	L.			x						x				
1113	Poaceae	*Oryza*	*eichingeri*	Peter			x										
1114	Poaceae	*Panicum*	*brevifolium*	L.											x		
1115	Poaceae	*Panicum*	*brazzavillense*	Franch.											x		
1116	Poaceae	*Panicum*	*parvifolium*	L.									x		x		
1117	Poaceae	*Panicum*	*filifolium*	W.D. Clayton											x		
1118	Poaceae	*Panicum*	*chionachne*	Mez			x	x									
1119	Poaceae	*Panicum*	*comorense*	Mez	x	x											
1120	Poaceae	*Panicum*	*genuflexum*	Stapf											x		
1121	Poaceae	*Panicum*	*heterostachyum*	Hack.											x		
1122	Poaceae	*Panicum*	*infestum*	Peters					x	x							
1123	Poaceae	*Panicum*	*laticomum*	Nees	x	x	x						x				
1124	Poaceae	*Panicum*	*coloratum*	L.			x		x	x							
1125	Poaceae	*Panicum*	*maximum*	Jacq.	x	x	x	x							x		
1126	Poaceae	*Panicum*	*repentellum*	Napper								x					
1127	Poaceae	*Panicum*	*repens*	L.											x		
1128	Poaceae	*Panicum*	*trichocladum*	Hack. ex K. Schum.	x	x	x		x	x		x			x		
1129	Poaceae	*Panicum*	*subflabellatum*	Stapf									x		x		
1130	Poaceae	*Paspalidium*	*geminatum*	(Forssk.) Stapf											x		
1131	Poaceae	*Paspalum*	*geminatum*	(Forssk.)											x		
1132	Poaceae	*Paspalum*	*scrobiculatum*	L.								x			x		
1133	Poaceae	*Paspalum*	*vaginatum*	Sw								x	x		x		
1134	Poaceae	*Pennisetum*	*polystachion*	(Stapf & C.E. Hubb.) Brunken								x			x		
1135	Poaceae	*Pennisetum*	*purpureum*	Schumach.			x										
1136	Poaceae	*Perrotis*	*hildebrandtii*	Mez											x		
1137	Poaceae	*Perrotis*	*patens*	Gand											x		

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1138	Poaceae	*Pseudoechinolaena*	*polystachya*	(Kunth.) Stapf									x				
1139	Poaceae	*Rhytachne*	*rottboellioides*	Desv.											x		
1140	Poaceae	*Rottboellia*	*cochinchinensis*	(lour.) Clayton					x	x					x		
1141	Poaceae	*Sacciolepis*	*africana*	(L.) Chase											x		
1142	Poaceae	*Sacciolepis*	*curvata*	(L.) Chase											x		
1143	Poaceae	*Sacciolepis*	*huillensis*	(Rendle) Stspf											x		
1144	Poaceae	*Schizachyrium*	*sanguineum*	(Retz.) Alston											x		
1145	Poaceae	*Schizachyrium*	*rupestre*	(Kunth.) Stapf			x						x		x		
1146	Poaceae	*Setaria*	*megaphylla*	(Steud.) T. Durand & Schinz			x						x				
1147	Poaceae	*Setaria*	*sphacelata*	(Steud.) T. Durand & Schinz					x	x					x		
1148	Poaceae	*Setaria*	*verticillata*	(L.) P. Beauv.					x	x							
1149	Poaceae	*Setaria*	*dimidiatum*	(L.) Brongn.											x		
1150	Poaceae	*Sorghum*	*arundinaceum*	(Desv.) Stapf					x	x		x					
1151	Poaceae	*Sporobolus*	*pyramidalis*	P. Beauv.	x										x		
1152	Poaceae	*Sporobolus*	*virginicus*	(L.)											x		
1153	Poaceae	*Urochloa*	*mosambicensis*	(Hack.) Dandy													
1154	Poaceae	*Vetiveria*	*nigritana*	(Benth.) Stapf	x								x	x	x		
1155	Polygalaceae	*Carpolobia*	*goetzei*	Gürke			x								x		
1156	Polygalaceae	*Polygala*	*abyssinica*	R. Br. ex Fresen.											x		
1157	Polygalaceae	*Polygala*	*africana*	Chod.											x		
1158	Polygalaceae	*Polygala*	*gagnebiniana*	Chod.											x		
1159	Polygalaceae	*Polygala*	*sansibarensis*	Guerke											x		
1160	Polygalaceae	*Polygala*	*sphenoptera*	Fresen.											x		
1161	Polygalaceae	*Securidaca*	*longipedunculata*	Fresen.			x										
1162	Polygonaceae	*Oxygonum*	*sinuatum*	(Hochst. & Steud. ex Meisn.) Dammer								x					

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1163	Polygonaceae	*Polygonum*	*senegalense*	Meisn.											x		
1164	Polygonaceae	*Polygonum*	*pulchrum*	Blume			x								x		
1165	Portulacaceae	*Portulaca*	*quadrifida*	L.											x		
1166	Primulaceae	*Lysimachia*	*ruhmeriana*	Vatke								x					
1167	Proteaceae:	*Grevillea*	*robusta*	A. Cunn. ex R.Br							x						
1168	Pteridophyta	*Acrostichum*	*aureum*	L.			x						x	x			
1169	Pteridophyta	*Asplenium*	*aethiopicum*	(Burm. f.) Bech.			x										
1170	Pteridophyta	*Asplenium*	*nidus*	L.								x	x				
1171	Pteridophyta	*Asplenium*	*simii*	A.F. Braithw. & Schelpe			x										
1172	Pteridophyta	*Cyclosorus*	sp.										x				
1173	Pteridophyta	*Dicranopteris*	*linearis*	(Burm. f.) Underw..									x				
1174	Pteridophyta	*Microsorum*	*punctatum*	(L.) Copel.			x										
1175	Pteridophyta	*Nephrolepis*	*biserrata*	(Sw.) Schott								x	x				
1176	Pteridophyta	*Nephrolepis*	*biserrata*	(Sw.) Schott			x										
1177	Pteridophyta	*Pellaea*	*doniana*	Hook.			x										
1178	Pteridophyta	*Phymatosorus*	*scolopendria*	(Burm. f.) Pic. Serm.								x	x	x			
1179	Pteridophyta	*Psilotum*	*nudum*	(L.) Beav.									x				
1180	Pteridophyta	*Pteridium*	*aquilinum*	(L.) Kuhn			x					x	x				
1181	Pteridophyta	*Pteris*	*atrovirens*	Willd.			x										
1182	Pteridophyta	*Pteris*	*catoptera*	Kunze			x										
1183	Pteridophyta	*Selaginella*	*eublepharis*	A. Braun			x										
1184	Pteridophyta	*Stenochlaena*	*tenuifolia*	(Desv.) Moore			x						x				
1185	Pteridophyta	*Thelypteris*	*totta*	(Thunb.) Schelpe									x				
1186	Pteridophyta	*Vittaria*	*elongata*	Sw.									x				
1187	Ranunculaceae	*Clematis*	*simensis*	Fresen.								x		x			
1188	Ranunculaceae	*Clematis*	*hirsuta*	Guill & Perr								x					
1189	Ranunculaceae	*Clematis*	*viridiflora*	Bertol								x					

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1190	Rhamnaceae	*Colubrina*	*asiatica*	(L.) Brongn.											x		
1191	Rhamnaceae	*Lasiodiscus*	*pervillei*	(Verdc.) Figueiredo										x			
1192	Rhamnaceae	*Maesopsis*	*eminii*	Engl.									x				
1193	Rhamnaceae	*Ziziphus*	*mucronata*	Willd.			x		x	x					x		
1194	Rhamnaceae	*Ziziphus*	*pubescens*	Oliv.			x								x		
1195	Rhizophoraceae	*Bruguiera*	*gymnorrhiza*	(L.) Lam.									x		x		
1196	Rhizophoraceae	*Ceriops*	*tagal*	(Perr.) C.B. Rob.									x	x	x		
1197	Rhizophoraceae	*Rhizophora*	*mucronata*	Lam.			x						x		x		
1198	Rhizophoraceae	*Cassipourea*	*gummiflua*	Tul.									x				
1199	Rubiaceae	*Afrocanthium*	*pseudoverticillatum*	(S. Moore) Lantz			x										
1200	Rubiaceae	*Porterandia*	*penduliflora*	(K.Schum.) Keay							x						
1201	Rubiaceae	*Faurena*	*saligna*	Harv.							x						
1202	Rubiaceae	*Agathisanthemum*	*bojeri*	Klotzsch			x					x	x		x		
1203	Rubiaceae	*Breonadia*	*salicina*	(Vahl) Hepper & J.R.I. Wood								x					
1204	Rubiaceae	*Burttdavya*	*nyasica*	Hoyle			x					x					
1205	Rubiaceae	*Canthium*	*impressinervium*	Bridson							x	x				x	VU
1206	Rubiaceae	*Canthium*	*mombazense*	Baill.								x					
1207	Rubiaceae	*Canthium*	*sp.*												x		
1208	Rubiaceae	*Canthium*	*bibracteata*	Baill.									x				
1209	Rubiaceae	*Canthium*	*oligocarpum*	(Bullock) Bridson												x	
1210	Rubiaceae	*Canthium*	*guenzii*	sond.									x				
1211	Rubiaceae	*Canthium*	*huillense*	Hiern									x				
1212	Rubiaceae	*Canthium*	*zanzibaricum*	Klotzsch									x				
1213	Rubiaceae	*Canthium*	*parasiebenlistii*	Bridson							x					x	
1214	Rubiaceae	*Canthium*	*rondoense*	Bridson							x					x	
1215	Rubiaceae	*Catunaregam*	*nilotica*	(Stapf) Tirveng.			x										

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1216	Rubiaceae	*Catunaregam*	*spinosa*	(S. Moore) Verdc.	x	x	x		x	x							
1217	Rubiaceae	*Chassalia*	*discolor*	K.Schum.								x					
1218	Rubiaceae	*Chassalia*	sp					x									
1219	Rubiaceae	*Chassalia*	*parvifolia*	K. Schum.								x					
1220	Rubiaceae	*Chassalia*	*umbraticola*	Vatke			x						x		x	x	
1221	Rubiaceae	*Chassalia*	*zimmermannii*	Verdc.			x									x	
1222	Rubiaceae	*Chazaliella*	*abrupta*	(Hiern) E.M.A. Petit & Verdc.	x	x	x									x	
1223	Rubiaceae	*Cladoceras*	*subcapitatum*	(K. Schum. & K. Krause) Bremek.											x	x	
1224	Rubiaceae	*Coffea*	*pseudozanguebariae*	Bridson					x	x		x				x	VU
1225	Rubiaceae	*Coffea*	sp.F.	(Kew Bull. 36, 840)											x	x	
1226	Rubiaceae	*Coffea*	*schliebenii*	Bridson							x					x	
1227	Rubiaceae	*Coptosperma*	*littorale*	(Hiern) Degreef										x			
1228	Rubiaceae	*Cremaspora*	*triflora*	(K. Schum.) Verdc.			x					x	x		x		
1229	Rubiaceae	*Craterispermum*	*schweinfurthii*	Hiern									x				
1230	Rubiaceae	*Crossopteryx*	*febrifuga*	(Afzel. ex G. Don) Benth.	x	x		x									
1231	Rubiaceae	*Cuviera*	*schliebenii*	Verdc.							x					x	EN
1232	Rubiaceae	*Cuviera*	*semseii*	Verdc.			x				x						
1233	Rubiaceae	*Diodia*	*sarmentosa*	Sw.											x		
1234	Rubiaceae	*Didymosalpinx*	*norae*	(Swynn.) Keay							x						
1235	Rubiaceae	*Gardenia*	*ternifolia*	(Welw.) Verdc.			x	x	x	x							
1236	Rubiaceae	*Gardenia*	*transvenulosa*	Verdc.			x	x	x	x							VU
1237	Rubiaceae	*Geophila*	*obvallata*	(K. Schum.) Verdc.			x										
1238	Rubiaceae	*Geophila*	*repens*	(L.) I.M. Johnst.									x				
1239	Rubiaceae	*Guettarda*	*speciosa*	L.								x	x		x		

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1240	Rubiaceae	*Heinsia*	*bussei*	Verdc.							x					x	
1241	Rubiaceae	*Heinsia*	*crinita*	(K. Schum. & K. Krause) Verdc.			x										
1242	Rubiaceae	*Hymenodictyon*	*parvifolium*	Oliv.			x										
1243	Rubiaceae	*Ixora*	*finlaysoniana*	Wall. ex G. Don			x										
1244	Rubiaceae	*Keetia*	*gueinzii*	(Sond.) Bridson			x										
1245	Rubiaceae	*Keetia*	*zanzibarica*	(Klotzsch) Bridson			x		x	x					x		
1246	Rubiaceae	*Kohautia*	*lasiocarpa*	Klotzsch								x					
1247	Rubiaceae	*Kohautia*	*virgata*	(Willd.) Bremek.											x		
1248	Rubiaceae	*Kraussia*	*kirkii*	(Hook. f.) Bullock			x						x	x	x	x	
1249	Rubiaceae	*Lamprothamnus*	*zanguebaricus*	Hiern	x				x	x					x		
1250	Rubiaceae	*Lagynias*	*pallidiflora*	Bullock			x						x			x	
1251	Rubiaceae	*Leptactina*	*delagoensis*	(K. Schum. & Krause) Verdc.			x									x	
1252	Rubiaceae	*Leptactina*	sp.										x				
1253	Rubiaceae	*Leptactina*	*delagoensis*	K.Schum.									x				
1254	Rubiaceae	*Leptactina*	*hexamera*	K. Schum.			x										
1255	Rubiaceae	*Leptactina*	*oxyloba*	K. Schum.			x				x					x	
1256	Rubiaceae	*Leptactina*	*papyrophloea*	Verdc.					x	x	x					x	EN
1257	Rubiaceae	*Leptactina*	*platyphylla*	(Hiern) Wernham	x	x	x					x					
1258	Rubiaceae	*Meyna*	*tetraphylla*	(Robyns) Verdc.											x		
1259	Rubiaceae	*Mussaenda*	*microdonta*	Wernham			x									x	
1260	Rubiaceae	*Mussaenda*	*monticola*	Bridson			x									x	
1261	Rubiaceae	*Oldenlandia*	*affinis*	(Vatke) Verdc.											x		
1262	Rubiaceae	*Oldenlandia*	*aegialode*	Bremek.											x	x	
1263	Rubiaceae	*Oldenlandia*	*corymbosa*	L.					x	x		x			x	x	
1264	Rubiaceae	*Oldenlandia*	*goreensis*	Bremek.											x	x	
1265	Rubiaceae	*Oldenlandia*	*herbaceae*	(L.) Roxb.											x		

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1266	Rubiaceae	*Oldenlandia*	*lancifolia*	(Schumach.).DC.	x												
1267	Rubiaceae	*Oldenlandia*	*johnstonii*	(Oliv.) K. Schum. ex Engl.			x									x	
1268	Rubiaceae	*Oxyanthus*	*haerdii*	Bridson			x										
1269	Rubiaceae	*Oxyanthus*	*pyriformis*	Bridson		x	x									x	
1270	Rubiaceae	*Oxyanthus*	*speciosus*	DC.			x		x	x							
1271	Rubiaceae	*Oxyanthus*	*zanguebaricus*	(Hiern) Bridson		x	x										
1272	Rubiaceae	*Paederia*	*bojeriana*	(Hiern) Verdc.			x										
1273	Rubiaceae	*Pavetta*	*crebrifolia*	Hiern								x			x		
1274	Rubiaceae	*Pavetta*	*diversipunctata*	Bridson			x										
1275	Rubiaceae	*Pavetta*	*gerstneri*	Bremek.											x		
1276	Rubiaceae	*Pavetta*	*lindiana*	Bremek.			x				x					x	
1277	Rubiaceae	*Pavetta*	*refractifolia*	K. Schum.	x		x									x	
1278	Rubiaceae	*Pavetta*	sp.				x						x				
1279	Rubiaceae	*Pavetta*	*stenosepala*	K.Schum.			x							x		x	
1280	Rubiaceae	*Pavetta*	sp.nov.	Bidgood							x					x	
1281	Rubiaceae	*Pentas*	*bussei*	K. Krause		x	x				x				x	x	
1282	Rubiaceae	*Pentas*	*micrantha*	(N.E. Br.) Verdc.			x						x				
1283	Rubiaceae	*Pentas*	*parvifolia*	Hiern								x				x	
1284	Rubiaceae	*Pentas*	*zanzibarica*	(Klotzsch) Vatke			x										
1285	Rubiaceae	*Pentodon*	*pentandrus*	(Schumach. & Thonn.) Vatke			x							x	x		
1286	Rubiaceae	*Polysphaeria*	*multiflora*	Hiern			x	x	x	x		x			x		
1287	Rubiaceae	*Polysphaeria*	*parvifolia*	Hiern								x	x		x		
1288	Rubiaceae	*Polysphaeria*	sp	Hiern				x									
1289	Rubiaceae	*Psychotria*	*bibracteata*	(Baker) Cavaco		x											
1290	Rubiaceae	*Psychotria*	*amboniana*	K.Schum.									x				
1291	Rubiaceae	*Psychotria*	*capensis*	(Eckl.) Vatke			x							x			
1292	Rubiaceae	*Psychotria*	*cyathicalyx*	E.M.A. Petit			x									x	VU
1293	Rubiaceae	*Psychotria*	*faucicola*	K. Schum.			x									x	

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1294	Rubiaceae	*Psychotria*	*goetzei*	(K. Schum) Petit			x					x	x			x	
1295	Rubiaceae	*Psychotria*	*holtzii*	(K. Schum.) E.M.A. Petit			x					x	x		x	x	
1296	Rubiaceae	*Psychotria*	*lauracea*	(K. Schum.) E.M.A. Petit			x		x	x			x				
1297	Rubiaceae	*Psychotria*	*punctata*	Vatke		x			x	x			x		x	x	
1298	Rubiaceae	*Psychotria*	*pumila*	Hiern											x	x	
1299	Rubiaceae	*Psychotria*	sp. D of FTEA								x					x	
1300	Rubiaceae	*Psychotria*	sp. nov.								x					x	
1301	Rubiaceae	*Psychotria*	*schliebenii*	Petit									x			x	
1302	Rubiaceae	*Psychotria*	*tanganyicensis*	Verdc.									x			x	
1303	Rubiaceae	*Psydrax*	*kaessneri*	(S. Moore) Bridson									x				
1304	Rubiaceae	*Psydrax*	*recurvifolia*	(Bullock.) Bridson									x				
1305	Rubiaceae	*Psydrax*	*kibuwae*	Bridson			x									x	
1306	Rubiaceae	*Pyrostria*	*bibracteata*	(Baker) Cavaco			x					x					
1307	Rubiaceae	*Rothmannia*	*macrosiphon*	(Engl.) Bridson			x										VU
1308	Rubiaceae	*Rothmannia*	*manganjae*	(Hiern) Keay			x										
1309	Rubiaceae	*Rothmannia*	*ravae*	(Chiov.) Bridson	x	x	x										
1310	Rubiaceae	*Rytigynia*	*binata*	(K. Schum.) Robyns		x	x		x	x						x	VU
1311	Rubiaceae	*Rytigynia*	*decussata*	(K. Schum.) Robyns			x		x	x							
1312	Rubiaceae	*Rytigynia*	*longipedicellata*	Verdc.			x				x					x	EN
1313	Rubiaceae	*Rytigynia*	*pergracilis*	Verdc.		x	x				x					x	
1314	Rubiaceae	*Spermacoce*	*laevis*	(Lam.) Griseb.								x					
1315	Rubiaceae	*Spermacoce*	*sinensis*	(Klotzsch) Hiern		x											
1316	Rubiaceae	*Spermacoce*	*remota*	Lam.			x										
1317	Rubiaceae	*Tapiphyllum*	*burnettii*	Tennant			x										
1318	Rubiaceae	*Tarenna*	*drummondii*	Bridson		x										x	VU
1319	Rubiaceae	*Tarenna*	*nigrescens*	(Hook. f.) Hiern											x		

