

Annotated Checklist of Cockroaches and Termites of Zambia (Arthropoda: Insecta; Blattodea)

by

Keith J. Mbata

**Department of Biological Sciences
University of Zambia, P.O. Box 32379
Lusaka, Zambia**

ABSTRACT

An annotated checklist of cockroaches and termites (Order Blattodea) was compiled for Zambia in this study based, on intensive reviews of literature on insects of the country and on confirmations of some of these literature records through field biodiversity surveys conducted in various parts of the country in the last five years (1st March 2013-31st October, 2017). There are 27 genera of cockroaches in Zambia, containing 43 species and three subspecies. The conservation status of none of these cockroach species and subspecies is known as none so far has been evaluated to determine its IUCN conservation status. The epifamily Termitoidae comprise 38 genera, 87 species and one subspecies of termites in Zambia. Statuses of some termite species, particularly those of the genus *Macrotermes* Holmgren, 1909, are controversial in the country as they are viewed as crop pests on one hand and as human food on another. None of all termite species and the subspecies reported to occur in Zambia in this study has been evaluated to determine its conservation status in the country. Only seven species of cockroaches and two species of termites reported to occur in Zambia were confirmed to be present in the country in the biodiversity field surveys undertaken.

INTRODUCTION

As signatory to the International Convention on Biological Diversity (CBD) which it ratified on 8th May, 1998, Zambia is expected to: conserve its genetic, species and ecosystem diversity; use its biodiversity components sustainably; and to share the benefits derived from the use of its genetic resources equitably among its citizenry. Development of biodiversity conservation programmes in the country is however, rendered difficult due to scarcity of information available on the country's biodiversity, that is needed to develop the programmes. It goes without saying that in order for a country to conserve its biodiversity and other natural resources effectively, it needs to know what is there in the country to conserve, in the first place, and why, in the second place. There is therefore need for more, reliable and updated information on Zambia's biodiversity, generated through intensive literature reviews and biodiversity field surveys in the country, in order to develop reliable biodiversity conservation programmes.

The formulation of the country's first National Biodiversity Strategy and Action Plan (NBSAP1) in Zambia which operationized the CBD was based on very little information available at the time and that which was gathered through a one-month long country study undertaken in 1998 on the country's biodiversity (Chidumayo & Aongola, 1998; Mbata, 1998; MENR, 1998). The country study was sanctioned by the Ministry of Environment and Natural Resources (MENR) and was sponsored by the International Union for Conservation of Nature (IUCN). Revision of NBSAP1 into NBSAP2 by the Ministry of Ministry of Lands, Natural Resources and Environmental Protection (MLNREP) in 2015 aimed at harmonizing it with the (a) country's new development trajectory, (b) challenges related to climate change, and (c) the Global Strategic Plan on Biodiversity (2011-2020), as well as the Aichi Biodiversity Targets under the CBD of 2010, both of which the country had adopted, did not help matters as no additional data on the country's biodiversity was collected from the field.

This gap in knowledge on Zambia's biodiversity has now started being filled up through a five-year project on Zambia's biodiversity entitled, "Baseline Inventory of Zambia's Biodiversity". The Author is working on Zambia's invertebrates on the project, while four other researchers are concerned with vertebrates, lower and higher plants. This paper reports on an annotated checklist developed for cockroaches and termites of the country by the author from the study.

STUDY AREA

The study area was the whole country Zambia. This is an independent land-linked country in tropical Africa that is bordered by Angola to the west, the Democratic Republic of Congo to the north, Tanzania to the north-east, Malawi to the east, Mozambique to the south-east, Zimbabwe and Botswana to the south, and Namibia to the south-west. The country lies on the anterior African high plateau, between 1000–1600 m altitude above sea level, comprising mainly of a series of gently undulating to flat plateaux, occasionally broken by isolated hills or low ranges of resistant rocks (Davies, 1971).

Zambia has three distinct seasons namely, rainy season (November to April), cool dry season (May/June to August), and the hot dry season (September to October/November). The relatively high altitude gives the country pleasant subtropical weather during the cool dry season but the average monthly temperatures remain above 20 °C over most of the country for eight or more months of the year.

There are 14 ecosystems in the country, classed into Forest, Thicket, Woodland and Grassland vegetation types and the country is divided into ten administrative provinces (Figure 1).

MATERIALS AND METHODS

The study involved intensive literature surveys on what is known about the diversity of cockroaches and termites (Order Blattodea) in Zambia as information on country's biodiversity in general and the invertebrates, in particular, is very scanty in the literature. Only few researchers worked on the biodiversity of Zambia in the past. For example, Pinhey (1961, 1975), reported on

dragonflies and insects of Zambia, while Pinhey & Loe (1973, 1977) produced guides to the insects and butterflies of Zambia. No specific study has been done in the past on cockroaches of the country, but regarding termites, Nkunika (1982, 1986) pioneered the preparation of termite checklists in the country. He published a preliminary checklist of termites of the Southern province of the country and one for Lochinvar National Park, in the same province. The present study involved reviews of of the above-mentioned literature plus many more scattered on internet that the author came across on cockroaches and termites of Zambia and the southern Africa region. Further information on invertebrates of Zambia in the form of preserved specimens in the nation's major animal species repository was accessed by visiting the country's Livingstone National Museum.

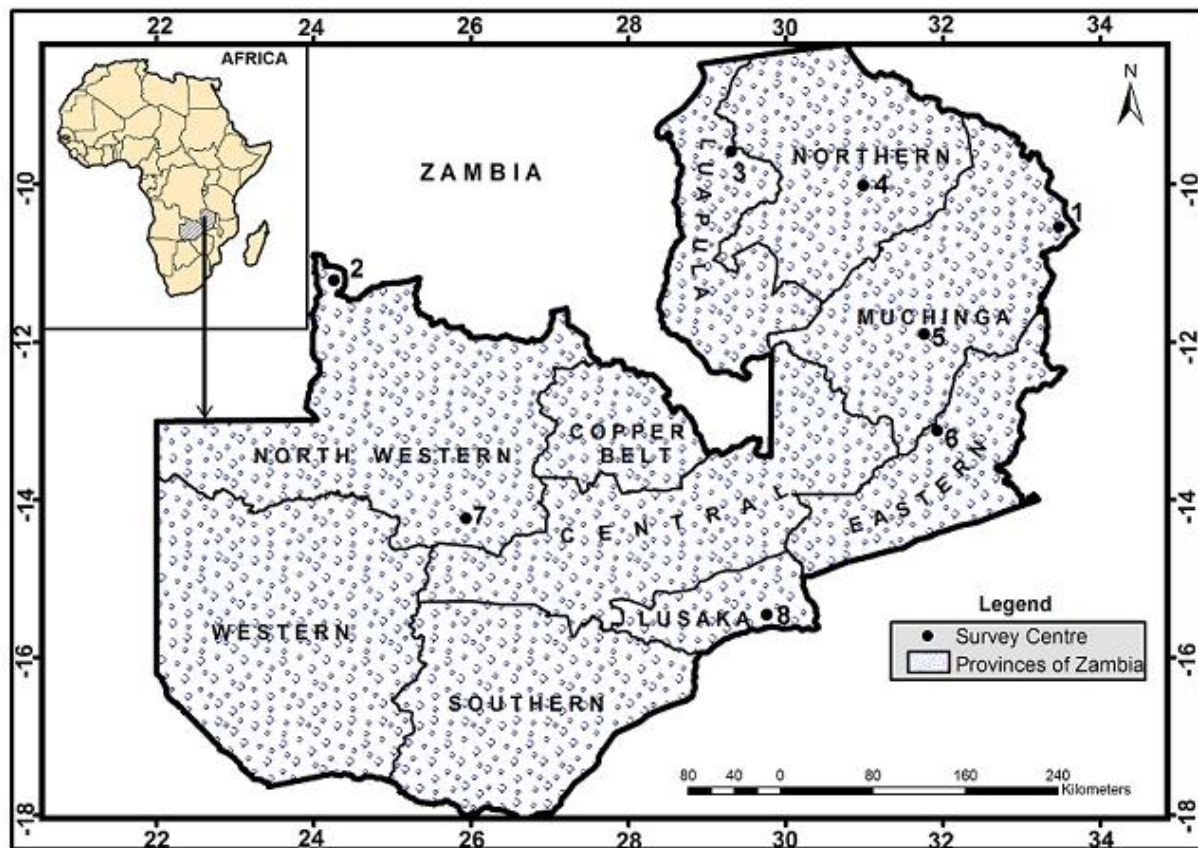


Fig. 1. Map of Zambia showing provinces and field biodiversity survey centres.

- 1 = Chowo forest, Nyika National Park.
- 2 = Source of the Zambezi River.
- 3 = Lumangwe Falls area.
- 4 = Chishimba Falls area.
- 5 = North Luangwa National Park.
- 6 = South Luangwa National Park.
- 7 = Treetops schools camp, Kafue National Park.
- 8 = Chakwenga, Lower Zambezi National Park.

Some of the cockroach and termite species recorded to occur in Zambia in the literature were confirmed in this study through identifications of specimens collected by the author and his research team through field biodiversity surveys undertaken in selected parts of the country (Fig. 1) during the study: Nyika National Park on Nyika plateau in Muchinga Province, in the northeast of the country; the source of the Zambezi River in the Northwestern Province; Luapula and Northern Provinces; North and South Luangwa National Parks; Lower Zambezi National Park; and Kafue National Park (KNP). The latter is the largest national park in the country and the fifth largest in Africa. Selection of parts of the country in which to conduct biodiversity surveys was based on accessibility of the part by road and the pristineness of the area. Areas with comparatively little human disturbance were preferred.

Sampling in each selected sampling site in a given survey centre/area in this study involved setting up two 100 x 0.25 meters long transects, spaced 50 meters apart, and collecting all cockroaches and termites encountered along each transect on vegetation and in litter using hands, forceps and aerial insect nets. Collected insects were preserved in 70% ethanol in well labelled bottles and taken to the University of Zambia, Department of Biological Sciences, in Lusaka, for identification. The number of sites sampled in each survey centre depended on vegetation/habitat types found in the centre. No termite mounds were dug up along the transects to collect termites. Only termites found on the surface in litter and on vegetation were collected for identification.

Identifications of cockroach and termite specimens collected during biodiversity surveys undertaken in the study, on the other hand, involved use of taxonomic identification keys (e.g. Krishna et al., 2013; Pratt, 2017; Marshall, 1989; Ruelle, 1989; Sands, 1998; Victor, 2016), photographs and comparisons of the specimens with already identified and confirmed preserved specimens in the Livingstone National Museum and in the teaching insect collections of the Department of Biological Sciences at the University of Zambia in Lusaka.

RESULTS

THE CHECKLIST

The checklist of cockroaches and termites known to occur in Zambia is presented in Table 1. below.

GENERAL REMARKS

Each species or subspecies entry in the checklist is divided into the following columns:

COMMON NAME(S): This column presents the vernacular (English) name(s) of the species or subspecies and occasionally, where known, a French common name(s) of the species or subspecies is also given.

SYNONYM(S): The alternative valid name(s) of the species or subspecies is presented in this column. If a name of a species or subspecies has many synonyms, only five were been selected and the number of remaining ones given.

IUCN STATUS: This Column presents the International Union for Conservation of Nature (IUCN) category that has been assigned to the species or subspecies taxon at its latest assessment for the IUCN red book, if any. The IUCN endangered species categories used in the checklist are: Extinct (EX); Extinct in the Wild (EW); Critically Endangered (CR); Endangered (EN); Vulnerable (VU); Near Threatened (NT); Least Concern (LC); Data Deficient (DD); and Not Evaluated (NE).

DISTRIBUTION: The column presents the geographical distribution of the species or subspecies in the world.

LOCATION IN ZAMBIA: All locations within Zambia are listed in this column, where the species or subspecies was collected.

NOTE: Species or subspecies that have been confirmed to occur in Zambia through the biodiversity field surveys conducted by the author (2013-2017) are marked with an asterisk in the checklist (*), while the places (localities) in Zambia where the species or subspecies was collected in the field surveys are marked with a double asterisk (**).

