Biomass Power Project

Invertebrates

Scoping level

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1 Introduction

NamPower, with the support of the European Investment Bank, is investigating the possibility of burning biomass to generate electricity, specifically the products of harvesting encroacher bush in northern Namibia. Six potential sites were identified for the eventual location of a biomass-burning power plant. The current scoping exercise is intended to determine which of these would be the preferred option.

2 Approach to study

2.1 Terms of reference

- Prepare lists of expected taxa and identify potential taxa of concern.
- Inspect satellite imagery to provide regional and habitat context.
- Identify potential sensitive habitats, ecosystem service or ecosystem functional issues relative to invertebrates.
- Conduct site visit. Given that all areas are known to have low data density in the literature, a literature review will be insufficient for the purposes of the site selection process.
- Visit the proposed locations to ground-truth, correct and expand the literature review, if and as needed, and make sufficient qualitative observations to allow the process to proceed.
- Summarize invertebrate biodiversity at each proposed location, including any taxa, habitats or ecosystem services of concern.
- Highlight the pros and cons of each location and make an informed recommendation as to the preferred site.
- Highlight any issues to be taken forward into the assessment phase, if any.

2.2 Methodology

2.2.1 Literature survey

Literature records were the primary source of invertebrate biodiversity information for the current project. Namibian biodiversity literature records are known to be geographically patchy, tending to be concentrated around towns and tourist attractions. There are essentially no published invertebrate records for any of the proposed sites, and in most cases not for their immediate surroundings either, therefore it was necessary to extend the areas of consideration outwards till at least the nearest town was included in each case. The basis for search area selection was the map of ‘biomass areas’ that was provided to the consultants (Figure 2.1), with two changes:

- The Otjikoto and Ohorongo areas overlap to a large degree and were treated as one search area.
- Although included in the Auas biomass area, Windhoek was excluded from the Auas data search area. This was because of the marked environmental differences between Windhoek and the Windhoek Valley, compared to the rest of the Auas

biomass area. Refer also to section 5.5 and Figure 8.5 below to confirm the validity of this decision.

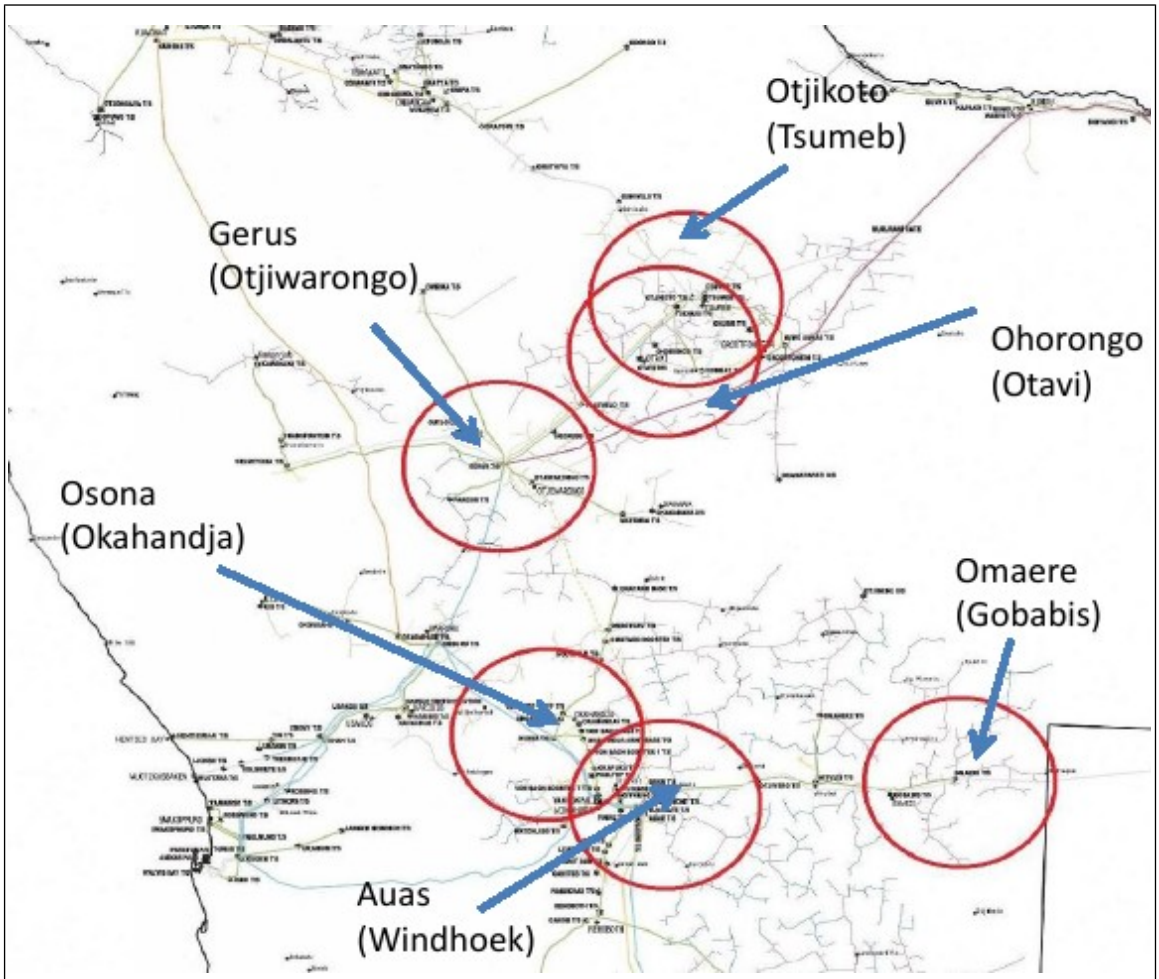

Figure 2.1: Biomass areas as provided.

The utilised data sources were:

- The Namibia Biodiversity Database (NBD 2017), a coordinate-based collation of about 270000 literature records of Namibian biodiversity.
- The Global Biodiversity Information Facility (GBIF 2017), that includes several hundred million international museum records, including some from Namibia, and that was accessed by coordinate.
- The South African GBIF node (SABIF 2016), that holds Southern African museum specimen data that is not duplicated on GBIF because it is in incompatible QDS based format. This former resource has been off-line for many months, but previously saved searches for some areas were available and were used here.
- A private collection of about 162 Gb of pdf-based publications concerned with Namibian biodiversity, that was subjected to a placename-based text search.

Data was extracted from each as follows:

- For coordinate-based datasets, all records with coordinates that fall within each selected area were used.

- For quarter-degree square (QDS) based datasets, all records for squares that have more than 50% of their surface area inside the selected area were used, but since it is often not known from where in a potentially habitat-diverse square a particular record might have originated, any species found in this way were vetted for habitat-compatibility with the core study area, and discarded if not.
- For locality-based datasets, all records from places inside the selected area were used, based on place names as found on official 1: 250000 topographical maps.

2.2.2 Site visits

Site visits took place as follows:

- 2 May 2017: Otjikoto and Ohorongo
- 3 May 2017: Gerus and Osona
- 4 May 2017: Auas and Omaere

At least 3 hours were spent on the ground at each site, observing invertebrate occurrence and habitat diversity. Spot check stops were made at one or two additional locations within each biomass area, generally where access routes crossed their borders, in order to assess homogeneity of the area and comparability of edge areas to the core investigated potential power plant site.

3 Limitations and Assumptions

Limitation: data deficiency. The Environmental Impact Assessment is for the location of a biomass power plant. The power plant can only function if bush harvesting takes place. The effect of bush harvesting is not being assessed. Despite a growing volume of reports to the effect, there exists no comprehensive information on the effect, positive or negative, of bush clearing on invertebrate populations. Bush harvesting is being considered as a single activity with a single outcome, not acknowledging the heterogeneity of the Namibian Savanna, and the likely very different effects of the same activity on different components thereof. There have been no pre- and post-harvesting comparisons of invertebrate biodiversity and abundance. The appropriate time for such studies is before the first biomass power station is built, not after.

Assumption: appropriate methodology. If the bulk of bush harvested comes from the vicinity of the power station, decreasing in volume with distance, then an assessment of the sensitivity of biodiversity in the surrounding area, as was done here, is useful for an assessment of the probable severity of the effect of the subsequent bush harvesting that will be facilitated by the existence of the power station. If this assumption is not true and the power plant is also fed with bush from distant locations, possibly increasingly so as local bush reserves become depleted, only a study that covers the entire Namibian Savanna Biome can be effective.

4 Legislative context

4.1 Applicable laws and policies

An overview of Namibian environmental legislation and policies can be found in Ruppel & Ruppel-Schlichting (2014). Those pertinent to biodiversity in the context of the current project include:

- The Constitution of the Republic of Namibia. Article 95 commits Namibia to the maintenance of ecosystems, essential ecological processes and biological diversity.
- The Environmental Management Act 7 of 2007 regulates the Environmental Impact Assessment process of which this report is part.
- Nature Conservation Ordinance 4 of 1975, including Nature Conservation General Amendment Act 1990 and Nature Conservation Amendment Act 5 of 1996 accords special status to defined taxa as per the following schedules:
    - Schedule 3: Specially Protected Game
    - Schedule 4: Protected Game
    - Schedule 5: Huntable Game
    - Schedule 6: Huntable Game Birds
    - Schedule 9: Protected Plants
- The Forest Act 12 of 2001 provides for the protection and control of forest areas and their biodiversity. Section 22 deals with the protection of natural vegetation on any land which is not part of a surveyed erven in a local authority area, and specifically prohibits the cutting, destruction or removal of vegetation on sand dunes, or within 100 m of a watercourse, without a permit. Similarly, the clearance of more than 15 ha of woody vegetation per development also requires a permit.
- Inland Fisheries Resources Act 1 of 2003 provides for the protection of aquatic ecosystems.
- The Convention of Biological Diversity of 1992 provides for the conservation of biological diversity.
- The Convention on International Trade in Endangered Species (CITES) of 1973 regulates trade in endangered species, through listing in appendices:
    - Appendix I includes species threatened with global extinction, and trade in these is subject to particularly strict regulations. It is only authorized under exceptional circumstances.
    - Appendix II includes species that are not necessarily now threatened with extinction, but may become so unless trade in them is strictly regulated to avoid utilization incompatible with their survival. It also includes any other species for which trade needs to regulated in order to effectively control trade in strict Appendix II species.
    - Appendix III includes species where trade regulation to prevent exploitation is mainly needed on the individual country or regional level. Namibia currently has no CITES Appendix III species.

Legislation generally does not specify invertebrates as such, and they derive their legal status by proxy, through being part of overall biodiversity, ecosystems and habitats.

5 Results

5.1 Raw diversity

Combined results appear in the Appendix, Section 9, and are summarised in Table 5.1. Numbers of recorded taxa vary widely between sites, from a low of 191 (Gerus) to a high of 752 (Osona) (Table 5.1). At this stage of our knowledge of Namibian invertebrates, such numbers reflect past collecting activity in an area rather than actual diversity. The highest diversity for Osona can be explained by the fact that the nearby town of Okahandja was the home of F. Gaerdes, a twentieth century insect collector who disseminated specimens worldwide, resulting in many published records for invertebrates from Okahandja and vicinity. It does not imply that Osona / Okahandja has intrinsically higher biodiversity than surrounding areas, simply that it has been better samples than other areas considered here. No significance was therefore attached to raw species numbers as such, but they were used as the basis for calculating endemism rates.

Table 5.1: Summary taxon statistics for study sites, with sensitivity ranking on endemism.

	Otjikoto	Ohorongo	Gerus	Osona	Auas	Omaere
Number of taxa	438	438	191	752	197	221
Number of endemic taxa	52	52	18	57	15	11
% endemism	11.9%	11.9%	9.4%	7.6%	7.6%	5.0%
Relative sensitivity ranking	1	1	2	3	3	4

5.2 Species with legal or conservation status

5.2.1 Legal status

The Namibia Biodiversity Database maintains the definitive list of Namibian species with legal status at http://biodiversity.org.na/legalspp.php. It shows that there are currently no Namibian terrestrial invertebrates with any legal protection at the species level. The Nature Conservation Ordinance does not extend to invertebrates, nor does CITES list any terrestrial Namibian invertebrates. Invertebrates, and by implication endemic invertebrates in particular, do enjoy blanket legal protection through Article 95 of the Namibian Constitution and Namibia's ratification of the Convention on Biological Diversity.

5.2.2 Conservation status

The Namibia Biodiversity Database maintains the definitive list of Namibian species with IUCN status. It will only be publicly available at http://biodiversity.org.na/redlistspp.php by August 2017, but a draft listing of the invertebrates was made privately available for the purposes of the current study. It includes 235 Namibian invertebrates that have an IUCN evaluation, but the vast majority are evaluated as 'Least Concern'. Only 25 species are categorised as Threatened, Near Threatened or Data Deficient. None of the latter species were recorded from any of the study sites, and none are listed in Table 9.1.

5.3 Endemism

The underlying endemism rate of a particular area is expected to be reflected in any sample of species from an area, even if the sample is incomplete (smaller), as some of our samples obviously are. Smaller samples will usually be expected to deviate further from true values than larger samples, but our samples seem to be large enough to overcome this effect. I base this assessment firstly on the similar endemism rates (Table 5.1) for the relatively proximate sites Osona and Auas, despite their very different raw diversity values, and secondly on the relatively smooth geographically correlated trend shown by the endemism rates.