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1320	Rubiaceae	*Tarenna*	*littoralis*	(Hiern) Bradson											x		
1321	Rubiaceae	*Tarenna*	sp. A of FTEA								x					x	
1322	Rubiaceae	*Tarenna*	*pavettoides*	(K. Schum.) Bridson								x	x				
1323	Rubiaceae	*Tarenna*	*supra-axillaris*	(Hamsley) Bremek.			x	x							x		
1324	Rubiaceae	*Tricalysia*	*ovalifolia*	Hiern		x									x	x	
1325	Rubiaceae	*Tricalysia*	*pallens*	Hiern			x								x		
1326	Rubiaceae	*Tricalysia*	*ruandensis*	Hiern							x						
1327	Rubiaceae	*Tarenna*	*supra-axillaris*	(Hemsl.) Bremek.				x									
1328	Rubiaceae	*Triainolepis*	*africana*	Hook.f.								x			x		
1329	Rubiaceae	*Uncaria*	*africana*	G. Don									x				
1330	Rubiaceae	*Vangueria*	*infausta*	Burch.		x	x		x	x					x		
1331	Rubiaceae	*Vangueria*	*madagascariensis*	J.F. Gmel.			x	x									
1332	Rubiaceae	*Vangueria*	*randii*	Verdc.	x												
1333	Rutaceae	*Clausena*	*anisata*	(Willd.) Hook. f. ex Benth.	x		x		x	x	x	x					
1334	Rutaceae	*Teclea*	*trichocarpa*	(Engl.) Engl.											x		
1335	Rutaceae	*Toddalia*	*asiatica*	(L.) Lam.			x										
1336	Rutaceae	*Vepris*	*amaniensis*	(Engl.) Mziray			x										
1337	Rutaceae	*Vepris*	*eugeniifolia*	(Engl.) I. Verd.								x					
1338	Rutaceae	*Vepris*	*glomerata*	Kokwaro					x	x							
1339	Rutaceae	*Vepris*	*lanceolata*	(Lam.) G. Don					x	x					x		
1340	Rutaceae	*Vepris*	*morogorensis*	(Kokwaro) Mziray			x										
1341	Rutaceae	*Vepris*	*nobilis*	(Delile) Mziray					x	x							
1342	Rutaceae	*Vepris*	*sansibarensis*	(Engl.) Mziray										x			VU
1343	Rutaceae	*Vepris*	*trichocarpa*	(Engl.) Mziray					x	x							
1344	Rutaceae	*Zanthoxylum*	*chalybeum*	Engl.		x			x	x							
1345	Rutaceae	*Zanthoxylum*	*deremense*	(Engl.) Kokwaro							x						VU

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1346	Rutaceae	*Zanthoxylum*	*holtzianum*	(Engl.) P.G. Waterman	x	x										x	VU
1347	Rutaceae	*Zanthoxylum*	*lindense*	(Engler) Kokwaro			x								x	x	VU
1348	Rutaceae	*Zanthoxylum*	*lepeurii*	(Engler) Kokwaro							x						
1349	Salvadoraceae	*Azima*	*tetracantha*	Lam.											x		
1350	Salvadoraceae	*Dobera*	*loranthifolia*	(Warb.) Warb. ex Harms	x				x	x							
1351	Salvadoraceae	*Salvadora*	*persica*	L.					x	x							
1352	Sterculiaceae	*Cola*	*microcarpa*	Brenan			x										
1353	Santalaceae	*Thesium*	*mukense*	A.W. Hill			x										
1354	Sapindaceae	*Allophylus*	*abyssinica*	(Hochst.) Radlk.	x												
1355	Sapindaceae	*Allophylus*	*africanus*	(Gilg) Verdc.			x					x					
1356	Sapindaceae	*Allophylus*	*alnifolius*	(Bak.) Radlk.											x		
1357	Sapindaceae	*Allophylus*	*pervillei*	Blume								x			x		
1358	Sapindaceae	*Allophylus*	*griseo-tomentosum*	Gilg.			x						x				
1359	Sapindaceae	*Aporrhiza*	*paniculata*	Radlk.			x	x				x					
1360	Sapindaceae	*Blighia*	*unijugata*	Baker	x						x	x	x	x			
1361	Sapindaceae	*Blighia*	*vestitus*	F.G. Davies									x				
1362	Sapindaceae	*Cardiospermum*	*halicacabum*	L.											x		
1363	Sapindaceae	*Deinbollia*	*borbonica*	Radlk.	x		x	x	x	x		x	x		x		
1364	Sapindaceae	*Dodonaea*	*viscosa*	(L. f.) Benth.					x	x		x			x		
1365	Sapindaceae	*Dodonaea*	*angustifolia*	(L. f.) Benth.								x					
1366	Sapindaceae	*Dodonaea*	*viscosa*	(L. f.) Benth.								x					
1367	Sapindaceae	*Glenniea*	*africana*	(Radlk.) Leenhl											x		
1368	Sapindaceae	*Haplocoelum*	*trigonocarpum*	Radlk.					x	x					x		LR/nt
1369	Sapindaceae	*Haplocoelum*	*inoploeum*	Radlk.	x		x		x	x			x				
1370	Sapindaceae	*Lecaniodiscus*	*fraxinifolius*	(Chiov.) Friis								x		x	x		
1371	Sapindaceae	*Lepisanthes*	*senegalensis*	(Juss. ex Poir.) Leenh.			x	x						x	x		

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1372	Sapindaceae	*Macphersonia*	*gracilis*	(O. Hoffm.) Capuron								x		x			
1373	Sapindaceae	*Macphersonia*	*hildebrandtii*	O. Hoffm											x		
1374	Sapindaceae	*Majidea*	*zanguebarica*	Oliv.									x				
1375	Sapindaceae	*Pancovia*	*golungensis*	(Hiern) Exell & Mendonça											x		
1376	Sapindaceae	*Pancovia*	*holtzii*	Gilg ex Radlk.			x										
1377	Sapindaceae	*Paullinia*	*pinnata*	L.			x		x	x		x	x		x		
1378	Sapindaceae	*Zanha*	*africana*	(Radlk.) Exell			x		x	x							
1379	Sapotaceae	*Chrysophyllum*	*lanceolatum*	(Bl.) DC.			x						x				
1380	Sapotaceae	*Englerophytum*	*natalense*	(Sond.) T.D. Penn.								x					
1381	Sapotaceae	*Bequaetiodendron*	*natalense*	(Sond.) Heine & H. Hemsl.			x		x	x			x				
1382	Sapotaceae	*Inhambanella*	*henriquesii*	(Engl. & Warb.) Dubard			x										
1383	Sapotaceae	*Manilkara*	sp.	(Sond.) J.H. Hemsl.			x	x									
1384	Sapotaceae	*Manilkara*	*discolor*	(Sond.) J.H. Hemsl.							x				x		
1385	Sapotaceae	*Manilkara*	*mochisia*	(Baker) Dubard			x										
1386	Sapotaceae	*Manilkara*	*sansibarensis*	(Engl.) Dubard								x	x		x		
1387	Sapotaceae	*Manilkara*	*sulcata*	(Engl.) Dubard							x			x	x	x	
1388	Sapotaceae	*Mimusops*	*acutifolia*	Mildbr.							x					x	VU
1389	Sapotaceae	*Mimusops*	sp										x				
1390	Sapotaceae	*Mimusops*	*fruticosa*	A.DC.								x			x		
1391	Sapotaceae	*Mimusops*	*obtusifolia*	mildbr. & G.M. Schulze					x	x							
1392	Sapotaceae	*Pachystela*	*brevipes*	(Baker) Engl.			x					x	x		x		
1393	Sapotaceae	*Pachystela*	*msolo*	(Engl.) Engl.									x				
1394	Sapotaceae	*Malacantha*	*alnifolia*	(Baker) Pierre			x										

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1395	Sapotaceae	*Sideroxylon*	*inerme*	(Baker) J.H. Hemsl.				x						x	x		
1396	Scrophulariaceae	*Bacopa*	*crenata*	(P. Beauv.) Hepper									x		x		
1397	Scrophulariaceae	*Bacopa*	*floribunda*	R.Br.Wettst											x		
1398	Scrophulariaceae	*Buchnera*	*hispida*	Buch.-Ham. ex D. Don								x					
1399	Scrophulariaceae	*Buchnera*	*leptostachya*	Benth.											x		
1400	Scrophulariaceae	*Scoparia*	*dulcis*	L.					x	x					x		
1401	Scrophulariaceae	*Lindernia*	*brevipes*	Skan					x	x							
1402	Scrophulariaceae	*Lindernia*	sp.												x		
1403	Scrophulariaceae	*Limnophila*	*indica*	(L.) Druce									x				
1404	Scrophulariaceae	*Micrargeria*	*filiformis*	(Schumach.) Hutch. & Dalz.											x		
1405	Scrophulariaceae	*Striga*	*asiatica*	(L.) Kuntze											x		
1406	Scrophulariaceae	*Striga*	*forbesii*	Benth.											x		
1407	Scrophulariaceae	*Striga*	*pubiflora*	Klotzsch											x		
1408	Scrophulariaceae	*Torenia*	*thouarsii*	(Cham. & Schltdl.) Kuntze			x								x		
1409	Simaroubaceae	*Harrisonia*	*abyssinica*	Oliv.			x					x			x		
1410	Simaroubaceae	*Suriana*	*maritima*	L.											x		
1411	Simaroubaceae	*Odyendea*	*zimmermannia*	engl.									x				
1412	Simaroubaceae	*Samadera*	*indica*	Gaertn.									x				
1413	Smilacaceae	*Smilax*	*kraussiana*	Meisn.									x		x		
1414	Solanaceae	*Datura*	*metel*	L.											x		
1415	Solanaceae	*Physalis*	*peruviana*	L.								x					
1416	Solanaceae	*Solanum*	*goetzei*	Dammer			x										
1417	Solanaceae	*Solanum*	*incanum*	L.											x		
1418	Solanaceae	*Solanum*	*zanzibarense*	Vatke											x		
1419	Sonneratiaceae	*Sonneratia*	*alba*	Sm.								x	x	x	x		
1420	Sphenocleaceae	*Sphenoclea*	*zeylanica*	Gaertn.			x								x		

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1421	Sterculiaceae	*Cola*	*clavata*	Mast.			x		x	x							
1422	Sterculiaceae	*Cola*	*discoglypremnophylla*	Brenan & A.P.D. Jones			x		x	x							
1423	Sterculiaceae	*Cola*	*greenwayi*	Brenan					x	x				x			
1424	Sterculiaceae	*Cola*	*microcarpa*	Brenan			x										
1425	Sterculiaceae	*Cola*	*scheffleri*	Brenan					x	x							VU
1426	Sterculiaceae	*Cola*	*stelechantha*	Brenan							x					x	
1427	Sterculiaceae	*Dombeya*	*acutangula*	Cav.			x										
1428	Sterculiaceae	*Dombeya*	*cincinnata*	K. Schum.											x		
1429	Sterculiaceae	*Dombeya*	*mupangae*	K. Schum.			x		x	x							
1430	Sterculiaceae	*Heritiera*	*littoralis*	Ait.									x		x		LC
1431	Sterculiaceae	*Melhania*	*ovata*	(Cuv.) Spreng								x					
1432	Sterculiaceae	*Melhania*	*velutina*	Forssk.											x		
1433	Sterculiaceae	*Melochia*	*bracteosa*	F.Hoffm.											x		
1434	Sterculiaceae	*Melochia*	sp												x		
1435	Sterculiaceae	*Nesogordonia*	*holtzii*	(Engl.) Capuron ex L.C. Barnett & Dorr											x		
1436	Sterculiaceae	*Pterygota*	*schummaniana*	Engl.								x					
1437	Sterculiaceae	*Sterculia*	*africana*	(Lour.) Fiori			x					x			x		
1438	Sterculiaceae	*Sterculia*	*appendiculata*	K. Schum.			x		x	x							
1439	Sterculiaceae	*Sterculia*	*quinqueloba*	(Garcke) K. Schum.					x	x							
1440	Sterculiaceae	*Waltheria*	*indica*	L.											x		
1441	Thymelaeaceae	*Synaptolepis*	*alternifolia*	Oliv.					x	x							
1442	Thymelaeaceae	*Synaptolepis*	*kirkii*	Oliv.			x		x	x		x	x		x		
1443	Tiliaceae	*Carpodiptera*	*africana*	Mast.					x	x							
1444	Tiliaceae	*Corchorus*	*aestuans*	L.								x					
1445	Tiliaceae	*Grewia*	*bicolor*	Juss.			x								x		
1446	Tiliaceae	*Grewia*	*capitellata*	Bojer			x					x					
1447	Tiliaceae	*Grewia*	*conocarpa*	K. Schum.			x										

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1448	Tiliaceae	*Grewia*	*forbesii*	Harv. ex Mast.			x								x		
1449	Tiliaceae	*Grewia*	*goetzeana*	K. Schum.			x										DD
1450	Tiliaceae	*Grewia*	*glandulosa*	Vahl								x			x		
1451	Tiliaceae	*Grewia*	sp	Burret									x				
1452	Tiliaceae	*Grewia*	*microcarpa*	K. Schum.			x										
1453	Tiliaceae	*Grewia*	*monticola*	Sond.			x										
1454	Tiliaceae	*Grewia*	*similis*	K. Schum.					x	x							
1455	Tiliaceae	*Grewia*	*vaughanii*	Exell											x		
1456	Tiliaceae	*Triumfetta*	*rhomboidea*	Jacq.					x	x					x		
1457	Tiliaceae	*Burrtdavya*	sp				x										
1458	Typhaceae	*Typha*	*dongensis*	Pers.											x		
1459	Apocynaceae	*Funtumia*	*africana*	(Benth.) Stapf.							x		x				
1460	Ulmaceae	*Celtis*	*gomphophylla*	Baker							x						
1461	Ulmaceae	*Celtis*	*africana*	Burm.f.							x	x					
1462	Ulmaceae	*Celtis*	*mildebraedii*	Engl.							x						
1463	Ulmaceae	*Trema*	*orientalis*	(L.) Blume					x	x		x	x		x		
1464	Umbelliferae	*Centella*	*asiatica*	(L.) Urb.											x		
1465	Urticaceae	*Boehmeria*	*macrophylla*	Hornen								x					
1466	Urticaceae	*Laportea*	*lanceolata*	(Engl.) Chew			x										
1467	Urticaceae	*Urera*	*fischeri*	Engl.											x		
1468	Urticaceae	*Urera*	*hypselodendron*	(Hochst. ex A. Rich.) Wedd.										x			
1469	Verbenaceae	*Avicennia*	*marina*	(Forssk.) Vierh.									x		x		
1470	Verbenaceae	*Clerodendrum*	*capitatum*	(Willd.) Schumach. & Thonn.			x								x		
1471	Verbenaceae	*Clerodendrum*	*glabratum*	Guerke											x		
1472	Verbenaceae	*Clerodendrum*	*glabrum*	E. Mey.											x		
1473	Verbenaceae	*Clerodendrum*	*myricoides*	(Hochst.) Vatke											x	x	
1474	Verbenaceae	*Clerodendrum*	*rotundifolia*	Oliv.								x					
1475	Verbenaceae	*Clerodendrum*	*sansibarensis*	Gurke								x				x	

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1476	Verbenaceae	*Clerodendrum*	*swynnertonii*	S. Moore											x		
1477	Verbenaceae	*Gmelia*	*arborea*	Roxb.								x					
1478	Verbenaceae	*Lantana*	*camara*	L.			x								x		
1479	Verbenaceae	*Lantana*	*trifolia*	L.								x					
1480	Verbenaceae	*Lantana*	*viburnoides*	(Forssk.) Vahl			x								x	x	
1481	Verbenaceae	*Lippia*	*javanica*	(Burm f.) Spreng.					x	x				x			
1482	Verbenaceae	*Phyla*	*nodiflora*	(L.) Greene											x	x	LC
1483	Verbenaceae	*Premna*	*obtusifolia*	(Bojer) G?rke											x		
1484	Verbenaceae	*Premna*	*hans-joachimii*	Verdc.							x					x	VU
1485	Verbenaceae	*Premna*	*tanganyikensis*	Moldenke							x					x	VU
1486	Verbenaceae	*Premna*	*obtusifolia*	R. Br.									x				
1487	Verbenaceae	*Premna*	sp.A. of FTEA								x					x	
1488	Verbenaceae	*Rotheca*	*incisa*	(Klotzsch) Steane & Mabb.			x										
1489	Verbenaceae	*Rotheca*	*myricoides*	(Hochst.) D.A. Steane & Mabb			x										
1490	Verbenaceae	*Stachytarpheta*	*angustifolia*	Vahl								x			x		
1491	Verbenaceae	*Tectona*	*grandis*	L. f.							x						
1492	Verbenaceae	*Vitex*	*amaniensis*	W. Piep.			x									x	VU
1493	Verbenaceae	*Vitex*	*doniana*	Sweet			x	x	x	x		x	x		x		
1494	Verbenaceae	*Vitex*	*mombassae*	Vatke			x		x	x							
1495	Verbenaceae	*Vitex*	*mossambicensis*	G?rke							x						
1496	Verbenaceae	*Vitex*	*payos*	(Lour.) Merr.											x		
1497	Verbenaceae	*Vitex*	*zanzibarensis*	Vatke					x	x	x						VU
1498	Violaceae	*Hybanthus*	*enneaspermus*	(L.) F. Muell.											x	x	
1499	Violaceae	*Rinorea*	*angustifolia*	(Engl.) Grey-Wilson			x		x	x						x	
1500	Violaceae	*Rinorea*	*brachypetala*	(Turcz.) Kuntze			x		x	x							
1501	Violaceae	*Rinorea*	*elliptica*	(Oliv.) Kuntze			x		x	x							
1502	Violaceae	*Rinorea*	*ferruginea*	Engl.					x	x	x			x			

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1503	Violaceae	*Rinorea*	*ilicifolia*	(Oliv.) Kuntze			x					x			x		
1504	Violaceae	*Rinorea*	*welwitschii*	(Oliv.) Kuntze			x									x	
1505	Violaceae	*Rinorea*	sp A of FTEA				x				x					x	
1506	Vitaceae	*Afromomum*	sp.nov.aff								x					x	
1507	Vitaceae	*Ampelocissus*	*africana*	(Lour.) Merr.					x	x					x		
1508	Vitaceae	*Ampelocissus*	*obtusata*	(Planch.) Wild & R.B. Drumm.			x										
1509	Vitaceae	*Cayratia*	*gracilis*	(Guill. & Perr.) Suess.			x					x					
1510	Vitaceae	*Cissus*	*aralioides*	Verdc.								x					
1511	Vitaceae	*Cissus*	*cornifolia*	(Baker) Planch.			x										
1512	Vitaceae	*Cissus*	*integrifolia*	(Baker) Planch.								x					
1513	Vitaceae	*Cissus*	*phymatocarpa*	Masinde & L.E. Newton								x				x	
1514	Vitaceae	*Cissus*	*oliveri*	Gilg								x	x				
1515	Vitaceae	*Cissus*	*quadrangularis*	L.					x	x				x	x		
1516	Vitaceae	*Cissus*	*rondoensis*	Verdc.							x					x	
1517	Vitaceae	*Cissus*	*rotundifolia*	(Forssk.) Vahl			x		x	x				x	x	x	
1518	Vitaceae	*Cissus*	*zanzibaricum*	Verdc.								x					
1519	Vitaceae	*Cissus*	*wallacei*	Verdc.							x					x	
1520	Vitaceae	*Cyphostemma*	*adenocaule*	(Steud. ex A. Rich.) Desc. ex Wild & R.B. Drumm.								x				x	
1521	Vitaceae	*Cyphostemma*	*bidgoodiae*	Verdc.							x					x	
1522	Vitaceae	*Cyphostemma*	sp										x				
1523	Vitaceae	*Cyphostemma*	*buchananii*	(Planch.) Desc. ex Wild & R.B. Drumm.											x		
1524	Vitaceae	*Cyphostemma*	*duparquetii*	(Planch.) Desc.			x										