Table 1. Checklist of Blattodea of Zambia.

Family	Scientific name	Common name(s)	Synonym(s)	IUCN Status	Distribution	Locality in Zambia
Superfamily BLATTOIDEA: Epifamily Blattoidae.						
Blattidae	<i>Blatta orientalis</i> Linnaeus, 1758. *	Waterbug, Oriental cockroach or Common Cockroach. • A common household pest in urban Zambia.	<i>Blatta badia</i> (Saussure, 1863); <i>Blatta castanea</i> (Blanchard, 1851); <i>Blatta culinaris</i> (De Geer, 1773); <i>Blatta europaea</i> (Bartsch, 1846); <i>Blatta europea</i> (Bartsch, 1846), plus 20 more.	NE	Cosmopolitan in temperate regions [southern Russian origin]. Has been introduced to many other parts of the world. The Oriental Cockroach is common world-wide. There is no country that is free of the presence of this insect (Plant Pests and Diseases Act. No. 13. 1994; IUCN Red List of Threatened Species. Version 2016-3; Mbata, 1998; Ministry of Environment and Natural Resources (MENR), 1998).	Lusaka** in Lusaka Province; Livingstone in Southern Province.
	<i>Cartoblatta barbara</i> (Shelford, 1911).	Cockroach.	<i>Blatta barbara</i> (Shelford, 1911).	NE	Burundi, Democratic Republic of Congo, Zambia (Beccaloni, 2014).	Chingola, Copperbelt Province.
	<i>Cartoblatta pulchra</i> Shelford, 1910.	Cockroach.	<i>Periplaneta transvaalensis</i> Rehn, 1922.	NE	Kenya, Malawi, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe (Beccaloni, 2014; Catalogue of life, 2016).	Lusaka and Kafue, Lusaka Province.
	<i>Deropeltis comosa</i> Rehn, 1922.	Cockroach.	None.	NE	Kenya, Mozambique, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species, 2016).	Chiawa, Middle Zambezi valley, Lusaka Province.

	<i>Deropeltis melanophila</i> (Walker, 1869).	Cockroach.	<i>Deropeltis speiseri</i> Brancsik, 1896; <i>Ischnoptera melanophila</i> Walker, F., 1869.	NE	Cameroon, Ethiopia, Kenya, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species, 2016).	Gorges east of Victoria Falls, Livingstone, in Southern Province.
	<i>Deropeltis paulinoi</i> Bolivar, 1881.	Cockroach.	None.	NE	Angola, Democratic Republic of Congo, Mozambique, Namibia, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species, 2016).	Mkushi, in Central Province.
	<i>Deropeltis wahlbergi</i> (Stål, 1856).	Cockroach.	<i>Deropeltis nubila</i> Rehn, 1922; <i>Periplaneta wahlbergi</i> (Stål, 1856).	NE	Mozambique, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014).	Chingola, in Copperbelt Province.
	<i>Neostylopyga rhombifolia</i> (Stoll, 1813).	Harlequin cockroach.	<i>Blatta rhombifolia</i> (Stoll, 1813); <i>Blatta signata</i> Eschscholtz, 1822; <i>Neostylopyga histrio</i> (Saussure, 1864); <i>Neostylopyga signata</i> (Eschscholtz, 1822); <i>Periplaneta decorata</i> Brunner von Wattenwyl, 1865 plus two more.	NE	Circumtropical [Asian origin]; China, El Salvador, Germany, India, Indonesia, Madagascar, Malaysia, Mexico, Netherlands, Sweden, Taiwan, Tanzania, United Kingdom, USA (Texas), Zambia (Catalogue of life, 2016; Beccaloni, 2014).	Mbala, Northern Province.
	<i>Periplaneta americana</i> (Linnaeus, 1758). *	American Cockroach, Bombay canary, Kakerlac, Ship cockroach, Palmetto bug, Waterbug, American. ● A household pest in urban and rural Zambia	<i>Blatta americana</i> Linnaeus, 1758; <i>Blatta aurelianensis</i> Fourcroy, 1785; <i>Blatta domicola</i> Risso, 1826; <i>Blatta ferrugineofusca</i> Gronovius, 1764; <i>Blatta heros</i> Eschscholtz, 1822 plus nine more.	NE	Cosmopolitan [African origin]; Africa – Algeria, Botswana, Cameroon, Ghana, Kenya, Madagascar, Malawi, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe etc., (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species, 2016-3).	Lusaka** and Kafue**, in Lusaka Province; Monze**, Pemba, Choma** and Livingstone**, in Southern Province; Chingola, Chililabombwe and Ndola**, in Copperbelt Province; Kasama and Mbala, in Northern Province; Solwezi and Ikelenge** in Northwestern Province; Mongu and Kalabo in Western

						Province. Mpika in Muchinga Province; Chipata in Eastern Province (Mbata, 1998; Ministry of Environment and Natural Resources 1998).
<i>Pseudoderopeltis anthracina</i> (Brancsik, 1896).	Cockroach.	<i>Pseudoderopeltis brancsiki</i> (Shelford, 1910); <i>Stylopyga anthracina</i> (Brancsik, 1896); <i>Stylopyga brancsiki</i> (Shelford, 1910).	NE	Malawi, Mozambique, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka and Kafue, in Lusaka Province.	
<i>Pseudoderopeltis caffra caffra</i> (Stål, 1856).	Cockroach.	<i>Periplaneta caffra</i> (Stål, 1856)	NE	Botswana, Mozambique, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014).	Gorges east of Victoria Falls, Livingstone, in Southern Province.	
<i>Pseudoderopeltis caffra vicina</i> Princis, 1955.	Cockroach.	<i>Pseudoderopeltis vicina</i> Princis, 1955	NE	Burkina Faso, Burundi, Rwanda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014).	Solwezi, in Northwestern Province (Catalogue of life, 2016; Cockroach species file, 2016).	
<i>Pseudoderopeltis diluta</i> (Stål, 1856).	Cockroach.	<i>Periplaneta africana</i> Karny, 1908; <i>Periplaneta diluta</i> Stål, 1856.	NE	Botswana, Namibia, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; Pinhey, 1975).	Victoria Falls region at gorges east of the Victoria Falls, Livingstone, Southern Province.	
<i>Pseudoderopeltis inermis</i> Princis, 1963.	Cockroach.	None.	NE	South Africa, Zambia (Catalogue of life, 2016; Beccaloni, 2014).	Chilanga, Lusaka Province.	
<i>Pseudoderopeltis transvaalensis</i> Rehn, 1922.	Cockroach.	None.	NE	Mozambique, Namibia, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014).	Kapiri Mposhi, in Central Province.	
Superfamily BLATTOIDEA: Epifamily Termitoidea						
Termitidae	<i>Acholotermes epius</i> Sands, 1972	Termite or White Ant. ● Known only from its type locality, Lusaka, in Zambia.	None	NE	Zambia, Zimbabwe (Krishna et al., 2016; Nkunika, 1982; Sands, 1998).	Lusaka (Type locality), in Lusaka Province.

	<i>Acholotermes imbellis</i> Sands, 1972.	Termite or White Ant.	None.	NE	Democratic Republic of Congo, Zambia (Livingstone National Museum Collection, Zambia).	Lusaka, in Lusaka Province.
	<i>Adaiphrotermes scapheutes</i> Sands, 1972.	Termite or White Ant.	None.	NE	Malawi; Zambia (Krishna et al., 2016; Sands, 1998).	Kitwe (Type locality), in Copperbelt Province.
	<i>Aderitotermes fossor</i> Sands, 1972.	Termite or White Ant.	None.	NE	Cameroon; Kenya; Malawi; Tanzania; Uganda; Zambia (Krishna et al., 2016; Sands, 1998).	Kabwe, in Central Province.
	<i>Aganotermes oryctes</i> Sands, 1972.	Termite or White Ant.	None.	NE	South Africa, Zambia, Zimbabwe (Krishna et al, 2016; Nkunika, 1982, 1986; Sands, 1998).	Livingstone, in Southern Province.
	<i>Allodotermes rhodesiensis</i> (Sjöstedt, 1914).	Termitid Termite or Fungus Growing Termite.	<i>Termes</i> (<i>Allodotermes</i>) <i>rhodesiensis</i> Sjöstedt, 1914; <i>Allodotermes schultzei orientalis</i> Fuller, 1922; <i>Termes</i> (<i>Protermes</i>) <i>esuriens</i> Sjöstedt, 1924; <i>Termes liber</i> Van Boven, 1969.	NE	Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe (Nkunika, 1982; Ruelle, 1979).	Southern Province.
	<i>Allodotermes schultzei</i> (Silvestri, 1908).	Termitid Termite or Fungus Growing Termite.	<i>Termes schultzei</i> Silvestri, 1908.	NE	Botswana, Namibia, South Africa, Swaziland, Zambia, Zimbabwe (Nkunika, 1982, 1986; Ruelle, 1979).	Southern Province.
	<i>Allodotermes tenax</i> (Silvestri, 1912).	Termitid Termite or Fungus Growing Termite.	<i>Termes</i> (<i>Allodotermes</i>) <i>tenax</i> Silvestri, 1912; <i>Termes tenax</i> Silvestri, 1912	NE	Democratic Republic of Congo, Kenya, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe (Hocking, 1965; Nkunika, 1982, 1986; Ruelle, 1979).	Livingstone, in Southern Province.
	<i>Amitermes importunus</i> Sands, 1959.	Termite or White Ant.	None.	NE	Malawi, Zambia, Zimbabwe (Bouillon and Mathot, 1965; Nkunika, 1982; Sands 1959, 1992, 1998).	Southern Province.
	<i>Amitermes messinae</i> (Fuller, 1922).	Termite or White Ant.	<i>Amitermes harleyi</i> Harris, 1957; <i>Hamitermes messinae</i> Fuller, 1922.	NE	Egypt, Iran, Kenya, Malawi, Saudi Arabia, South Africa, Sudan, Tanzania, Yemen, Zambia (Krishna et al., 2016; Nkunika, 1982).	Southern Province.
	<i>Amitermes truncatidens</i> Sands, 1959.	Termite or White Ant.	None	NE	Democratic Republic of Congo, Malawi, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1965; Nkunika 1982, 1986; Sands 1992, 1998).	Southern Province.
	<i>Amitermes unidentatus</i> (Wasmann, 1897).	Termite or White Ant.	<i>Amitermes macrocephalus</i> Ghidini, 1941; <i>Eutermes meruensis</i> Sjöstedt, 1911; <i>Hamitermes elongatus</i> Silvestri, 1914; <i>Hamitermes limpopoensis</i> Fuller, 1922; <i>Termes</i>	NE	Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Rwanda, South Africa, Sudan, Tanzania, Uganda, Zambia (Krishna et al., 2016).	Lusaka, in Lusaka Province.