Higher endemism rates for a particular site accorded it a higher relative sensitivity rating here. The reasoning is that bush harvesting will reduce the available habitat for all indigenous species within the harvested area. Endemic species have smaller distribution ranges than non-endemic species, hence identical harvesting will reduce the viable distribution ranges of endemic species proportionally more than those of non-endemic species. Proportionally larger habitat decline puts endemic species at a higher risk of population decline and potential extinction due to habitat destruction as a result of bush harvesting. Endemism rate is a proxy for the severity of this risk.

In making this assessment we are working under the severe constraint of data deficiency. Most endemic invertebrate taxa are known to be endemic (because they have only ever been recorded from Namibia), but detail on their distribution and abundance within Namibia is usually lacking. Two scenarios present themselves to explain endemic species that are known from only one or two records: they might be widespread within different habitats in Namibia and simply under-collected, and therefore of lesser concern, or they might truly be highly localised range- and habitat-restricted species that are of highest concern. Our current data resolution does not discriminate between the preceding opposite cases and treats both as simply ‘endemic’. By using endemism rate as a proxy for severity of risk, we are respectively over and underestimating risk in these two example cases. Underestimation of risk is of highest concern, but the constraint of data deficiency does not allow us to even identify particular cases where this might be happening at present.

5.4 Proximity to centres of endemism

The distribution of endemic species tends to cluster around particular geographical locations, known as biodiversity hotspots, or centres of endemism. The reasons for the existence of such hotspots are usually a combination of climatic, geo-historical and biogeographical factors. No formal enumeration of Namibian invertebrate centres of endemism exists. What follows is based on personal knowledge and experience of invertebrate occurrence in Namibia, cross-correlated with better known plant and vertebrate distributions, that often show the same patterns.

In the Namibian Savanna Biome, biodiversity hotspots tend to be associated with mountains, and defined by the climatic effects of higher altitude and the probable functioning of mountains as climatic refugia for relict species. Altitude was therefore used here to define the extent of such mountain hotspots; in the case of isolated individual

mountains (Paresis, Waterberg, Auas) the altitude of the foot was used to delimit it, while in the case of extended mountainlands (Otavi, Central Highlands) the altitude of the highest contiguous mountain area was used.

Table 5.2 shows that the Auas study site at 1880 m altitude is located within the Central Highlands centre of endemism, as defined by the 1800 m altitude contour, and only 3 km away from an outlier of the Auas Mountain hotspot, as defined by the 2000 m altitude contour on the nearby Bismarckberge. The Ohorongo site is similarly located within the Otavi Mountainland hotspot, and the Otjikoto site close to it. The Gerus and Osona sites are moderately close to the Paresis and Central Highland hotspots respectively, while the Omaere site has no hotspots within its circle of influence.

Bush harvesting on mountain slopes is less likely for purely practical reasons, therefore direct habitat destruction of mountain hotspots as a result of bush harvesting is also less likely. It is not known exactly what the indirect effects of habitat destruction due to bush harvesting in their surrounding resource areas will be on endemic invertebrate taxa of mountains within harvested areas, but the probability that it will be detrimental can not be discounted. Where centres of endemism are located closer to the centre of the harvesting area (the study sites in this case), the probability of potential detrimental effects are higher. Proximity to hotspots was therefore used to assign a relative sensitivity ranking to each site, with closer sites being accorded higher sensitivity than more distant sites.

Table 5.2: Relative sensitivity ranking for study sites, based on proximity to known centres of endemism. Distances measured from centre of current substation to nearest defining contour, rounded to one decimal.

Study site	**Proximate hotspot**	**Defining contour**	**Distance in km**	**Sensitivity ranking**
Otjikoto	Otavi Mountainland	1500 m	8 km	3
Ohorongo	Otavi Mountainland	1500 m	3 km	2
Gerus	Paresis Mountains	1500 m	13.5 km	4
Gerus	Waterberg	1550 m	71.5 km	
Osona	Central Highlands	1800 m	16 km	5
Auas	Central Highlands	1800 m	0 km	1
Auas	Auas Mountains	2000 m	3.3 km	
Omaere	none	-	-	6

5.5 Uniqueness of habitat

The distribution ranges of species are largely determined by the geographical extent of those environmental factors to which they are best adapted, or those to which their preferred food plants or prey species are best adapted. Species that are adapted to suites of environmental factors of limited occurrence in nature will have similarly restricted

distribution ranges compared to those for which the required environmental conditions can be readily found over large extents of the country. We do not know what the exact environmental requirements of most Namibian invertebrate are, but experience has shown that the interplay between climate and substrate can account for most cases (e.g. Irish 1994, Irish 2008). Climate is an environmental factor for which data is readily available, as are mathematical tools to model it. Once a climatic model is available, known substrate conditions in the area can be used to interpret it. The end result is a prediction of areas of more or less common climatic conditions that are likely to harbour more or less climate-restricted endemic species.

Various algorithms are available to calculate environmental similarity or dissimilarity. In the current case, a generic algorithm based on environmental dissimilarity metrics was used, specifically the Environmental Distance algorithm developed from DOMAIN (Carpenter et al. 1993) , as implemented in the CRIA-produced open source software OpenModeler (version 1.1.0). Locations were modelled using the BioClim subset of the WorldClim climate dataset (WorldClim 2013) and for each study site four data points centred on each substation were used. The resulting rasters were normalised to a data range of 0 (maximum dissimilarity) to 100 (maximum similarity) and visualised by mapping as a 256 grayscale. The area of highest environmental similarity, or ‘bioclimatic envelope’, was highlighted by overlaying the raster with a copy of itself, clipped at 75% and depicted in yellow. The result was then subjected to a reality check for consistent substrate.

Bioclimatic envelopes for all sites are mapped in Figure 5.1. More detailed visualisations for each individual site appear in Appendix 8 , and each site is discussed further below.

The Otjikoto site is located near to the edge of its bioclimatic envelope, and is most similar to those areas north and east of it. It is highly dissimilar to the Otavi Mountainland immediately to the south (Figure 8.1).

The Ohorongo site is relatively centrally located in a relatively smallish bioclimatic envelope. While the area is included within the greater Otavi Mountainlands, the highest altitude eastern portion of the Mountainlands is less similar and is excluded. There are two areas of climatic similarity towards the north-east, extending to the Kavango River. Both are in northern Kalahari Sandveld, and while they might share bioclimatic similarity with the vicinity of Ohorongo, they do not share the substrate and topography of the latter site. Only the contiguous area around Ohorongo was therefore considered for sensitivity purposes here (Figure 8.2).

The Gerus site is offset from the centre of a relatively large area extending towards the north and west. It is interrupted by an area of dissimilarity at the Paresis Mountain and a few smaller peaks, while the environmentally dissimilar Ugab Valley interrupts it in the west (Figure 8.3).

The Osona site is relatively centrally located in relatively small bioclimatic envelope. It lies adjacent to but outside the Central Highlands, and includes the upper Swakop River Valley and the Windhoek Valley (Figure 8.4).

The Auas site is located in a environmentally complex area that includes most of the Central Highlands. The bioclimatic envelope excludes even higher altitude mountains that sit on top of the highlands, like the Auas Mountains, that are environmentally dissimilar to the base highlands in which the site is located. Low-lying areas like the Windhoek Valley are excluded from the bioclimatic envelope. To the west there is a relatively sharp and straight end to the envelope despite the similarly high altitude there, presumably as an effect of the Namibian east-west climatic gradient. The envelope extends towards the north-east into Sandveld. Despite the bioclimatic similarity and the continued relatively high altitude there, the area is dissimilar from the Central Highlands with regard to substrate and topography, and the part north-east of the black line on Figure 8.5 was not considered for the purposes of sensitivity rating here.

The Omaere site is relatively centrally located within a large area of environmental similarity, but interrupted in the east by the slightly higher altitude Ghanzi Ridge (Figure 8.6).

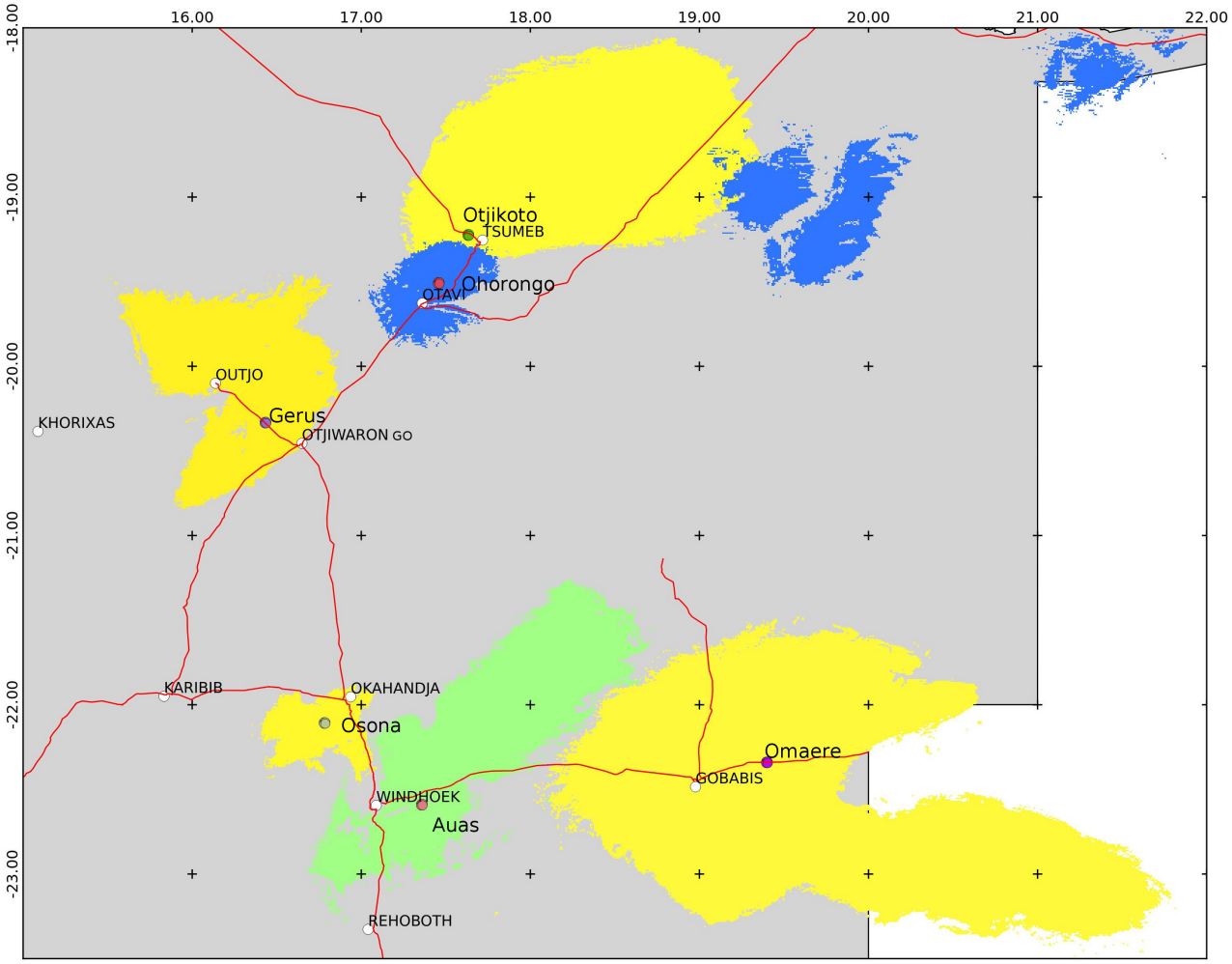

Figure 5.1: Areas of greatest environmental similarity to each study site, at 75% similarity level. Detailed individual visualisations in Appendix 8.

On the basis of the relative sizes of their surrounding bioclimatic envelopes of similar environment, the study sites were ranked for sensitivity. Sites with smaller envelopes were considered to be environmentally more sensitive than ones with larger envelopes (Table 5.3).

Table 5.3: Relative sensitivity ranking for study sites, based on relative sizes of surrounding areas of environmental similarity.

Study site	Sensitivity ranking
Otjikoto	4
Ohorongo	1
Gerus	3
Osona	1
Auas	2
Omaere	5

6 Summary and recommendations

Relative sensitivity rankings from Tables 5.1, 5.2 and 5.3 above were summed in Table 6.1 below. In accordance with instructions, a traffic light approach was used. Considering the high levels of data deficiency under which we are operating, the Precautionary Principle was followed and any site that had been ranked as most sensitive on any one parameter was accorded 'red' status, regardless of its relative ranking otherwise. Only two sites, Gerus and Omaere, had not been ranked most sensitive on any particular parameter. They were also the two sites with the least sensitive composite ranking scores and were therefore evaluated as 'green'. There are no yellow sites.

It should be noted that the two sites with the highest sensitivity rankings are Ohorongo and Auas, respectively, and that Ohorongo is also the only site that ranked most sensitive on two different parameters. They should be considered a redder red than the other red sites.

Table 6.1: Summarised environmental sensitivity of study sites. Lower rankings indicate higher sensitivity. Highest sensitivity rankings highlighted in bold. Traffic light derivation as described above.