S/N	Family	Genus	Species	Author(s)	Weme	Kichi	Kiwengoma/Matumbi Hills	Mchungu	Mbara	Ruawa	Rondo	Jozani	Ngezi	Mrora	Mafia	CF endemic	IUCN status
1525	Vitaceae	*Cyphostemma*	*hildebrandtii*	(Gilg) Desc. ex Wild & R.B. Drumm.											x		
1526	Vitaceae	*Cyphostemma*	*subciliatum*	(Baker) Desc. ex Wild & R.B. Drumm.			x										
1527	Vitaceae	*Cyphostemma*	*kirkianum*	(Planch.) Wild & R.B. Drumm.								x					
1528	Vitaceae	*Rhoicissus*	*revoilii*	Planch.								x		x	x		
1529	Vitaceae	*Rhoicissus*	*tradentata*	(L.f.) Willd & Drummond			x					x					
1530	Xyridaceae	*Xyris*	*anceps*	Lam.									x		x		
1531	Xyridaceae	*Xyris*	*capensis*	Thaunb.											x		
1532	Xyridaceae	*Xyris*	*parvula*	Malme											x		
1533	Zingiberaceae	*Afromomum*	*angustifolia*	(Sonnerat.) K.Schum.								x	x				
1534	Zingiberaceae	*Costus*	sp.										x				
1535	Zingiberaceae	*Siphonochilus*	*aethiopicus*	(Schweinf.) B.L. Burtt			x		x	x							
1536	Zygophyllaceae	*Balanites*	*maughamii*	Sands				x								x	
1537	Zygophyllaceae	*Tribulus*	*cistoides*	L.											x		
				Total	116	111	571	91	233	227	132	290	219	75	607	248	89

Table 3. 9: Desk top study amphibian distribution in coastal forests of Tanzania

CF=coastal forest; EAM=Eastern Arc Mts; K, T = Kenya, Tanzania, X=specimen; P '83=Pakenham,1983 Pi07=Pickersgill,2007; 2002=Nahonyo et al., 2002; M&P=Moreau & Pakenham, 1941; ND = Not assessed; Ftz=Frontier Tanzania; db=Univeresity of Dar es Salaam Biodiversity database record

Group, notes and endemism	Genus	species	IUCN Red list status	Weme	Kichi hills	Kiwen-Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
Family: Arthroleptidae	*Arthroleptis*	*stenodactylus*	LC	x	x		x	x	x			2002				
	Arthroleptis	*xenodactyloides*	LC		x				x			2002		2005		
	Leptopelis	*flavomaculatus*	LC			FtTz '90					P '83	2002				x (Ftz)
Family: Brevicipitidae																
	Breviceps	*mossambicus*	LC	x	x	FtTz '90										
Family: Bufonidae																
	Amietophrynus	*gutturalis*	LC	x		FtTz '90					P '83	2002	P '83	2005		
Endemic to coastal forest on Unguja and Mafia Islands.	*Mertensophryne*	*howelli*	EN									2002				x (Ftz)
	Mertensophryne	*lindneri*	LC	x												
Endemic to coastal woodland and forest from the Kilombero Valley to south of the Rufiji River.	*Mertensophryne*	*loveridgei*	LC		x	FtTz '90		x	x							

Group, notes and endemism	Genus	species	IUCN Red list status	Weme	Kichi hills	Kiwen-Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
A CF near endemic in K & T	*Mertensophryne*	*micranotis*	LC		x	FtTz '90					P '83	2002				
Family: Hemisotidae																
	Hemisus	*marmoratus*	LC	x		FtTz '90						2002			xdb	
Family: Hyperoliidae																
sometimes identified as *pygmaeus*	*Afrixalus*	*brachycnemis*		x							P '83	2002				
	Afrixalus	*delicatus*	LC													
	Afrixalus	*fornasini*	LC				x				P '83	2002	P '83	2005		
includes *sylvaticus*	*Afrixalus*	*stuhlmanni*	LC													
Near CF endemic	*Afrixalus*	*sylvaticus*	EN													
includes *nasutus*	*Hyperolius*	*acuticeps*	LC				x					2002			xdb	
	Hyperolius	*argus*	LC								P '83					
	Hyperolius	*mitchelli*	LC								P '83					
	Hyperolius	*parkeri*	LC				x				P '83	2002				
	Hyperolius	*tuberilinguis*	LC				x								xdb	
	Hyperolius	*sp.*										0				
Endemic to Tz, Jozani Forest, Unguja Island	*Kassina*	*jozani*	EN									2002				
	Kassina	*maculata*	LC								P '83					
	Kassina	*senegalensis*	LC				x								xdb	
Family: Phrynobatrachidae																

Group, notes and endemism	Genus	species	IUCN Red list status	Weme	Kichi hills	Kiwen-Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
	Phrynobatrachus	*acridoides*	LC	x			x	x			P '83	2002	P '83		xdb	
	Phrynobatrachus	*mababiensis*	LC	x												
	Phrynobatrachus	*minutus****	ND								P '83	2002				
	Phrynobatrachus	*natalensis*	LC								P '83					
Endemic to Tz, known only from Ngezi Forest, Pemba Island; may be based on juveniles of *P. pakenhami*.	*Phrynobatarachus*	*nigripes*	ND													
Endemic to Ngezi forest, Pemba Island if a full species	*Phrynobatarachus*	*pakenhami****									P '83	2002	P '83	2005		
	Phrynobatrachus	*petropedetoides*	ND													
Endemic to Tz, known only from Jozani Forest	*Phrynobatrachus*	*ungujae*	EN									Pi 07				
Family: Microhylidae																
	Phrynomantis	*bifasciatus*									P '83					
Family: Pipidae																
	Xenopus	*muelleri*	LC				x				P '83	2002				
Family: Ptychadenidae																
	Hildebrandtia	*ornata*	LC	x												
	Ptychadena	*anchietae*	LC				x	x			P '83	2002	M&P	M&P		
	Ptychadena	*mascareniensis*	LC								P '83		M&P		xdb	

Group, notes and endemism	Genus	species	IUCN Red list status	Weme	Kichi hills	Kiwen-Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
	Ptychadena	*mossambica*	LC	x				x				2002				
	Ptychadena	*uzungwensis*	LC													
	Ptychadena	*sp.*									P '83		P '83			
	Amietia	*tenuoplicata*	ND								Pi 07					
	Amietia	*wittei*	DD													
Family: Ranidae																
	Hylarana	*galamensis*	LC				x				P '83		P '83	M& P	Channing spec.	
Family Rhacophoridae																
	Chiromantis	*xerampelina*	LC		x	Ftz '90		x			P '83	2002				

Table 3.10: Desk top Study Reptile distribution in coastal forests of Tanzania

Reptiles not yet evaluated by IUCN; P'83-Pakenham, 1983; 2002=Nahonyo et.al, 2002; B&H=Broadley & Howell, 2000; 2005=Dept. of Zoology, 2005; B&W=Broadley &Wallach, various studies; x = record, KMH=KM Howell

Group/Species	Endemism	CITES	Weme	Kichi	Kiweng	Mchungu	Mbara	Ruawa	Rondo	Zbar	Jozani	Pemba	Ngezi	Mafia	Mlola
Order Chelonii															
Cheloniidae		App I											2005		
Chelonia mydas										P '83		P '83	-		
Eretmochelys imbricata										P '83		P '83	-		
Dermochelyidae															
Dermochelys coriacea		App I								P '83		x	-		
Pelomudusidae															
Pelusios castanoides											2002	P '83	x		
Testudinidae		App.II													
Kinixys belliana										x	2002				
Order Crocodylia															
Crocodylidae		App.II													
Crocodylus niloticus										P '83					
Order Sauria															
Chamaeleonidae															
Chamaeleo dilepis		App.II		x	x	x				P '83	2002	P '83	-		
Chamaeleo melleri		App.II			x										
Rhampholeon brachyurus	near CF endemic (B&H, 2000)				x										
Rhampholeon brevicaudatus	CF and EAM endemic				x				B&H		2002				
Cordylidae															
Cordylus tropidosternum		App.II		x	x			x			2002				xdb

Group/Species	Endemism	CITES	Weme	Kichi	Kiweng	Mchungu	Mbara		Rondo	Zbar	Jozani	Pemba	Ngezi	Mafia	Mlola
Gekkonidae															
Cnemaspis uzungwae				x	x										
Ebenavia inunguis												P '83			
Hemidactylus brooki										P '83		P '83			
Hemidactylus mabouia						x				P '83	2002	P '83	x	xdb	
Hemidactylus platycephalus							x			P '83	2002	P '83	-	xdb	
Lygodactylus broadleyi						x									
Lygodactylus capensis					x							P '83	x	xdb	
Lygodactylus luteopocturatus					x					P '83	2002	KMH			
Lygodactylus viscatus	CF endemic				x					KMH obs.		x	x		x
Phelsuma abbotti	Pemba endemic	App.II										P '83	x		
Phelsuma dubia		App.II								P '83					
Gerrhosauridae															
Gerrhosaurus major				x						P '83					
Lacertidae															
Nucras boulengeri							x								
Scincidae															
Cryptoblepharus boutonii										P '83		P '83	x	xdb	
Lygosoma mafianum															x
Lygosoma pembanum	Pemba Island endemic											P '83	x		
Lygosoma sundevalli										P '83				xdb	
Melanoseps loveridgei					x										
Melanoseps rondoensis	Near CF endemic (B&H, 2000)								x						
Panaspis wahlbergi						x	x	x							
Sepsina tetradactylus	Near CF endemic (B&H, 2000)		x	x	x			x							
Trachylepis albotaeniata	Pemba island endemic											P '83	x		
Trachylepis maculilabris			x				x	x		P '83				xdb	

Group/Species	Endemism	CITES	Weme	Kichi	Kiweng	Mchungu	Mbara		Rondo	Zbar	Jozani	Pemba	Ngezi	Mafia	Mlola
Trachylepis megalura			x												
T. striata			x									x	x	xdb	
T. varia			x												
Varanidae															
Varanus niloticus		App.II								P '83					
Order Serpentes															
Colubridae															
Aparallactus werneri	CF and EAM endemic				x										
Atractaspis bibronii					x					P '83					
Crotaphopelis hotamboeia					x					P '83					
Crotaphopelis tornieri					x										
Dasypeltis medici	CF endemic									P '83					x
Dipsadoboa aulica										P '83					
Dispholidus typus										P '83		x	x		
Hemirhaggeris nototaenia						x									
Lamprophis fuliginosus					x					P '83		P '83	x	xdb	
Lycophidion capense					x					P '83					
Lycophidion pembanum	Pemba island endemic											P '83	-		
Mehelya capensis										P '83					
M. nyassae										P '83					
Natriciteres olivacea					x					P '83					
Natriciteres pembanum	Pemba island endemic											P '83	x		
Philothamnus hoplogaster														xdb	
Philothamnus macrops	CF and EAM endemic				x				x B& H+J 36	P '83					
Philothamnus semivariegatus										P '83		P '83	x		
Psammophis sibilans										P '83					

Group/Species	Endemism	CITES	Weme	Kichi	Kiweng	Mchungu	Mbara		Rondo	Zbar	Jozani	Pemba	Ngezi	Mafia	Mlola
P. subtaeniatus					x					P '83				xdb	
Thelotornis capensis			x		x									xdb	
Elapidae															
Dendroaspis angusticeps										P '83		P '83			
Naja melanoleuca					x					P '83					
Naja mossambica										P '83		P '83	x		
Leptotyphlopidae															
Leptotyphlops howelli						x									
Leptotyphlops macrops	CF endemic, K+T (B&H, 2000)					x									
Leptotyphlops pembae	Pemba endemic; see Broadley & Wallach, 2007a											P '83	x		
Leptotyphlops scutifrons					x										
Leptotyphlops conjunctus														xdb	
Pythonidae															
Python sebae		App.II								P '83		P '83			
Typhlopidae															
Ramphotyphlops braminus										P '83		P '83	-		
Letheobia lumbriciformis	see Broadley & Wallach, 2007b.									P '83					
Letheobia pallida	Zanzibar endemic; see B&W, 2007b.									P '83		P '83	-		
Afrotyphlops rondoensis	Near endemic; see B&W, 2009								x						
	see Broadley & Wallach, 2009				x					P '83					
Viperidae															
Bitis gabonica				x											
Causus defilippii				x						P '83					

Table 3.11: Desk top study: Bird distribution in coastal forests of Tanzania

Key to data sources: Mbarawala and – Msuya *et al*. 2004; Kiwengoma, Mchungu, Pemba Island, Zanzibar Island and Mafia Island – Mlingwa *et al*. 2000; Rondo - Jensen *et al*. 2005; Rufiji – Doody & Hamerlynck, 2003 and Haldane, 1946; Ngezi – Nahonyo *et al*. 2005. IUCN threat status as of 16 December 2011 (www.iucn.org; VU = vulnerable, NT = Near Threatened, EN = Endangered). We included Rufiji to represent Kichi and Weme forests.

Species/Group	**English Name**	**IUCN Threat status/CITES**	**Mbarawala**	**Ruawa**	**Rondo**	**Kiwengoma**	**Mchungu**	**Ngezi**	**Rufiji**	**Pemba Island**	**Zanzibar Island**	**Mafia Island**	**Mlola**
Phalacrocorax africanus	Reed Cormorant							x					
Ixobrychus minutus	Little Bittern							x					
Nycticorax nycticorax	Night Heron								x				
Gorsachius leuconotus	White-backed Night Heron							x					
Ardeola ralloides	Squacco Heron							x					
Bubulcus ibis	Cattle Egret							x	x				
Butorides striatus	Green-backed Heron							x	x				
Egretta alba	Great White Egret							x					
Egretta intermedia	Yellow-billed Egret								x				
Ardea purpurea	Purple Heron							x					
Ardea cinerea	Grey Heron							x					
Ardea melanocephala	Black-headed Heron							x					
Scopus umbretta	Hamerkop								x				
Bostrychia hagedash	Hadada Ibis							x					
Phoenicopteridae		App. II											
Phoenicopterus ruber	Greater Flamingo							x					
Anatidae													
Dendrocygna viduata	White-faced Tree Duck							x					
Thalassornis leuconotos	White-backed Duck							x					
Nettapus auritus	Pygmy Goose							x					
Falconiformes		App. II											
Aviceda cuculoides	Cuckoo Hawk								x				
Pernis apivorus	Honey Buzzard								x				
Macheiramphusalcinus	Bat Hawk			x				x	x				
Elanus caeruleus	Black-shouldered Kite								x				
Milvus migrans	Black-billed Kite							x	x				
Haliaeetus vocifer	Fish Eagle							x	x				
Gypohierax angolensis	Palm-nut Vulture							x	x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Necrosyrtes monachus	Hooded Vulture	EN							x				
Gyps africanus	White-backed Vulture	NT							x				
Circaetus pectoralis	Black-chested Snake Eagle								x				
Circaetus cinereus	Brown Snake Eagle								x				
Circaetus fasciolatus	Southern Banded Snake Eagle	NT	x	x	x	x			x				
Terathopius ecaudatus	Bateleur	NT	x	x					x				
Polyboroides typus	Gymnogene/ Harrier Hawk		x	x				x	x				
Circus macrourus	Pallid Harrier	NT							x				
Circus pygargus	Montagu's Harrier								x				
Melierax metabates	Dark Chanting Goshawk								x				
Micronisus gabar	Gabar Goshawk								x				
Accipiter melanoleucus	Great Sparrowhawk							x	x	x	x		
Accipiter ovampensis	Ovambo Sparrowhawk								x				
Accipiter minullus	Little Sparrowhawk								x				
Accipiter tachiro	African Goshawk		x		x	x		x	x	x	x	x	
Accipiter badius	Shikra						x		x				
Kaupifalco monogrammicus	Lizard Buzzard			x					x				
Buteo buteo	Common Buzzard								x				
Aquila wahlbergi	Wahlberg's Eagle								x				
Aquila pomarina	Lesser Spotted Eagle								x				
Aquila nipalensis	Steppe Eagle								x				
Aquila helaica	Imperial Eagle	VU							x				
Hieraaetus spilogaster	African Hawk Eagle								x				
Hieraaetus pennatus	Booted Eagle								x				
Hieraaetus ayresii	Ayres' Hawk Eagle								x				
Lophaetus occipitalis	Long-crested Eagle								x				
Stephanoaetus coronatus	Crowned Eagle		x	x	x	x	x		x				
Polemaetus bellicosus	Martial Eagle	NT							x				
Pandion haliaetus	Osprey							x	x				
Sagittarius serpentarius	Secretarybird	VU											
Falco naumanni	Lesser Kestrel							x					
Falco tinnunculus	Common Kestrel							x					
Falco ardosiaceus	Grey Kestrel								x				
Falco dickinsoni	Dickinson's Kestrel							x	x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Falco amurensis	Amur Falcon							x	x				
Falco chicquera	Red-necked Falcon								x				
Falco subbuteo	Eurasian Hobby								x				
Falco cuvierii	African Hobby								x				
Falco eleonorae	Eleonora's Falcon								x				
Falco concolor	Sooty Falcon	NT							x				
Falco biarmicus	Lanner Falcon								x				
Falco peregrinus	Peregrine Falcon								x				
Francolinus coqui	Coqui Francolin								x				
Francolinus sephaena	Crested Francolin		x	x					x				
Francolinus afer	Red-necked Spurfowl								x				
Coturnix delegorguei	Harlequin Quail							x	x				
Coturnix adansonii	Blue Quail							x	x				
Guttera pucherani	Crested Guineafowl		x	x	x	x	x	x	x		x		
Numida meleagris	Helmeted Guineafowl								x				
Turnix sylvatica	Common Buttonquail							x	x				
Sarothrura elegans	Buff-spotted Flufftail							x		x	x		
Sarothrura rufa	Red-chested Flufftail							x					
Crex crex	Corncrake								x				
Crex egregia	African Crake								x				
Amaurornis flavirostris	Black Crake							x	x				
Gallinula chloropus	Common Moorhen							x					
Eupodotis melanogaster	Black-bellied Bustard								x				
Actophilornis africanus	Jacana							x	x				
Microparra capensis	Lesser Jacana								x				
Rostratula benghalensis	Painted Snipe							x	x				
Burhinus vermiculatus	Water Thicknee							x	x				
Rhinoptilus chalcopterus	Violet-tipped Courser								x				
Cursorius temminckii	Temminck's Courser								x				
Pluvialis squatorola	Grey Plover								x				
Vanellu albiceps	White-crowned Plover								x				
Vanellus spinosus	Spur-winged Plover								x				
Vanellus lugubris	Senegal Plover								x				
Vanellus coronatus	Crowned Plover								x				
Gallinago gallinago	Common Snipe								x				
Gallinago media	Great Snipe	NT						x	x				