			<i>unidentatus</i> Wasmann, 1897.			
<i>Ancistrotermes latinotus</i> (Holmgren, 1912).	Termite or White Ant.		<i>Ancistrotermes lebomboensis</i> Fuller, 1922; <i>Microtermes latinotus</i> Holmgren, 1912; <i>Termes crucifer</i> Sjöstedt 1900.	NE	Central African Republic, Congo-Brazzaville, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Coaton and Sheasby, 1975; Harris, 1966; Nkunya 1982, Nkunya, 1986; Wood and Tomas, 1989).	Southern Province.
<i>Anenteotermes disluctans</i> Sands, 1972.	Termite or White Ant.		<i>Anoplotermes luescheri</i> Mathur and Thapa, 1962.	NE	Congo-Brazzaville, Democratic Republic of Congo, Uganda, Zambia (Nkunya 1982, 1986; Sands, 1998.).	Southern Province.
<i>Angulitermes truncatus</i> Sjöstedt, 1926.	Termite or White Ant.		None.	NE	Ghana, Kenya, Nigeria, Senegal, Tanzania, Uganda, Zambia, Palaearctic Region [Saudi Arabia] (Krishna et al., 2016; Nkunya, 1982).	Lochinvar National Park, Monze, Southern Province.
<i>Astalotermes brevior</i> (Holmgren, 1913).	Termite or White Ant.		<i>Anoplotermes sanctus</i> Silvestri, 1914; <i>Mirotermes</i> (<i>Procubitermes</i>) <i>mbazwanicus</i> Fuller, 1925; <i>Mirotermes</i> (?) <i>Procubitermes</i> <i>mfolozii warreni</i> Fuller, 1925; <i>Mirotermes</i> (<i>Cubitermes</i>) <i>natalensis brevior</i> Holmgren, 1913.	NE	Angola, Namibia, South Africa, Swaziland, Zambia, Zimbabwe (Nkunya, 1982; Sands, 1972, 1998).	Southern Province.
<i>Astalotermes impediens</i> Sands, 1972.	Termite or White Ant.		None.	NE	Zambia (Krishna et al., 2016; Sands, 1972).	Ndola (Type locality), in Copperbelt Province.
<i>Astalotermes murcus</i> Sands, 1972.	Termite or White Ant.		None.	NE	Congo-Brazzaville, Zambia (Krishna et al., 2016; Sands, 1998).	Ndola (Type locality), in Copperbelt Province.
<i>Astratotermes aneristus</i> Sands, 1972.	Termite or White Ant.		None.	NE	Zambia (Krishna et al., 2016; Sands, 1998).	Kitwe (Type locality), in Copperbelt Province.
<i>Crenetermes albotarsalis</i> (Sjöstedt, 1897).	Termite or White Ant.		<i>Eutermes albotarsalis</i> Sjöstedt, 1897.	NE	Cameroon, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Gabon, Nigeria, Rwanda, Tanzania, Zambia (Bouillon and Mathot, 1965; Harris, 1951a).	Kabwe, in Central Province.
<i>Cubitermes inclitus</i> Silvestri, 1912.	Termite or White Ant.		<i>Cubitermes bilobatus inclitus</i> Silvestri, 1912; <i>Eutermes</i> (<i>Cubitermes</i>) <i>domifaber</i> Sjöstedt, 1913.	NE	Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Malawi, Rwanda, Tanzania, Uganda, Zambia (Bouillon and	Type locality: Zambia [formerly, Northern Rhodesia],

		<ul style="list-style-type: none"> • Taxon known only from its type locality Bangweulu area, Luapula Province, Zambia. 			Mathot, 1966; Snyder, 1949; Williams, 1966).	Banguelo (Lake Bangweulu area), Samfya, in Luapula Province. Also collected on Ndola-Kitwe road, in the Copperbelt Province; and in Abercorn [Now Mbala], in Northern Province.
	<i>Cubitermes minitabundus</i> (Sjöstedt, 1913).	Termite or White Ant.	<i>Eutermes</i> (<i>Cubitermes</i>) <i>minitabundus</i> Sjöstedt, 1913; <i>Isognathotermes minitabundus</i> Sjöstedt, 1926.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Zambia (Bouillon and Mathot, 1966; Hocking, 1965; Sands, 1998; Williams, 1966).	Chingola, Nchanga, Ndola-Kitwe road and Kitwe-Dola Hill road, in Copperbelt Province; 8.045km (5 m.) N. of Chembe ferry, Luapula R., in Luapula Province; and Abercorn [Now Mbala], in Northern Province.
	<i>Cubitermes montanus</i> Williams, 1966.	Termite or White Ant.	None.	NE	Malawi, Tanzania, Zambia (Bouillon and Mathot, 1966; Nkunica, 1982).	Southern Province.
	<i>Cubitermes muneris</i> (Sjöstedt, 1913).	Termite or White Ant.	<i>Cubitermes bisulcatus</i> (Sjöstedt, 1914); <i>Cubitermes muneris</i> Sjöstedt, 1926; <i>Eutermes</i> (<i>Cubitermes</i>) <i>bisulcatus</i> Sjöstedt, 1914; <i>Eutermes</i> (<i>Cubitermes</i>) <i>muneris</i> Sjöstedt, 1913.	NE	Congo-Zaire [Now Democratic Republic of Congo], Kenya, Malawi, Tanzania, Zambia (Bouillon and Mathot, 1966; Nkunica, 1982; Sands, 1998; Williams, 1966).	Southern Province; Kitwe-Dola Hill road., Ndola=Kitwe road, in Copperbelt Province; Abercorn [Now Mbala], in the Northern Province; and the Zambian environs of Tunduma in Muchinga Province.
	<i>Cubitermes oblectatus</i> Harris, 1958.	Termite or White Ant.	None.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Tanzania,	Abercorn [Now Mbala], in Northern Province;

					Zambia (Bouillon and Mathot, 1966; Williams, 1966).	Nakonde, in Muchinga Province.
<i>Cubitermes orthognathus</i> (Emerson, 1928).	Termite or White Ant.	<i>Mirotermes</i> (<i>Cubitermes</i>) <i>orthgnathus</i> Emerson, 1928.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Malawi, Tanzania, Uganda, Zambia (Bouillon and Mathot, 1966; Nkunika, 1982; Sands, 1998; Williams, 1966).	Southern Province.	
<i>Cubitermes pallidiceps</i> (Sjöstedt, 1913)	Termite or White Ant.	<i>Eutermes</i> (<i>Cubitermes</i>) <i>pallidiceps</i> Sjostedt, 1913.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Williams, 1966).	Solwezi, in Northwestern Province.	
<i>Cubitermes sanctaeluciae</i> (Fuller, 1925).	Termite or White Ant.	<i>Mirotermes</i> (<i>Cubitermes</i>) <i>sanctaeluciae</i> Fuller, 1925.	NE	South Africa, Zambia (Sands, 1998).	Lusaka and Kafue, in Lusaka Province.	
<i>Cubitermes sankurensis</i> Wasmann, 1911.	Termite or White Ant.	<i>Cubitermes sankurensis elongata</i> Sjostedt, 1926 [junior homonym of <i>Cubitermes fungifaber elongata</i> Sjostedt, 1924; replacement name needed if taxon is removed from synonymy]; <i>Eutermes</i> (<i>Cubitermes</i>) <i>cubicephalus</i> Sjostedt, 1913; <i>Eutermes sibitiensis</i> Sjostedt, 1925.	NE	Angola, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Malawi, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Hocking, 1965; Williams, 1966).	Luapula River at Chembe Ferry, Lake Bangweulu at Samfya, in Luapula Province; Ndola, Dola Hill, in the Copperbelt Province; Abercorn [Now Mbala], in Northern Province.	
<i>Cubitermes tenuiceps</i> (Sjöstedt, 1913).	Termite or White Ant.	<i>Eutermes</i> (<i>Cubitermes</i>) <i>tenuiceps</i> Sjostedt, 1913.	NE	Congo-Zaire [Now Democratic Republic of Congo], Malawi, Tanzania, Zambia (Bouillon and Mathot, 1966; Nkunika 1982, 1986; Williams, 1966).	Kafue R., Mazabuka rd., in Southern Province; 30 m. W. of Mumbwa, in Central Provice.	
<i>Cubitermes transvaalensis</i> (Fuller, 1925).	Termite or White Ant.	<i>Mirotermes</i> (<i>Cubitermes</i>) <i>transvaalensis</i> Fuller, 1925.	NE	South Africa; Zambia (Nkunika 1982, 1986).	Southern Province.	
<i>Cubitermes ugandensis</i> Fuller, 1923.	Termite or White Ant.	<i>Cubitermes antennalis</i> Sjostedt, 1924.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Malawi, Rwanda, Tanzania, Uganda, Zambia (Bouillon and Mathot, 1966; Williams, 1966).	Bangweulu environs including Samfya in Luapula Province; near Tunduma in Muchinga Province.	

	<i>Enetotermes bembicoides</i> Sands, 1995.	Termite or White Ant.	None.	NE	Zambia (Sands, 1998).	Lusaka (Type locality), in Lusaka Province.
	<i>Fulleritermes contractus</i> (Sjöstedt, 1913).	Termite or White Ant.	<i>Coarctotermes brunneus</i> Noiro, 1955; <i>Eutermes contractus</i> Sjöstedt, 1913.	NE	Congo-Zaire [Now Democratic Republic of Congo], Namibia, South Africa, Zambia, Zimbabwe (Bouillon and Mathot 1965, 1966; Coaton and Sheasby, 1973c; Nkunica, 1982; Sands, 1957; Sands 1965; Sands, 1998).	Southern Province.
	<i>Furculitermes soyeri</i> Emerson, 1960.	Termite or White Ant.	None.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Zambia (Sands, 1998).	Chingola, Copperbelt Province.
	<i>Lepidotermes goliathi</i> (Williams, 1954).	Termite or White Ant.	None.	NE	Tanzania; Zambia; Zimbabwe (Uys, 1994).	Lusaka, in Lusaka Province.
	<i>Macrotermes bellicosus</i> (Smeathman, 1781).	Bark-eating termite; Termitid Termite or Fungus Growing Termite or Edible termite (at least in Zambia).	<i>Bellicositermes convexus</i> Grasse, 1937; <i>Termes bellicosus</i> Smeathman, 1781; <i>Termes bellicosus zambesiana</i> Van Boven, 1969; <i>Termes carboniceps</i> Sjöstedt, 1924; <i>Termes nigeriensis</i> Sjöstedt, 1911.	NE	Angola, Cameroon, Central African Republic, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Eritrea, Ethiopia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Cote d'Ivoire), Kenya, Liberia, Malawi, Mauritania, Mozambique, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Yemen, Zambia (Coaton, 1962c & d; Mbata, 1995; Ruelle, 1970; Silvestri, 1912; Sjöstedt, 1926).	Lusaka, in Lusaka Province.
	<i>Macrotermes falciger</i> (Getstäck, 1891). *	Termitid Termite or Fungus Growing Termite or Edible termite (at least in Zambia).	<i>Macrotermes usutu</i> Fuller, 1922; <i>Termes falciger</i> Gerstaecker, 1891; <i>Termes goliath</i> Sjöstedt, 1899; <i>Termes michelli</i> Rosen, 1912; <i>Termes swaziae</i> Fuller, 1915; <i>Tumulitermes kibonotensis</i> Sjöstedt, 1924.	NE	Benin, Central African Republic, Congo-Zaire [Now, Democratic Republic of Congo], Ghana, Guinea, Kenya, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Uganda, Zambia (Bouillon and Mathot, 1971; Coaton, 1962c & d; Mbata, 1995; Nkunica, 1982, 1986; Ruelle et al., 1975a; Ruelle, 1970; Wood and Tomas, 1989)	Southern Province; Lusaka**, in Lusaka Province; Treetops** (Kafue National Park), in Northwestern Province; Ndola and Chingola, in Copperbelt Province; Mfuwe** and Chipata, in Eastern Province.
	<i>Macrotermes michaelsoni</i>	Termitid Termite or	<i>Macrotermes bellicosus kunenensis</i> Fuller,	NE	Angola, Botswana, Kenya, Malawi, Mozambique,	Southern Province;