Study site	Endemism	Hotspots	Bioclimatic	Total	Traffic light
Otjikoto	**1**	3	4	8	Red
Ohorongo	**1**	2	**1**	4	Reddest
Gerus	2	4	3	9	Green
Osona	3	5	**1**	9	Red
Auas	3	**1**	2	6	Reddest
Omaere	4	6	5	15	Green

Regarding the alternative sub-sites that were provided for some study sites, the selection of one or the other makes no difference to the rankings above. Similarly, the effect of the development on invertebrates is unchanged regardless of the technology option followed.

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8 Appendix: Bioclimatic envelopes

Visualisations have been moved to this appendix so as not to clutter the text.

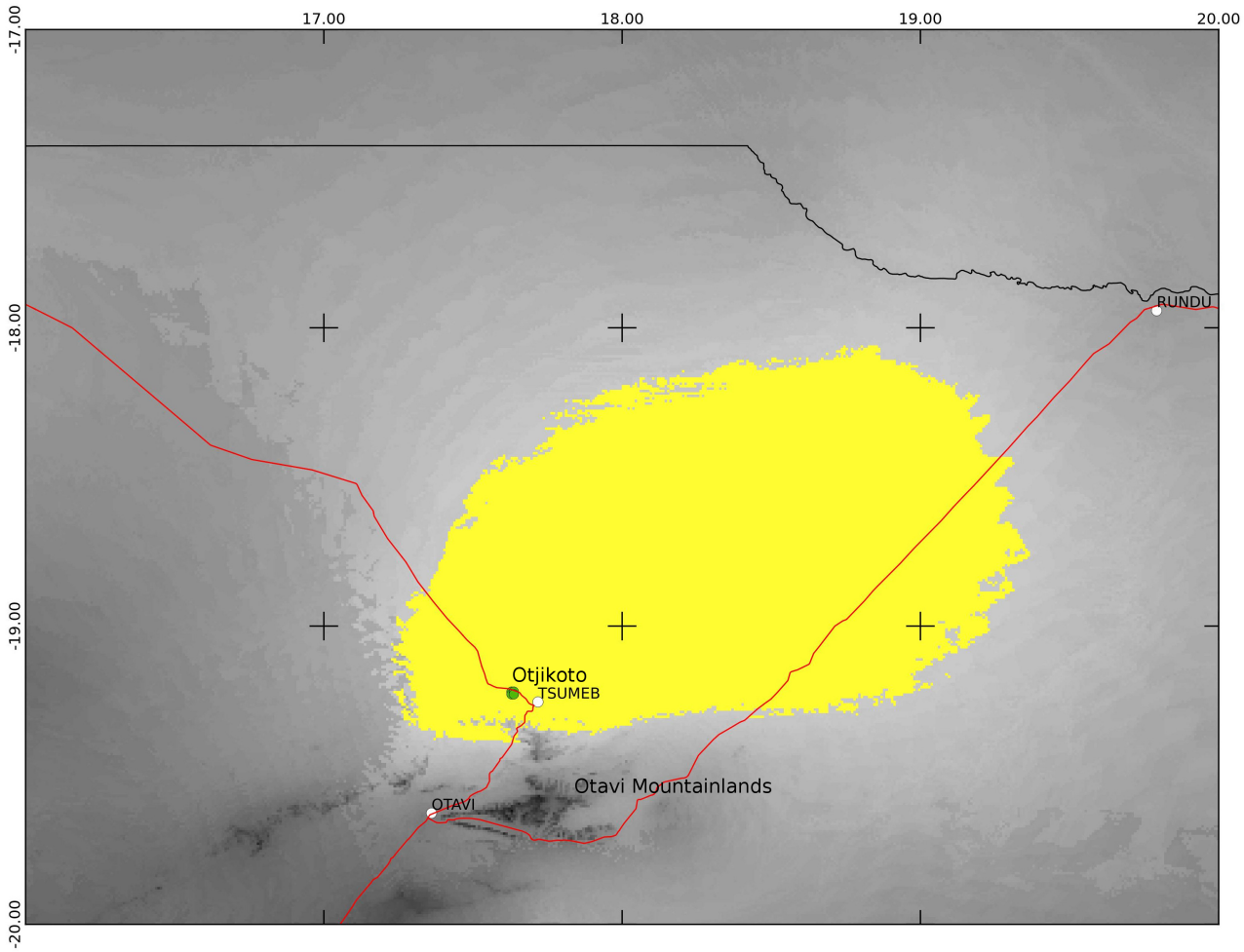

Figure 8.1: Visualisation of Environmental Similarity for the surroundings of Otjikoto study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

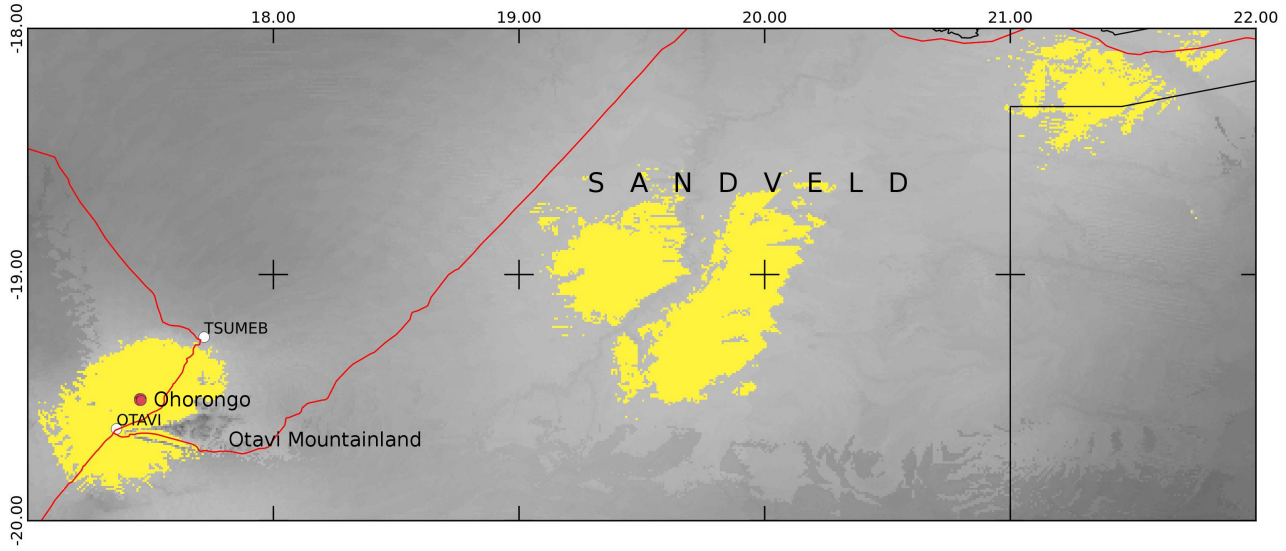

Figure 8.2: Visualisation of Environmental Similarity for the surroundings of Ohorongo study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

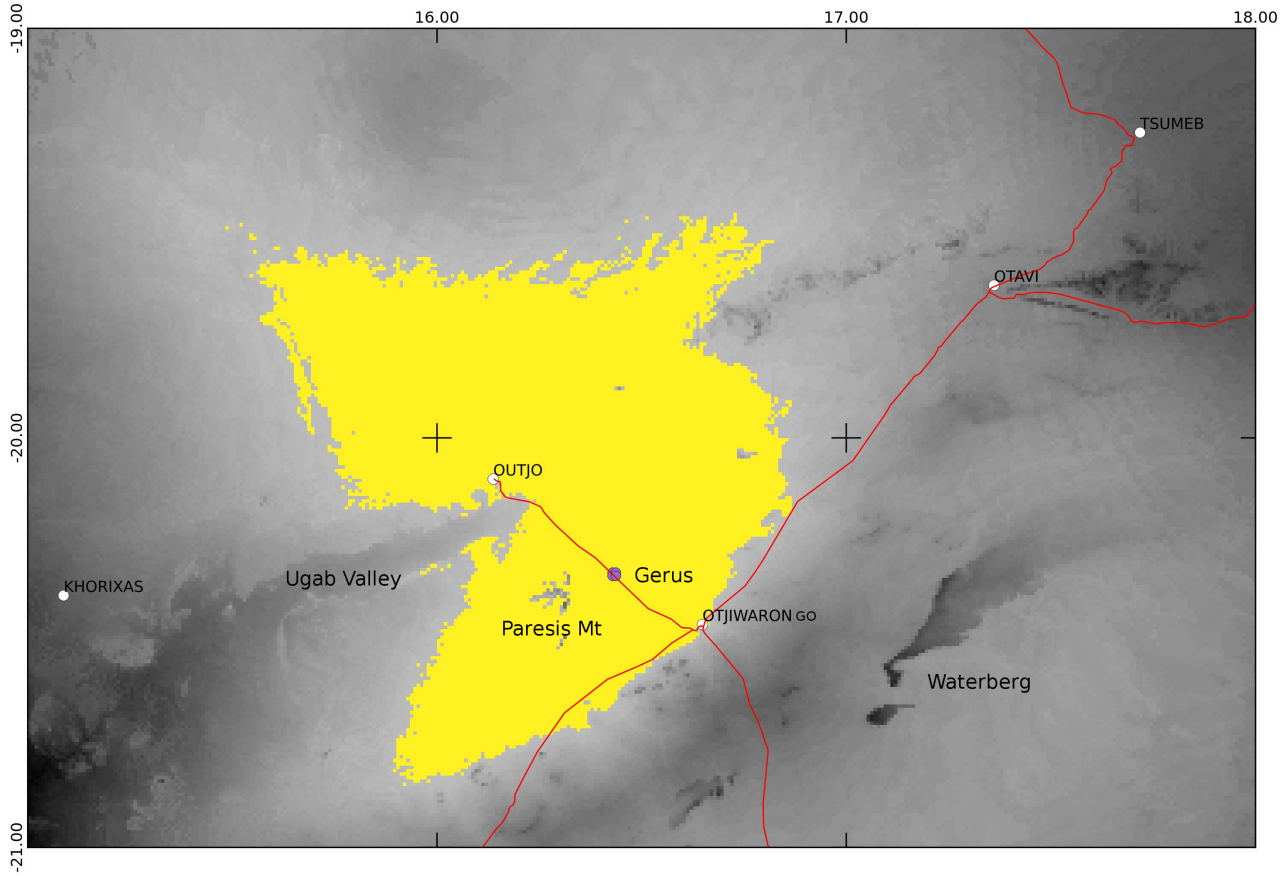

Figure 8.3: Visualisation of Environmental Similarity for the surroundings of Gerus study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

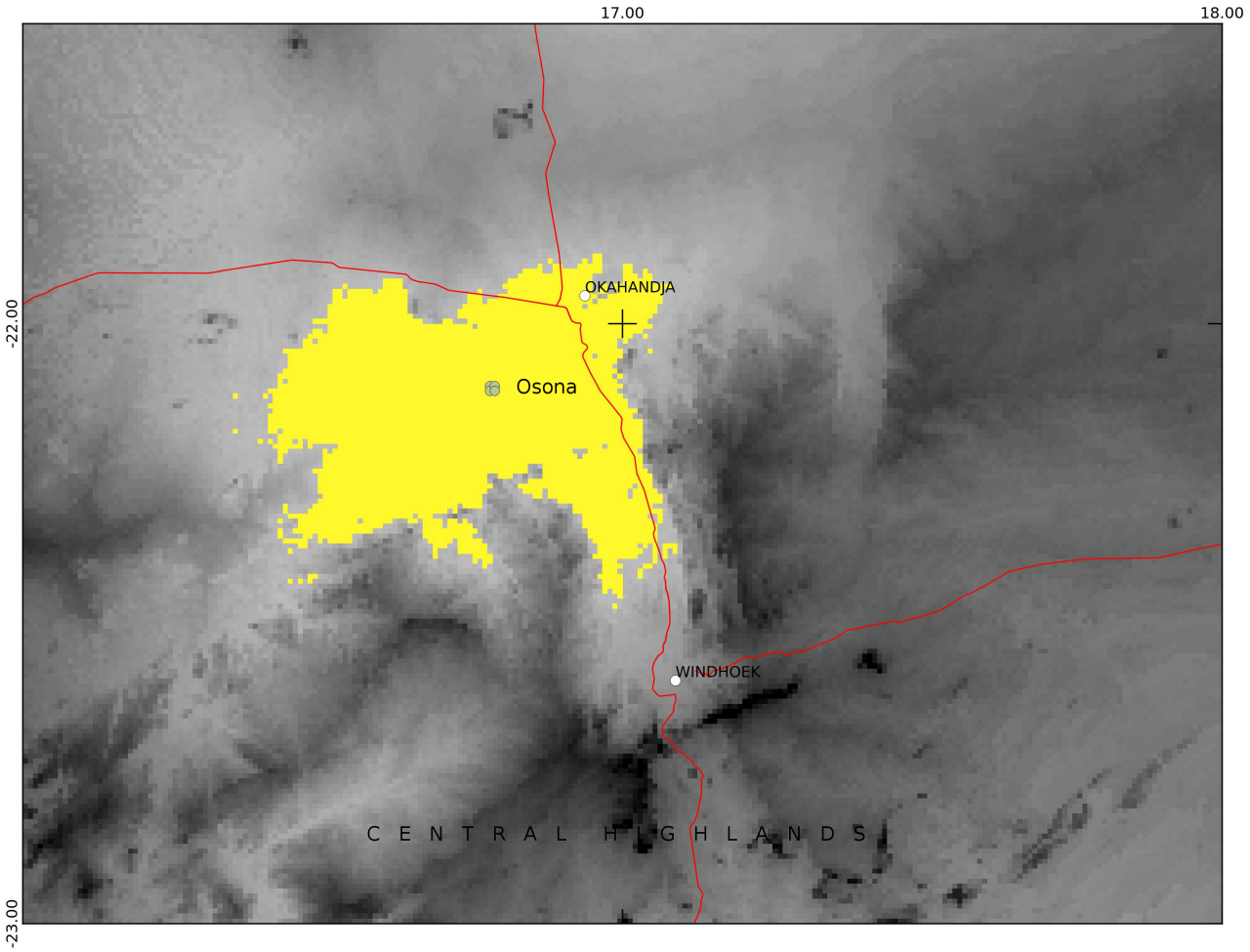

Figure 8.4: Visualisation of Environmental Similarity for the surroundings of Osona study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