Tringa nebularia	Greenshank							x					
Tringa ochropus	Green Sandpiper							x					
Tringa glareola	Wood Sandpiper							x					
Actitis hypoleucos	Common Sandpiper							x	x				
Columba guinea	Speckled Pigeon								x				
Columba delegorguei	Eastern Bronze-naped Pigeon									x	x		
Aplopelia larvata	Lemon Dove				x								
Streptopelia senegalensis	Laughing Dove								x				
Streptopelia capicola	Ring-necked Dove								x				
Streptopelia semitorquata	Red-eyed Dove			x				x	x				
Turtur chalcospilos	Emerald-spotted Wood Dove		x	x	x			x	x				
Turtur afer	Blue-spotted Wood Dove							x					
Turtur tympanistria	Tambourine Dove		x	x	x	x	x	x	x	x	x	x	
Oena Oen capensis	Namaqua Dove								x				
Treron pembaensis	Pemba Green Pigeon	VU						x		x			
Treron calva	Green Pigeon		x	x	x		x		x		x	x	
Psittaciformes		App.II											
Poicephalus robustus	Brown-necked Parrot				x				x				
Poicephalus cryptoxanthus	Brown-headed Parrot		x	x	x	x	x	x	x	x			
Agapornis lilianae	Lilian's Lovebird	NT							x				
Tauraco spp.		App.II											
Tauraco livingstonii	Livingstone's Turaco		x	x	x	x	x		x				
Tauraco porphyreolophus	Purple-crested Turaco								x				
Corythaixoides concolor	Grey Go-away Bird								x				
Clamator glandarius	Great Spotted Cuckoo								x				
Oxylophus jacobinus	Jacobin Cuckoo								x				
Oxylophus levaillantii	Levaillant's Cuckoo								x				
Cuculus solitarius	Red-chested Cuckoo			x					x				
Cuculus clamosus	Black Cuckoo								x				
Cuculus canorus	Eurasian Cuckoo								x				
Cuculus gularis	African Cuckoo								x				
Cercococcyx montanus	Barred Long-tailed Cuckoo				x	x			x				
Chrysococcyx cupreus	Emerald Cuckoo				x				x				
Chrysococcyx klaas	Klaas's Cuckoo			x					x				
Chrysococcyx caprius	Didric Cuckoo							x	x				
Ceuthmochares australis	Eastern Yellowbill				x	x	x						
Ceuthmochares aereus	Yellowbill							x	x	x	x	x	
Centropus grillii	Black Coucal								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Centropus superciliosus	White-browed Coucal			x				x	x				
Centropus burchellii	Burchell's Coucal								x				
Strigiformes		App.II											
Tyto alba	Barn Owl							x	x				
Otus senegalensis	African Scops Owl								x				
Otus pembaensis	Pemba Scops Owl	VU						x		x			
Bubo africanus	Spotted Eagle Owl				x				x				
Scotopelia peli	Pel's Fishing Owl								x				
Glaucidium perlatum	Pearl-spotted Owlet								x				
Glaucidium capense	Barred Owlet								x			x	
Strix woodfordii	African Wood Owl			x	x	x	x		x	x	x		
Caprimulgus europaeus	Eurasian Nightjar								x				
Caprimulgus pectoralis	Fiery-necked Nightjar				x		x		x				
Caprimulgus fossii	Gabon Nightjar							x	x				
Telacanthura ussheri	Mottled Spinetail				x				x				
Neafrapus boehmi	Böhm's Spinetail		x	x	x	x	x		x			x	
Cypsiurus parvus	Palm Swift		x					x	x				
Apus apus	Eurasian Swift								x				
Apus affinis	Little Swift							x	x				
Apus horus	Horus Swift								x				
Apus caffer	White-rumped Swift								x				
Colius striatus	Speckled Mousebird								x				
Urocolius macrourus	Blue-naped Mousebird								x				
Apaloderma narina	Narina's Trogon				x	x	x		x		x	x	
Corythornis cristata	Malachite Kingfisher							x	x				
Ceryx picta	Pygmy Kingfisher			x	x			x	x				
Halcyon albiventris	Brown-hooded Kingfisher				x				x				
Halcyon leucocephala	Chestnut-bellied Kingfisher							x	x				
Halcyon senegalensis	Woodland Kingfisher			x					x				
Halcyon senegaloides	Mangrove Kingfisher							x	x				
Halcyon chelicuti	Striped Kingfisher								x				
Megaceryle maxima	Giant Kingfisher								x				
Ceryle rudis	Pied Kingfisher							x	x				
Merops pusillus	Little Bee-eater								x				
Merops hirundineus	Swallow-tailed Bee-eater								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Merops bullockoides	White-fronted Bee-eater								x				
Merops albicollis	White-throated Bee-eater								x				
Merops boehmi	Böhm's Bee-eater		x	x					x				
Merops superciliosus	Madagascar Bee-eater							x	x				
Merops persicus	Blue-cheeked Bee-eater							x	x				
Merops apiaster	Eurasian Bee-eater								x				
Merops nubicus	Northern Carmine Bee-eater								x				
Coracias garrulus	Eurasian Roller	NT							x				
Coracias caudata	Lilac-breasted Roller							x	x				
Coracias spatulata	Racket-tailed Roller								x				
Eurystomus glacurus	Broad-billed Roller			x	x			x	x				
Phoeniculus purpureus	Green Wood Hoopoe				x				x				
Rhinopomastus cyanomelas	Common Scimitarbill								x				
Upupa africana	African Hoopoe							x					
Upupa epops	Eurasian Hoopoe								x				
Tockus erythrorhynchus	Red-billed Hornbill								x				
Tockus deckeni	Von der Decken's Hornbill								x				
Tockus alboterminatus	Crowned Hornbill		x	x	x			x	x				
Tockus pallidirostris	Pale-billed Hornbill								x				
Tockus nasutus	Grey Hornbill								x				
Bycanistes bucinator	Trumpeter Hornbill		x	x	x	x	x		x				
Bucorvus cafer	Southern Ground Hornbill	VU	x	x					x				
Stactolaema leucotis	White-eared Barbet					x			x				
Stactolaema olivacea	Green Barbet		x	x	x								
Pogoniulus simplex	Green Tinkerbird				x	x	x				x		
Pogoniulus bilineatus	Yellow-rumped Tinkerbird		x	x	x	x	x		x		x	x	
Tricholaema lacrymosa	Spot-flanked Barbet								x				
Lybius torquatus	Black-collared Barbet								x				
Lybius melanopterus	Brown-breasted Barbet								x				
Trachyphonus vaillanti	Crested Barbet								x				
Trachyphonus erythrocephalus	Red and Yellow Barbet								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Indicator variegatus	Scaly-throated Honeyguide				x				x				
Indicator indicator	Greater Honeyguide		x						x				
Indicator minor	Lesser Honeyguide				x				x				
Indicator meliphilus	Pallid Honeyguide								x				
Campethera nubica	Nubian Woodpecker								x				
Campethera abingoni	Golden-tailed Woodpecker				x	x			x				
Campethera cailliautii	Little Spotted Woodpecker				x				x				
Dendropicosfuscescens	Cardinal Woodpecker			x	x				x				
Thripias namaquus	Bearded Woodpecker								x				
Smithornis capensis	African Broadbill		x	x	x	x	x		x				
Pitta angolensis	African Pitta				x	x			x				
Mirafra rufocinnamomea	Flappet Lark								x				
Pinarocorys nigricans	Dusky Bush Lark								x				
Eremopterix leucopareia	Fischer's Sparrow Lark								x				
Psalidoprocne holomelas	Black Roughwing				x				x				
Phedina borbonica	Mascarene Martin							x					
Riparia riparia	Sand Martin								x				
Hirundo griseopyga	Grey-rumped Swallow								x				
Hirundo senegalensis	Mosque Swallow								x				
Hirundo abyssinica	Lesser Striped Swallow							x	x				
Hirundo fuligula	Rock Martin								x				
Hirundo smithii	Wire-tailed Swallow							x	x				
Hirundo rustica	European Swallow								x				
Delichon urbica	House Martin								x				
Motacilla flava	Yellow Wagtail							x	x				
Motacilla aguimp	African Pied Wagtail							x	x				
Anthus cinnamomeus	African Pipit							x	x				
Macronyx croceus	Yellow-throated Longclaw								x				
Campephaga flava	Black Cuckoo Shrike				x				x				
Coracina pectoralis	White-breasted Cuckoo Shrike								x				
Andropadus virens	Little Greenbul				x		x		x		x	x	
Andropadus importunus	Zanzibar Sombre Greenbul								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Chlorocichla flaviventris	Yellow-bellied Greenbul		x		x	x	x		x				
Phyllastrephus terrestris	Terrestrial Brownbul								x				
Phyllastrephus cerviniventris	Grey-olive Greenbul								x				
Phyllastrephus fischeri	Fischer's Greenbul		x		x	x	x		x				
Phyllastrephus flavostriatus	Yellow-streaked Greenbul		x	x	x	x			x				
Phyllastrephus debilis	Tiny Greenbul		x	x	x	x	x		x				
Pycnonotus barbatus	Yellow-vented Bulbul			x					x				
Nicator gularis	Eastern Nicator		x		x	x	x		x		x		
Neocossyphus rufus	Red-tailed Ant-thrush				x	x			x		x		
Monticola saxatilis	Eurasian Rock Thrush								x				
Turdus libonyanus	Kurrichane Thrush								x				
Zoothera guttata	Spotted Ground Thrush	EN			x								
Sheppardia gunningi	East Coast Akalat	NT		x	x				x		x		
Luscinia luscinia	Sprosser								x				
Cossypha heuglini	White-browed Robinchat								x				
Cossypha natalensis	Red-capped Robinchat		x	x	x	x	x		x		x	x	
Cichladusa arquata	Collared Palm Thrush			x					x				
Cichladusa guttata	Spotted Morning Thrush								x				
Cercotrichas quadrivirgata	Eastern Bearded Scrub Robin		x	x	x				x				
Cercotrichas leucophrys	White-browed Scrub Robin								x				
Oenanthe oenanthe	Northern Wheatear								x				
Oenanthe pileata	Capped Wheatear								x				
Oenanthe isabellina	Isabelline Wheatear							x					
Myrmecocichla arnotti	White-headed Black Chat								x				
Bradypterus baboecala	Little Rush Warbler								x				
Melocichla mentalis	African Moustached Warbler								x				
Acrocephalus schoenobaenus	Sedge Warbler								x				
Acrocephalus baeticatus	African Reed Warbler							x	x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Acrocephalus arundinaceus	Great Reed Warbler							x	x				
Acrocephalus gracilirostris	Lesser Swamp Warbler							x					
Acrocephalus rufescens	Greater Swamp Warbler							x					
Hippolais pallida	Olivaceous Warbler								x				
Eremomela scotops	Green-capped Eremomela								x				
Eremomela icteropygiallis	Yellow-bellied Eremomela								x				
Sylvietta whytii	Red-faced Crombec								x				
Macrosphenus kretschmeri	Kretschmer's Longbill				x	x			x				
Phylloscopus trochilus	Willow Warbler								x				
Sylvia nisoria	Barred Warbler								x				
Sylvia communis	Common Whitethroat								x				
Cisticola juncidis	Zitting Cisticola							x	x				
Cisticola aridulus	Desert Cisticola								x				
Cisticola natalensis	Croaking Cisticola								x				
Cisticola chiniana	Rattling Cisticola								x				
Cisticola brachypterus	Siffling Cisticola								x				
Cisticola angusticauda	Tabora Cisticola								x				
Cisticola fulvicapillus	Piping Cisticola			x									
Cisticola erythrops	Red-faced Cisticola								x				
Cisticola cantans	Singing Cisticola								x				
Cisticola galactotes	Winding Cisticola								x				
Prinia subflava	Tawny-flanked Prinia			x	x				x				
Prinia leucopogon	White-chinned Prinia												
Heliolais erythroptera	Red-winged Warbler			x					x				
Apalis flavida	Yellow-breasted Apalis				x				x				
Apalis binotata	Masked Apalis		x	x									
Apalis melanocephala	Black-headed Apalis				x								
Camaroptera brachyura	Grey-backed Camaroptera			x	x								
Camaroptera brevicauda	Green-backed Camaroptera								x				
Camaroptera stierlingi	Stierling's Wren Warbler								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Bradornis microrhynchus	Grey Flycatcher								x				
Bradornis pallidus	Pale Flycatcher								x				
Melaenornis pammelaina	Southern Black Flycatcher								x				
Muscicapa striata	Spotted Flycatcher		x	x				x	x				
Muscicapa caerulescens	Ashy Flycatcher								x				
Myioparus plumbeus	Lead-coloured Flycatcher								x				
Bias musicus	Vanga Flycatcher				x				x				
Batis mixta	Short-tailed Batis		x	x	x	x	x		x				
Batis soror	East Coast Batis				x						x	x	
Batis minor	Black-headed Batis								x				
Platysteira peltata	Black-throated Wattle-eye			x	x		x		x	x		x	
Erythrocercus livingstonei	Livingstone's Flycatcher			x	x	x			x				
Erythrocercus holochlorus	Little Yellow Flycatcher								x				
Trochocercus cyanomelas	Crested Flycatcher		x	x	x	x	x		x		x		
Terpsiphone viridis	Paradise Flycatcher				x			x	x				
Illadopsis rufipennis	Pale-breasted Illadopsis							x	x				
Turdoides jardineii	Arrow-marked Babbler								x				
Parus leucomelas	Black Tit								x				
Parus pallidiventris	Cinnamon-breasted Tit								x				
Anthoscopus caroli	African Penduline Tit								x				
Anthreptes reichenowi	Plain-backed Sunbird	NT	x	x	x								
Anthreptes neglectus	Uluguru Violet-backed Sunbird			x	x	x			x				
Anthreptes collaris	Collared Sunbird		x	x	x	x	x		x				
Nectarinia olivacea	Olive Sunbird		x	x	x	x	x	x	x	x	x	x	
Nectarinia veroxii	Mouse-coloured Sunbird								x				
Nectarinia amethystina	Amethyst Sunbird								x				
Nectarinia senegalensis	Scarlet-chested Sunbird			x				x	x				
Nectarinia bifasciata	Purple-banded Sunbird								x				
Nectarinia pembae	Pemba Sunbird							x		x			
Zosterops senegalensis	Yellow White-eye				x				x				
Zosterops vaughani	Pemba White-eye							x		x			
Oriolus oriolus	Golden Oriole			x				x	x				
Oriolus auratus	African Golden Oriole				x				x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Oriolus larvatus	Black-headed Oriole				x			x	x				
Oriolus chlorocephalus	Green-headed Oriole		x	x	x	x							
Lanius collurio	Red-backed Shrike							x	x				
Lanius isabellinus	Red-tailed Shrike								x				
Lanius minor	Lesser Grey Shrike								x				
Lanius cabanisi	Long-tailed Fiscal								x				
Lanius collaris	Common Fiscal								x				
Nilaus afer	Brubru								x				
Dryoscopus cubla	Black-backed Puffback		x	x	x	x	x		x		x	x	
Tchagra minuta	Marsh Tchagra								x				
Tchagra australis	Brown-crowned Tchagra								x				
Tchagra senegala	Black-crowned Tchagra								x				
Laniarius aethiopicus	Tropical Boubou		x	x	x				x				
Malaconotus sulfureopectus	Sulphur-breasted Bush Shrike								x				
Malaconotus quadricolor	Four-coloured Bush Shrike				x	x	x		x				
Malaconotus blanchoti	Grey-headed Bush Shrike		x						x				
Prionops retzii	Retz's Helmet Shrike				x	x	x		x				
Prionops scopifrons	Chestnut-fronted Helmet Shrike				x				x				
Dicrurus ludwigii	Square-tailed Drongo		x	x	x	x	x		x				
Dicrurus adsimilis	Common Drongo		x					x	x				
Corvus splendens	Indian House Crow								x				
Corvus albus	Pied Crow			x				x	x				
Corvus albicollis	White-necked Raven		x	x									
Lamprotornis corruscus	Black-breasted Starling			x	x	x	x	x	x	x			
Lamprotornis chalybaeus	Blue-eared Starling								x				
Lamprotornis chloropterus	Lesser Blue-eared Starling								x				
Cinnyricinclus leucogaster	Violet-backed Starling				x			x	x				
Creatophora cinerea	Wattled Starling								x				
Buphagus africanus	Yellow-billed Oxpecker								x				
Buphagus erythrorhynchus	Red-billed Oxpecker								x				
Passer domesticus	House Sparrow								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Passer griseus	Grey-headed Sparrow							x	x				
Petronia superciliaris	White-browed Petronia								x				
Plocepasser mahali	White-browed Sparrow Weaver								x				
Ploceus ocularis	Spectacled Weaver			x					x				
Ploceus subaureus	Golden Weaver			x					x				
Ploceus cucullatus	Village Weaver			x					x				
Ploceus jacksoni	Golden-backed Weaver								x				
Ploceus bicolor	Dark-backed Weaver				x	x			x		x		
Anaplectes rubriceps	Red-headed Weaver								x				
Quelea cardinalis	Cardinal Quelea								x				
Quelea erythrops	Red-headed Quelea								x				
Quelea quelea	Red-billed Quelea								x				
Euplectes hordeaceus	Black-winged Red Bishop							x	x				
Euplectes nigroventris	Zanzibar Red Bishop								x				
Euplectes capensis	Yellow Bishop			x					x				
Euplectes axillaris	Fan-tailed Widowbird								x				
Euplectes macrourus	Yellow-mantled Widowbird			x									
Euplectes albonotatus	White-winged Widowbird								x				
Euplectes ardens	Red-collared Widowbird								x				
Anomalospiza imberbis	Parasitic Weaver							x					
Amblyospiza albifrons	Grosbeak Weaver							x	x				
Pytilia melba	Green-winged Pytilia								x				
Pytilia afra	Orange-winged Pytilia								x				
Hypargos niveoguttatus	Peters' Twinspot			x	x	x	x		x			x	
Mandingoa nitidula	Green-backed Twinspot			x	x	x	x	x	x	x	x	x	
Lagonosticta nitidula	Brown Firefinch								x				
Lagonosticta senegala	Red-billed Firefinch								x				
Lagonosticta rubricata	African Firefinch			x									
Lagonosticta rhodopareia	Jameson's Firefinch			x									
Estrilda astrild	Common Waxbill								x				

Species/Group	English Name	IUCN Threat status/CITES	Mbarawala	Ruawa	Rondo	Kiwengoma	Mchungu	Ngezi	Rufiji	Pemba Island	Zanzibar Island	Mafia Island	Mlola
Uraeginthus angolensis	Southern Cordonbleu								x				
Uraeginthus cyanocephalus	Blue-capped Cordonbleu			x									
Amandava subflava	Zebra Waxbill							x					
Lonchura cucullata	Bronze Mannikin			x				x	x				
Lonchura bicolor	Black and White Mannikin							x					
Lonchura nigriceps	Rufous-backed Mannikin								x				
Lonchura fringilloides	Magpie Mannikin							x	x				
Lonchura oryzivora	Java Sparrow							x					
Vidua chalybeata	Village Indigobird								x				
Vidua funerea	Dusky Indigobird								x				
Vidua macroura	Pin-tailed Whydah								x				
Vidua paradisaea	Eastern Paradise Whydah								x				
Vidua obtusa	Broad-tailed Whydah								x				
Serinus reichenowi	Reichenow's Seedeater								x				
Serinus mozambicus	Yellow-fronted Canary			x					x				
Emberiza flaviventris	Golden-breasted Bunting								x				
Emberiza cabanisi	Cabanis' Bunting								x				

Table 3.12: Desk top study: Mammal distribution in coastal forests of Tanzania

P, '84=Pakenham, 1984; 2002=Nahonyo *et al.*, 2002; 2005=Nahonyo *et al.*, 2005; Only Redlist threat levels above LC are indicated; +++=introduced species; WTS 2008=Stanley, 2008; K&S = Kock & Stanley, 2009; G&W-H, 2003=Goldman,& Winther-Hanen, 2003; W&R=Wilson & Reeder, 2005; x= record, db=Zoology biodiversity database