	(Sjöstedt, 1914).	Fungus Growing Termite or Edible termite (at least in Zambia).	1922; <i>Macrotermes bellicosus limpopoensis</i> Fuller, 1922; <i>Macrotermes bellicosus tonga</i> Fuller, 1927; <i>Termes (Termes) bellicosus mossambica</i> Hagen, 1858; <i>Termes (Termes) michaelsoni</i> Sjöstedt, 1914.		Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1971; Mbata, 1995 ; Nkunika, 1982, 1986; Ruelle et al., 1975; Ruelle, 1970; Snyder, 1949a).	Lusaka, in Lusaka Province.
	<i>Macrotermes natalensis</i> (Haviland, 1898).	Termitid Termite or Fungus Growing Termite or Edible termite (at least in Zambia).	<i>Macrotermes natalensis durbanensis</i> Fuller, 1927; <i>Macrotermes natalensis intermedius</i> Fuller, 1922; <i>Macrotermes natalensis transvaalensis</i> Fuller, 1922; <i>Termes natalensis</i> form <i>durbanensis</i> Fuller 1927; <i>Termes natalensis</i> form <i>intermedius</i> Fuller 1922 plus three more.	NE	Angola, Chad, Central African Republic, Congo-Brazzaville, Congo-Zaire, Eritrea, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Kenya, Liberia, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Senegal, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe (Bouillon and Mathot, 1971; Coaton, 1962d; Mbata, 1995; Nkunika, 1982; Ruelle et al., 1975; Ruelle, 1970; Wood and Tomas, 1989).	Southern Province.
	<i>Macrotermes subhyalinus</i> (Rambur, 1842).	Termitid Termite or Fungus Growing Termite or Edible termite (at least in Zambia).	<i>Bellicositermes bellicosus rex</i> Grasse and Noirot, 1961; <i>Bellicositermes jeanneli</i> Grasse, 1937; <i>Termes bellicosus sansibarita</i> Wasmann, 1897; <i>Termes subhyalinus</i> Rambur, 1842; <i>Termes tumulicola</i> Sjöstedt, 1899.	NE	Angola, Benin, Burundi, Central African Republic, Chad, Congo-Zaire [Now, Democratic Republic of Congo], Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Kenya, Liberia, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Yemen, Zambia, Palaearctic Region — Oman, Saudi Arabia (Bouillon and Mathot, 1971; Mbata, 1995; Nkunika, 1982; Ruelle et al., 1975; Ruelle, 1970; Ruelle, 1975b).	Southern Province; Chipata District in Eastern Province; Chelstone, in Lusaka Province.
	<i>Macrotermes vatralatus</i> (Sjöstedt, 1899).	Termitid Termite or Fungus Growing Termite or Edible termite (at least in Zambia).	<i>Termes vatralatus</i> Sjöstedt, 1899; <i>Termes imperator</i> Sjöstedt, 1913; <i>Termes waterbergi</i> Fuller, 1915; <i>Macrotermes schoutedeni</i> Sjöstedt, 1924; <i>Amplitermes mozambicanus</i> Sjöstedt, 1926 plus onemore.	NE	Angola, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia, (Bouillon and Mathot, 1971; Mbata, 1995; Nkunika 1982, 1986; Ruelle et al., 1975a; Ruelle, 1970).	Southern Province.

	<i>Megagnathotermes katangensis</i> Sjöstedt, 1927.	Termite or White Ant.	None.	NE	Zambia (Bouillon and Vincke, 1973c; Nkunika, 1982; Sands, 1998).	Southern Province.
	<i>Microcerotermes brachygnathus</i> Silvestri, 1914.	Termitid Termite or Fungus Growing Termite.	None.	NE	South Africa, Tanzania, Zambia, Zimbabwe (Krishna et al., 2016; Nkunika, 1986).	Lochinvar in Monze, in Southern Province.
	<i>Microcerotermes fuscotibialis</i> (Sjöstedt, 1896).	Termitid Termite or Fungus Growing Termite.	None.	NE	Angola, Cameroon, Congo-Zaire [Now, Democratic Republic of Congo], Gabon, Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Nigeria, Senegal, Sierra Leone, Zambia (Livingstone National Museum, Zambia, Collection, 2013).	Southern Province.
	<i>Microcerotermes nemoralis</i> Harris, 1954.	Termitid Termite or Fungus Growing Termite.	None.	NE	Tanzania, Zambia (Bouillon and Mathot, 1965; Nkunika, 1982).	Southern Province.
	<i>Microcerotermes parvus</i> (Haviland, 1898).	Termitid Termite or Fungus Growing Termite.	None.	NE	Angola, Cameroon, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Eritrea, Ethiopia, Gabon, Ghana, Ivory Coast, Kenya, Nigeria, Senegal, South Africa, Sudan, Tanzania, Uganda, Zambia (Livingstone National Museum Collection, Zambia, 2013).	Southern Province.
	<i>Microcerotermes solidus</i> Silvestri, 1912.	Termitid Termite or Fungus Growing Termite.	None.	NE	Angola, Cameroon, Congo-Zaire, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Nigeria, Senegal, Zambia (Livingstone National Museum Collection, Zambia, 2013).	Southern Province.
	<i>Microtermes albopartitus</i> (Sjöstedt, 1911).	Termitid Termite or Fungus Growing Termite.	<i>Microtermes longiceps</i> Holmgren, 1913; <i>Termes albopartitus</i> Sjöstedt, 1911.	NE	Cameroon, Congo-Zaire [Now, Democratic Republic of Congo], Malawi, South Africa, Tanzania, Zambia, Zimbabwe (Bacchus, 1997).	Lusaka, Lusaka Province.
	<i>Microtermes chomaensis</i> Bacchus, 1997.	Termitid Termite or Fungus Growing Termite.	None.	NE	Zambia (Bacchus, 1997).	Choma, in Southern Province.
	<i>Microtermes etiolatus</i> Fuller, 1922.	Termitid Termite or Fungus Growing Termite.	None.	NE	Mozambique, South Africa, Zambia (Bacchus, 1997).	Lusaka, in Lusaka Province.

<i>Microtermes kasaiensis</i> (Sjostedt, 1913).	Termitid Termite or Fungus Growing Termite.	<i>Eutermes kasaiensis</i> Sjostedt, 1913.	NE	Congo-Zaire; Kenya; Malawi; Uganda. Zambia (Nkunika, 1982).	Southern Province.
<i>Microtermes lounsburyi</i> Fuller, 1922.	Termitid Termite or Fungus Growing Termite.	<i>Microtermes umfolozii</i> Fuller, 1922	NE	Malawi, South Africa, Zambia, Zimbabwe (Bacchus, 1997).	Kabwe, Central Province.
<i>Microtermes luteus</i> Harris, 1954.	Termitid Termite or Fungus Growing Termite.	None.	NE	Kenya, Malawi, Tanzania, Zambia (Krishna et al., 2016; Nkunika, 1982).	Southern Province.
<i>Microtermes magnocellus</i> (Sjostedt, 1915).	Termitid Termite or Fungus Growing Termite.	<i>Termes (Microtermes) magnocellus</i> Sjostedt, 1915.	NE	Ethiopia, Tanzania, Malawi, Zambia (Bacchus, 1997; Krishna et al., 2016).	Lusaka, Lusaka Province.
<i>Microtermes pamela</i> Bacchus, 1997.	Termitid Termite or Fungus Growing Termite.	None.	NE	Zambia (Bacchus, 1997; Krishna et al., 2016).	Type locality, Mbala, in Northern Province.
<i>Microtermes vadschaggae</i> (Sjostedt, 1907).	Termitid Termite or Fungus Growing Termite.	<i>Termes vadschaggae</i> Sjostedt, 1907.	NE	Ethiopia, Kenya, Malawi, Senegal, Tanzania, Zambia (Krishna et al, 2016; Nkunika, 1986).	Lochinvar, in Southern Province.
<i>Mimeutermes binghami</i> Sands, 1968.	Termite or White Ant.	None.	NE	Kenya, Zambia (Bouillon and Mathot, 1971; Sands, 1998).	Roma in Lusaka (Type locality), in Lusaka Province.
<i>Nitiditermes berghei</i> Emerson, 1960.	Termite or White Ant.	None.	NE	Congo-Zaire [Now Democratic Republic of Congo], Zambia (Krishna et al, 2016; Sands 1998).	Lusaka, in Lusaka Province; Chingola and Chililabombwe, in Copperbelt Province.
<i>Odontotermes badius</i> (Haviland 1898).	Crater Termite.	<i>Termes badius</i> Haviland, 1898; <i>Odontotermes badius badius</i> (Haviland, 1898).	NE	Angola, Botswana, Cameroon, Congo-Zaire [Now, Democratic Republic of Congo], Ethiopia, Kenya, Malawi, Namibia, Somalia, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe (Krishna et al., 2016; Nkunika, 1982).	Southern Province.
<i>Odontotermes flammifrons</i> (Sjostedt, 1926).	Termitid Termite or Fungus Growing Termite.	<i>Termes flammifrons</i> Sjostedt, 1926.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Sudan, Zambia (Bouillon and Mathot, 1965; Harris, 1960).	Lusaka, in Lusaka Province.

<i>Odontotermes lacustris</i> Harris, 1960.	Termitid Termite or Fungus Growing Termite.	None.	NE	Malawi, Zambia (Bouillon and Mathot, 1965; Nkunica 1982, 1986; Wood and Tomas, 1989).	Type locality of this species is Abercorn [Now, Mbala - 08°50'S, 31°24'E] in Northern Province but it has also been reported to occur in the Southern Province of the country in, for example, Kalomo, Mazabuka, Monze, Lochinvar and Choma.
<i>Odontotermes latericius latericius</i> (Haviland, 1898).	Termitid Termite or Fungus Growing Termite.	<i>Odontotermes latericius</i> (Haviland, 1898); <i>Termes latericius</i> Haviland, 1898.	NE	Angola, Botswana, Congo-Zaire [Now Democratic Republic of Congo], Kenya, Malawi, Mozambique, Namibia, Senegal, South Africa, Sudan, Tanzania, Togo, Uganda, Zimbabwe, Zambia (Nkunica 1982, 1986; Silvestri, 1912; Sjöstedt, 1926; Wood and Tomas, 1989).	Southern Province.
<i>Odontotermes transvaalensis</i> (Sjöstedt, 1902).	Termitid Termite or Fungus Growing Termite.	<i>Termes transvaalensis</i> Sjöstedt, 1902; <i>Termes tubicola</i> Wasmann, 1902.	NE	Botswana, Ethiopia, Kenya, South Africa, Tanzania, Uganda, Zambia, Zimbabwe (Krishna et al., 2016; Livingstone National Museum, Collection, 2013).	Southern Province.
<i>Ovamboterme sylvaticus</i> Coaton, 1971.	Termite or White Ant.	None.	NE	Namibia, Zambia (Krishna et al., 2016; Sands, 1998).	Lusaka, Lusaka Province.
<i>Pericapritermes gloveri</i> Harris, 1951.	Termite or White Ant.	None.	NE	Tanzania, Zambia (Bouillon and Mathot, 1965; Sands, 1998).	Kalambo Falls on south bank river [08°35'S, 31°13'E], in Northern Province.
<i>Promirotermes massaicus</i> (Sjöstedt, 1907).	Termite or White Ant.	<i>Eutermes massaicus</i> Sjöstedt, 1907.	NE	Kenya; Tanzania; uganda; and Zambia (Krishna et al., 2016; Nkunica, 1982).	Southern Province.
<i>Protermes minimus</i> Ruelle, 1971.	Termitid Termite or Fungus Growing Termite.	None.	NE	Angola, Congo-Zaire [Now, Democratic Republic of Congo], Guinea, Nigeria, Zambia (Ruelle, 1975a).	Lusaka, in Lusaka Province.
<i>Protermes minutus</i> Grassé, 1937.	Termitid Termite or Fungus	<i>Termes minutus</i> Grassé, 1937.	NE	Angola; Congo-Zaire; Gabon; Guinea; Ivory Coast (Cote d'Ivoire); Nigeria; Sierra	Lusaka, in Lusaka Province.