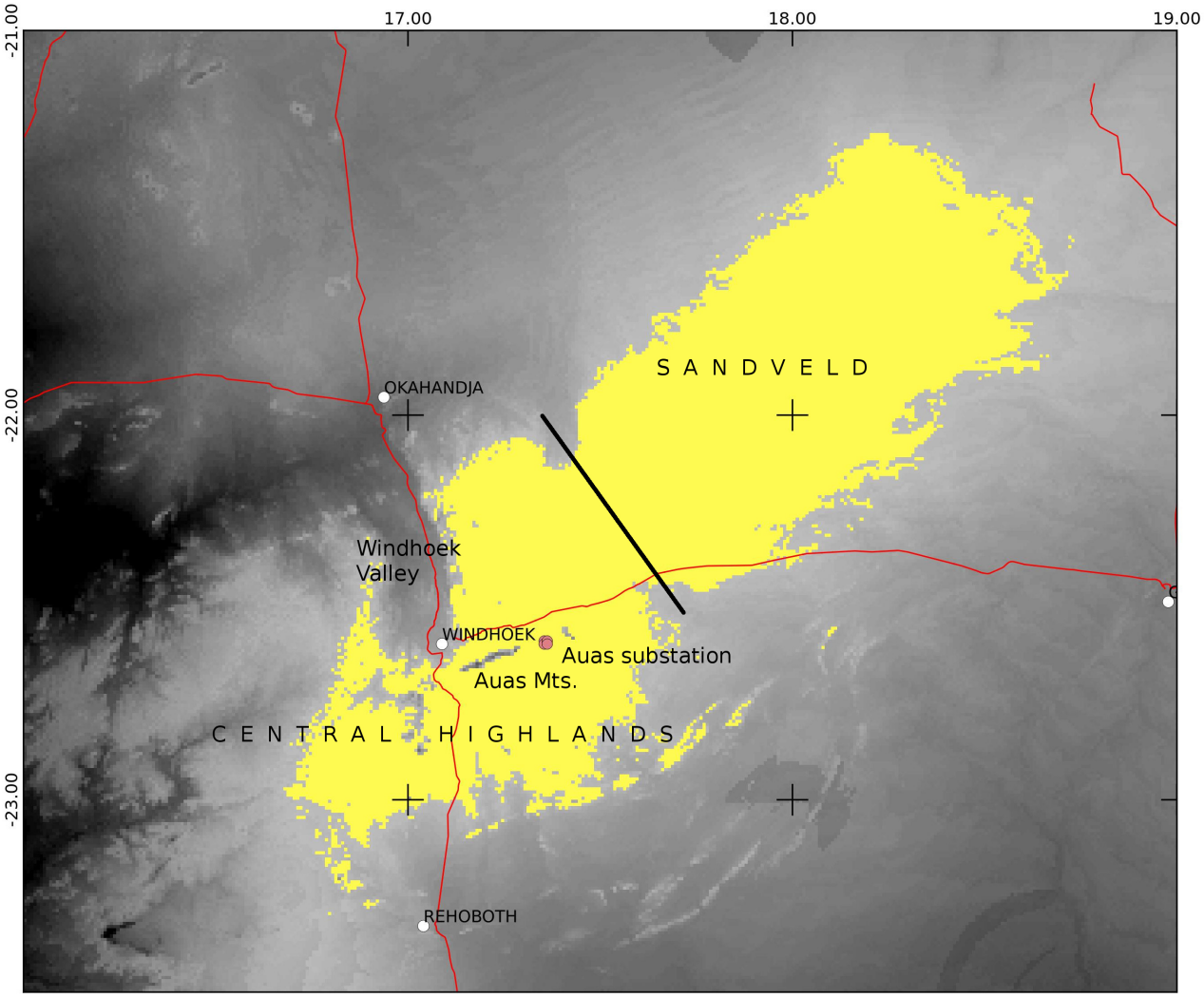

Figure 8.5: Visualisation of Environmental Similarity for the surroundings of Auas study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

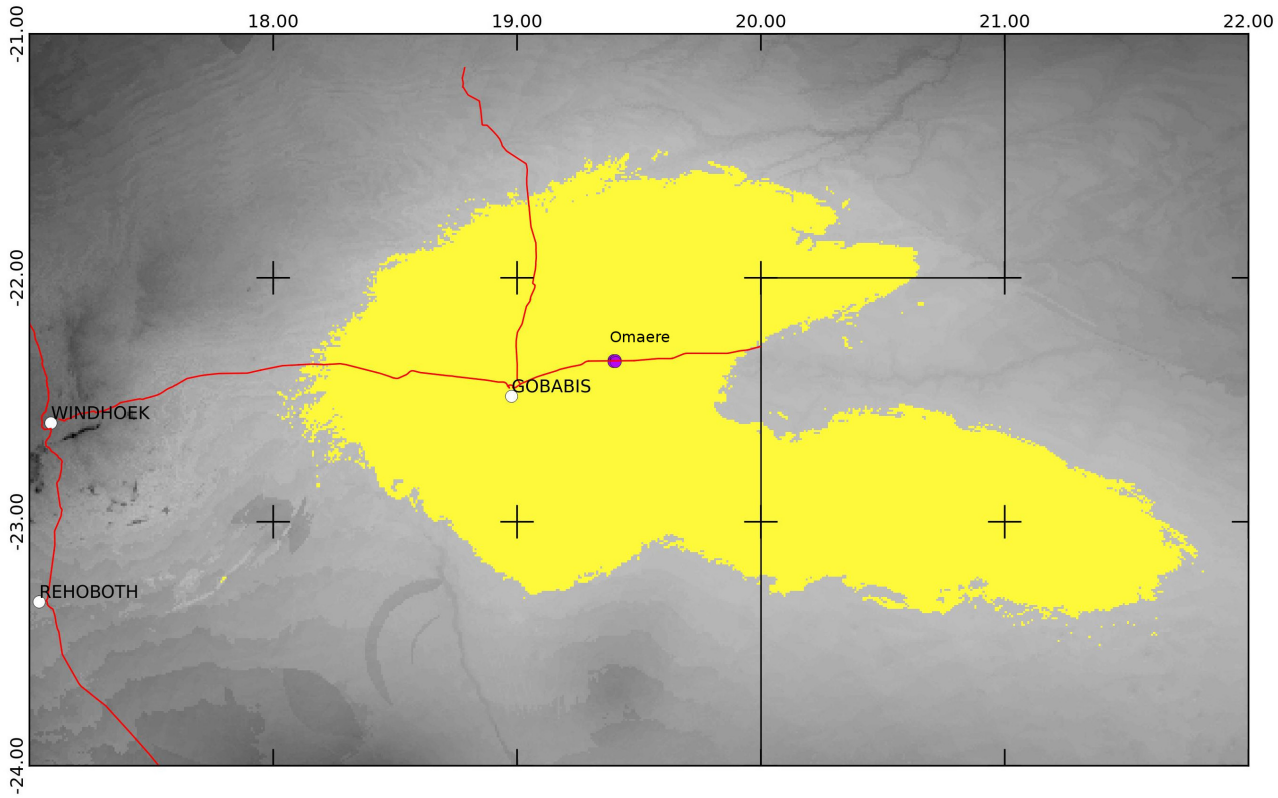

Figure 8.6: Visualisation of Environmental Similarity for the surroundings of Omaere study site, compared to the site. Yellow area denotes > 75% environmental similarity. Darker shades in background denote progressively less similar / more dissimilar areas.

9 Appendix: list of taxa

Table 9.1. Invertebrate taxa known or expected to occur in the study areas, with relevant accessory data.

Study areas: Tsu = Otjikoto, Tsumeb; Oho = Ohorongo; Otji = Gerus, Otjiwarongo; Okh = Osona, Okahandja; Aua = Auas; Gob = Omaere, Gobabis.

Basis for listing for each study area indicated by: L = literature records for site or surroundings exist, refer section 2.2.1; O = observed on site during visit, refer section 2.2.2; E = no actual records or observations but confidently expected to occur on the basis of known ecological requirements and distribution elsewhere.

End = Endemism: X = full Namibian endemic taxa; nr = Namibian near-endemic taxa (> 75% of global range).

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
Annelida	Oligochaeta				Earthworms			E				
Arthropoda	Arachnida	Acariformes			Mites		E	E	E	E		
			Hermanniidae	*Hermannia modesta*							L	L
		Amblypygi	Phrynichidae	*Damon sylviae*	Whip scorpions	X			L			
		Araneae	Agelenidae	*Agelena* sp.	Funnel-web spiders		O	L		E	E	
			Ammoxenidae	*Ammoxenus coccineus*	Termite-eating spiders		L	L	E			E
			Araneidae		Orb-web spiders		E	E	E		E	E
				Neoscona subfusca						L		
			Caponiidae	*Caponia* sp.							L	
			Dipluridae	*Thelochoris striatipes*			L	L				
			Eresidae		Velvet spiders		E	E	O			E

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Stegodyphus bicolor						L		
				Stegodyphus dumicola							L	
			Gnaphosidae		Ground spiders				E	E	E	E
				Asemesthes fodina		X	L	L				
				Asemesthes windhukensis		X	L	L				
				Camillina corrugata			L	L				
				Xerophaeus aridus			L	L				
				Zelotes cronwrighti			E	E				
			Hersiliidae	*Hersilia setifrons*	Tree trunk spiders		L	L				
			Idiopidae	*Idiops damarensis*					L			
			Lycosidae		Wolf spiders			O	E		E	
				Hippasa africana			L	L				
				Lycosa kalaharensis			L	L				
				Ocyale atalanta						L		
			Migidae	*Moggridgea purpurea*		X	L	L				
			Palpimanidae		Palp-footed spiders		E	E	E	E	E	E
			Pholcidae		Daddy-long-legs spiders				E			
				Smeringopus atomarius						L	L	L
				Smeringopus similis		X	L	L		L		L
			Pisauridae	*Euprosthenops australis*	Nursery web spiders						L	
			Salticidae		Jumping spiders		E	E	E	E	E	E
			Scytodidae	*Scytodes quinqua*	Spitting spiders	X	L	L				
			Sicariidae	*Loxosceles spinulosa*	Six-eyed crab					L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
					spiders							
			Tetragnathidae	*Tetragnatha boydi*	Long-jawed orb spiders		L	L				
			Theraphosidae	*Idiothele nigrofulva*	Baboon spiders					L		
			Theridiidae	*Latrodectus indistinctus*	Cobweb spiders					L		
				Latrodectus renivulvatus							L	L
			Thomisidae	*Heriaeus peterwebbi*	Crab spiders							L
			Zodariidae	*Capheris crassimana*						L		
		Opiliones	Assamiidae	*Namutonia wuehlischi*	Harvestmen	X						L
		Parasitiformes	Ixodidae		Ticks		O		E		O	
				Amblyomma impressum			L	L				
				Amblyomma latum						L		L
				Amblyomma marmoreum						L		L
				Rhipicephalus distinctus						L		
				Rhipicephalus longiceps						L		
		Pseudoscorpiones	Garypidae	*Thaumastogarypus okahandjanus*	False scorpions					L		
				Thaumastogarypus robustus			L	L				
			Hesperolpiidae	*Ectactolpium garypoides*						L		
		Scorpiones			Scorpions		O					
			Bothriuridae	*Lisposoma elegans*		X					L	
				Lisposoma josehermana		X	L	L				
			Buthidae	*Parabuthus brevimanus*						L	L	
				Parabuthus kraepelini			L	L		L	L	