Species and endemism	**CITES and IUCN status**	**Weme**	**Kichi**	**Kiwengoma/ Matumbi**	**Mchungu**	**Mbarawala**	**Ruawa**	**Rondo**	**Unguja**	**Jozani**	**Pemba**	**Ngezi**	**Mafia**	**Mlola**
Soricomorpha, Soricidae														
Crocidura fuscomurina									P, '84	2002		2005		
Crocidura hirta				x				x						
Crocidura jacksoni													K&S	
Crocidura olivieri									P, '84	2002				
Crocidura varia									P, '84					
Crocidura sp.		x	x			x	x							
Suncus murinus Indian Musk Shrew+++									P, '84					
Chiroptera, Pteropodidae														
Eidolon helvum	NT								P, '84	2002		2005	K&S	
Epomophorus labiatus									P, '84	2002			K&S	
Epomophorus wahlbergi					x			x	P, '84			2005	K&S	
Epomophorus sp.							x							
Myonycteris relicta	VU			x				x						
Pteropus seychellensis	Appendix II												K&S	
Pteropus voeltzkowi	Appendix II, VU										P, '84	2005		
Rousettus aegyptiacus				x							P, '84	2005	K&S	
Rousettus sp.						x								
Lissonycteris angolensis														
Emballonuridae														
Coleura afra											P, '84			
Taphozous hildegardeae														
Taphozous mauritanius									P, '84					

Species and endemism	CITES and IUCN status	Weme	Kichi	Kiwengoma/ Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
Nycteridae														
Nycteris grandis							x		P, '84		P, '84			
Nycteris hispida									P, '84					
Nycteris macrotis									P, '84					
Nycteris thebaica									P, '84	2002			K&S	
Nycteris woodi														
Nycteris sp.			x											
Megadermatidae														
Cardioderma cor									P, '84					
Lavia frons							x	x	P, '84	2002				
Hipposideridae														
Cloeotis percivali													K&S	
Hipposideros caffer									P, '84	2002			K&S	
Hipposideros commersoni				x					P, '84	2002	P, '84	2005		
Hipposideros ruber				x			x				P, '84	2005		
Hipposideros vittatus													K&S	
Rhinolophidae														
Rhinolophus deckenii	NT								P, '84				K&S	K&S
Rhinolophus fumigatus								x						
Rhinolophus hildebrandti						x	x							
Rhinolophus landeri						x								
Rhinolophus swinnyi									P, '84					K&S
Triaenops persicus							x							
Vespertilionidae														
Myotis welwitschii								x						
Neoromicia nanus								x	P, '84		P, '84		K&S	
Pipistrellus capensis as *Eptesicus capensis*									P, '84					
Scotoecus albofuscus								x						
Scotophilus dinganii									P, '84	2002	P, '84	2005		

Species and endemism	CITES and IUCN status	Weme	Kichi	Kiwengoma/ Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
Scotophilus nigrita									P, '84	2002				
Scotophilus viridis								x					K&S	
Molossidae														
Chaerephon pumila											P, '84			
Mops brachypterus as *Tadarida*									P, '84	2002	P,'84			
Tadarida aegyptiaca														
Mops bakarii Pemba endemic, probably endemic to Ngezi area	Not assessed											WTS, 2008		
Primates, Galagonidae	Primates, Appendix II													
Galagoides rondoensis, near endemic? to CF	CR					x	x	x						
Galagoides zanzibaricus									P, '84	2002				
Galago senegalensis									P, '84					
Otolemur crassicaudatus			x			x	x	x						
Otolemur garnetti								x	P, '84	2002	P, '84	2005	K&S	
unidentified Galago sp.			x		x									
Primates, Cercopithecidae	Primates, Appendix II													
Cercopithecus albogularis					x	x	x		P, '84	2002			K&S	
Chlorocebus aethiops					x	x	x				P, '84	2005		
Colobus angolensis recorded as *C. polykomos*					x									
Papio hamadryas recorded as *P. cynocephalus*					x	x								
Procolobus kirkii Zanzibar Jozani area endemic	Appendix I as Piliocolobus, EN								P, '84	2002				
Carnivora, Canidae														
Canis adustus								x						
Canis sp.							x							
Otocyon megalotis						x								
Caranivora, Felidae														

Species and endemism	**CITES and IUCN status**	**Weme**	**Kichi**	**Kiwengoma/ Matumbi**	**Mchungu**	**Mbarawala**	**Ruawa**	**Rondo**	**Unguja**	**Jozani**	**Pemba**	**Ngezi**	**Mafia**	**Mlola**
Caracal caracal														
Felis silvestris														
Panthera leo	VU		x		x	x	x	x						
Panthera pardus (historical, but no recent records)	NT		x	x	x	x	x	x	P, ' 84					
Carnivora, Herpestidae														
Atilax paludinosus											P, ' 84	2005		
Bdeogale crassicauda						x				G&W-H, 2003				
Galerella sanguinea									P, ' 84	2002				
Genetta sp./spp.				x		x		x						
Genetta servalina										G&W-H, 2003				
Helogale parvula														
Herpestes auropunctatus+++													K&S	
Herpestes paludinosus					x									
Ichneumia albicauda														
Mungus mungo (possibly +++)									P, ' 84	2002				
Nandinia binotata										Perkin, '04				
Carnivora, Hyaenidae														
Crocuta crocuta						x	x							
Caranivora, Mustelidae														
Aonyx capensis	Lutrinae, App. II											2005		
Mellivora capensis								x						
Carnivora, Viverridae														
Civettictis civetta						x		x	P, ' 84	2002				
Viverricula indica +++									P, ' 84	2002	P, ' 84		K&S	
Proboscidea, Elephantidae														
Loxodonta africana	Appendix I, VU		x		x	x		x						
Hycracoidea, Procaviidae														

Species and endemism	CITES and IUCN status	Weme	Kichi	Kiwengoma/ Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
Dendrohyrax arboreus														
Dendrohyrax validus									P, ' 84	2002	P, ' 84	2005		
Heterohyrax brucei						x	x							
Tubulidentata, Orycteropidae														
Orycteropus afer								x						
Artiodactyla, Suidae														
Phacochoerus africanus						x								
Potamochoerus larvatus						x	x	x	P, ' 84	2002			K&S	
Sus scrofa +++									P, ' 84		P, ' 84		K&S	
Artiodactyla, Hippopotamidae														
Hippopotamus amphibius	Appendix II, VU				x								K&S	
Perissodactyla, Equidae														
Equus burchellii						x								
Artiodactyla, Bovidae														
Cephalopus abboti	CR			x										
Cephalophus adersi									P, ' 84	2002				x
Cephalopus grimmyi				x										
Cephalophus harveyi											P, ' 84	2005		
Cephalophus natalensis				x		x	x				P, ' 84			
Hippotragus niger						x								
Neotragus moschatus				x		x	x	x	P, ' 84	2002			K&S	
Philantoba monticola									P, ' 84	2002	P, ' 84	2005	K&S	x
Raphicercus sharpie						x								
Syncerus caffer						x	x	x						
Tragelaphus scriptus						x		x						
Tragelaphus oryx						x								
Pholidaota, Manidae														
Smutsia temminckii	App. II													
Rodentia, Sciuridae														
Heliosciurus rufobrachium								x	P, ' 84					

Species and endemism	**CITES and IUCN status**	**Weme**	**Kichi**	**Kiwengoma/ Matumbi**	**Mchungu**	**Mbarawala**	**Ruawa**	**Rondo**	**Unguja**	**Jozani**	**Pemba**	**Ngezi**	**Mafia**	**Mlola**
Heliosciurus undulatus													K&S	
Paraxerus flavovittis								x						
Paraxerus ochraceus						x								
Paraxerus palliatus		x			x	x	x	x	P, ' 84	2002			K&S	
Rodentia, Muridae														
Acomys spinosissimus		x	x			x	x	x						
Acomys wilsoni														
Aethomys sp.							x							
Mastomys natalensis													K&S	
Beamys hindei	VU W&R, 2005	x	x			x	x	x	W&R					
Cricetomys ansorgei													K&S	
Cricetomys gambianus								x	P, ' 84	2002				
Grammomys dolichurus					x	x	x						K&S	
Lemniscomys griselda			x							2002				
Mastomys natalensis		x						x						
Mus minutoides							x							
Pelomys fallax								x						
Rattus rattus +++									P, ' 84	2002			K&S	
Rattus norvegicus+++									P, ' 84	2002	P	2005		
Mus musculus +++									P, ' 84					
Mus minutoides									P, ' 84		P			
Saccostomus mearnsi		x	x	x										
Tatera robusta				x										
Tatera valida								x						
Tatera sp.														
Rodentia,, Gliridae														
Graphiurus murinus		x				x								
Graphiurus n.sp. cf *parvus*														
Rodentia, Thryonomyidae														
Thryonomys swinderianus														

Species and endemism	CITES and IUCN status	Weme	Kichi	Kiwengoma/ Matumbi	Mchungu	Mbarawala	Ruawa	Rondo	Unguja	Jozani	Pemba	Ngezi	Mafia	Mlola
Rodentia, Hystricidae														
Hystrix sp.				x										
Macrosceloidea, Macroscelididae														
Petrodromus tetradactylus					x		x						K&S	
Rhynchocyon chrysopygus	EN						x	x	P, ' 84	2002				
Rhynchocyon cirnei	NT			x				x						
Rhynchocyon petersi	VU		x	x	x	x	x		P, ' 84	2002			K&S	

4. DISCUSSION

4.1. Botanical

4.1.1. Plant diversity and richness of the Kilwa Forests

The coastal forests studied in Kilwa are found at a very low altitude and there is little variation among them. All forests studied are within a range of from 48 to 360m above sea level and therefore altitude cannot be a prominent factor in determining the vegetation communities. As pointed out by Clarke et al (2000) there are other important factors that may determine vegetation assemblages in these forests. Hall et al (2004) pointed out that coastal climatic conditions, soil, geology, and landscape characteristics might have significant impacts on the community structure of the vegetation in the coastal forests. In addtion, anthropogenic disturbances and historic factors as well as the activities of invertebrates such as termites may also play a role in shaping the coastal forests.

In this study, the soil properties and geology were identified as probably the most important factors in determining the vegetation communities since they occurred to a large extent on rocky outcrops. For example, coral rag was widely distributed in most parts of the forests. The species listed as threatened (www.redlist.org) including *Erythrina schliebenii, Cynometra webberi, Encephalator hildebrandtii* and C*ynometra gullmanii* occurred in forest on coral rag substrate. *Scorodophloeus fischeri, Karomia gigas, Coffea pseudozanguebariae, Leptactina papyrophloea, Vitex zanzibariensis* were found on silt loam and reddish soils. On the sandy soils common in flood plains, characterstic plant species included *Khaya anthotheca, Sorindeia madagascariensis* and *Polysphaeria parvifolia*.

Hall *et al* (2004) pointed out that anthropogenic activities result in *Brachystegia* forest, scrub, wooded grassland, grassland, open areas and forest edges habitats in coastal forests. This observation agrees with our findings in Kilwa that timber sawing, logging, bush fires and clearance for cultivation were activities that resulted in habitat changes and the current vegetation types in those forests. There has been frequent burning in these forests and the regenerating scrub vegetation types may be the result

Based on systematic sampling of vegetation, a total of 374 plant species were identified in the three forests. This includes both opportunitistic sampling and species associated with sampling points. These species include trees, shrubs, lianas and herbaceous plants. The studies by Whittaker (1960, 1974) on *alpha* diversity suggest that a forest fragment accommodates a minimum of 300 and a maximum of 800 plant species (cited by Clarke *et al.*, 2000). The species identified in this study approach the minimum as recorded by Whittaker (1974) showing that the Tanzanian coastal forests have high *beta* diversity. However, comparisons among forest fragments in terms of species composition can be misleading due to factors such as seasonality. Therefore the number of species within these forests is expected to be higher than what was

identified and recorded (374) and comparable to the maximum figures suggested by Whittaker (1960).

Among the species identified and recorded within sampling plots of all the forests surveyed, *Pteleopsis myrtifolia, Terminalia sambesiaca, Strychnos henningsii, Millettia stuhlmannii* and *Zanthoxylum chalybeum* were among the most abundant and widespread. There was a high level of overlap of species among forests particularly for the habitat generalist species such as these.

The vegetation types identified in the forests of Kilwa (Matapwa, Mitundumbea and Namatimbili) reflect the characteristic vegetation community types found in coastal forests in Tanzania as described by Clarke and Robertson (2000) with some modification. The vegetation types of mixed forest, *Brachystegia* forest, riverine, and evergreen forests are well represented in Namatimbili and Mitundumbea forests.

The existence of riverine habitat is important and it provides permanent moist conditions which favour a number of plant species that have been characterised by IUCN (2011) as threatened. The majority of these endemic plant species appear in the Swahelian region. These conditions however are very rare in the coastal forests generally (Clarke and Robertson, 2000). However, in the Kilwa area such riverine habitats can be found along Mavuji river (in Namatimbili) Mchinjidi river (Matapwa forest), and Nyange river (Pindiro). There are mixed forests, scrub, bushland and thickets which do not correspond directly with the classification by Clarke and Robertson (2000). The application of the classification system of coastal forest developed by Clarke and Robertson (2000) is difficult to apply in the coastal forests of south eastern Tanzania due to the complexity of the community types.

4.1.2. Species dependent on forest habitat, “coastal forest species”

Some species of plants are known to only be able to survive in or near forests and are therefore regarded as forest dependent species (see Table. 4.1 and Burgess and Clarke, 2000). In our survey, forest specialist species were present, but also a high number of ecologically generalist plant species were found. According to Burgess et al., (2000), the dominance of ecologically generalist plants in coastal forests is attributed to small-sized patches surrounded by mosaic habitats; these forest patches are generally dry for an extended period of the year. The riverine, evergreen, woodland, mixed and *Brachystegia* forest, bushland, thickets and scrub are the vegetation types in which both habitat specific and generalist species can be found.

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Table 4.1: Coastal forest endemic species recorded in each of the forests visited

x = present

S/n	Family	Plant species name	Author	Matapwa	Mitundumbea	Namatimbili
1	Annonaceae	*Artabotrys modestus*	Verdc.	x	-	-
2	Annonaceae	*Asteranthe asterias*	(S. Moore) Engel. & Diels	-	-	x
3	Annonaceae	*Lettowianthus stellatus*	Diels	-	-	X
4	Annonaceae	*Mkilua fragrans*	Verdc.	-	-	x
5	Annonaceae	*Ophrypetalum odoratum*	Diels	-	x	X
6	Annonaceae	*Uvariodendron gorgonis*	Verdc.	-	-	X
7	Annonaceae	*Xylopia latipetala*	Verdc.	-	-	X
8	Balanitaceae	*Balanites maughamii*	Sprague	-	-	X
9	Cycadaceae	*Encephalators hildebrandtii*	A. Br & Bouche var	-	-	X
10	Dichapetalaceae	*Dichapetalum braunii*	Engl. & K. Krause	-	-	X
11	Dilleniaceae	*Tetracera litoralis*	Gilg	x	-	X
12	Fabaceae	*Baphia kirkii*	Baker	-	x	-
13	Fabaceae	*Cassia abbreviata*	Oliv.	-	-	-
14	Fabaceae	*Cynometra webberi*	Baker f.	-	-	x
15	Fabaceae	*Cynometra greenwayi*	Brenan			
16	Fabaceae	*Cynometra gillmanii*	J. Leonard	-	-	x
17	Fabaceae	*Erythrina sacleuxii*	Hua	x	-	x
18	Fabaceae	*Erythrina schliebenii*	Harms	x	x	-
19	Fabaceae	*Scorodophloeus fischeri*	(Taub.) J. Leonard	-	x	-
20	Fabaceae	*Tessmannia densiflora*	Harms	-	-	x
21	Flacourtiaceae	*Xylotheca tettensis*	(Kloyzsch) Gilg	x	-	x
22	Melastomataceae	*Khaya anthotheca*	C. DC.	x	-	x
23	Rubiaceae	*Coffea pseudozanguebariae*	Bridson	-	x	x
24	Rubiaceae	*Coffea sessiliflora*	Bridson	-	x	x
25	Rubiaceae	*Chassalia umbraticola*	Vatke	-	x	-
26	Verbanaceae	*Karomia gigas*	(Faden) Verdc.	-	-	x
27	Verbanaceae	*Vitex zanzibariensis*	Vatke	x		
			Total	**8**	**8**	**20**

4.1.3 Threatened Plant species found in the survey

A number of globally threatened plant species were found in the survey, see Tables 3.1 and 4.2

Table 4.2: The conservation status of plant species detected

Based on the IUCN Redlist threat status VU= Vulnerable, EN= Endangered, Nt = Near threatened, CR= Critical, LC= least concern

Genus	**species**	**author**	**Red List status**	**Red List criteria**	**Red List criteria version**	**Year assessed**
Baphia	*kirkii*	Baker	VU	B1+2b	2.3	1998
Croton	*megalocarpoides*	Friis & Gilbert	LR/nt		2.3	1998
Cynometra	*webberi*	Bak.f.	VU	B1+2b	2.3	1998
Cynometra	*gillmanii*	Leon	CR	B1+2abcde, C2b	2.3	1998
Encephalartos	*hildebrandtii*	A.Braun & C.D.Bouché	NT		3.1	2009
Erythrina	*sacleuxii*	Hua	VU	B1+2b	2.3	1998
Erythrina	*schliebenii*	Harms	EX		2.3	1998
Gardenia	*transvenulosa*	Verdc.	VU	B1+2b	2.3	1998
Khaya	*anthotheca*	(Welw.) C. DC.	VU	A1cd	2.3	1998
Lettowianthus	*stellatus*	Diels	NT		3.1	2006
Milicia	*excelsa*	(Welw.) C.C. Berg	LR/nt		2.3	1998
Newtonia	*paucijuga*	(Harms) Brenan	VU	B1+2b	2.3	1998
Pterocarpus	*angolensis*	DC.	LR/nt		2.3	1998
Uvariodendron	*gorgonis*	Verdc.	EN	B2ab(iii)	3.1	2006
Vitex	*zanzibarensis*	Vatke	VU	B1+2c	2.3	1998
Zanthoxylum	*holtzianum*	(Engl.) Waterm.	VU	B1+2d	2.3	1998
Asteranthe	*asterias*	(S.Moore) Engl. & Diels	NT		3.1	2006
Artabotrys	*modestus*	Diels	LC		3.1	2006
Mkilua	*fragrans*	Verdc.	VU	B1ab(iii)	3.1	2006
Monanthotaxis	*trichocarpa*	(Engl. & Diels) Verdc.	LC		3.1	2006
Ophrypetalum	*odoratum*	Diels	VU	B1ab(ii,iii,v)	3.1	2006
Uvaria	*acuminata*	Oliv.	LC		3.1	2006
Sphaeranthus	*africanus*	L.	LC		3.1	2006
Vismia	*pauciflora*	Milne-Redh.	EN	B1+2c	3.1	1998
Cynometra	*suaheliensis*	(Taub.) Bak. f.	VU	B1+2b	2.3	1998
Karomia	*gigas*	(Faden) Verdc	CR			2011
Dialium	*holtzii*	Harms	VU	B1+2b	2.3	1998
Tessmannia	*densiflora*	Harms	EN	B1+2c, C2a	2.3	1998
Coffea	*pseudozanguebariae*	Bridson	VU	B1+2b	2.3	1998
Gardenia	*transvenulosa*	Verdc.	VU	B1+2b	2.3	1998
Vitex	*zanzibariensis*	Vatke	VU	B1+2c	2.3	1998

4.1.4. The impacts of human activities on vegetation

4.1.4.1. Clearance for cultivation

The reserve is surrounded by land used for crop cultivation. The Mavuji riparian is an important agriculture area producing vegetableswhich supply Mavuji, Nangurukuru, Kilwa and the other nearby inhabitants.

4.1.4.2. Logging, pole extraction and exploitation for timber

There is ongoing illegal logging in the southern coastal forests, including government forest reserves and local government reserves. This logging targets important timber species. some of which are species of conservation concern. Target species highly exploited for timber include *Khaya anthotheca, Albizia gummifera, Pterocarpus angolensis, Dalbergia melanoxylon* and *Milicia excels*a, *Pterocarpus tinctorius, Afzelia quanzensis, Millettia stuhlmannii*. The dense evergreen forest is now reduced to patchy bushland with only a few less valuable timber species remaining in the fragments. The riverine woodland dominated by *Khaya anthotheca* has been almost completely depleted of *Milicia excelsa*. The forests closer to human settlement contains regenerating *Scorodophloeus fischeri* and *Cynometra webberi* that are highly prized for use as building poles.