		Growing Termite.			Leone; Zambia (Krishna et al., 2016).	
	<i>Protermes mwekeræ</i> Ruelle, 1971.	Termitid Termite or Fungus Growing Termite.	None.	NE	Zambia (Krishna et al., 2016; Ruelle, 1975 a&b).	Type locality for this species 24 km ex Kitwe-Dola Hill via Mwekera Forest Reserve. In Copperbelt Province of Zambia.
	<i>Pseudacanthotermes militaris militaris</i> (Hagen, 1858).	Sugarcane Termite.	<i>Acanthotermes militaris minor</i> Sjostedt, 1913; <i>Termes (Termes) militaris</i> Hagen, 1858.	NE	Angola, Benin, Cameroon, Central African Republic, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Kenya, Malawi, Nigeria, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zambia, Zimbabwe (Coaton and Sheasby, 1977; Nkunka, 1982; Sjostedt, 1926).	Southern Province.
	<i>Pseudacanthotermes spiniger</i> (Sjostedt, 1900).	Termitid Termite or Fungus Growing Termite.	<i>Acanthotermes spiniger kohli</i> Wasmann, 191; <i>Acanthotermes spiniger lujæ</i> Wasmann, 1904; <i>Pseudacanthotermes spiniger maynei</i> Sjostedt, 1926; <i>Pseudacanthotermes unsgaardi</i> Sjostedt, 1926; <i>Termes (Acanthotermes) spiniger</i> Sjostedt, 1900.	NE	Angola, Cameroon, Central African Republic, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Kenya, Nigeria, Sudan, Tanzania, Uganda, Zambia (Coaton and Sheasby, 1977; Nkunka, 1982; Wood and Tomas, 1989).	Southern Province.
	<i>Rhadinotermes coarctatus</i> (Sjostedt, 1902).	Termite or White Ant.	<i>Eutermes coarctatus</i> Sjostedt, 1902.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Coaton and Sheasby, 1974; Sands, 1965; Sands, 1998).	Kabwe, Central Province.
	<i>Spatulitermes coolingi</i> Coaton, 1971.	Termite or White Ant.	None.	NE	Namibia, Zambia (Sands, 1998).	Lusaka, in Lusaka Province.
	<i>Synacanthotermes trilobatus</i> Sjostedt, 1926.	Termitid Termite or Fungus Growing Termite.	<i>Synacanthotermes angolensis</i> Weidner, 1956; <i>Synacanthotermes heterodon trilobata</i> Sjostedt, 1926.	NE	Angola, Congo-Zaire [Now, Democratic Republic of Congo], Malawi, Zambia (Krishna et al., 2016; Sands, 1998).	Lusaka, Lusaka Province.
	<i>Synacanthotermes zanzibarensis</i>	Termitid Termite or Fungus	<i>Termes (Synacanthotermes)</i>	NE	Ethiopia, Kenya, Tanzania, Zambia (Livingstone National	Kitwe, Ndola and Chati in

	(Sjöstedt, 1915).	Growing Termite.	<i>zanzibarensis</i> Sjöstedt, 1915.		Museum, Zambia, 2013 Report.).	Copperbelt Province.
	<i>Termes boultoni</i> Coaton and Sheasby, 1978.	Termite or White Ant.	<i>Termes kalaharicus</i> Irish, 1985: 111 [nomen nudum; name credited to Coaton].	NE	Zambia, Zimbabwe (Nkunika, 1982; Sands, 1998).	Southern Province.
	<i>Thoracotermes lusingensis</i> Harris, 1958.	Termite or White Ant.	None.	NE	Angola, Congo-Zaire [Now, Democratic Republic of Congo], Zambia (Krishna et al., 2916; Sands, 1998).	Lusaka, Lusaka Province.
	<i>Trinervitermes bettonianus</i> (Sjöstedt, 1905).	Termite or White Ant.	<i>Eutermes bettonianus</i> Sjöstedt, 1905; <i>Eutermes crassinasus</i> Sjöstedt, 1914; <i>Eutermes (Trinervitermes) ruficeps</i> Holmgren, 1913; <i>Eutermes segelli</i> Sjöstedt, 1907.	NE	Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Nkunika 1982, 1986; Sands 1957, 1965; Snyder, 1949).	Southern Province.
	<i>Trinervitermes dispar</i> (Sjöstedt, 1902).	Termite or White Ant.	<i>Eutermes dispar</i> Sjöstedt, 1902; <i>Eutermes (Trinervitermes) erythrae</i> Holmgren, 1913; <i>Eutermes gemellus</i> Sjöstedt, 1902; <i>Eutermes grootfonteinensis</i> Sjöstedt, 1914; <i>Eutermes katangensis</i> Sjöstedt, 1913 plus three more	NE	Congo-Zaire [Now, Democratic Republic of Congo], Eritrea, Ethiopia, Kenya, Malawi, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe (Bouillon and Mathot 1965, 1966; Nkunika, 1982; Sands 1957, 1965).	Southern Province.
	<i>Trinervitermes graciosus</i> (Sjöstedt, 1924).	Termite or White Ant.	<i>Eutermes (Trinervitermes) carbo</i> Sjöstedt, 1924; <i>Eutermes (Trinervitermes) graciosus</i> Sjöstedt, 1924.	NE	Angola, Burundi, Congo-Zaire [Now, Democratic Republic of Congo], Kenya, Rwanda, Tanzania, Uganda, Zambia (Krishna et al., 2016; Nkunika, 1982, 1986).	Southern Province.
	<i>Trinervitermes occidentalis</i> (Sjöstedt, 1904).	Termite or White Ant.	<i>Eutermes occidentalis</i> Sjöstedt, 1904; <i>Nasutitermes (Trinervitermes) bettonianus sulciceps</i> Emerson, 1928; <i>Nasutitermes (Trinervitermes) lutzi</i> Emerson, 1928; <i>Trinervitermes auriterrae</i> Sjöstedt, 1926; <i>Trinervitermes maudanicus</i> Sjöstedt, 1926.	NE	Central African Republic, Congo-Zaire [Now, Democratic Republic of Congo], Ethiopia, Ghana, Guinea-Bissau, Ivory Coast (Cote d'Ivoire), Nigeria, Sierra Leone, Uganda, Zambia (Bouillon and Mathot, 1965, 1966; Krishna et al., 2016).	Lusaka, in Lusaka Province.
	<i>Trinervitermes rhodesiensis</i> (Sjöstedt, 1911)	Termite or White Ant.	<i>Eutermes agricola</i> Sjöstedt, 1913; <i>Eutermes brutus</i> Sjöstedt, 1911;	NE	Angola, Botswana, Central African Republic? Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of	Southern Province.

			<i>Eutermes</i> (<i>Trinervitermes</i>) <i>diplacodes</i> Sjöstedt, 1924; <i>Eutermes</i> (<i>Trinervitermes</i>) <i>kalaharicus</i> Holmgren, 1913; <i>Eutermes</i> (<i>Trinervitermes</i>) <i>loubetsiensis</i> Sjöstedt, 1924 plus six more.		Congo], Namibia, South Africa, Tanzania, Zambia, Zimbabwe (Bouillon and Mathot, 1966; Nkunica, 1982; Sands, 1965).	
	<i>Unguitermes proclivifrons</i> Ruelle, 1973.	Termite or White Ant.	None.	NE	Zambia (Krishna et al., 2016; Ruelle, 1975).	Type locality, 30 km ex Kitwe-Dola via Mwekera Forest Reserve, Copperbelt Province of Zambia.
Rhinotermitidae	<i>Coptotermes amanii</i> (Sjöstedt, 1911).	Termite or White Ant.	<i>Eutermes</i> (<i>Coptotermes</i>) <i>amanii</i> Sjöstedt, 1911	NE	Ethiopia, Kenya, Malawi, Somalia, South Africa (introduced from East Africa), Tanzania, Zambia, Zimbabwe (Krishna et al., 2016).	Lusaka, in Lusaka Province.
	<i>Schedorhinotermes lamanianus</i> (Sjöstedt, 1911).	Termite or White Ant.	<i>Rhinotermes bequaertianus</i> Sjöstedt, 1913; <i>Rhinotermes havilandi</i> Van Boven, 1969; <i>Rhinotermes lamanianus</i> Sjöstedt, 1911; <i>Rhinotermes</i> (<i>Schedorhinotermes</i>) <i>lamanianus angulatus</i> Emerson, 1928; <i>Schedorhinotermes provisorius</i> Grasse, 1937 plus onemore.	NE	Angola, Congo-Brazzaville, Congo-Zaire [Now, Democratic Republic of Congo], Ghana, Guinea, Ivory coast, Kenya, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe (Coaton and Sheasby, 1973b; Maiti, 2006; Nkunica, 1982).	Southern Province.
Kalotermitidae	<i>Bifiditermes sibayiensis</i> (Coaton, 1949).	Termite or White Ant.	<i>Kalotermes sibayiensis</i> Coaton, 1949.	NE	Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe (Coaton and Seasby, 1980; Nkunica, 1982).	Southern Province.
Hodotermitidae	<i>Hodotermes mossambicus</i> (Hagen, 1853) *.	Harvester Termite.	<i>Hodotermes</i> (<i>Hodotermes</i>) <i>bloemfonteinensis</i> Sjöstedt, 1926; <i>Hodotermes braini</i> Fuller, 1915; <i>Hodotermes havilandi</i> Sharp, 1895; <i>Hodotermes karrooensis</i> Fuller, 1915; <i>Hodotermes macrothorax</i> Sjöstedt, 1914 plus six more.	NE	Angola, Botswana, Ethiopia, Kenya, Malawi, Mozambique, Namibia, South Africa, Tanzania, Uganda, Zambia (Krishna et al., 2016; Nkunica 1982, 1986; Pinhey, 1975; Sands, 1998).	Victoria Falls region in Southern Province; Kafue**, Lusaka**and Kafue** and Lower Zambezi** National Parks, in Lusaka Province; Chisamba**, in Central Province.

Superfamily BLABEROIDEA Saussure, 1864.

Blattellidae (= Ectobiidae Wood Cockroaches)	<i>Anaplecta cincta cincta</i> Gerstaecker, 1883.	Cockroach.	<i>Anaplecta cincta</i> (Gerstaecker, 1883).	NE	Angola, Democratic Republic of Congo, Gabon, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014).	Chingola, in Copperbelt Province.
	<i>Blattella germanica</i> (Linnaeus, 1767). *	German cockroach. ● A household pest, common in urban areas in Zambia. It is found in warmer parts of homes such as bathrooms and kitchens.	<i>Blatta asiatica</i> (Pallas, 1773); <i>Blatta bivittata</i> Serville, 1838; <i>Blatta daunca</i> (Laxmann, 1769); <i>Blatta daurica</i> Laxmann, 1769; <i>Blatta germanica</i> Linnaeus, 1767 plus 20 more.	NE	Cosmopolitan [Asian origin]; The German cockroach is found throughout the world in association with humans. Cameroon, Congo-Brazzaville, Democratic Republic of Congo, Kenya, Madagascar, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; Ministry of Environment and Natural Resources, 1998; Mbata, 1998; Plant Pests and Diseases Act. No. 13. 1994).	Lusaka** in Lusaka Province; Monze and Livingstone in the Southern Province; Ndola and Kitwe in Copperbelt Province; Solwezi** in Northwestern Province; Mongu in Western Province; Chipata in Eastern Province; Mansa in Luapula Province; Luwingu in Northern Province.
	<i>Blattella lobiventris</i> (Saussure, 1895).	Cockroach.	<i>Blatta lobiventris</i> Saussure, 1895; <i>Blatta madecassa</i> Saussure, 1895; <i>Blatta scioana</i> (Adelung, 1905); <i>Blattella pallidula</i> Werner, 1907; <i>Blattella schubotzi</i> Shelford, 1912 plus eight more.	NE	Angola, Burkina Faso, Burundi, Cameroon, Congo-Brazzaville [= Republic of Congo], Democratic Republic of Congo, Equatorial Guinea, Ethiopia, Guinea, Ivory Coast, Kenya, Madagascar, Mozambique, Namibia, Rwanda, Sierra Leone, South Africa, Spanish Guinea, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Gorges, east of Victoria Falls and Livingstone, in Southern Province.
	<i>Burchellia neavei</i> Shelford, 1913.	Cockroach.	<i>Hemithysocera neavei</i> (Shelford, 1913).	NE	Democratic Republic of Congo, Ghana, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chililabombwe, in Copperbelt Province.
	<i>Burchellia vinula</i> (Stal, 1856).	Cockroach.	<i>Blatta vinula</i> (Stal, 1856).	NE	Angola, Democratic Republic of Congo, Mozambique, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red	Chililabombwe, in Copperbelt Province.