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Parabuthus laevifrons						L		
				Parabuthus raudus								L
				Uroplectes carinatus						L		
				Uroplectes otjimbinguensis						L		
				Uroplectes planimanus						L		
			Ischnuridae	*Hadogenes taeniurus*			L	L		L		
			Scorpionidae	*Opisthophthalmus carinatus*			L	L		L	L	
				Opisthophthalmus fitsimonsi						L		
				Opisthophthalmus wahlbergi			L	L	L			
		Solifugae	Daesiidae	*Biton gaerdesi*	Sun spiders	X				L		
				Biton hottentottus						L		
				Biton striatus		X			L			L
				Blossia falcifera			L	L	L		L	
				Blossia gaerdesi		X				L		
				Blossia spinicornis		X	L	L				
				Hemiblossia termitophila						L		
			Gylippidae	*Lipophaga kraepelini*		X				L		
			Hexisopodidae	*Chelypus wuehlischi*		X						L
				Hexisopus aureopilosus		X				L		
			Solpugidae	*Solpuga bechuanica*						L		
				Solpugiba lineata						L		L
				Solpuguna alcicornis		X				L		
				Solpuguna browni		X			L			
				Zeria monteiri						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Zeria sericea			L	L		L		
				Zeria striata		X					L	
				Zeriassa cuneicornis					L			
	Branchiopoda	Anostraca	Streptocephalidae	*Streptocephalus cafer*	Fairy shrimps				L	L		
				Streptocephalus namibiensis								L
				Streptocephalus proboscideus								L
		Cladocera	Daphniidae	*Daphnia barbata*	Water fleas					L		
				Daphnia laevis						L		
			Moinidae	*Moina micrura*						L		
			Sididae	*Diaphanosoma excisum*						L		
		Notostraca	Triopsidae	*Triops numidicus*	Tadpole shrimps							L
	Chilopoda	Geophilida	Oryidae	*Aspidopleres intercalatus*	Centipedes	nr			L	L		
				Diphtherogaster flavus						L	L	
			Pachymerinidae	*Eurytion aporopus*						L	L	
				Eurytion kalaharinus			L	L		L		
		Lithobiomorpha	Henicopidae	*Lamyctes robusta*			L	L				
		Scolopendrida	Scolopendridae	*Arthrorhabdus formosus*						L		
				Cormocephalus anceps			L	L			L	
				Cormocephalus multispinosus			L	L		L	L	
				Cormocephalus oligoporus						L	L	
				Cormocephalus spinulosus			L	L		L		
				Scolopendra morsitans			L	L		O		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Trachycormocephalus occidentalis							L	
		Scutigeromorpha	Scutigeridae	*Scutigerina weberi*								L
	Diplopoda				Millipedes		E	E				O
		Spirostreptida	Harpagophoridae	*Zinophora sabulosa*					L			
			Julomorphidae	*Triaenostreptus kymatorhabdus*		X					L	
			Odontopygidae	*Chaleponcus limbatus*		X					L	
				Spinotarsus xanthonotus							L	
			Spirostreptidae	*Doratogonus rugifrons*						L		
				Triaenostreptus triodus					L	L		
	Insecta	Anoplura			Sucking lice		E	E	E	E	E	E
		Archaeognatha	Meinertellidae	*Machiloides solitarius*	Bristletails	X				L		
		Blattodea			Cockroaches		O	E			O	
			Blattidae	*Deropeltis erythrocephala*						L		
			Derocalymmidae	*Bantua scabra*								L
				Derocalymma cruralis					L	L		
		Coleoptera	Anthicidae	*Anthicus crinitus*	Ant beetles					L		
				Hirticomus biplagiatus						L		
				Notoxus cucullatus			L	L		L		
				Notoxus roeri					L			L
				Omonadus floralis						L		
				Omonadus robustithorax						L		
			Bostrychidae		Augur beetles		E	E	E		E	E

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Bostrychoplites cornutus						L		
				Calopertha kalaharensis						L		
				Sinoxylon cafrum						L		
				Xylomedes scutifrons						L		
			Bruchidae		Seed beetles		E	E			E	
				Bruchidius cretaceus					L	L		L
				Bruchidius senegalensis					L			
			Buprestidae	*Acmaeodera albovillosa*	Jewel beetles					L		
				Acmaeodera amoenula						L		
				Acmaeodera deplanata						L		
				Acmaeodera exasperans					L			
				Acmaeodera excellens			L	L		L		L
				Acmaeodera fraterna						L		
				Acmaeodera grata					L	L		L
				Acmaeodera kukepanica						L		
				Acmaeodera luculenta						L		
				Acmaeodera lugubrina					L	L		L
				Acmaeodera posticalis						L		
				Acmaeodera punctatissima						L		
				Acmaeodera ruficaudis							L	L
				Acmaeodera signata						L		
				Acmaeodera signifera						L		
				Acmaeodera smaragdina			L	L				
				Acmaeodera viridaenea						L	L	L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Agelia petelii			L	L	L	L		L
				Chrysobothris dorsata			L	L				
				Julodis caffer						L		
				Phlocteis exasperata			L	L				
				Polycestina damarana		X				L		
				Psiloptera foveicollis						L		
				Sphenoptera schultzei						L		
				Steraspis aeruginosa								L
				Sternocera feldspathica			L	L				L
				Sternocera orissa			L, O	L	L	L	L	L, O
			Carabidae	*Anthia cinctipennis*	Ground beetles		L	L			L	L
				Anthia thoracica							L	L
				Baeoglossa melanaria						L	L	
				Bembidion mixtum							L	
				Bohemania gigantea			L	L				
				Brachinus armiger							L	
				Bradybaenus czeppeli			L	L				
				Chlaenius bipustulatus							L	
				Chlaenius coscinioderus							L	
				Chlaenius limbipennis							L	
				Clivina grandis			L	L				
				Cratognathus capensis			L	L				
				Crepidogaster posticalis			L	L		L		
				Curtisipaussus shuckardi			L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Cypholoba opulenta								L
				Dioryche tessellata							L	
				Graphipterus amabilis			L	L	L			L,O
				Graphipterus amicus		X	L	L				
				Graphipterus ancora						L		L
				Graphipterus bilineatus						L		
				Graphipterus circumcinctus						L		
				Graphipterus cordiger			L	L			L	
				Graphipterus damarensis		X				L		
				Graphipterus limbatus					L	L	L	
				Graphipterus lugens		nr	L	L				
				Graphipterus marginatus						L		
				Graphipterus obliteratus		X			L	L		
				Graphipterus pronitens		nr	L	L				
				Graphipterus pseudofrontalis		X				L		
				Graphipterus suturiger		X			L			
				Harpalus fulvipennis							L	
				Harpalus lugubris			L	L				
				Hypolithus damarensis							L	
				Metabletus michaelseni							L	
				Microlestia immerita							L	
				Netrodera formicaria						L		
				Ooidius dorsiger								L
				Pseudoclivina grandis								L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Stenodinodes perspicillaris			L	L				
				Tetragonoderus scitulus							L	
				Thermophilum capillatum						L		
				Thermophilum homoplatum								L
			Cerambycidae		Longhorned beetles		E	E	O			
				Anthracocentrus capensis						L		
				Crossotus aethiops						L		
				Crossotus plumicornis						L		
				Dere nigrita							L	
				Enaretta castelnaudi						L		
				Hecyra tenebrioides								L
				Macrotoma palmata						L		
				Taurotragus klugi						L		L
			Chrysomelidae		Leaf beetles				E		E	
				Aphthona namibiana								L
				Monolepta ursulae						L		
				Oncocephala promontorii			L	L				
				Sphondylia afra						L		
			Cicindelidae		Tiger beetles				E			E
				Dromica ramigera		X	L	L				
				Lophyra herero		X				L		
				Lophyra reliqua						L		
				Manticora mygaloides						L		
				Myriochile melancholica			L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Coccinellidae		Ladybird beetles		E	E	E	E	O	E
			Curculionidae	*Baris civilis*	Weevils					L		
				Brachycerus apterus								L
				Brachycerus brevicostatus						L		
				Brachycerus congestus								L
				Brachycerus difficilis						L		
				Brachycerus ephippiatus						L		
				Brachycerus granifer								L
				Brachycerus inaequalis						L		
				Brachycerus infitialis						L		
				Brachycerus interstitialis								L
				Brachycerus natalensis			L	L		L		
				Brachycerus rotundatus					L	L		
				Brachycerus sefrensis						L		
				Brachycerus tursio						L		L
				Brachycerus viduatus			L	L				
				Brachycerus viduatus						L		
				Brachycerus wahlbergi					L	L		
				Bradybamon swalei			L	L				
				Calodemas nickerli			L	L				
				Camptorrhinus sp.			L	L				
				Ceuthorhynchus afer						L		
				Cossonus subfoveolatus						L		
				Dereodus schoenherri			L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Episus contractus			L	L		L		
				Episus cyathiformis			L	L		L	L	L
				Episus devylderi			L	L				
				Episus fahraei								L
				Episus impressicollis			L	L		L		
				Episus inermicollis			L	L				L
				Episus westermanni						L		
				Hyomora penrithae		X				L		
				Microcerus borrei			L	L		L	L	L
				Microcerus gracilis		nr						L
				Microcerus latipennis						L	L	L
				Paramecops stapeliae						L		
				Siderodactylus albilatera						L		
				Siderodactylus puberulus						L		
			Dermestidae	*Attagenus kaniai*	Museum beetles					L		
			Dytiscidae	*Cybister tripunctatus*	Water beetles		L	L				
				Eretes sticticus			L	L				
				Yola dohrni						L		
			Elateridae		Click beetles		E	E	E		E	E
				Tetralobus flabellicornis						L		
			Geotrupidae	*Bolboceratex posticatus*								L
				Namibiobolbus iphicles						L	L	
				Namibiotrupes auspicatus						L		
				Prototrupes copridoides						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Glaresidae	*Glaresis impressicollis*						L		
				Glaresis koenigsbaueri		nr				L		
			Gyrinidae	*Dineutus aereus*	Whirligig beetles		L	L				
			Histeridae	*Hister lentulus*	Hister beetles							L
				Placodes senegalensis			L	L				
				Saprinus cupreus						L		
				Saprinus splendens						L		
			Hybosoridae	*Hybosorus ruficornis*						L		
			Hydraenidae	*Ochthebius andronius*						L		
			Hydrophilidae	*Berosus crassus*						L		
				Berosus furcatus						L		
				Berosus nigriceps						L		
				Helochares congruens						L		
				Laccobius revelieri						L		
			Laemophloeidae	*Planolestes laevicornis*						L		
			Meloidae		Blister beetles			O			E	O
				Actenodia chrysomelina					L	L		L
				Australytta szekessyi						L		
				Decapotoma windhoekana			L	L				
				Hycleus oculatus				O				
				Hycleus tinctus						L		
				Iselma penrithae		X	L	L				
				Prionotolytta binotata						L		
				Prionotolytta melanura						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Melyridae		Flower beetles		E	E				E
				Attalus kochi					L			
				Dinometopus narebisanus		X			L			
				Dinometopus tridens						L		
				Metaphilhedonus hobohmi		X			L			
				Metaphilhedonus penrithae		X			L			
			Monommidae	*Inscutomonomma pseudolatum*							L	
			Mordellidae	*Paratomoxioda brevis*						L		
				Paratomoxioda grandipalpis						L		
				Paratomoxioda uncinata						L		
			Nitidulidae	*Aethina hirsutula*			L	L		L		
				Aethina peringueyi			L	L		L		L
				Carpophilus bifenestratus			L	L				
				Carpophilus deplanatus			L	L				
				Carpophilus zeaphilus						L		
				Lorditus costipennis						L		
				Lorditus tibialis						L		
				Meligethes arcopenis		X	L	L				
				Meligethes bisignifer						L		
				Meligethes opacidorsum						L		
			Ochodaeidae	*Chaetocanthus insuetus*						L		
				Ochodaeus adsequa			L	L		L		L
			Phalacridae	*Olibrus namibiensis*		X	L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Scarabaeidae	*Adoretus tessulatus*	Dung beetles, chafers		L	L		L		
				Anachalcos convexus			L, O	L		L		
				Anomala separata						L		
				Anomala ustulata						L		
				Aphodius dorsalis			L	L				
				Aphodius hastulifer						L		
				Aphodius hepaticus						L		
				Aphodius impurus			L	L				
				Aphodius peregrinus			L	L				
				Aphodius pseudolividus						L		
				Copris elphenor			L	L		L		
				Copris jacchus			L	L				
				Copris subsidens						L		
				Coptorhina auspicata						L		
				Cyphonistes vallatus						L		
				Dicronorhina derbyana						L		
				Digitonthophagus gazella						L		
				Dischista cincta						L		
				Gymnopleurus sp.					O			
				Metacatharsius opacus						L		
				Metacatharsius troglodytes						L		
				Niphetophora carneola						L		
				Onitis alexis						L		L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Onthophagus acutus						L		
				Onthophagus aspericeps						L		
				Onthophagus bayeri						L		
				Onthophagus burchelli						L		
				Onthophagus okahandjanus						L		
				Onthophagus rubens			L	L				
				Onthophagus stellio						L		L
				Paraclitopa lanuginosa						L		
				Paracorythoderus casperi						L		
				Peritrichia ditissima						L		
				Phalops pyroides						L		
				Scarabaeus satyrus						L		
				Schizonycha damarina						L		
				Schizonycha inedita			L	L	L			
				Schizonycha livida					L			
				Schizonycha meracula						L		
				Schizonycha puncticollis			L	L	L	L		L
				Schizonycha profuga			L	L				
				Schizonycha transvaalica			L	L	L			
				Sparrmannia flava								L
				Sparrmannia similis		X				L		
				Sparrmannia vertumnus						L		
				Spilophorus plagosus					L			
				Temnorrhynchus coronatus								L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Temnorrhynchus faunus						L		
				Trichinopus flavipennis						L		
			Silphidae	*Thanatophilus micans*								L
			Staphylinidae		Rove beetles		E	E	E			E
				Aleochara bisolata						L		
				Bledius koenigsbaueri						L		
				Bledius subopacus						L		
				Myllaena sebastiani		X				L		
				Oxyteles okahandjanus						L		
				Philonthus caffer						L		
				Philonthus cinctus						L		
				Philonthus gaerdesi						L		
				Stenus arenicola						L		
				Stenus peringueyi						L		
				Stenus prospector						L		
				Stenus rorellus						L		
				Termitomimus pretoriusi							L	
				Thinobius iridiventris						L		
				Zyras piciceps						L		
				Zyras terminatus						L		
			Tenebrionidae	*Adesmia seineri*	Toktokkies							L
				Alogenius favosus						L		
				Alphitobius diaperinus			L	L				
				Amathobius mesoleius						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Anomalipus acutangulus						L		
				Anomalipus elephas			L	L		L	L	L
				Caenocrypticus uncinatus		X				L	L	
				Cheiroplus freyi			L	L				
				Cryptochile consita			L	L	L	L		L
				Decoriplus discicollis		X	L	L				
				Decoriplus hieroglyphicus			L	L		L		L
				Derosphaerius antilope						L		
				Derosphaerius damarinus						L		
				Derosphaerius lineatopunctatus						L		
				Emmallus australis							L	
				Ethmus latus			L	L				
				Eurychora barbata							L	
				Eurychora terrulenta						L		
				Geophanus confusus						L		
				Gonopus amplipennis						L		
				Gonopus deplanatus					L	L		L
				Gonopus edentatus		X				L		
				Gonopus hirtipes						L	L	L
				Gonopus puncticollis						L		
				Gonopus tibialis			L	L	L	L	L	L
				Herpiscius bisbicostatus							L	
				Herpiscius damarinus						L	L	