The biggest variation in vegetation community structure within forests appeared to be caused by logging that depleted the populations of some of the target species. When large timber trees are removed the forest canopy is opened up, thereby enabling more widespread species to regenerate and making the forest more vulnerable to fire. In the case of Mitundumbea and Namatimbili forests, villagers are occasionally employed to cut timber by people licensed from outside Kilwa District. Pitsaw camps were distributed throughout the Mitundumbea Forest Reserve. The authorities responsible for safeguarding these forests appear unable to do so, and forest resources are extracted in an unsustainable manner. This pattern of illegal exploitation cuts across many southern coastal Tanzania forests (Clarke and Karoma 2000).

4.1.4.3. Fire

Fire is one of the greatest threats to the forests of the coastal areas. Although woodlands are usually tolerant of low temperature fires, most forest species are sensitive to fire and easily

destroyed by it.. Intrusion of fire opens up the forest to widespread woodland species, thereby reducing habitats and their biodiversity values both in terms of species diversity and greatly affecting species of restricted distribution patterns.

4.1.4.4. Gypsum (Calcium sulphate) Mining

Gypsum mining occurring in Ngarama area is another threat to biodiversity. Gypsum is calcium sulphate ($CaSO_4 \cdot 2H_2O$), used for the production of cement and gypsum powder. Extraction machinery in the area destroys vegetation by removing the rock deposits below the surface. The most intense impact is in the southern part of Ngarama and the nearby areas as companies appear to be operating in the area without any prior environmental impact assessment or studies on the effects of mining on biodiversity in the areas.

4.1.4.5. Critical areas for conservation

The minimum area required to protect endemic species would need to include as many patches as possible along the southern Tanzanian coastal strip. Namatimbili, Mitundumbea and Matapwa forests were the only forests surveyed in this study. Protecting the threatened, endemic and the near-endemic species requires a matrix of interconnected patches with properly managed corridors and habitats. This should involve prioritization of patches that are closer to each other for easy management. The Mitundumbea, Matapwa, and Namatimbili including Pindiro and Ngarama are suggested as sites that would benefit from such conservation activities; it would be best if all of them could be included in conservation plans and actions.

4.1.4.6. Threatened species

Species at greatest risk are those with a restricted range, narrow habitat preference and a range not presently include in any of the formally protected coastal forests. Based on the present vegetation survey, some species that were previously documented as extinct (*Karomia gigas* and *Erythrina schliebenii*) have been found to be still present in the southern Tanzania forests. *Karomia gigas* has been located only at Mitundumbea Forest Reserve but *Erythrina schliebenii* has been found widely distributed in the southern Tanzanian forests (Particularly Namatimbili gorge and Matapwa Forests). The distribution of both species is being rapidly affected by fires and logging and tree exploitation. *Karomia* is more vulnerable as its habitats are more directly affected by human activities than those of *Erythrina schliebenii*. In contrast, for the latter species, the effects of anthropogenic activities are limited except for fire. The habitats are to some extent naturally protected due to the wide extent of rocky outcrops, unsuitable for

cultivation or for timber extraction, as most of the timber trees do not grow in this habitat. Studies of individual species would be needed to determine the threats for the other species considered threatened under the various IUCN categories.

4.1.5. Conservation Issues

4.1.5.1. General Conservation Issues

The general conservation issues relating to the surveyed forests include clearing for agriculture, fire, illegal and unsustainable removal of wildlife and forest vegetation and products, and in some places, mining. Another as yet unassessed threat is climate change, but if climate change results in generally drier conditions, or more intense weather events, then climate change can be expected to have negative effects on isolated forest patches and associated wildlife.

It should be noted that although a forest may not have a "charismatic" species or assemblages of species, this does not mean that the forest is not of biodiversity importance (Wegner et. al, 2009).

4.2. Zoological Biodiversity Issues

4.2.1. Conservation of particular species and groups

Because each class of animals has particular ecological requirements and conservation issues, each is discussed separately.

4.2.1.1. Amphibians

Amphibians generally have smooth, moist skins and depend on moist or wet conditions for living and reproduction. Many, but not all, depend,for example, on seasonal, temporary pools for reproduction. Also, some amphibian species undergo long- distance (one or more kilometeres) postbreeding movements away from the seasonal temperary breeding locations. Such species depend on dry season refuges in forest patches in which to survive the harsh conditions of a long dry season. The amphibian species we detected during this dry season study were geneneralist species not restricted to forest, but rather those which are known from woodlands as well as a wide variety of habitats (See Channing & Howell, 2006). The best way of addressing amphibian conservation issues is to ensure continued forest and breeding habitat.

While our field study was conducted during a dry period, the desk top study noted the presence of two species of anurans listed as Endangered according to the IUCN Redlist criteria, *Mertensophyrne howelli* and *Kassina jozani*. The former is known only from forest on Unguja and Mafia islands, and the latter only from Jozani forest. In addition, Ngezi forest provides habitat for three endemic amphibians in the genus *Phrynobatrachus*. These distributions emphasize the importance of these island forests and the need for further studies on the distributions of these species.

4.2.1.2. Reptiles

Most reptiles have dry, scaly skins and are not as dependent on moisture for day to day living as are the amphibians. Nor do they depend on free water for reproduction. The reptiles we detected were not strictly forest dependent species, but rather those found in open woodland and other habitats. Some of the reptiles, such as the tortoises, chameleons, spiny lizards, pythons and crocodile are listed on CITES Appendices. We found no evidence that traders were collecting for the live animal trade in the forests studied.

Usually crocodiles are persecuted because they are seen as a threat to human survival, and our informants suggested that indeed they were feared by local residents in the Mavuji area.

A single subspecies of reptile we captured, *Sepsina tetradactyla, tetradactyla,* has a coastal forest distribution and in Tanzania is known from only the coastal forests of south eastern Tanzania (Kiwengoma, Rondo and Litipo forests (see Msuya *et al.*, 2004); elsewhere this subspecies is known from northern Mozambique and from Malawi.

The desk top study indicated that in addition to the Unguja and Ngezi forests, coastal forest endemic reptiles have been found at Kiwengoma and Rondo forests, and a subspecies of the skink *Sepsina tetradactyla* found in coastal forests is known from Weme, Kichi and others.

Reptile conservation issues can be addressed by ensuring adequate natural habitat and by control of any commercial trade in reptiles that might develop in the future.

4.2.1.3. Birds

Twenty-eight species of birds are regarded as Endemic or Near Endemic to coastal forest in East Africa (Mlingwa *et al.*, 2000). Seven of these were detected in our survey. Among these seven, two, the Southern Banded Snake Eagle (*Circaetus fasciolatus*) and Reichenow's Batis (*Batis reichenowi*) have been categorised as Vulnerable and one, Plain-backed Sunbird (*Anthreptes reichenowi*) as Near Threatened using the IUCN Redlist criteria.

These same species were identified in the desk top study, and in addition, The presence of an endemic, the Pemba Scops Owl was noted. The coastal forests are recognized as important for intra-African migrants such as the Spotted Ground Thrush and others (Baker & Baker, 2002) and many in our study were recognized as Important Bird Areas (Baker & Baker, 2002).

4.2.1.4. Mammals

Some of the small mammals recorded were those of woodlands and generally mammals detected were not regarded as typically associated with forest, such as *Acomys* sp., the Spiny Mouse. However the rodent *Beamys hindei* is often associated with forest and it is widely distributed in coastal and Eastern Arc Mountain forests. The identification and distribution of squirrels is a complex topic in East Africa, but the two species captured would seem to be common residents of coastal forest. The Galagos (bushbabies) are best studied using specialist techniques involving recording of vocalisations, but the three species we detected would be regarded as "expected to occur" in coastal forests. Elephant Shrews as a group are of conservation interest but the two species of elephant shrew present based on our surveys are known to be of rather widespread occurrence and are not strict forest endemics, and they tolerate some human disturbance.

The largest species of mammal encountered, the African Elephant, is on Appendix I of CITES. In the study area it was hunted illegally and especially in riverine situations, vulnerable because of its need for water. We were told, and saw, that elephants concentrated in the riverine areas in the dry season and only moved away from these during the wetter season. Lions and leopard, also listed on the CITES Appendices, occurred and the presence of a female leopard in camp with two cubs indicates a breeding record for that species. Many of the larger ungulates appeared to be under pressure from poaching, and they were present in only small numbers. We witnessed poaching of medium sized mammals (bush pigs); the meat of which was dried and smoked. Snares, probably set for small ungulates, were also encountered in the forests.

Human wildlife conflict in the riverine forest areas was high, elephants are crop-raiders and hippos may damage crops and people; one of our assistants bore the scars of an interaction with a hippo.

Important coastal forest endemics from our study and the desk top study included *Pteropus voeltzkowi*, *Procolobus kirkii*, and *Genetta servalina*) (an introduced species).

One of the positive results of the desk top study and use of the Biodiversity Database of the Dept. of Zoology & Wildlife Conservation was the discovery of an early record of the Palm Civet from Jozani forest (specimen in the National Museums of Kenya, Nairobi), well before that of the observation of Perkin (2004).

Ensuring the continued existence of natural forest will assist the survival of smaller mammals, but for those that are hunted for their meat and are of a larger size, greater protection from poaching is needed.

4.2.2. General Conservation Issues and Recommendations

4.2.2.1 Management recommendations

Given their high biodiversity values, the coastal forests we surveyed as well as others we were unable to visit (see Desk top study) should remain the focus for conservation activities. Boundaries should be surveyed and connectivity increased. Effectively, the forests of Mbawara should be continuous to ensure the highest chances of success for biodiversity conservation.

Support should be provided to those reserves that bear the responsibility for conserving the near-endemic species, such as Mitundumbea, Namatimbili, and Pindiro. The fragmentation of these forests may have serious implications for larger mammals and strictly forest dependent birds. Efforts should be made to maintain the corridors between these forest patches.

Immediate action should be taken to halt deforestation in local authority reserves.

Priority research should include an assessment of the populations of the endemic species found in the southern coastal forests.

Many of the reserve borders need to be re-surveyed, re-established and clearly indicated and marked. Survey beacons should be installed for management and monitoring purposes.

Maps should be prepared of the local authority reserves since many of the forest patches in southeastern Tanzanian are not gazetted and their boundaries are not clearly marked. In this respect, Namatimbili forest appeared to be rich in species based on our sampling and to support coastal forest plants not found at the other sites.

Our survey indicated that the value of the coastal forests visited is high, especially as regards plant biodiversity. The detection of two species of plants previously thought to be extinct indicates the need for specialist surveys and continued monitoring. The forests are important habitat for many forms of wildlife and serve as a dry season refuge for larger forms such as elephants.

The riverine forest along the Mavuti river in the vicinity of Namatimbili Gorge is important habitat for amphibians in the dry season, and birds and large mammals depend on the river for water. Because this is one of the few areas with water, humans also prefer this area, and are cutting down the forest associated with the river for new cultivation.

There is a need to develop an approach to conserving the forest such that local residents are able to access some of the resources they need, but that also ensures the long-term survival of the forest and wildlife.

4.2.2.1 Other recomendations

There is a need to document and organise the information available on each of the Tanzanian coastal forests and constantly update this especially as regards taxonomic and redlist changes. It is only by constantly using and analyzing such data (as well as by monitoring to provide more) that sound management and conservation can be effected.

Over the years, numerous studies have been conducted on some but not all of the coastal forests (see www.tfcg.org for references). However, few forests appear to have been surveyed throughout a year, or even in both the dry and wet seasons.

We note that there is a need to have an active, constantly updated database of information for each forest, listing the published (or unpublished technical report) that provides biodiversity on it. Such a database should also include related social and ecnomic activities. In many cases, field surveys have only been done during a single season; in addition, certain groups, such as the invertebrates have not received sufficient study.

A major information gap we see is that there is little information on the distribution and role in the ecology of invertebrates in the coastal forests. Therefore, one of our recommendations is to conduct studies on the ecology of endemic or near endemic plants and animals, including invertebrates, as well as wider ecological and taxonomic studies

Little is known of the biology of the coastal species generally, and there are both plants and animals in need of attention, such as the endemic plants and smaller vertebrates. Such studies should be prioritised with the most highly threated species receiving priority.

There appears to be little information on the role of invertebrates in forest ecology, yet these animals obviously play important roles as primary consumers, as predators, as prey, as pollinators, etc. The current focus on vertebrates, while understandable, needs to be corrected.

4.2.3.2. Recommendations for monitoring, survey and study

The Terms of Reference included that the study should provide recommendations for species that could be monitored by the project to assess impact. Yet any discussion of monitoring must involve such critical issues as who will conduct the monitoring, what species or groups will be monitored, where and when the monitoring will take place, and most importantly, why and for what purpose the monitoring is being undertaken.

In some cases, it may be easier for those involved in the monitoring to use indirect indicators of forest quality and/or health rather than directly monitor species. The difficulties in monitoring species are numerous; one of the most obvious is the need for the monitors to be able to accurately identify particular species in the field.

Our observations indicate that both vegetation and larger forms of wildlife are being removed illegally and in an unsustainable manner from the forests we visited. For example, in many of.the forests visited, the largest mammals such as elephants have been heavily hunted and local residents indicated that these animals had been greatly reduced in number. This was also true for most of the larger mammals that were hunted for food. A programme that monitors illegal as well as legal hunting and removal of timber and timber products would provide critical baseline data on offtake and whther or not this is sustainable.

Given the lack of general information about species present and their ecology, it is not a simple matter to suggest suitable species for monitoring. In many cases, one may need to instead monitor governance (see Milledge et al., 2007).

If monitoring is to be done by local community members, then the species involved must be easy to recognise, and probably some training of the local community members will be required.

Depending on the species involved, specialized techniques may be needed, including pitfall trapping, camera trapping and much night time field work (especially but not only for bats).

For Unguja and Pemba islands, some forests are already receiving attention through WCS. We suggest that others may require more general surveys before it is possible to identify monitoring activities. We provide suggestions for survey and monitoring in Table 4.3.

Table 4.3: Sites sampled with recommendations for survey and /or monitoring

Name of Forest	Sampled in the field?	Vegetation to be monitored	Faunal monitoring
Ngarama Plateau forests	Visited only briefly	*Erythrina schliebenni*	
Mbarawara Plateau		*Erythrina schliebenni*	
Pindiro	Sampled briefly	*Erythrina schliebenni*	Hippopotamus
Namatimbili gorge	Sampled	*Erythrina schliebenni;*	
	Poaching, elephant movements; Sepsina t. tetradactylus	*Khaya anthotheca*	
Matapwa	Sampled	*Erythrina schliebenni*	Monitor poaching of large mammals
Mitundembea	Sampled	*Karomia gigas; Scorodophloeus fischeri*	Monitor poaching of large mammals
Matumbi-Kichi Hills	Not sampled	*Diospyros amaniensis; Xylopia collina*	*Cordylus tropidosternum*
Rondo plateau and surrounding hills	Not sampled	*Baphia kirkii, Newtonia paucijuga*	*Galigoides rondoensis*
Unguja forests:			
Jozani Chwaka NP visited so as to see not only situation inside the NP but also at the edges	Visited	*Canthium impressinervium, Mkilua fragrans*	Red Colobus population, *Kassina jozani*
Kitwele		General botanic survey	Survey for endemics
Uzi		General botanic survey	Red colobus, amphibians and reptiles need to be surveyed
Pemba Island			
Ngezi		General botanic survey	General survey to confirm identification of endemic species of amphibians reported to occur, and presence of other endemics;
Mkowe		General botanic survey	General survey, with emphasis on Pemba endemics
Kangagani Vitongoji		General botanic survey	General survey, with emphasis on Pemba endemics

4.3. Limitations of the study

A major limitation of the study was the season; the weather was dry and therefore many species were innactive and not able to be detected by trapping or other means; this was especially true for amphibians. Also due to dieback of most plant species during the season in which sampling was done, the identification was a problem making the checklist less exhaustive.

Other limitations included transport, difficulties of logistics and local bureaucracy that often took hours and days to complete. Thus, in some cases days budgeted for field sampling were instead spent in lengthy discussions with local officials. We also realised that due to the size of the team and the amount of equipment required, the use of two large capacity, strong, four-wheel drive vehicles were needed. We were fortunate to be able to arrange this as well as for a 2nd armed guard; it was only because of these arrangements that we were able to work efficiently and to sample vegetation and wildlife separately.

Early during the fieldwork, it was recognised that it would not be possible to visit all of the sites noted in the TOR. We therefore focussed on those with the least data associated with them; in some cases the botanical team was able to visit sites not seen by the zoological team, but still made observations on wildlife.

5.0. References

Baker, N.E. & Baker, E.M. 2002 Important Bird Areas in Tanzania: A first inventory. Wildlife Conservation Society of Tanzania, Dar es Salaam, Tanzania.

Beentje, H.H. J. No date. Botanical assessment of Ngezi Forest, Pemba. Prepared for the Zanzibar Forestry Development Project of FINNIDA and the Finnish National Board of Forestry. Unpublished report.

Broadley, D.G. 2003. The Reptiles of East Africa Coastal Mosaic. Biodiversity Foundation of Africa Seminar series No. 19, 4pp.

Broadley, D.G. & Howell, K.M. A Check List of the Reptiles of Tanzania, with Synoptic Keys. Syntarsus 1: 1-70.

Broadley, D.G. & Howell, K.M. 2000. Section 4.4 Reptiles. Pp. 191-199. In: Burgess, N.D. & Clarke, G.P. (eds). 2000 Coastal Forests of Eastern Africa. The IUCN Forest Conservation Programme, IUCN, Gland. xiii + 443 pp.

Broadley, D.G. & Wallach, Van. 2007a. A revision of the genus *Leptotyphlops* in northeastern Africa and southwestern Arabia (Serpentes: Leptotyphlopidae) *Zootaxa* 1408: 78pp.

Broadley, D.G. & Wallach, Van. 2007b. A review of East and Central African species of *Letheobia* Cope, revived from the synonymy of *Rhinotyphlops* Fitzinger, with descriptions of five new species (Serpentes: Typhlopidae). *Zootaxa* 1515: 31–68.

Broadley, D.G. & Wallach, Van. 2009. A review of the eastern and southern African blind-snakes (Serpentes: Typhlopidae), excluding *Letheobia* Cope, with the description of two new genera and a new species. *Zootaxa* 2255: 1–100.

Burgess, N.D. and Clarke, G.P. (Eds). *Coastal Forests of Eastern Africa*. xiii + 443 pp. IUCN, Gland, Switzerland ad Cambridge, UK.

Burgess, N. D.; Clarke, G. P.; Madgewick, J.; Robertson, S. A. & Dickinson, A. 2000. Section 3.1 Distribution and Status. pp. 71-81. In:: Burgess, N.D and G.P. Clarke, (eds).*The Coastal Forests of Eastern Africa*. IUCN

Channing, A. & Howell, K.M. 2006. Amphibians of East Africa. Cornell University Press, Ithaca, New York.

Clarke, G. P. 1995a. Checklist of the Vascular Plants from 13 Coastal Forests, Tanzania. Frontier Tanzania Technical report No. 15.

Clarke, G. P. 1995b. Status report for 6 Coastal forests in Lindi region, Tanzania. Coastal forest Research Programme. Frontier Tanzania Technical report No. 18.

Clarke, G.P. & Karoma, N.J. 2000. Section 5.1 History and Anthropogenic disturbance. pp. 251-261. In: Burgess, N.D. and Clarke GP (eds) Coastal Forests of the Eastern Africa. The IUCN Forest Conservation Programme, Cambridge, UK.

Clarke, G.P. & Robertson, A. 2000. Section 3.2 Vegetation Communities. pp. 83-102. In: Burgess, N.D. and Clarke GP (eds) Coastal Forests of the Eastern Africa. The IUCN Forest Conservation Programme, Cambridge, UK.