					List of Threatened Species. Version 2016-3).	
	<i>Ectobius africanus</i> (Saussure, 1899).	Cockroach.	<i>Ectobius</i> (<i>Ectobius</i>) <i>africanus</i> Saussure, 1899.	NE	Angola, Central African Republic, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, in Lusaka Province.
	<i>Ectobius makalaka</i> Rehn, 1931.	Cockroach.	<i>Ectobius fernandesi</i> (Harz, 1975); <i>Ectobius ferrum-equinum</i> (Costa, 1866); <i>Ectobius helvetica</i> (Hagenbach, 1822); <i>Ectobius lapponicus picta</i> (Adelung, 1917); <i>Ectobius</i> (<i>Ectobius</i>) <i>makalaka</i> Rehn, 1931.	NE	Malawi, Spain, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Mpika, in Muchinga Province; Kapiri Mposhi, in Central Province.
	<i>Matabelina backlundii</i> Princis, 1969.	Cockroach.	None.	NE	Democratic Republic of Congo, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, Lusaka Province.
	<i>Matabelina ectobioides</i> (Shelford, 1910).	Cockroach.	<i>Temnopteryx ectobioides</i> (Shelford, in Sjöstedt 1910)	NE	Rwanda, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Kafue and Lusaka, in Lusaka Province.
	<i>Stayella abnormalis</i> (Roth, L. M., 1984).	Cockroach.	None.	NE	Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, in Lusaka Province.
	<i>Stayella bimaculata</i> (Gerstaecker, 1869).	Cockroach.	<i>Phyllodromia bimaculata</i> (Gerstaecker, 1869); <i>Symploce bimaculata</i> (Gerstaecker, 1869); <i>Symploce backlundii</i> Princis, 1963; <i>Symploce massaica</i> Princis, 1951.	NE	Angola, Democratic Republic of Congo, Kenya, Mozambique, Tanzania, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Mbala, in Northern Province.
	<i>Supella dimidiata</i> (Gerstaecker, 1869).	Cockroach.	<i>Aphlebia transvaaliensis</i> (Kirby, 1900); <i>Ceratinoptera dimidiata</i> Gerstaecker, 1869; <i>Ceratinoptera hottentotta</i> (Saussure, 1899); <i>Phyllodromia delta</i> Kirby, 1900; <i>Supella delta</i> (Kirby, 1900) plus five more.	NE	Angola, Botswana, Democratic Republic of Congo, Eritrea, Kenya, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Kalabo, in Western Province; Kabwe, in Central Province.

	<i>Supella supellectilium</i> Serville, 1838. *	Brown-banded cockroach or Brown banded cockroach.	<i>Blatta cubensis</i> Saussure, 1862; <i>Blatta extenuata</i> Walker, 1868; <i>Blatta incisa</i> Walker, 1868; <i>Blatta longipalpa</i> Fabricius, 1798; <i>Blatta phalerata</i> Saussure, 1863 plus eight more.	NE	Algeria, Gambia, Namibia, South Africa, Sudan, Tanzania, Togo, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Gorges**, east of Victoria Falls in Livingstone, Southern Province; Lower Zambezi valley, Lusaka Province.
	<i>Symploce incuriosa</i> (Saussure, 1899).	Cockroach.	<i>Ischnoptera incuriosa</i> (Saussure, 1899); <i>Ischnoptera pitmani</i> Hanitsch, 1929; <i>Ischnoptera uniramosa</i> Karny, 1908; <i>Phyllodromia trigonalis</i> Saussure, 1899; <i>Symploce pitmani</i> (Hanitsch, 1929); <i>Symploce trigonalis</i> (Saussure, 1899).	NE	Botswana, Namibia, South Africa, Tanzania, Uganda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chingola, in Copperbelt Province.
	<i>Theganopteryx obscura</i> (Shelford, 1911).	Cockroach.	None.	NE	Democratic Republic of Congo, Mozambique, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chingola, in Copperbelt Province.
	<i>Theganopteryx rhodesiae</i> (Shelford, 1913).	Cockroach.	None.	NE	Cameroon, Democratic Republic of Congo, Rwanda, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Environs of Lake Bangweulu, in Luapula Province.
Blaberidae (Giant Cockroaches)	<i>Cyrtotria capucina</i> (Gerstaecker, 1869).	Giant Cockroach.	<i>Agis basilewskyi</i> Princis, 1955; <i>Cyrtotria basilewskyi</i> Princis, 1955; <i>Cyrtotria somali</i> (Saussure & Zehntner, 1895); <i>Derocalymma capucina</i> (Gerstaecker, 1869); <i>Stenopilema somali</i> Saussure & Zehntner, 1895.	NE	Democratic Republic of Congo, Djibouti, Ethiopia, Kenya, Rwanda, Somaliland [Now, Somalia], Tanzania, Tanzania (Zanzibar Island), Uganda, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Samfya, in Luapula Province.
	<i>Derocalymma lampyrina</i> Gerstaecker, 1869.	Giant Cockroach.	<i>Derocalymma bottegoiana</i> Saussure & Zehntner, 1895; <i>Derocalymma punctata</i> Saussure & Zehntner, 1895.	NE	Angola, Cameroon, Central African Republic, Democratic Republic of Congo, Djibouti, Ethiopia, Kenya, Mozambique, Namibia, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chirundu bridge, in Lusaka Province.
	<i>Derocalymma porcellio</i>	Giant Cockroach.	<i>Derocalymma bipapilla</i> (Kirby, 1900); <i>Derocalymma</i>	NE	Angola, Democratic Republic of Congo, Djibouti, Ethiopia, Kenya, Malawi, Mozambique,	Kasama, in Northern Province.

	Gerstaecker, 1869.		<i>erythreiana</i> Saussure & Zehntner, 1895; <i>Homalodemus bipapilla</i> Kirby, 1900.		Somalia, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	
	<i>Derocalymma silphoides</i> Bolívar, 1889.	Giant Cockroach.	None	NE	Angola, Botswana, Namibia, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Kafue, Lusaka Province.
	<i>Eustegasta poecila</i> (Schaum, 1853). *	Giant Cockroach.	<i>Eustegasta obsoleta</i> Kirby, 1900; <i>Eustegasta rhodesiana</i> Princis, 1949; <i>Panchlora poecila</i> (Schaum, 1853)	NE	Kenya, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3; Ministry of Environment and Natural Resources, 1998; Mbata, 1998; Pinhey, 1975).	Victoria Falls Region at gorges**, east of Victoria Falls in Livingstone, Southern Province.
	<i>Gyna kazungulana</i> Giglio-Tos, 1907.	Giant Cockroach.	None.	NE	Zambia (Only) (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Kazungula (Type locality) in Southern Province.
	<i>Gyna maculipennis</i> (Schaum, 1853). *	Giant Cockroach.	<i>Gyna fervida</i> (Saussure, 1864); <i>Gyna insignata</i> (Kirby, 1896); <i>Gyna vetula</i> Brunner von Wattenwyl, 1865; <i>Panchlora fervida</i> Saussure, 1864; <i>Panchlora lata</i> Walker, 1868 plus two more.	NE	Angola, Benin, Cameroon, Democratic Republic of Congo, Gambia, Ghana, Ivory Coast, Kenya, Mozambique, Nigeria, Senegal, Sierra Leone, Swaziland, Tanzania, Togo, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3; Ministry of Environment and Natural Resources, 1998; Mbata, 1998; Pinhey, 1975).	Victoria Falls Region, at gorges**, east of Victoria Falls in Livingstone, Southern Province; Kafue Riverside Motel (RIMO)**in Kafue, Lusaka Province.
	<i>Gynopeltis cryptospila</i> (Walker, 1868). *	Giant Cockroach.	<i>Gynopeltis picta</i> Gerstaecker, 1869; <i>Polyphaga cryptospila</i> (Walker, F., 1868); <i>Polyphaga erythrospila</i> Saussure, 1893.	NE	Kenya, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Kafue**, in Lusaka Province.
	<i>Gynopeltis neavei</i> Shelford, 1909.	Giant Cockroach.	None	NE	Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, in Lusaka Province.
	<i>Nauphoeta cinerea</i> (Olivier, 1789).	Cinereous cockroach.	<i>Blatta cinerea</i> (Olivier, 1789); <i>Blatta elegans</i> Eschscholtz, 1822; <i>Blatta gallica</i> Fabricius, 1793; <i>Nauphoeta bivittata</i> Burmeister, 1838; <i>Nauphoeta gallica</i> (Fabricius, 1793); <i>Nauphoeta</i>	NE	Caribbean islands, China, Ecuador, Great Britain, India, Indonesia, Mozambique, Netherlands, Swaziland, Sweden, Taiwan, Tanzania, Zambia (Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, in Lusaka Province; Kabwe, in Central Province.

			<i>grisea</i> Burmeister, 1838.			
	<i>Phenacisma semialata</i> Shelford, 1909.	Giant Cockroach.	None.	NE	Mozambique, Tanzania, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chingola, in Copperbelt Province.
	<i>Platysilpha murina</i> (Walker, 1868).	Giant Cockroach.	<i>Perisphaeria murina</i> (Walker, F., 1868).	NE	Mozambique, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Mpika, in Muchinga Province.
	<i>Pseudocalolampra pardalina</i> (Walker, 1868).	Giant Cockroach.	<i>Calolampra aptera</i> Schulthess, 1898; <i>Calolampra arborifera</i> Hanitsch, 1939; <i>Calolampra pardalina</i> (Walker, F., 1868); <i>Epilampra pardalina</i> Walker, F., 1868; <i>Pseudocalolampra aptera</i> (Schulthess, 1898) Plus one more	NE	Botswana, Democratic Republic of Congo, Djibouti, Ethiopia, Kenya, Mozambique, Namibia, Rwanda, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chililabombwe, in Copperbelt Province.
	<i>Pseudogyna intermedia</i> Shelford, 1909.	Giant Cockroach.	None.	NE	Zambia (Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, in Lusaka Province.
	<i>Rhyparobia maderae</i> (Fabricius, 1781).	Madeira cockroach or Drummer.	<i>Blatta maderae</i> (Fabricius, 1781); <i>Blatta maderensia</i> Jones, 1859; <i>Blatta major</i> Palisot de Beauvois, 1805; <i>Blatta tuberculata</i> Thunberg, 1810; <i>Leucophaea maderae</i> (Fabricius, 1781) plus six more.	NE	Brazil, Cameroon, Caribbean islands, Chile, Colombia, Democratic Republic of Congo, Ecuador, Madagascar, Mexico, Netherlands, Nigeria, Portugal, Spain, Sweden, Tanzania, USA, Zambia (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Chililabombwe, in Copperbelt Province.

Superfamily CORYDIOIDEA Saussure, 1864

Corydiidae (Sand cockroaches)	<i>Ergaula capensis</i> (Saussure, 1893).	Sand Cockroach.	<i>Dyscologamia wollastoni</i> Kirby, 1909	NE	Angola, Cameroon, Congo-Brazzaville, Democratic Republic of Congo, Kenya, Nigeria, Tanzania, Tanzania (Zanzibar Island), Uganda, Zambia, Zimbabwe (Catalogue of life, 2016; Beccaloni, 2014; IUCN Red List of Threatened Species. Version 2016-3).	Lusaka, Lusaka Province.
---	--	-----------------	--	----	--	--------------------------

A total of 27 genera of cockroaches are reported to occur in Zambia (Table 2). They are represented by 43 species and three subspecies. None of the 43 species of cockroaches has yet been evaluated for the IUCN red book.

Table 2. Numbers of Cockroaches (Order Blattodea) known to occur in Zambia.

Family	Number of Genera	Number of Species	Number of Subspecies
Blattidae	6	12	2
Blattellidae	9	15	1
Blaberidae	11	15	0
Corydiidae	1	1	0
TOTAL	27	43	3

There are 38 genera of termites known to occur in Zambia. These include 87 species and one subspecies (Table 3). *Odontotermes latericius latericius* (Haviland, 1898), the nominate subspecies of *Odontotermes latericius* (Haviland, 1898) was the only subspecies reported to occur in the country in the literature.

Table 3. Numbers of Termites (Order Blattodea) known to occur in Zambia.