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Himatismus gentilis						L		
				Horatoma scherzi						L		
				Horatoma spinipes			L	L				
				Horatomodes minimus						L		
				Luprops concinnus						L		
				Luprops hereroensis						L		
				Metriopus albicollis						L		L
				Micrantereus ovampoanus			L	L				
				Nicandra michaelseni						L		
				Nicandra okahandia						L		
				Nicandra subplanatus		X	L	L				
				Opatroides hemistictus							L	
				Opatropis hispida							L	
				Phanerotomea semiscaber						L		
				Physosterna foveipennis		X				L		
				Planostibes angulatipes							L	
				Praeugena flavolimbata					L			
				Psammodes dubiosus						L		
				Psammodes schultzei							L	
				Psammodes vialis			O					
				Pseudoseriscius explorator						L	L	
				Renatiella scrobipennis		nr	L	L	L	L	L	L
				Rhammatodes kalaharicus							L	
				Rhyzodina mniszechii								L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Rozonia strigicollis						L		
				Somaticus aeneus			O			L		
				Somaticus bohemani							L	
				Somaticus dubius						L		
				Somaticus regalis						L		
				Somaticus tentyrioides							L	
				Stenocara aenescens			L	L		L	L	
				Stenocara gracilipes			L	L	L	L		
				Stenodesia globulum		X	L	L		L	L	
				Stenolamus sulciceps						L		
				Stizopus mammifer		X	L	L				
				Stizopus talpa							L	
				Tarsocnodes rugicollis		X				L		L
				Zophosis amita						L		
				Zophosis balti		X				L		
				Zophosis boei			L	L	L	L	L	L
				Zophosis burkei			L	L		L		
				Zophosis castelnaudi			L	L				L
				Zophosis crassa						L		L
				Zophosis declivitatis		X	L	L		L		
				Zophosis deyrollei						L		L
				Zophosis hobohmi		X	L	L				
				Zophosis inenarrabilis		X			L	L		
				Zophosis louwi						L	L	L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Zophosis mellyi					L	L		L
				Zophosis parentalis		X	L	L		L		
				Zophosis puncticollis		X				L	L	
				Zophosis reticulata		nr			L			
				Zophosis rufipennis						L		L
				Zophosis similis			L	L				
				Zophosis subaenea								L
			Trogidae	*Trox asperulatus*	Hide beetles							L
				Trox elevatus		nr				L		
				Trox foveolatus		X				L		
				Trox radula			L	L		L		
				Trox rusticus			L	L		L		L
				Trox squalidus			L	L		L		
				Trox sulcatus			L	L				
			Urodontidae	*Urodontus planicollis*						L		
		Collembola			Springtails		E	E	E	E	E	E
		Dermaptera			Earwigs		E	E				
		Diptera	Agromyzidae	*Pseudonapomyza hohmanni*						L		
			Anthomyiidae	*Anthomyia amoena*			L	L				
				Karliella sexpunctata						L		
			Asilidae	*Afroholopogon flavidus*	Assassin flies	X					L	
				Afromelittodes mimos						L		
				Afromelittodes solis						L		
				Agrostomyia dimorpha						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Alcimus tristrigatus						L		
				Anypodetus fasciatus			L	L		L		
				Anypodetus fascipennis						L		
				Anypodetus unicolor					L			
				Euscelidia peteraxi		X				L		
				Euscelidia pulchra					L			
				Gonioscelis bykanistes			L	L		L		
				Gonioscelis ventralis			L	L				
				Heligmonevra rubripes			L	L		L	L	
				Hoplistomerus nobilis			L	L	L	L	L	L
				Lamyra gulo			L	L			L	
				Loewinella nigripes							L	
				Loewinella virescens							L	
				Lycostommyia albifacies					L			
				Neolaparus laticornis						L		
				Neolophonotus angustibarbus						L		
				Neolophonotus parvus							L	
				Neolophonotus robustus						L		L
				Neolophonotus satanus						L	L	
				Pegesimallus inermis						L		
				Pegesimallus laticornis						L		
				Pegesimallus pedunculatus			L	L		L		
				Philodicus obscuripes						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Philodicus tenuipes							L	
				Pycnomerinx gweta						L		
				Pycnomerinx rhodesii			L	L				L
				Rhabdogaster gracilis								L
				Rhipidocephala semitestacia						L	L	
				Scylaticus namibiensis						L		
				Stichopogon caffer			L	L		L		
				Stichopogon punctum							L	
				Stiphrolamyra angularis								L
				Stiphrolamyra bipunctata						L		
				Valiraptor namibiensis		X	L	L				
			Bombyliidae	*Anastoechus leucosoma*	Bee flies					L		
				Anthrax aygulus			L	L				
				Anthrax caffer							L	
				Anthrax doliops			L	L				
				Anthrax pithecius						L		
				Australoechus molitor						L		
				Australoechus peringueyi						L		
				Bombomyia discoidea			L	L		L		
				Bombylella okahandjana		X				L		
				Bombylella plorans							L	
				Bombylisoma kaokoense			L	L		L		
				Bombylisoma lepidum						L		
				Chasmoneura pectoralis							L	

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Crocidium immaculatum						L		
				Eurycarenus dichopticus					L			
				Eurycarenus minimus		X	L	L				
				Exhyalanthrax lugens			L	L			L	
				Exoprosopa barnardi		X	L	L				
				Exoprosopa cervina		X	L	L		L		
				Exoprosopa hypargyra			L	L				
				Exoprosopa luteicosta			L	L				
				Exoprosopa punctulata			L	L				
				Exoprosopa sigmoidea							L	
				Exoprosopa tripartita						L		
				Hyperusia muscoides		X	L	L				
				Hyperusia soror		X				L		
				Litorhina ectophaea								L
				Notolomatia leucophasia						L		
				Parisus annuliventris		X				L		
				Parisus damarensis		X				L		
				Spogostylum incisurale			L	L			L	
			Calliphoridae	*Bengalia flocosa*	Blow flies		L	L				
				Bengalia peuhi						L		
				Chrysomya albiceps						L	L	
				Chrysomya marginalis			L	L		L	L	
				Chrysomya regalis							L	
				Cordylobia anthropophaga						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Fainia elongata					L			
				Hemigymnochaeta unicolor			L	L	L	L		
				Hemigymnochaeta varia					L			L
				Hemipyrellia fernandica						L		
				Rhinia apicalis						L	L	
				Rhinia nigricornis			L	L				
				Rhyncomya forcipata			L	L			L	
				Rhyncomya trispina			L	L				
				Tricyclea dubia						L		
				Tricyclea fasciata			L	L		L		
				Zumba antennalis								L
			Chironomidae	*Chironomus transvaalensis*	Midges						L	
			Chloropidae	*Apotropina gregalis*	Shoot flies					L		
				Arcuator munroi						L		
				Pachylophus proximus							L	
			Culicidae	*Aedes aegypti*	Mosquitoes		L	L				
				Aedes hirsutus						L		L
				Aedes metallicus						L		
				Aedes minutus			L	L				
				Aedes pseudonigeria					L			
				Aedes saimedres						L		
				Anopheles rufipes			L	L				
				Culex decens						L		
				Culex theileri						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Culex tigripes			L	L		L		
				Culex univittatus						L		
				Mucidus scatophagoides								L
			Curtonotidae	*Curtonotum bicuspis*			L	L				
				Curtonotum herrero						L		
				Curtonotum uncinatum						L		
			Dolichopodidae	*Amblypsilopus cilifrons*			L	L				
				Amblypsilopus munroi			L	L				
				Asyndetus virgatus			L	L				
				Chrysosoma munroi			L	L				
				Condylostylus imitator			L	L				
				Cryptophleps rothii			L	L				
				Medetera chumakovi		X				L		
				Medetera cimbebasia		X	L	L				
				Medetera lvovskii			L	L				
				Medetera norlingi						L		
				Medetera normalis			L	L				
				Medetera polleti						L		
				Medetera subchevi			L	L		L		
				Pelastoneuras micrurus			L	L				
				Tachytrechus tessellatus						L		
				Thinophilus indigenus						L		
			Empididae	*Drapetis aenescens*						L		
			Ephydridae	*Dryxo ornata*	Shore flies					L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Parathyroglossa africana							L	
			Hippoboscidae		Louse flies		E	E	E			E
				Hippobosca rufipes						L	L	
			Lonchaeidae	*Silba arcana*			L	L				
				Silba virescens			L	L				
			Muscidae		True flies				O			
				Atherigona falcata							L	
				Atherigona mitrata			L	L				
				Atherigona naqvii								L
				Dichaetomyia luteiventris						L		
				Helina conformis							L	
				Helina icterica			L	L				
				Limnophora simulans							L	
				Lispe leucospila			L	L			L	
				Musca albina						L		
				Musca conducens						L	L	
				Musca domestica							L	
				Musca lusoria			L	L			L	
				Ophyra capensis							L	
			Odiniidae	*Afrodinia deemingi*		nr				L		
			Phoridae				E	E	E	E	E	E
			Pipunculidae	*Eudorylas flexus*	Big-headed flies	X	L	L		L		
				Eudorylas mutillatus			L	L		L		
				Tomosvaryella africana						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Psychodidae	*Parvidens arida*	Latrine flies	X	L	L				
				Phlebotomus schwetzi					L			
				Phlebotomus zumpti					L			L
				Sergentomyia cunicula					L			
				Sergentomyia formica					L			
			Pyrgotidae	*Tephritopyrgota passerina*						L		
			Sarcophagidae		Flesh flies		E	E	E	E		E
				Heteronychia munroi							L	
				Sarcophaga hirtipes							L	
				Sarcophaga vansoni							L	
				Senotainia albifrons							L	
				Senotainia pretoria							L	
			Sphaeroceridae	*Coproica ferruginata*							L	
			Syrphidae		Hover flies		E	E	O	E		E
				Paragus haemorrhous							L	
				Paragus tibialis							L	
				Syritta flaviventris							L	
				Syritta subtilis							L	
			Tabanidae	*Haematopota decora*	Horse flies							L
			Tachinidae	*Carcelia persimilis*							L	
				Peletieria varia							L	
			Tephritidae	*Actinoptera maculifrons*	Fruit flies					L		
				Ceratitis cosyra			L	L				
				Ceratitis quinaria			L	L		L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Coelotrypes fasciolatus						L		
				Coelotrypes vittatus			L	L				
				Dacus bistrigulatus			L	L				
				Dacus ciliatus			L	L		L		
				Dacus frontalis						L		
				Dacus vertebratus			L	L				
				Dioxyna sororcula			L	L				
				Ensina barnardi		X	L	L				
				Euryphalara barnardi		X			L	L		
				Metasphenisca longulior					L	L		
				Metasphenisca tetrachaeta						L		
				Platomma luniferum		nr			L			
				Sphaeniscus sexmaculatus						L		
				Stephanotrypeta nigrofemorata		X				L		
				Trupanea superdecora			L	L				
				Trupanea xanthochaeta						L		
			Therevidae	*Microgephyra stylata*		X				L		
				Phycus niger		nr				L	L	
			Tipulidae		Crane flies		E	E				
		Heteroptera	Alydidae	*Euthetus leucopoecilus*	Broad-headed bugs		L	L		L		
				Nariscus cinctiventris			L	L	L	L		L
				Nemausus sordidatus			L	L	L			
				Zulubius maculatus						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Belostomatidae	*Lethocerus cordofanus*	Water bugs					L		
			Cimicidae	*Cimex lectularius*	Bed bugs				L			
			Coreidae	*Anoplocnemis curvipes*	Wilt bugs		L	L		L		L
				Brotheolus pugnax						L		
				Brotheolus viridis						L		
				Choerommatus techowi						L		
				Cletus decoratus			L	L				
				Gonocerus falcatus						L		
				Homoeocerus auriculatus			L	L				
				Homoeocerus nigricornis						L		
				Homoeocerus trabeatus			L	L				
				Petalocnemis flavicornis			L	L		L		
				Petalocnemis spinulosa						L		
			Cydnidae	*Cephalocteus punctipennis*	Burrowing bugs		L	L				
			Dinodoridae	*Coridius nubilis*						L		L
				Coridius viduatus			L	L				
			Lygaeidae	*Aphanus apicalis*	Seed bugs				L			
				Aspilocoryphus fasciativentris					L			
				Dieuches armipes			L	L				
				Dieuches herero								L
				Geocoris megacephalus						L		
				Graptostethus grandis					L			
				Graptostethus septus						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Graptostethus servus						L		
				Haemobaphus concinnus					L	L		
				Horvathiolus delicatulus						L		
				Spilostethus furculus						L		
				Spilostethus pandurus					L	L		
				Stalagmostethus concinnus			L	L	L	L		L
				Stalagmostethus festivus			L	L				
				Stalagmostethus macilentus			L	L		L		
				Stalagmostethus militaris			L	L	L	L		L
				Teracrius namaquensis						L		
			Miridae		Plant bugs		E	E	E	E	E	E
			Notonectidae	*Anisops arnoldi*	Backswimmers	X	L	L				
				Anisops debilis					L			
				Anisops sardea			L	L				
				Anisops varia			L	L	L			
			Pentatomidae	*Afrius purpureus*	Stink bugs		L	L	L			
				Agonoscelis erosa			L	L				
				Agonoscelis puberula					L	L		L
				Atelocera foveata						L		L
				Atelocera notatipennis						L		
				Atelocera stictica								L
				Bagrada hilaris			L	L				
				Bolbocoris inaequalis			L	L				
				Bolbocoris obscuricornis			L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Bolbocoris rufus			L	L				
				Carbula marginella			L	L				
				Coenomorpha nervosa			L	L				
				Delagorguella vittiventris						L		
				Dorycoris pavoninus			L	L	L	L		
				Halydicorus capitata			L	L				
				Halys clausnitzeri			L	L				
				Mecidea linearis			L	L				
				Nezara viridula						L		L
				Piezodorus purus			L	L	L			L
				Platacantha lutea						L		
			Pyrrhocoridae	*Dermatinus tartareus*					L			
				Probergrothius sexpunctatus			L	L				
			Reduviidae	*Acanthaspis obscura*	Assassin bugs					L		
				Baebius caffer			L	L				
				Cleptria oculata								L
				Ectomocoris quadrimaculatus								L
				Ectrichodia crux						L		
				Edocla limbata					L			
				Edocla vittipennis					L			
				Glymmatophora eques			L	L				
				Glymmatophora erythrodera			L	L				
				Glymmatophora submetallica						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Myiophanus wagneri						L		
				Oncocephalus annulipes			L	L				
				Reduvius tarsatus			L	L	L	L		L
				Rhaphidosoma circumvagans			L	L				
				Trichedocla quadrisignata					L			
			Scutelleridae	*Alphocoris indutus*	Shield bugs		L	L				
				Callidea duodecimpunctata			L	L		L		
				Hotea subfasciata			L	L				
				Solenosthedium lilligerum			L	L				
				Xerobia sculpturata					L			
			Stenocephalidae	*Stenocephala caffer*			L	L				
			Tingidae	*Agramma maynei*	Lace bugs					L		
				Ammianus ernsti						L		
				Bunia milleri			L	L				
				Cochlochila zetana						L		
				Compseuta holana			L	L				
				Cysteochila endeca			L	L				
				Cysteochila otaviana			L	L				
				Dictyla pongana						L		
				Galeatus scrophicus						L		
				Habrochila kalahariana		X			L			
				Lasiacantha turneri						L		
				Neoplerochila inflata		X	L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Physatocheila namibiana		X	L	L				
				Pogonostyla discrega			L	L				
				Sinuessa subinermis			L	L				
				Urentius vepris						L		
		Homoptera	Aphididae		Aphids		E	E	E	E	E	E
			Cercopidae	*Locris arithmetica*						L		
			Cicadellidae		Leafhoppers				E		E	
				Aconurella compta								L
				Distantia planescens			L	L				
				Exitianus okahandia						L		
				Iseza auxilia								L
				Theronopus bicornis			L	L				
				Theronopus mimicus		X	L	L				
			Cicadidae		Cicadas						E	E
				Monomatapa insignis			L	L				
				Munza laticlavia					L	L		
				Munza venusta			L	L				
				Platypleura divisa					L			
				Platypleura severini			L	L				
			Derbidae	*Imbalara squamifer*			L	L				
			Dictyopharidae	*Aselgeia ramulifera*			L	L				
			Eurybrachidae	*Paropioxys jucundus*			L	L				
			Flatidae	*Cyarda ocreata*			L	L				
			Lophopidae	*Elasmoscelis stali*						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Ricaniidae	*Diazanus coriipennis*					L			
				Lugardia mimica			L	L				
		Hymenoptera	Andrenidae	*Melitturga penrithorum*	Ground-nesting bees							L
				Meliturgula flavida						L		L
				Melitergula fuliginosa					L			
				Meliturgula haematospila						L		
				Meliturgula minima						L		L
				Meliturgula scriptifrons						L		
			Apidae *s.l.*	*Amegilla acraensis*	Honey bees				L			
				Amegilla atrocincta					L	L		
				Amegilla calens			L	L		L		
				Amegilla langi								L
				Amegilla nubica					L	L		
				Anthophora armata					L	L		
				Anthophora circulata			L	L				
				Anthophora xanthostoma								L
				Apis mellifera			E	E	L	L	E	E
				Braunaspis otavica						L		
				Ceratina albinasis						L		
				Ceratina electron						L		
				Ceratina liliputana						L		
				Ceratina turneri						L		
				Crocisa abyssinica						L		
				Crocisa polysticta						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Ctenoceratina bilobata						L		
				Ctenoceratina lunata			L	L				
				Ctenoceratina moerenhouti						L		
				Ctenoceratina rufigastra						L		
				Epeolus natalensis					L			L
				Hypotrigona araujoi						L		
				Liotrigona botegoi						L		
				Meliponula beccarii			L	L				
				Mesotrichia inconstans					L			
				Mesotrichia mossambica						L		
				Pasites appletoni						L	L	
				Pasites braunsi						L		
				Pasites friesei								L
				Pasites histrio								L
				Tetraloniella braunsiana			L	L				
				Tetraloniella michaelseni					L			
				Tetraloniella minuta								L
				Tetraloniella ogilviae					L	L		
				Thyreus calceatus								L
				Thyreus delumbatus					L	L		
				Thyreus plumifer								L
				Xylocopa caffra					L			
				Xylocopa flavorufa						L		
				Xylocopa hottentotta								L