Clarke, G. P., Vollensen, K. & Mwasumbi, L.B. 2000 Vascular plants. pp. 129-147. In: N.D. Burgess & G.P. Clarke (eds). Coastal Forests of Eastern Africa. pp: 129–147. IUCN Gland, Switzerland & Cambridge, UK.

Clarke, G.P. & Dickinson, A. 1995 Frontier-Tanzania Technical Report No. 17. Status reports for 11 coastal forests in Coast region, Tanzania.

Davies, G. &. Howell, K.M. 2002. Chapter 4. Small mammals. Pp. 45- 68. In: Davies, G. African Forest Biodiversity. Earthwatch, London.

Doody, K. & and Hamerlynck, O.2003. *Biodiversity of Rufiji District. Environmental Management and Biodiversity Conservation of Forests, Woodlands and Wetlands of the Rufiji Delta and Floodplain.* Technical Report No. 44.

Frost, D.R., T. Grant, J. Faivovich, R. H. Bain, A. Haas, C. F. B. Hadad, R. O. De Sa, A Channing, M. Wilkinson, S. C. Donnellan, C. J. Raxworthy, J. A. Campbell, B. L. Blotto, P. Moler, R. C. Drewes, R. A. Nussbaum, J. D. Lynch, D. M. Green and W. C. Wheeler, 2006. The Amphibian Tree of Life. *Bulletin of the American Museum of Natural History* Number 297.

Goldman, H. V. & Winther-Hanen, J. 2003 The small carnivores of Unguja, results of a photo-trapping survey in Jozani Forest Reserve, Zanzibar, Tanzania. Unpublished report.

Haldane, L.A. (1946). Birds of Rufiji District. Tanganyika Notes and Records 22:27-53.

Hall, S.M., Staddon, S., Howell, K.M. & Fanning, E. (eds). 2004. Kasimbumbwi Forest Reserve, A Biodiversity Survey. Fronter Tanzania, Report 110.

Howell, K.M. 2002 Chapter 3. Amphibians and reptiles: Herptiles. Pp. 17-44. In Davies, G.African Forest Biodiversity. Earthwatch, London.

Jensen, F.P., Tøttrup, A.P. Christensen, K.D. 2005. The avifauna of coastal forests in southeast Tanzania. *Scopus* 25:1-22.

Kock, D. & Stanley, W. T. 2009 Mammals of Mafia Island, Tanzania. Mammalia 73: 339-352.

Kasenene, J.M. 1987. The influuence of mechanised selective logging, felling intensity and gap size on the vegetation of tropical moist forest reserve, Uganda. PhD Dissertation, Michigan State University, USA.

Kingdon, J. 1997. The Kingdon Field Guide to African Mammals. Academic Press, London.

Milledge, S.A.H., Gelvas, I.K. & Ahrends, A. 2007. Forestry, Governance and National Development: Lessons learned from a Logging Boom in Southern Tanzania. TRAFFIC East/Southern Africa/Tanzania Development Partners Group/Ministry of Natural Resources of Tourism, Dar es Salaam, Tanzania. 252 pp.

Mittermeier, R.A., Robles-Gil, P., Hoffman, M. Pilgrim, J.D., Brooks, T.M., Mittermeier, C.G., Lamoreux, J.L. & Fonesca, G. 2004. Hotspots revisited: Earth's biologically richest and most endangered terrestrial ecoregions. Mexico City: CEMEX.

Mlingwa, C.O.F,. Wayiyaki, E.M., Bennun, L. A. & Burgess, N.D. 2000 Birds:pp. 149-171. In Burgess, N.D. & Clarke, G. P., (eds) 2000 Coastal Forests of Eastern Africa. IUCN, Cambridge, UK.

Msuya, C.A., Sangu, G.M., Kayombo, C.K., Howell, K.M., Ndangalasi, H.J., Seleman, H., Ngalason, W. & Kihaule, P.M. 2004 Biological diversity survey of the Mbarawala and -Likonde plateaus in Lindi Region, Tanzania.

Mlingwa, C.O.F., Waiyaki, E.M., Bennun, L.A. & Burgess, N.D. (2000). Birds. *In*: Burgess, N.D. and Clarke, G.P. (Eds). *Coastal Forests of Eastern Africa*. Xiii + 443 pp. IUCN, Gland, Switzerland ad Cambridge, UK.

Moreau, R. E. & Pakenham, R. H. W. 1941 the land vertebrates of Pemba, Zanzibar, and Mafia: a zoogeographical study. Proceedings of the Zoological Society of London (Ser. A.) 110:97-128.

Msuya, C.A., Howell, K.M. & Channing. A. 2006 A new species of Running Frog, (Kassina, Anura: Hyperoliidae) from Unguja island, Zanzibar, Tanzania. African Journal of Herpetology 55: 113-122.

Mwasumbi, L. B., Suleiman, H.O. & Lyaruu, V.M. 2000. A Preliminary Biodiversity (Flora) Assessment of Selected Forests of the Rufiji Floodplain. Environmental Management and Biodiversity Conservation of Forests, Woodlands, and Wetlands of the Rufiji Delta and Floodplain. Technical report No. 10, July 2000.

Nahonyo, C.L., Mwasumbi, L.B., Eliapenda, S., Msuya, C., Mwansasu, C., Suya, T.M. Mponda, B.O. & Kihaule, P. 2002. Jozani-Chwaka Bay Proposed National Park, Biodiversity Inventory Report. Care Tanzania and Department of Commercial Crops, Fruits and Forestry, Serikali ya Mapinduzi, Zanzibar.

Nahonyo, C. L., Mwasumbi, L. B., Msuya, C. A. , Masao, C.A., Suya, T.B., & Shing'wenda, C. 2005. Ngezi-Vumawimbi Forest Reserves Biodiversity Inventory Report. Technical Report for CARE Tanzania/Department of Commercial Crops, Fruits and Forestry, Zanzibar.

Pakenham, R.W.H. 1983 The reptiles and amphibians of Zanzibar and Pema islands with a note of the freshwater fishes. Journal of the East Africa Natural History Society and National Museum 177: 1-40.

Pakenham, R.W.H. 1984 The mammals of Zanzibar and Pemba islands. Privately published, Harpenden, England 94 pp.

Perkin, A. 2004 A new range record for the African palm civet *Nandina binotata* (Carnivora, Viverridae) from Unguja Island, Zanzibar. African Journal of Ecology 42: 232-234.

Pickersgill, M. 2007 Frog search: results of expeditions to southern and eastern Africa from 1993-1999. Chimaira, Frankfurt.

Pomeroy, D. 1992. Counting birds. AWF Handbook technical handbook series. AWF, Nairobi, Kenya.

Poynton, J. C. 2000. Chapter 4.5 Amphibians. Pp. 201-210. In Burgess, N.D. & Clarke, G.P. (eds). 2000 Coastal Forests of Eastern Africa. The IUCN Forest Conservation Programme, IUCN, Gland. Xiii + 443 pp.

Rodgers W.A. Wingfield R. C. & Mwasumbi LB (Rev.) 1988. The vegetation of Mafi Island, Tanzania, Kirkia 13(1): 1988.

Rodgers,W. A. John, H, Mwasumbi L, Swai I, & Vollesen K. 1986. The Conservation status and Value of Ngezi reserve, Pemba Island, Tanzania. Forest Conservation Group July 1986.

Spawls, S., Howell, K.M., Drewes, R.C. & Ashe, J. 2004. Field Guide to the Reptiles of East Africa. A.C. Black, London.

Stanley, W.T. 2008 A new species of Mops (Molossidae) from Pemba Island, Tanzania. Actga Chiropterologica 10: 183-192.

Stanley, W.T.,. Goodman, S., & Hutterer, R. 1996. Notes on the insectivores and elephant shrews of the Chome Forest, South Pare Mountains, Tanzania (Mammalia: Insectivora et Macroscelidea). *Zoologische Abhandlungen* 49:111-147.

Stevenson, T. & J. Fanshawe, 2002 Field Guide to the Birds of East Africa. Christopher Helm, London.

Stohlgren, T.J., M.B. Falkner, & Schell. L.D. 1995. A modified-Whittaker nested vegetation sampling method. *Vegetatio* 117:113-121.

Waters, T. & Burgess, N. 1994. Preliminary result of Biological Surveys of Mchungu and Kiwengoma(Matumbi) forests and short visitis to seven other forested sites in Coastal Tanzania: July to September 1990. Frontier Technical report No.9.

Wegner, G., Howell, K., Davenport, T. & Burgess, N. 2009 The Forgotten 'Coastal Forests' of Mtwara, Tanzania: A Biologically Impoverished and yet important ecosystem. *Journal of East African Natural History* 98:167-209.

Whittaker RH. 1960. Vegetation of the Kiskiyou Mountain Oregon and California. *Ecology Monographs* 30:279-338

Whittaker, R.H. 1974. *Ordination and Classification of Communities*. Dr. W. Junk, Publisher, The Hague. p.737.

Wilson, D. & Reeder, D.M. 2005 Mammal Species of the World, a taxonomic and Geographic Reference, 3rd edition. The Johns Hopkins University Press, Baltimore, 2142 pp.

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6. Appendices

Appendix 6.1: Itinerary WWF SE Tz fieldwork Sept Oct Nov 20xx

Date	**Activity**	**Location, Notes**
x0 Sept	Shopping for supplies	Dar es Salaam
xx Sept	Packing Vehicle	Dar es Salaam
x2 Sept	Departed Dar 0700 hrs	Using 2 vehicles, one Toyota hardtop from Dept. of Zoology for most of the equipment (traps, etc) and a Land Rover Discovery for the people. Team consisted of Driver Rodius Munla, Dr. C. Msuya, (team leader) Dr. C. Mligo (botanist) Chacha Werema (bird specialist), Phillip Kihaule (mammal specialist) Michael Kimaryo (field assistant, trapper) and Suleimanni Haji (botanist assistant) .
		Arrived Kilwa ca x430 hrs as government offices were closing; lodged at Mujaka rest bandas.
x3 Sept	Time spent at WWF office, Kilwa and District offices	Kilwa, met Mr. Isaac Mulugu, WWF Office and Almasi Kashingja ; introduced to District Wildlife officerAbushiri Mbwana who introduced us to District Wildlife Officer Victor Shabu; and arranged for us to be in village by giving letters of introduction to villagers and instructions how to reach the villages and arranged for an armed Game Ranger from Selous, Mr. Godofisi, to accompany us. He had to be transported from the Selous Game Reserve because all other armed Wildlife Staff were out in the bush. We completed formalities for picking him up from Miguruwe Sector, Selous Game Reserve. We agreed to contribute fuel for a vehicle to pick him from 70 km away and return. We could not use our already overloaded vehicles to do this.
x4 Sept	Moved to campsite	07:30 then drove to Mavuji village , left Kilwa to meet armed Game Ranger at road junction; then drove to Mavuji village along main road to Lindi. Then to Mchkama Village. The village level formalities there

		took hours. We saw we could not camp at the village, the gorge working site would have been a 6 km walk in. But it would have taken at least one week for the now unused track to be cleared and we would have had to incur the cost of the villagers doing this. We thus decided to get someone who would accompany us to the area. We camped in a clearing when the stumps in the road prevented us from going further. This camp was made as dusk approached and elephants were present. We reached a point where we could not proceed any fuather and camped there in the Namatimbili forest (37L 0525733, UTM 899204x). But this camp was too far from the water for a permanent camp. Earlier, we had visited Mavuji Njenga on the Mbarawala Plateau
x5 Sept	Cleared a road and continued area suitable for a base camp in Namatimbili Gorge	Base camp in Namatimbili Gorge (37L 0525357, UTM 8992436) Base Camp; was established and 2 BPFLs set, one in woodland, on in riverine vegetation along the Mavuti River. We had ordered 6 assistants from the village to assist in setting raps, but we were ale to use only 3 due to the high prices charged by them for daily labour.
x6 Sept	Checking traps and processing specimens; set traplines 3,4, 5: Botanists establishing transects;	Botanists also found another good forest with evergreen patches
x7 Sept	Checking traps, processing specimens; Botanists conducting transects	Botanists found another good forest with evergreen patches
x8 Sept	Sampling continues	
x9 Sept	Sampling continues	
20 Sept	Sampling continues	

2x Sept	Traps checked, then removed; camp moved	We went back to Mkuchama village to say good bye; we also met former UDSM student Baruani Mishale , now post grad, conducting field work. Back to Mavuji, main road towards Lindi and Kiwawa village along main road that looks over Mutumbea; We had to go through much bureaucracy at village level; we had taken 2 villagers who we had trained, but we said we would also take some people from Kiwawa. This was agreed. These negotiations took most of the day. The terrain was extremely steep and rocky, we needed all the power the vehicles had. By x600 hrs, we had reached Mitundumbea area campsite on Mbarawala plateau. The area had been heavily logged, camp site at: 37L 053x097, UTM 8983498
22 Sept	Traplines 1-5 set	
23 Sept	Data collection began	
24 Sept	CAM drove back to Dar es Salaam	There was a need to relieve the University Driver Rodius Munda, so Land Rover Discovery drove back to Dar es Salaam to pick up driver Ulaya.
25 Sept		
26 Dept	Driver Rodius Munda dropped at main road to take bus back to Dar es Salaam; driver Ulaya now driving UDSM vehicle	Sampling continues
27 Sept	Botanists to Ngarama	Sampling continues
28 Sept	Data collection; traps removed, broke camp	Proceeding to Lindi late in the day, arriving at dusk.
29t Sept	Dealing with Lindi District and Regional offices and bureaucracy	Entire day spent dealing with formalities
30 Sept	Left Lindi town, drove to Mkwajuni village, then to	We were trying to find a suitable track into Matapwa (Namatapwa in the TOR); we went to a school, realised

	Mpingo, 8 km from main road.	we could not camp there becauswe it was too far from the forest. Then we went back to Mpingo and took a different route, but the camp site threw would have been a 5 km walk to the forest. We went to Mpingo, crossed the dry river bed and made a camp in the village where we could get water from a well: Camp set at 37L 0542545, UTM 8930845; no traplines set on this day.
01 Oct	Traps set, Matapwa village camp site;	
02 Oct	Mist nets set; Botanists set transects to the sw	Botanists found elephant kills; one was a tuskless animal so perhaps they were killed for meat rather than only ivory.
03 Oct	Sampling continued	
04 Oct	Sampling continued	
05 Oct	Sampling continued	
06 Oct	Trap lines closed and traps washed and packed	Others drove to Kilwa to return maps to WWF and to briefly visit Pindiro forest areas
07 Oct	Drove back to Dar, left about 0800 hrs, arrived in Dar ca 2000 hrs.	
20 Nov	Flew through Coastal Aviation to Unguja	K.M. Howell, C. Msuya, C. Mligo
21 Nov	Meeting with WCS representative	Met with Dr. T. Davenport to discuss Zanzibar and Pemba forest status and activities
22 Nov	Visit to Jozani and environs	Our planned night time fieldwork to detect the endemic frog *Kassina jozani* had to be cancelled
23 Nov	Flew back to Dar es Salaam	

We were not able to visit Matumbi or Rondo due to limitations (see above)

Appendix 6.2: Small vertebrates (amphibians, reptiles, mammals) detected using trapping techniques

Appendix 6.2.1: Namatimbili Forest, trapping data for small vertebrates

Bucket Pitfall Trapline I: Location: 37L. 0525492; UTM 8992204 **Habitat: Mixed evergreen forest, on a hill side**									
Date:		**16-Sep**	**17-Sep**	**18-Sep**	**19-Sep**	**20-Sep**	**21-Sep**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:									
	Stephopaedes loveridgei	1	0	0	0	0	0	1	0.015
	Panaspis wahlbergi	0	1	0	1	0	0	2	0.03
	Petrodromus tetradactylus	0	0	0	1	0	0	1	0.015
	Cordylus tropidosternum	0	0	0	0	1	0	1	0.015
Shermans		20	20	20	20	20	20	120	
Species	*Grammomys dolichurus*	0	1	0	0	0	1	2	0.017
Snaps		20	20	20	20	20	20	120	
Species	*Petrodromus tetradactylus*	0	1	0	0	0	0	1	0.008
Bucket Pitfall Trapline 2: **Habitat: Evergreen Riverine forest in gorge**									
Date:		**16-Sep**	**17-Sep**	**18-Sep**	**19-Sep**	**20-Sep**	**21-Sep**		
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:									
	Crocidura sp	1	0	0	1	0	0	2	0.03
	Stephopaedes loveridgei	1	0	0	0	0	0	1	0.015
	Trachylepis maculilabris	0	1	0	1	0	0	2	0.03
	Sepsina tetradactyla	0	1	0		0	0	1	0.015
	Panaspis wahlbergi	0	0	1	2	0	1	4	0.061
	Arthroleptis xenodactyloides	0	0	1		0	0	1	0.015
	Causus defilippi	0	0	0	1	0	0	1	0.015
Shermans		20	20	20	20	20	20	120	
Species									
Snaps									
Species	Eastern-bearded Scrub Robin	0	1	0	0	0	0	1	0.008
Bucket Pitfall Trapline 3: Location: 37L. 0526121 UTM 8990553 **Habitat: Woodland, edge of forest**									
Date:		**16-Sep**	**17-Sep**	**18-Sep**	**19-Sep**	**20-Sep**	**21-Sep**		

Trapping effort (No. of Buckets)		0	11	11	11	11	11	55	
Species:									
Shermans		0	20	20	20	20	20	100	
Species	*Panaspis wahlibergi*	0	1	2	0	0	0	3	0.03
Snaps									
Species	*Petrodromus tetradactylus*	0	0	0	0	1	1	2	0.02
Bucket Pitfall Trapline 4: Location: 37L. 0525925 UTM 8991418 Habitat: Woodland									
Date:		**16-Sep**	**17-Sep**	**18-Sep**	**19-Sep**	**20-Sep**	**21-Sep**		
Trapping effort (No. of Buckets)		0	11	11	11	11	11	55	
Species:	*Panaspis wahlbergi*	0	0	1	0	0	0	1	0.018
	Trachylepis maculilabris	0	0	1	0	0	0	1	0.018
Shermans		0	20	20	20	20	20	100	
Species									
Snaps		0	20	20	20	20	20	100	
Bucket Pitfall Trapline 5: Location: 37L. 0525362 UTM 8993612 Habitat: Riverine forest in gorge									
Date:		**16-Sep**	**17-Sep**	**18-Sep**	**19-Sep**	**20-Sep**	**21-Sep**		
Trapping effort (No. of Buckets)		0	11	11	11	11	11	55	
Species:									
	Arthroleptis xenodactyloides	0	5	4	0	0	0	9	0.164
	Amietophrynus maculata	0	1	0	0	1	1	3	0.055
	Arthroleptis sp	0	0	4	0	0	0	4	0.073
	Trachylepis maculilabris		0	0	1	0	0	1	0.018
	Panaspis wahlbergi		0	0	0	1	0	1	0.018
Shermans		0	20	20	20	20	20	100	
Species									
Snaps		0	20	20	20	20	20	100	

Appendix 6.2.2: Mitundumbea Forest Reserve trap data trapping data for small vertebrates