Family	Number of Genera	Number of Species	Number of Subspecies
Termitidae	34	83	1
Rhinotermitidae	2	2	0
Kalotermitidae	1	1	0
Hodotermitidae	1	1	0
TOTAL	38	87	1

Similar to the situation of cockroaches known to occur in Zambia reported in this paper, none of these 87 species of termites has been evaluated for the IUCN red list of threatened species to-date.

Table 4. presents the distribution of cockroaches and termites known to occur in Zambia by province. The province with the largest numbers of reported species and subspecies of both cockroaches and termites is the Southern Province. This is followed by Lusaka Province. Copperbelt Province is the third, while the least known Province regarding these two groups of

insects, is the Western Province. Only seven species of cockroaches and two species of termites reported to occur in Zambia in the literature were confirmed to be present in the country through the biodiversity field surveys undertaken. Some Cockroach specimens and particularly those of termites collected from the field are yet to be taxonomically discriminated to determine whether or not they are new species not described before. The unknown termite specimens have also not yet been compared with preserved specimens in the Livingstone national museum for identification. The intention is to describe those cockroach and termite species that will be determined to be new species. But for purposes of this study the numbers of species of both cockroaches and termites found to have been reported to occur in Zambia in the literature and the few of those that were confirmed to occur in the country through the field surveys, were thought to be enough to serve as baseline data for the biodiversity two groups of insects in the country for future conservation programmes of the groups and further research.

The Livingstone national museum is the largest and oldest museum in Zambia. It was established in 1934 during the colonial days as the David Livingstone Memorial Museum. It was also formerly called Rhodes-Livingstone museum. Its 1999 insect collection register examined by the Author in 2014, had on record 25 genera and 52 species of termites and 470 termite specimens that were only identified to genus level. It is a relatively recent termite collection. The oldest termite specimen only identified to genus level i.e. *Macrotermes* sp., was collected from Lusaka by M.G. Bingham. The most recent termite specimen, also only identified to genus level is *Trinervitermes* sp. collected in 1982 by P. Nkunya, from Lochinvar national park in Monze, Southern Province. Surprisingly enough, the Livingstone national museum had no specimens of cockroaches of Zambia, neither did it have specimens at the time of the visit by the author.

Table 4. Numbers of species and subspecies of cockroaches and termites in Zambia by Province.

#	PROVINCE	COCKROACHES (Order Blattodea: Superfamilies Blattoidea [Epifamily Blattoidae], Blaberoidea and Corydioidea).	TERMITES (Order Blattodea: Superfamily Blattoidea: Epifamily Termitoidae)
1	Central	5	6
2	Copperbelt	12	14
3	Eastern	2	2
4	Luapula	3	4
5	Lusaka	20	25
6	Muchinga	3	3
7	Northern	5	8
8	Northwestern	3	1
9	Southern	21	47
10	Western	3	0

DISCUSSION

COCKROACHES: Superfamilies BLATTOIDEA (Epifamily Blattoidae), BLABEROIDEA and CORYDIOIDEA

The 43 species and three subspecies of cockroaches found to occur in Zambia in this study is by far, a very large number of species of cockroaches reported for the country compared to the 11 species that were recorded in the country's first National Biodiversity Strategy and Action plan (NBSAP1) (Ministry of Environment and Natural Resources (MENR), 1998.) which was developed following Zambia's first country study on its biodiversity in 1998 (Chidumayo & Aongola, 1998; Mbata, 1998). However, this difference in number is not surprising as the country study in question on which NBSAP1 was based was done in one month time only.

The numbers of genera (27), species (43) and subspecies (3) of cockroaches reported for Zambia in this paper, are comparable to those of other countries in the Southern Africa region. Namibia in the southwest of Zambia reported the presence of 11 genera and 30 species for the three cockroach families represented in Zambia namely Blattidae, Blattellidae and Blaberidae (Irish, 2018a). However, Namibia has five other cockroach families not represented in Zambia (Anacompidae, Derocalymidae, Euthyrhaphidae, Oxyhaloidae and Perisphaeridae) which raises these numbers to 21 genera and 51 species for the country. The Southern Africa region as a whole has a total of 48 Genera and 175 species of cockroaches from Blattidae, Blattellidae and Blaberidae families (Marshall, 1989). The total number of cockroach species occurring in South Africa for all families represented in the country is 108 (SANBI, 2018). Other countries in Southern Africa have not yet published checklists of their termites.

In terms of conservation, however, when the 43 species of cockroaches reported for Zambia in this paper were subjected to the International Union for Conservation of Nature's (IUCN) test, it was discovered that none has ever been evaluated for the IUCN red list of threatened species. Thus, their conservation statuses are still not known. Preparation of checklists of different plant and animal taxa occurring in a country is important for conservation and determination of the IUCN status of a given species is important in that it helps a country to prioritize which taxa need to be conserve at a given time.

However, it should be noted that there is a high possibility that some species of cockroaches present in the country could have been missed in this study, particularly by the biodiversity surveys that were conducted in various parts of the country. Most of the surveys were done during the dry season in the country when there are fewer insects in the environment as many are in cryptic stages such as aestivating eggs and other inconspicuous insect developmental stages. But the 43-species identified in this study, as indicated earlier, will serve as the baseline number of cockroaches for the country.

TERMITES: Superfamily BLATTOIDEA (Epifamily Termitoidae)

It is reported that the Southern Africa region has 50 genera and 210 species of termites (Ruelle, 1989). Zambia's 38 genera and 87 species reported in this paper could be indicative that many more species known to occur in other parts of the region could be present and are yet to be found and collected in the country. Namibia for example, also reported only 25 genera and 41 species of termites (Irish, J. 2018b), numbers that could also be low for the country. South Africa recorded 122 species of termites in all termite families represented in the country (SANBI, 2018). Many other Southern Africa countries do not have checklists of their termites. Outside the Southern Africa region in Africa however, numbers of genera and species of termites occurring in countries is comparable what has been determined for Zambia in this study. In Ethiopia in North Africa for example, it is recorded that there are 25 genera and 61 species of termites (Cowie et al. 1990).

Among the termites, reported to exist in Zambia, some are pests of crops. For instance, *Macrotermes bellicosus* (Smeathman, 1781), *Macrotermes falciger* (Getstaecker, 1891), *Macrotermes michaelsoni* (Sjöstedt, 1914), *Macrotermes natalensis* (Haviland, 1898), *Macrotermes subhyalinus* (Rambur, 1842) and *Macrotermes vatralatus* (Sjöstedt, 1899), are Polyphagous general feeders which occasionally damage a wide range of crops including; cotton, coconut, coffee, cocoa, clove, groundnuts, rice, sugarcane fruit trees and forest trees (Hill, 2008). *Odontotermes badius* (Haviland 1898) and *Odontotermes latericius* (Haviland, 1898), also polyphagous feeders, will attack a range of crops both as seedlings and as grown plants such as sugarcane, cotton and tea. They are also wood destroyers in buildings. *Pseudacanthotermes militaris militaris* (Hagen, 1858), the so-called Sugarcane termite, attacks not only sugarcane but will also destroy bamboo structures including fences. *Hodotermes mossambicus* (Hagen, 1853), the harvester termite attacks various grass species including maize. It will also destroy cotton.

However, for Zambia, other parts of tropical Africa and some parts of the tropical world, classifying these insects as pests is questionable. The term pest has the connotation that an organism in question is not beneficial to man. Some of the so-called termite pests especially the *Macrotermes* species mentioned above are edible by man (Mbata, 1995). Many ethnic groups in Zambia, tropical Africa and the tropical world, consume these insects yearly as relish and/or snacks, hence the species are beneficial to these people (Mbata, 1995). In Zambia the *Macrotermes* species are delicacies for both rural and urban communities. Alates of the species are collected during their nuptial flights that occur at the start of the rainy season in the country (November to March) and consumed as snacks and/or relish.

Only 36 species of termites were reported to occur in Zambia in the NBSAP1 (Chidumayo & Aongola, 1998; Mbata, 1998). This number has now risen to 87. However, none of the 87 species and the one subspecies of termites found in Zambia has been evaluated for their IUCN conservation status. Again, an immediate question that comes to mind when one hears this is, why conserve organisms some of which are pests to man. The answer is that, any given organisms on earth is essential to the normal functioning of its ecosystem(s). Unless they cause disease in man and/or in his livestock or they directly injure him and/or his livestock, they ought to be conserved for purposes of ecosystem health and the continuity of life on earth.

Nkunika (1982) reported the presence of 41 species of termites in the Southern Province of Zambia alone. The species were grouped in 27 genera. He reported that distribution of the termite species in the province was related to rainfall and the distribution of vegetation zones. It can be assumed therefore that the distribution of termites in the rest of Zambia is also correlated to the distribution of rainfall and vegetation types in those parts of the country. Again, as stated under the section of cockroaches above, the actual number of termites species in Zambia could be more than the 87 found in this study. More work is required to ascertain this but in the mean time, the number 87 serves as a baseline for the future study of termite diversity in the country.

ACKNOWLEDGEMENTS

The author is greatly indebted to the sponsors of this study, namely, the German Federal Ministry of Education and Research (BMBF), who funded the study through the auspices of the Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL), headquartered in Namibia, Southern Africa. to whom I am also very thankful. I am also very grateful to UHH and KfW, both from Germany who administrated and implemented parts of the project. Last but not least I thank Ms. Indie Dinala, our SASSCAL projects National Coordinator in Zambia based at the National Remote Sensing Centre on Kenneth Kaunda International Airport road in Lusaka where the SASSCAL Offices are located, for her maturity in coordinating many SASSCAL projects that were running at the sametime in the country.

REFERENCES

- Bacchus, S. (1997) *Microtermes* in East Africa (Isoptera: Termitidae: Macrotermitinae). *Bulletin of the Natural History Museum, Entomology*, **66** (2), 123–171.
- Beccaloni, G. W. 2014. *Cockroach Species File Online*. Version 5.0/5.0. World Wide Web electronic publication. <<http://Cockroach.SpeciesFile.org>> [accessed 19 & 20 August, 2016].
- Beccaloni, G. & Eggleton, P. (2013) Order Blattodea. *Zootaxa* **3703**(1), 046–048. <http://www.mapress.com/zootaxa/2013/f/zt03703p048.pdf>
- Bouillon, A. (1958) Les termites du Katanga. *Naturalistes Belges*, **39**(6), 198–208.
- Bouillon, A. & Mathot, G. (1965) Quel est ce termite africain? *Zooleo (Kinshasa)*, **1**, 1–115.
- Bouillon, A. & Mathot, G. (1966) Quel est ce termite africain? *Zooleo (Kinshasa)*, **1** (Suppl. 1), 1–23.
- Bouillon, A. & Mathot, G. (1971) Quel est ce termite africain? *Zooleo (Kinshasa)*, **1** (Suppl. 2), 1–48.

Bouillon, A. & Vincke, P.P. (1973) *Megagnathotermes* Silvestri (Isoptera Termitinae): valvules enteriques, revision des soldats, morphotype nouveau, comparaison avec *Cubitermes* et *Ophiotermes*. *Revue de Zoologie et de Botanique Africaines*, **87**(4), 764–774.

Catalogue of life (2016). <http://www.catalogueoflife.org/col/details/species/id/>

Chidumayo, E.N. and Aongola, L. (1998) *Zambia biodiversity strategy and action plan: The country report*. IUCN, Lusaka.

Coaton, W.G.H. (1962a) Survey of the termites of the Kruger National Park (including diagnosis of *Fulleritermes* gen.nov.: Nasutitermitinae). *Koedoe*, **5**, 144–156.

Coaton, W.G.H. (1962b) Nesting habits and mounds of the termites of northern Rhodesia. *African Wild Life*, **16**(1), 61–70.

Coaton, W.G.H. (1962c) The origin and development of massive, vegetated termite hills in northern Rhodesia. *African Wild Life*, **16**(2), 159–166.