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Xylocopa inconstans			L	L	L	L		
				Xylocopa senior			L	L				L
				Xylocopa sicheli								L
			Argidae	*Arge stuhlmanni*						L		
			Braconidae		Parasitoid wasps							O
				Bacuma rufa			L	L				
				Iphaulax pandora			L	L				
				Triraphis ramosissima					L		L	
			Bradynobaenidae	*Apterogyna climene*						L		
			Chrysididae	*Hedychridium arnoldi*	Cuckoo wasps					L		
				Spintharina bispinosa			L	L				
			Colletidae	*Colletes rozeni*								L
				Hylaeus xanthostoma						L		
				Nothylaeus dentiferellus						L		
			Encyrtidae	*Leptomastix dactylopii*						L		
			Eumenidae		Potter wasps		E	O	L	E	E	
				Antepipona penetrata					L			
				Synagris abyssinica								L
			Fideliidae	*Fidelia friesei*								L
			Formicidae	*Anoplolepis steingroeveri*	Ants		E	E	E	E	O	E
				Camponotus fulvopilosus			L	L		L,O	L	
				Camponotus maculatus						L		
				Camponotus mystaceus						L		
				Camponotus rufoglaucus						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Cardiocondyla shuckardii						L		
				Carebara vidua						L		
				Cataulacus intrudens			L	L				
				Dorylus fulvus						L		
				Meranoplus inermis						L		
				Messor luebberti					O	L		
				Monomorium minor		nr					L	
				Ocymyrmex micans		X				L		
				Ocymyrmex shushan		X						L
				Ocymyrmex velox					L			
				Paltothyreus tarsatus						L		
				Pheidole crassinoda						L		
				Pheidole sculpturata						L		
				Pheidole tenuinodis						L		
				Plagiolepis custodiens						L		
				Tetramorium krynitum		X				L		
				Tetramorium petersi		X				L		
				Tetramorium rufescens		X				L		
				Tetramorium setuliferum								L
			Halictidae	*Acunomia epileuca*	Sweat bees					L		
				Afronomia fimbriata								L
				Ceylalitus halictoides						L		
				Ceylalictus muiri					L	L		
				Halictus duplocinctus						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Halictus michaelseni						L		
				Leuconomia rozeni						L		
				Lipotriches arnoldi								L
				Lipotriches meadewaldoi								L
				Lipotriches tuckeri			L	L				
				Macronomia leucomelanura								L
				Macronomia macropus								L
				Nomia aliceae						L		
				Nomia angulifera						L		
				Nomia austrotegulata						L		
				Nomia bellicornis			L	L				
				Nomia cinerea								L
				Nomia epileuca						L		
				Nomia interstitinervis						L		
				Nomia laticinctula						L		
				Nomia pulchella						L		
				Nomia sanguinolenta						L		
				Nomioides maculiventris					L	L		
				Nomioides variegata						L		
				Poecilomelitta flavida						L		
				Poecilomelitta fuliginosa						L		
				Poecilomelitta obscurata						L		
				Poecilomelitta robustula								L
				Pseudapis usakoa						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Spatunomia rubra			L	L				
				Systropha glabriventris						L		
				Systropha ogilviei						L		
				Trinomia cirrita			L	L				
			Ichneumonidae	*Enicospilus mnous*						L		
				Enicospilus quietus						L		
				Mesochorus herero						L		
			Megachilidae	*Chalicodoma chrysorrhaea*	Carpenter bees		L	L				
				Chalicodoma felina			L	L				
				Coelioxys chionospila						L		
				Coelioxys pruinosa			L	L				
				Gronoceras cerberus						L		
				Heriadus pellucidus						L		
				Lithurge spiniferus								L
				Megachile caerulea			L	L				
				Megachile chrysorrhoea						L		
				Megachile discolor						L		
				Megachile fimbriata						L		
				Megachile gratiosa						L		
				Megachile latitarsis						L		
				Megachile maxillosa			L	L	L		L	L
				Megachile nigrifacies						L		
				Megachile okahandjica						L		
				Megachile pennata						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Megachile rufiventris						L		L
				Megachile rufosuffusa						L		
				Megachile tsumebica		X	L	L				
				Oranthidium odonturum						L		
			Melittidae	*Capicola nanula*						L		
				Hesperapis nanula						L		
				Meganomia binghami					L			
			Mutillidae		Velvet ants		E	E	E		E	O
				Barymutilla ignava						L		
				Dasylabris merope						L		
				Dolichomutilla livingstonis						L		
				Odontomutilla horrida						L		
				Stenomutilla eurydice						L		
			Plumariidae	*Myrmecopterinella okahandja*		X				L		
			Pompilidae		Spider wasps		E	E	E		E	E
				Ceropales karooensis						L		
				Galactopterus rufipes						L		
				Homonotus dispersus						L		
				Pompilus bilineatus						L		
				Pompilus cadmius						L		
				Pompilus cinereus						L		
			Pteromalidae	*Oniticellobia reticulata*					L			
			Scelionidae	*Nixonia pretiosa*						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Sphecidae	*Afrogorytes silverlocki*	Sand wasps		L	L				
				Ammophila beniniensis			L	L				
				Ammophila bonaespei			L	L				
				Ammophila dolichocephala						L		
				Ammophila ferrugineipes			L	L				
				Bembix capensis			L	L				
				Bembix cultrifera			L	L				
				Bembix diversipennis			L	L				
				Bembix fuscipennis			L	L		L		
				Bembix ochracea						L		
				Bembix zinni								L
				Cerceris albifrons						L		
				Cerceris arrogans						L		
				Cerceris barnardi					L			
				Cerceris bicuspidata						L		
				Cerceris grata						L		
				Cerceris horus						L		
				Cerceris languida						L		
				Cerceris lunigera						L		
				Cerceris nephthys						L		
				Cerceris osiris						L		
				Cerceris pearstonensis						L		
				Cerceris quadridentata						L		
				Cerceris ventripilosa						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Cerceris xanthogaster			L	L				
				Handlirschia scoliaeformis					L			
				Miscophus kriechbaumeri								L
				Miscophus oraniensis								L
				Tachysphex aethiopicus						L		
				Tachysphex albocinctus			L	L		L		
				Tachysphex aterrimus						L		
				Tachysphex brevipennis						L		
				Tachysphex caliban								L
				Tachysphex camptopygus		X	L	L		L		
				Tachysphex consocius			L	L		L		
				Tachysphex dissimulatus						L		L
				Tachysphex fugax							L	
				Tachysphex gagates						L		
				Tachysphex kalaharicus						L		
				Tachysphex lacertosus					L			
				Tachysphex oberon						L		
				Tachysphex octodentatus			L	L		L		
				Tachysphex paulus						L		
				Tachysphex pentheri			L	L	L	L		L
				Tachysphex plicatus						L		
				Tachysphex quadricolor						L		
				Tachysphex rhacodes			L	L				
			Tenthredinidae	*Athalia turneri*						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Vespidae	*Belonogaster lateritius*	Paper wasps		E	E	E	E	E	E
		Isoptera	Hodotermitidae	*Hodotermes mossambicus*	Termites		L,O	L	L	L	L	L
			Rhinotermitidae	*Psammotermes allocerus*								L
				Schedorhinotermes lamanianus			L	L				
			Termitidae	*Amitermes hastatus*						L		
				Macrotermes mossambicus			E	E	L	L	L	
				Macrotermes natalensis					L	L	L	L
				Macrotermes vitrialatus								L
				Odontotermes fockianus						L		
				Odontotermes interveniens						L		
				Odontotermes latericius			L	L				
				Odontotermes okahandjae						L		
				Odontotermes rehobothensis						L		
				Odontotermes vulgaris						L		
				Rhadinotermes coarctatus					L			
				Skatitermes psammophilus		X			L			L
				Trinervitermes dispar						L		
				Trinervitermes rhodesiensis							L	
				Trinervitermes trinervoides			E	E	E	L	L,O	E
		Lepidoptera	Cosmopterygidae	*Ascalenia albitergis*			L	L				
			Cossidae	*Arctiocossus tessellatus*						L		
				Azygophleps asylas						L		
				Azygophleps aurivillii						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Azygophleps inclusa							L	
				Azygophleps leopardina						L		
				Brachylia eutelia						L		
				Cossus terebroides			L	L				
				Macrocossus coelebs						L		
				Xyleutes atriplaga			L	L				
				Xyleutes dictyotephra						L		
				Xyleutes forsteri						L		
			Ctenuchidae	*Syntomis cerbera*						L		
			Gelechiidae	*Gelechia omphalopis*	Twirler moths				L			
			Geometridae		Loopers						E	E
				Drepanogynis incondita			L	L				
				Hebdomophruda apicata						L		
				Larentia corticearia			L	L				
				Scopula palpifera					L			
			Hesperiidae	*Abantis tettensis*	Skippers		L	L				
				Caprona cassualalla		X	L	L		L		
				Caprona pillaana			L	L				
				Coeliades forestan						L		
				Coeliades libeon								
				Coeliades pisistratus						L		
				Kedestes lepenula			L	L				
				Kedestes sublineata		X	L	L		L		
				Sarangesa gaerdesi		X	L	L				