Bucket Pitfall Trapline I: Location: 37L. 0531007 UTM 8983813 Habitat: Open woodland on plateau									
Date:		**23-Sep**	**24-Sep**	**25-Sep**	**26-Sep**	**27-Sep**	**28-Sep**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:	*Mertensophryne loveridgei*	0	0	1	0	0	0	1	0.015
	Panaspis wahlbergi	2	0	0	0	0	0	2	0.03
	Crocidura sp	2	0	0	0	0	0	2	0.03
	Phrynobatrachus sp	0	0	1	2	0	0	3	0.045
Snaps		20	20	20	20	20	20	120	
	Lemniscomys sp	0	0	0	1	0	0	1	0.008
	Petrodromus tetradactylus	0	0	0	1	1	0	2	0.017
Shermans		20	20	20	20	20	20	120	
	Crocidura sp	1	0	0	2	0	0	3	0.025
	Acomys sp	2	0	0	0	0	0	2	0.017
Bucket Pitfall Trapline 2: Location: 37L. 0530712 UTM 8982915 Habitat: Closed woodland									
Date:		**23-Sep**	**24-Sep**	**25-Sep**	**26-Sep**	**27-Sep**	**28-Sep**		
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:	*Trachylepis maculilabris*	1	4	1	2	0	0	8	0.121
	Panaspis wahlbergi	1	2	1	2	0	0	6	0.091
	Arthroleptis sternodactylus	1	1	1	0	0	0	3	0.045
	Breviceps mossambicus	1	0	0	0	0	0	1	0.015
	Typhlops sp	1	0	0	0	0	0	1	0.015
	Schismaderma carens	0	1	0	0	0	0	1	0.015
	Trachylepis varia	0	0	0	3	0	2	5	0.076
	Heliobolus neumanni	0	0	1	0	1	0	2	0.03
	Lygodactylus capensis	0	0	0	0	0	1	1	0.015
	Agama mossambica	0	0	0	0	1	0	1	0.015
Snaps		20	20	20	20	20	20	120	
Species:	*Tatera* sp	1	0	0	0	0	0	1	0.008
Shermans		20	20	20	20	20	20	120	
Bucket Pitfall Trapline 3: Location: 37L. 0529920 UTM 8983175 Habitat: Evergreen forest									
Date:		**23-Sep**	**24-Sep**	**25-Sep**	**26-Sep**	**27-Sep**	**28-Sep**		

Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:	*Schismaderma carens*	2	0	0	0	0	0	2	0.03
	Heliobolus sp	0	0	1	0	0	0	1	0.015
	Trachylepis maculilabris	0	0	1	0	0	0	1	0.015
	Paraxerus palliatus	0	0	0	0	1	0	1	0.015
	Acomys sp	0	0	0	0	1	0	1	0.015
Snaps		20	20	20	20	20	20	120	
Species									
Shermans		20	20	20	20	20	20	120	
Species									
Bucket Pitfall Trapline 4: Location: 37L. 0532182 UTM 8984571 Habitat: Shrubland									
Date:		**23-Sep**	**24-Sep**	**25-Sep**	**26-Sep**	**27-Sep**	**28-Sep**		
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:									
	Mertensophryne loveridgei	4	1	0	3	0	0	8	0.121
Snaps		20	20	20	20	20	20	120	
Species									
	Petrodromus tetradactylus	0	0	0	0	0	1	1	0.008
Shermans		20	20	20	20	20	20	120	
Species	*Paraxerus palliatus*	0	0	0	1	0	0	1	0.008
Bucket Pitfall Trapline 5: Location: 37L. 0531385 UTM 8985951 Habitat: Riverine thicket									
Date:		**23-Sep**	**24-Sep**	**25-Sep**	**26-Sep**	**27-Sep**	**28-Sep**		
Trapping effort (No. of Buckets)		11	11	11	11	11	11	66	
Species:	*Mertensophryne loveridgei*	1	0	0	1	0	0	2	0.03
	Crocidura sp	1	0	0	0	0	0	1	0.015
	Apparalactis capensis	0	0	0	0	1	0	1	0.015
	Cordylus tropidosternum	0	0	0	0	1	0	1	0.015
Snaps		20	20	20	20	20	20	120	
Species	*Grammomys* sp.	0	0	0	1	0	0	1	0.008
	Acomys sp	0	0	0	0	0	1	1	0.008
Shermans		20	20	20	20	20	20	120	

Appendix 6.2.3: Matapwa Forest Reserve trapping data trapping data for small vertebrates

Bucket Pitfall Trapline I: Location: 37L. 0542522 UTM 8930868 Habitat: Open woodland in valley, forest/cultivation edge								
Date:		**2-Oct**	**3-Oct**	**4-Oct**	**5-Oct**	**6-Oct**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	55	
Species:	*Trachylepis maculilabris*	1	2	0	0	0	2	0.036
	Panaspis wahlbergi	1	5	2	1	0	9	0.164
Shermans		20	20	20	20	20	100	
	Acomys sp	0	1	0	1	0	2	0.02
	Tatera sp	0	0	0	1	0	1	0.01
Snaps		20	20	20	20	20	100	
Species	*Petrodromus tetradactylus*	0	1	1	1	0	3	0.03
	Tatera sp	1	1	1	0	0	3	0.03
	Paraxerus palliatus	0	0	2	1	0	3	0.03
Bucket Pitfall Trapline 2: Location: 37L 0542189 UTM 8930637 Habitat: Mixed dry forest								
Date:		**2-Oct**	**3-Oct**	**4-Oct**	**5-Oct**	**6-Oct**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	55	
Species:	*Trachylepis varia*	0-Jan	0-Jan	0-Jan	0-Jan	2-Jan	2-Jan	0.036
	Panaspis wahlbergi	3	3	0	0	0	6	0.109
	Knixys belliana	0	0	0	1	0	1	0.018
Shermans		20	20	20	20	20	100	
Snapss		20	20	20	20	20	100	
Species:	*Acomys* sp	1	0	0	0	0	1	0.01
Bucket Pitfall Trapline 3: Location: 37L 0542696 UTM 8931441 Habitat: Mixed dry forest in valley								
Date:		**2-Oct**	**3-Oct**	**4-Oct**	**5-Oct**	**6-Oct**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	55	
Species:	*Arthroleptis stenodactylus*	0	0	0	1	0	1	0.018
	Trachylepis maculilabris	0	0	0	2		2	0.036
	Panaspis wahlbergi	11	10	2	3	3	29	0.527
	Leptotyphlops sp	0	1	0	0	0	1	0.018

Shermans		20	20	20	20	20	100	
	Acomys sp	0	3	0	0	0	3	0.03
Snaps		20	20	20	20	20	100	
Species:								
Bucket Pitfall Trapline 4: Location: 37L 0541879 UTM 8930656 Habitat: Mixed dry forest on plateau								
Date:		**2-Oct**	**3-Oct**	**4-Oct**	**5-Oct**	**6-Oct**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	55	
Species:	*Panaspis wahlbergi*	0	0	4	0	3	7	0.127
	Trachylepis varia	0	0	1	0	0	1	0.018
	Gerrhosaurus flavigularis ?	0-Jan	0-Jan	1-Jan	0-Jan	0-Jan	1	0.018
	Agama mossambica	0	0	0	1	0	1	0.018
Shermans		20	20	20	20	20	100	
Species	*Mastomys* sp	3	2	0	1	0	6	0.06
Snaps		20	20	20	20	20	100	
Species:								
Bucket Pitfall Trapline 5: Location: 37L 0541543 UTM 8930532 Habitat: Mixed dry forest on plateau								
Date:		**2-Oct**	**3-Oct**	**4-Oct**	**5-Oct**	**6-Oct**	**Total**	**Catch rate**
Trapping effort (No. of Buckets)		11	11	11	11	11	55	
Species:	*Trachylepis maculilabris*	0	1	0	0	4	5	0.091
	Panaspis wahlbergi	7-Jan	4-Jan	6-Jan	5-Jan	6-Jan	28	0.509
	Leptotyphlops sp	0	0	0	1	0	1	0.018
Shermans		20	20	20	20	20	100	
Species:								
Snaps		20	20	20	20	20	100	
Species:								

Appendix 6.3: Birds and Bats detected, mist netting

1.NAMATIMBILI		
63 m of netting for 26 hours		
Species	Number of individuals	Catch rate per 1000 metre net hours
African Broadbill	2	1.22
Blue-mantled Crested Flycatcher	1	0.61
Grey-backed Camaroptera	2	1-Jan
Olive Sunbird	7	4-Jan
Red-capped Robin Chat	2	1.22
Yellow-bellied Greenbul	2	1.22
Yellow-streaked Greenbul	4	2.44
Bat		
63 metres of netting for 24 night hours		
Epaulated Fruit Bat	4	2.65
2. MITUNDUMBEA		
90 metres of netting for 24 daylight hours		
Species	Number of individuals	Catch rate per 1000 metre net hours
Crested Francolin	1	0.31
Eastern Nicator	5	1.54
Grey-backed Camaroptera	5	1.54
Peter's Twinspot	2	0.62
Bat		
90 metres of netting for 36 hours		
Epaulated Fruit Bat	4	1.85
3. MATAPWA		
93 metres of netting for 41 day light hours		
Species	Number of individuals	Catch rate per 1000 metre net hours
African Broadbill	1	0.26
African Goshawk	1	0-Jan
African Pygmy Kingfisher	2	0-Jan
Black-backed Puffback	1	0.26
Black-throated Wattle-eye	1	0.26
Eastern Nicator	3	0.79
Fisher's Greenbul	3	0.79
Forest Batis	1	0.26
Grey-backed Camaroptera	1	0.26
Olive Sunbird	2	0.52
Peter's Twinspot	7	1.84
Plain-backed Sunbird	1	0.26
Red-capped Robin Chat	2	0.52
Square-tailed Drongo	2	0.52
Tambourine Dove	3	0.79
Yellow-streaked Greenbul	1	0.26
Bats		
93 metres of netting for 36 night hours		
Epaulletted Fruit Bat	1	0.3
Lander's Horseshoe Bat	1	0.3

Appendix 6.4: Birds detected, Timed Species count data

Appendix 6.4.1: Timed Species Count, Namatimbili

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total Score	Mean Score
Hadada Ibis	0	0	6	0	0	6	1.2
Southern Banded Snake Eagle	6	0	0	0	0	6	1.2
African Goshawk	6	0	0	0	0	6	1.2
Crowned Eagle	6	0	0	0	0	6	1.2
Crested Guineafowl	0	0	0	6	0	6	1.2
Red-eyed Dove	0	0	0	0	0	0	0
Emerald-spotted Wood Dove	0	0	0	3	0	3	0.6
Tambourine Dove	6	0	0	0	0	6	1.2
Brown-necked Parrot	5	0	0	0	0	5	1
Livingstone's Turaco	5	0	0	0	0	5	1
Klaa's Cuckoo	5	0	0	0	0	5	1
African Wood Owl	5	0	0	0	0	5	1
Boehm's Spinetail	0	0	0	5	0	5	1
Narina's Trogon	0	0	0	6	0	6	1.2
Brown-hooded Kingfisher	5	0	0	0	0	5	1
Little Bee-eater	0	0	0	5	0	5	1
Boehm's Bee-eater	0	0	0	3	0	3	0.6
Green Wood Hoopoe	5	0	0	0	6	11	2.2
Common Scimitarbill	0	0	0	6	0	6	1.2
Crowned Hornbill	4	0	0	0	0	4	0.8
Trumpeter Hornbill	5	0	0	0	0	5	1
Southern Ground Hornbill	0	0	6	0	0	6	1.2
Yellow-rumped Tinkerbird	0	0	5	0	0	5	1
Green Barbet	0	0	6	0		6	1.2
Golden-tailed Woodpecker	4	0	5	0	0	9	1.8
African Broadbill	3	0	0	0	0	3	0.6
Black Cuckoo-shrike	0	0	0	6	0	6	1.2
White-breasted Cuckoo-Shrike	0	0	0	1	0	1	0.2
Zanzibar Sombre Greenbul	3	0	0	0	0	3	0.6
Yellow-bellied Greenbul	2	0	3	0	6	11	2.2
Yellow-streaked Greenbul	0	0	0	0	6	6	1.2
Common Bulbul	0	0	1	0	6	7	1.4
Eastern Nicator	0	0	6	0	0	6	1.2
Red-tailed Ant Thrush	1	0	0	0	0	1	0.2
Red-capped Robin Chat	2	0	0	0	0	2	0.4
Eastern Bearded Scrub Robin	0	0	3	0	0	3	0.6
Krestchmer's Longbill	0	6	0	0	0	6	1.2
Yellow-breasted Apalis	0	0	0	2	0	2	0.4
Grey-backed Camaroptera	0	6	0	0	0	6	1.2
Livingstone's Flycatcher	0	0	0	6	6	12	2.4
Crested Flycatcher	0	0	3	0	0	3	0.6
Ashy Flycatcher	1	0	0	0	0	1	0.2
African Paradise Flycatcher	0	6	0	0	0	6	1.2

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total Score	Mean Score
Yellow White-eye	0	0	5	0	6	11	2.2
Collared Sunbird	0	4	0	0	6	10	2
Plain-backed Sunbird	0	0	4	0	0	4	0.8
Amethyst Sunbird	0	0	0	4	0	4	0.8
Olive Sunbird	0	4	0	0	0	4	0.8
Black-headed Oriole	0	5	0	0	0	5	1
Ret'z Helmet Shrike	0	0	4	0	0	4	0.8
Black-backed Puffback	0	6	0	0	0	6	1.2
Tropical Boubou	0	0	0	5	0	5	1
Brubru	0	3	0	0	0	3	0.6
Sulphur-breasted Bush Shrike	0	0	0	5	0	5	1
Square-tailed Drongo	0	5	0	0	0	5	1
Black-breasted Starling	0	0	2	6	0	8	1.6
Dark-backed Weaver	0	3	0	0	0	3	0.6
Peters' Twinspot	0	0	0	4	0	4	0.8

Appendic 6.4.2: Timed Species Count, Mitundumbea

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total score	Mean Score
Bateleur	0	0	0	0	6	6	1.2
Crested Francolin	6	0	6	0	0	12	2.4
Crested Guineafowl	6	0	0	0	0	6	1.2
Red-eyed Dove	6	6	0	0	0	12	2.4
Emerald-spotted Wood Dove	6	0	6	0	0	12	2.4
Green Pigeon	6	0	0	0	0	6	1.2
Brown-headed Parrot	0	0	1	0	0	1	0.2
Brown-necked Parrot	6	0	0	0	0	6	1.2
Livingstone's Turaco	0	0	0	0	4	4	0.8
African Barred Owlet	0	0	6	0	0	6	1.2
Brown-hooded Kingfisher	0	0	0	3	0	3	0.6
Little Bee-eater	0	0	1	5	0	6	1.2
Boehm's Bee-eater	3	0	0	0	0	3	0.6
Green Wood Hoopoe	0	2	1	0	0	3	0.6
Crowned Hornbill	6	0	0	4	0	10	2
Trumpeter Hornbill	3	0	0	3	0	6	1.2
Southern Ground Hornbill	0	0	0	0	0	0	0
Yellow-rumped Tinkerbird	2	0	0	2	0	4	0.8
Golden-tailed Woodpecker	0	0	0	0	5	5	1
Cardinal Woodpecker	0	6	5	1	0	12	2.4
African Broadbill	0	0	0	6	0	6	1.2
Yellow-bellied Greenbul	4	0	0	0	0	4	0.8
Tiny Greenbul	0	0	0	0	6	6	1.2
Common Bulbul	5	0	0	0	0	5	1
Eastern Nicator	6	0	0	6	0	12	2.4
Red-capped Robin Chat	0	0	0	0	6	6	1.2
Eastern Bearded Scrub Robin	0	5	0	0	0	5	1

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total score	Mean Score
Piping Cisticola	0	4	0	5	0	9	1.8
Tawny-flanked Prinia	4	0	5	0	0	9	1.8
Yellow-breasted Apalis	0	0	0	0	5	5	1
Grey-backed Camaroptera	0	3	0	6	0	9	1.8
Reichenow's Batis	4	6	6	5	0	21	4.2
Cape Batis	0	0	0	0	3	3	0.6
Ashy Flycatcher	0	0	0	0	6	6	1.2
Collared Sunbird	6	6	4	1	0	17	3.4
Amethyst Sunbird	0	4	3	6	0	13	2.6
Olive Sunbird	6	6	0	3	0	15	3
Black-headed Oriole	0	0	6	0	0	6	1.2
Ret'z Helmet Shrike	0	0	6	0	0	6	1.2
Black-backed Puffback	6	0	6	6	0	18	3.6
Tropical Boubou	5	0	0	6	0	11	2.2
Brown-crowned Tchagra	5	6	5	0	0	16	3.2
Square-tailed Drongo	6	0	4	6	0	16	3.2
Dark-backed Weaver	0	5	0	6	0	11	2.2
Peters' Twinspot	0	4	0	0	0	4	0.8
Black and White Mannikin	0	4	0	0	0	4	0.8

Appendix 6.4.3: Timed Species Count, Matapwa

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total Score	Mean Score
Bat Hawk	0	0	0	6	0	6	1
Southern Banded Snake Eagle	0	0	0	6	0	6	1
Bateleur	0	0	0	6	0	6	1
Gymnogene	0	0	0	2	0	2	0
African Goshawk	6	5	0	0	5	16	3
Crowned Eagle	0	0	0	6	0	6	1
Red-eyed Dove	0	0	0	6	0	6	1
Emerald-spotted Wood Dove	0	0	0	6	0	6	1
Tambourine Dove	0	5	6	0	1	12	2
Brown-necked Parrot	0	6	0	1	0	7	1
White-browed Coucal	0	0	0	2	0	2	0
Spotted Eagle Owl	0	0	0	6	0	6	1
Little Bee-eater	5	0	0	0	0	5	1
Boehm's Bee-eater	3	0	0	0	6	9	2
Green Wood Hoopoe	1	0	0	0	0	1	0
Crowned Hornbill	5	0	6	0	0	11	2
Trumpeter Hornbill	4	4	0	0	0	8	2
Southern Ground Hornbill	0	0	0	2	0	2	0
Yellow-rumped Tinkerbird	0	0	6	0	5	11	2
Cardinal Woodpecker	6	0	0	0	6	12	2
African Broadbill	0	5	0	5	0	10	2
Zanzibar Sombre Greenbul	6	0	0	0	0	6	1
Yellow-bellied Greenbul	0	0	5	5	0	10	2

Species	Score 1	Score 2	Score 3	Score 4	Score 5	Total Score	Mean Score
Fischer's Greenbul	0	0	1	0	0	1	0
Common Bulbul	0	0	0	6	0	6	1
Eastern Nicator	6	0	3	0	6	15	3
Red-tailed Ant Thrush	0	0	0	0	0	0	0
Eastern Bearded Scrub Robin	0	0	6	0	5	11	2
Tawny-flanked Prinia	0	0	0	6	0	6	1
Yellow-breasted Apalis	0	0	2	0	0	2	0
Grey-backed Camaroptera	5	6	6	0	6	23	5
Cape Batis	0	4	6	0	4	14	3
Livingstone's Flycatcher	2	5	0	4	6	17	3
Crested Flycatcher	0	0	0	4	5	9	2
Ashy Flycatcher	0	0	0	6	0	6	1
Black and White Shrike Flycatcher	0	0	0	3	6	9	2
Mouse-coloured Sunbird	0	0	0	0	5	5	1
Collared Sunbird	6	5	0	4	0	15	3
Plain-backed Sunbird	0	0	4	0	0	4	1
Scarlet-chested Sunbird	0	0	0	1	0	1	0
Olive Sunbird	6	6	5	0	0	17	3
Black-headed Oriole	0	0	2	0	0	2	0
Chestnut-fronted Helmet Shrike	0	0	0	5	0	5	1
Black-backed Puffback	6	6	5	0	6	23	5
Tropical Boubou	6	0	0	1	0	7	1
Sulphur-breasted Bush Shrike	5	6	4	0	0	15	3
Square-tailed Drongo	2	6	6	0	1	15	3
Pied Crow	0	0	0	6	0	6	1
White naped Raven	0	0	0	6	0	6	1
Dark-backed Weaver	0	6	3	4	0	13	3
Peters' Twinspot	6	6	0	3	0	15	3
Blue-capped Cordonbleu	2	0	0	3	6	11	2
Red-billed Firefinch	4	0	0	0	0	4	1
Bronze Mannikin	0	0	0	5	5	10	2
Yellow-fronted Canary	0	0	0	5	0	5	1

Appendix 6.5: Photographs

Appendix 6.5.1: Botanical photos

Appendix 6.5.2: Zoological photos