Coaton, W.G.H. & Sheasby, J.L. (1973a) National survey of the Isoptera of southern Africa. 4. The genus *Fulleritermes* Coaton (Termitidae: Nasutitermitinae). *Cimbebasia (Series A)*, **3**(4), 29–38.

Coaton, W.G.H. & Sheasby, J.L. (1973b) National survey of the Isoptera of southern Africa. 2. The genus *Schedorhinotermes* Silvestri (Rhinotermitidae). *Cimbebasia (Series A)*, **3**(2), 10–17.

Coaton, W.G.H. & Sheasby, J.L. (1973c) National survey of the Isoptera of southern Africa. 4. The genus *Fulleritermes* Coaton (Termitidae: Nasutitermitinae). *Cimbebasia (Series A)*, **3**(4): 29–38.

Coaton, W.G.H. & Sheasby, J.L. (1974) National survey of the Isoptera of southern Africa. 5. The genus *Rhadinotermes* Sands (Termitidae: Nasutitermitinae). *Cimbebasia (Series A)* **3**(5), 39–45.

Coaton, W.G.H. & Sheasby, J.L. (1975) National survey of the Isoptera of southern Africa. 9. The genus *Ancistrotermes* Silvestri (Termitidae: Macrotermitinae), *Cimbebasia (Series A)*, **3**(9), 95–104.

Coaton, W.G.H. & Sheasby, J.L. (1977) National survey of the Isoptera of southern Africa. 13. The genus *Pseudacanthotermes* Sjostedt (Termitidae: Macrotermitinae). *Cimbebasia (Series A)* **3**(13), 183–205.

Coaton, W.G.H. & Sheasby, J.L. (1980) National survey of the Isoptera of southern Africa. 18. The genus *Bifiditermes* Krishna (Kalotermitidae). *Entomology Memoir, Department of Agricultural and Technical Services (South Africa)*, **53**, 1–13.

Cowie, R.H., Wood, T.G., Barnett, E.A., Sands, W.A. & Black, H.I.J. (1990) A checklist of the termites of Ethiopia with a review of their biology, distribution and pest status. *African Journal of Ecology*, **28**, 21-33.

Davies, D.H. (1971) *Zambia in Maps*. University of London Press Ltd., St Paul's House, Warwick Lane, London. 128 pp.

Emerson, A.E. (1928) Termites of the Belgian Congo and the Cameroon. *Bulletin of the American Museum of Natural History*, **57(7)**, 401–574.

Harris, W.V. (1951) Further records of East African termites. *Proceedings of the Royal Entomological Society of London, Series B, Taxonomy*, **20(1–2)**, 25–28.

Harris, W.V. (1960) Further records of East African termites—III. *Proceedings of the Royal Entomological Society of London, Series B, Taxonomy*, **29(1–2)**, 17–21.

Harris, W.V. (1961) *Termites: their recognition and control*. London: Longmans, Green and Co., xii + 187 pp.

Harris, W.V. (1966) The genus *Ancistrotermes* (Isoptera). *Bulletin of the British Museum (Natural History), Entomology*, **18(1)**, 1–20.

Hill, D.S. (2008) *Pests of Crops in Warmer Climates and Their Control*. Springer; 2008 edition (November 17, 2008). 704 pages.

Hocking, B. (1965) Notes on some African termites. *Proceedings of the Royal Entomological Society of London, Series A, General Entomology*, **40(4–6)**, 83–87.

Irish, J. (2018a) *Namibia Biodiversity Database Web Site. Page: Family Blattidae in Namibia*. Interpretive collation based on the combined published sources for all included taxa, as listed. URL: <http://biodiversity.org.na/taxondisplay.php?nr=4526>, accessed at: 2018-02-10T20:17:36+02:00.

Irish, J. (2018b). *Namibia Biodiversity Database Web Site. Page: Order Isoptera in Namibia*. Interpretive collation based on the combined published sources for all included taxa, as listed. URL: <http://www.biodiversity.org.na/taxondisplay.php?nr=2987>, accessed at: 2018-02-10T20:20:57+02:00.

IUCN Red List of Threatened Species. Version 2016-3. <www.iucnredlist.org>.

Krishna, K., Grimaldi, D.A., Krishna, V. & Engel, M.S. (2013) *Treatise on the Isoptera of the world. Bulletin of the American Museum of Natural History*, no. 377. **Vol. 1-7**. URI: <http://hdl.handle.net/2246/6430>

Livingstone National Museum, Zambia (2013) Report. *Insect Collection Register*. Natural History Department, Livingstone, Zambia.

Maiti, P.K. (2006) A taxonomic monograph on the world species of termites of the family Rhinotermitidae (Isoptera: Insecta). *Memoirs of the Zoological Survey of India*, **20(4)**, 1–272.

Marshall, J. (1989) 5: Order Blattodea (Cockroaches). *Insects of Southern Africa* (ed by Scholtz, C.H. and E. Holm. 1989), pp 49-52. Butterworths Professional Publishers (Pty) Ltd., Durban, South Africa.

Mathot, G. (1974) Liste des specimens typiques de termites conservees dans les collections du Musee Royal de l'Afrique Centrale (Tervuren, Belgique) (Insecta: Isoptera). *Documentation Zoologique, Musee Royal de l'Afrique Centrale*, **18**, 1–30.

Mbata, K.J. (1995) Traditional uses of Arthropods in Zambia: I. The food insects. *The Food Insects Newsletter*, **8**, 5-7, 9.

Mbata, K.J. (1998) *Country study for Zambia National Biodiversity Strategy and Action Plan (BSAP): Invertebrate component*. Prepared on behalf of IUCN – The World Conservation Union, Zambia Country Office and the Ministry of Environment and Natural Resources (MENR), Lusaka. 165 pp.

Ministry of Environment and Natural Resources (MENR) (1998) *Zambia Biodiversity Strategy and Action Plan - The Country Study*, MENR, Lusaka.

Nkunika, P.O.Y. (1982) The termites of southern Zambia: their distribution in relation to vegetation zones. *Zambia Museums Journal*, **6**, 112–117.

Nkunika, P.O.Y. (1986) An ecological survey of the termites (Isoptera) of Lochinvar National Park, Zambia. *Journal of the Entomological Society of Southern Africa*, **49(1)**, 45–53.

Pinhey ECG (1961) Dragonflies (Odonata) of Central Africa. *Occasional Papers Rhodes-Livingstone Museum*, **14**, 1-97.

Pinhey, E. (1975) Chapter 14: Insects. In: Phillipson, D.W. ed., *Mosi-oa-Tunys: A Handbook to the Victoria Falls Region*. Longman Zimbabwe.

Pinhey, E. & Loe, I. (1973) *A guide to the Insects of Zambia*. Anglo American Corporation (Central Africa) Ltd. Lusaka, Zambia.

Pinhey, E. & Loe, I. (1977) *A guide to the butterflies of Zambia*. Anglo American Corporation (Central Africa) Ltd. Lusaka, Zambia.

Plant Pests and Diseases Act. No. 13. (1994) Government of the Republic of Zambia. Government Printers, Lusaka.

- Pratt, D. H. (2017) *Cockroaches: Pictorial key to some common species*.
https://www.cdc.gov/nceh/ehs/docs/pictorial_keys/cockroaches.pdf
- Ruelle, J.E. (1970) A revision of the termites of the genus *Macrotermes* from the Ethiopian region (Isoptera: Termitidae). *Bulletin of the British Museum (Natural History), Entomology*, **24(9)**, 363–444.
- Ruelle, J.E. (1975a) The genus *Protermes* (Isoptera: Termitidae): description of imago caste and new records from central Africa. *Journal of the Entomological Society of Southern Africa*, **38(2)**, 155–163.
- Ruelle, J.E. (1975b) Type specimens of Isoptera in the National Collection of Insects, Pretoria. *Entomology Memoir, Department of Agricultural and Technical Services (South Africa)*, **45**, 1–22.
- Ruelle, J.E. (1979) National survey of the Isoptera of southern Africa. 16. A revision of the genus *Allodoterms* Silvestri from the Ethiopian region (Termitidae: Macrotermitinae). *Entomology Memoir, Department of Agricultural and Technical Services (South Africa)*, **49**, 1–25.
- Ruelle, J.E. (1989) 6: Order Isoptera (Termites). *Insects of Southern Africa* (ed by Scholtz, C.H. and E. Holm) pp 53-61. Butterworths Professional Publishers (Pty) Ltd., Durban, South Africa.
- Ruelle, J.E., Coaton, W.G.H. & Sheasby, J.L. (1975) National survey of the Isoptera of southern Africa. 8. The genus *Macrotermes* Holmgren (Termitidae: Macrotermitinae). *Cimbebasia (Series A)*, **3(8)**, 73–94.
- Sands, W.A. (1957) A revision of the East African Nasutitermitinae (Isoptera). *Bulletin of the British Museum (Natural History), Entomology*, **5(1)**, 1–28.
- Sands, W.A. (1959) A revision of the termites of the genus *Amitermes* from the Ethiopian region (Isoptera, Termitidae, Amitermitinae). *Bulletin of the British Museum (Natural History), Entomology*, **8(4)**, 129–156.
- Sands, W.A. (1965) A revision of the termite subfamily Nasutitermitinae (Isoptera, Termitidae) from the Ethiopian Region. *Bulletin of the British Museum (Natural History), Entomology (suppl.)*, **4**, 1–172.
- Sands, W.A. (1972) The soldierless termites of Africa (Isoptera: Termitidae). *Bulletin of the British Museum (Natural History), Entomology (suppl.)*, **18**, 1–244.
- Sands, W.A. (1992) The termite genus *Amitermes* in Africa and the Middle East. *Natural Resources Institute Bulletin*, **51**, 1–140.
- Sands, W.A. (1998) *The identification of worker castes of termite genera from soils of Africa and the Middle East*. Wallingford, U.K.: CAB International, 500 pp.

Silvestri, F. (1912) Termiti raccolte da S.A.R. la Duchessa d'Aosta nelle regione dei grandi laghi dell'Africa equatoriale. *Annuario del Museo Zoologico della R. Università di Napoli (n.s.)*, **3(22–23)**, 1–5.

Sjostedt, Y. (1913) Über Termiten aus dem inneren Kongo, Rhodesia, und Deutsch-Ostafrika. *Revue Zoologique Africaine (Bruxelles)*, **2(3)**, 354–391.

Sjöstedt, Y. (1926) Revision der Termiten Afrikas. 3. Monographie. Kungliga Svenska Vetenskaps-Akademiens Handlingar (3) **3(1)**, 1–419.

Snyder, T.E. (1949) Catalog of termites (Isoptera) of the world. Smithsonian Miscellaneous Collections, **112(3953)**, 1–490.

South African National Biodiversity Institute (SANBI) (2018) *South African animal checklist*. http://biodiversityadvisor.sanbi.org/wp-content/uploads/2016/06/2016_04_13-animal-checklist.pdf

Uys, V.M. (1994) A systematic revision of the genus *Lepidoterme*s Sjostedt (Isoptera: Termitidae). *Entomology Memoir, Department of Agricultural and Technical Services (South Africa)*, 90 (4), 1–53.

Victor, H.W. (1941) Termites in East Africa: field key and distribution (by territories). *The East African Agricultural Journal*, **6(4)**, 201–205. Published online, 06 Jan 2016.

Wanyonyi, K., Darlington, J.P.E.C. & Bagine, R.K.N. (1984) Checklist of the species of termites (Isoptera) recorded from East Africa. *Journal of the East Africa Natural History Society and National Museum*, **181**, 1–10.

Williams, R.M.C. (1966) The East African termites of the genus *Cubiterme*s (Isoptera: Termitidae). *Transactions of the Royal Entomological Society of London*, **118(4)**, 73–118.

Wood, T.G. & Thomas, R.J. (1989) The mutualistic association between Macrotermitinae and *Termitomyces*. *Insect-fungus interactions; 14th symposium of the Royal Entomological Society of London in collaboration with the British Mycological Society* (ed by Wilding, N., Collins, N.M., Hammond, P.M. and J.F. Webber), pp 6–17, 69–92. Academic Press, New York.