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Lasiocampidae	*Beralade jordani*	Snout moths		L	L				
				Braura truncata						L		
				Odontocheilopteryx myxa						L		
			Lycaenidae		Blues				E		E	E
				Alaena brainei		X	L	L				
				Aloeides molomo			L	L				
				Axiocerces tjoane			L	L				
				Azanus jesous			L	L				
				Deudorix antalus			L	L				
				Euchrysops dolorosa			L	L				
				Euchrysops subpallida			L	L				
				Myrina silenus			L	L		L		
				Pseudonacaduba sichela						L		
				Zintha hintza						L		
			Noctuidae		Owlet moths				E		E	E
			Noctuidae	*Achaea catella*						L		
				Amyna octo						L		
				Anua tirhaca						L		
				Audea melanoplaga						L		
				Ctenusa pallida						L		
				Ctenusa pretoriae						L		
				Cyligramma latona						L		
				Euterpoides cyanofascia			L	L		L		

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				Euterpoides croceizona			L	L				
				Euterpiodes gracilior						L		
				Euxoa segetis						L		
				Grammodes stolida						L		
				Helicoverpa armigera						L		
				Ophiusa algira						L		
				Pericyma atrifusa						L		
				Pericyma scandulata						L		
				Polydesma sagulata						L		
				Sphingomorpha chlorea						L		
				Thria robusta						L		
			Nymphalidae	*Acraea acara*	Butterflies		L	L				
				Acraea lygus						L		
				Acraea neobule			L	L				
				Acraea stenobea						L		
				Acraea trimeni			L	L				
				Byblia antevara			L	L				
				Byblia ilithyia			L	L,O				
				Charaxes jasius			L	L		L		
				Coenyropsis natalii			L	L		L		
				Danaus chrysippus			L	L,O		L		O
				Hamanumida daedalus			L	L		L		
				Hypolimnas misippus						L		
				Junonia hierta			E	O	E	E	E	O

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				Junonia oenone			L	L				
				Precis antilope			L	L				
				Pseudonympha schultzei						L		
				Vanessa cardui			L	L				
				Ypthima asterope						L		
			Papilionidae	*Papilio demodocus*	Swallowtail butterflies		E	E	E	L	E	E
			Phycitidae	*Ancylosis namibiella*					L			
			Pieridae	*Belenois aurota*	Whites		L	L	E	E	E	E
				Belenois creona			L	L				
				Catopsilia florella			L	L				
				Colias electo						L		
				Colotis agoye						L		
				Colotis antevippe			L	L				
				Colotis celimene						L		
				Colotis eris			L	L				
				Colotis evenina			L	L				
				Colotis lais						L		
				Colotis regina			L	L		L		
				Colotis subfasciatus			L	L				
				Colotis vesta			L	L				
				Eurema brigitta			L	L,O				O
				Mylothris agathina			L	L				
				Pinacopteryx eriphia			L	L	O			

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
			Saturniidae		Emperor moths				E			E
				Argema mimosae			L	L				
				Heniocha dyops						L	L	
			Schrechensteiniidae	*Eretmocera contermina*		X	L	L				
			Sphingidae		Hawk moths				E		E	E
				Herse convolvuli			L	L		L		
				Hippotion celerio			L	L		L		
				Hippotion rosae			L	L				
				Polyptychus numosae			L	L				
				Pseudoclanis postica						L		
			Thyrididae	*Rhodoneura abacha*	Picture-winged moths		L	L				
			Tineidae	*Melasina araeopis*	Clothes moths		L	L				
		Mallophaga			Biting lice		E	E	E	E	E	E
		Mantodea			Praying mantids				E		E	
			Empusidae	*Empusa binotata*								
			Empusidae	*Empusa guttula*						L		
			Mantidae	*Bisanthe pulchripennis*						L		
				Cilnia humeralis						L		
				Dystacta alticeps			L	L		L		
				Episcomantis chalybea						L		
				Episcopus chalybaeus						L		
				Ligariella gracilis						L		
				Miomantis australis						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Popa undata						L		
				Pseudodystacta braueri						L		
				Sphodromantis gastrica			L	L		L		L
			Thespidae	*Hoplocorypha macra*						L		
				Hoplocorypha striata						L		
				Hoplocorypha turneri						L		
		Mecoptera	Bittacidae	*Bittacus pinguipalpi*	Scorpionflies	X			L			
		Neuroptera	Ascalaphidae	*Strixomyia manselli*	Owlflies					L		
			Chrysopidae		Lacewings			O	E	E	O	E
				Apertochrysa eurydera			L	L				
			Myrmeleontidae		Antlions				E		E	E
				Palparellus flavofasciatus		nr	L	L		L		
			Nemopteridae	*Nemeura glauningi*	Threadwings		L	L				
		Odonata	Aeshnidae	*Aeshna minuscula*					L			
			Coenagrionidae	*Africallagma glaucum*	Damselflies					L		
				Agriocnemis exilis						L		
				Ceriagrion glabrum						L		
				Pseudagrion massaicum						L		
				Pseudagrion nubicum						L		
				Pseudagrion sublacteum			L	L		L		
			Corduliidae	*Phyllomacromia bifasciata*					L			
			Gomphidae	*Ceratogomphus pictus*						L		
				Diplacodes lefebvrei			L	L				
				Ictinogomphus ferox						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
				Paragomphus cognatus			L	L				
			Libellulidae	*Acisoma panorpoides*	Dragonflies					L		
				Brachythemis leucosticta						L		
				Crocothemis erythraea						L		
				Diplacodes lefebvrii						L		
				Hemistigma albipunctum						L		
				Orthetrum abbotti						L		
				Orthetrum brachiale			L	L		L		
				Orthetrum machadoi						L		
				Palpopleura jucunda						L		
				Palpopleura lucia			L	L				
				Pantala flavescens			E	E	L	E	E	E
				Philonomon luminans						L		
				Rhyothemis semihyalina						L		
				Tholymis tillarga						L		
				Tramea basilaris			L	L		L		
				Trithemis arteriosa					L	L		
				Trithemis donaldsoni						L		
				Trithemis furva						L		
				Trithemis kirbyi								L
				Trithemis stictica			L	L				
				Urothemis assignata						L		
				Urothemis edwardsi						L		
				Zygonyx torridus						L		

Phylum	Class	Order	Family	Species	Common name	End	Tsu	Oho	Otji	Okh	Aua	Gob
		Orthoptera	Acrididae	*Acorypha gilli*	Grasshoppers					L		
				Acorypha pallidicornis			L	L				
				Acrida bicolor						L		
				Acrida turrita					L	L		
				Acridella rendalli			L	L				
				Acrotylus apricarius						L		
				Acrotylus azureus			L	L				L
				Acrotylus bilobatus			L	L				
				Acrotylus diana			L	L		L		L
				Acrotylus gracilis		X				L		L
				Acrotylus humbertianus						L		
				Acrotylus patruelis			L	L				
				Ailopus thalassinus			L	L				
				Amblyphymus transvaalicus						L		
				Anacridium moestum			O	O	O	L		
				Brachyphymus vylderi					L	L		
				Callicatantops cephalotes						L		
				Catantops melanostictus			L	L	L	L		
				Cyrtacanthacris aeruginosa						L		
				Duronia chloronota						L		
				Heteracris prasinatus						L		
				Humbe tenuicornis			L	L				
				Locustana pardalina						L		
				Mesopsis hessei			L	L				

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				Oedaleus flavus						L		
				Oedaleus nigrofasciatus			L	L		L		
				Pycnodictya herero			L	L		L		
				Rhachitopis curvipes		nr	L	L		L	L	
				Rhodesiana cuneicerca						L		
				Schistocerca gregaria						L		
				Scintharista magnifica						L		
				Scintharista saucia						L		
				Thisoicetrus prasinatus			L	L		L		
				Truxalis nasuta						L		
			Bradyporidae	*Acanthoplus discoidalis*	Corn crickets		O	O	O	L,O	O	L,O
			Charilaidae	*Hemicharilaus monomorphus*			L	L				
			Euschmidtiidae	*Symbellia stigmatica*						L		
			Gryllacrididae	*Stictogryllacris lyrata*			L	L				
			Gryllidae		Crickets		O	E			O	
				Brachytrupes membranaceus						L		
				Gryllodes kuhlgatzi						L		
				Gryllus bimaculatus					L	L		L
				Gryllus zaisi		X					L	
				Rupilius nigrosignatus						L		L
			Pamphagidae		Grasshoppers		E	E	E		E	
				Akicera fusca								L
				Hoplolopha horrida								L

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				Lamarckiana cucullata						L		
				Lamarckiana sparrmani								L
				Lobosceliana cinerascens						L		L
				Stolliana sabulosa		X				L		
			Pyrgomorphidae		Grasshoppers				E		E	
				Dictyophorus spumans						L		
				Phymateus aegrotus						L		
				Phymateus baccatus						L		L
				Phymateus viridipes			L	L				
				Pyrgomorpha granulata			L	L		L		L
				Tanitella sanderi						L		
				Zonocerus elegans						L		
			Schizodactylidae	*Comicus campestris*		nr				L		
				Comicus capensis						L		
			Tettigoniidae		Katydids				O		E	
				Clonia caudata			L	L				
				Clonia wahlbergi			L	L		L		L
				Conchotopoda grallatoria						L		
				Eurycorypha brevicollis						L		
				Eurycorypha cuspidata						L		
				Horatosphaga serrifera						L		
				Horatosphaga stylifera			L	L				
				Melidia brunneri						L		
				Ruspolia nitidula						L		

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				Terpnistria zebrata						L		
				Tylopsis continua						L		
		Phasmatodea			Stick insects				E		E	E
			Diapheromeridae	*Bactrododema hecticum*			L	L		L		
				Bactrododema tiaratum						L		
				Clonaria natalis						L		
				Maransis graminea						L		
		Psocoptera			Booklice		E	E	E	E	E	E
		Siphonaptera			Fleas		E	E	E	E	E	
			Pulicidae	*Ctenocephalides canis*								L
				Ctenocephalides felis								L
		Thysanoptera			Thrips		E	E	E	E	E	E
		Thysanura	Lepismatidae		Fishmoths				E			
				Afrolepisma elegans			L	L				
				Ctenolepisma inornata		X	L	L				
				Ctenolepisma intercursa							L	
				Ctenolepisma longicaudata								L
				Ctenolepisma pluriseta						L		
				Ctenolepisma plusiochaeta		X					L	
				Thermobia aegyptiaca							L	
				Xenolepisma globosa						O		
	Malacostraca	Isopoda	Armadillidae	*Diploexochus damarensis*	Isopods						L	
			Oniscidae	*Niamba squamata*							L	
				Porcellionides pruinosus							L	

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			Platyarthridae	*Niambia longicauda*		X	L	L				
				Niambia truncata						L		
	Maxillopoda	Calanoida	Diaptomidae	*Lovenula falcifera*	Copepods						L	
				Metadiaptomus colonialis						L	L	
				Paradiaptomus schultzei							L	
		Cyclopoida	Cyclopidae	*Thermocyclops macracanthus*						L		
		Podocopida	Cypridida e	*Sclerocypris major*		X	L	L				
Bryozoa	Phylacto-laemata	Plumatellida	Lophopodidae	*Lophopodella capensis*	Moss animals						L	
			Plumatelidae	*Plumatella punctata*							L	
Mollusca	Gastropoda	Basommatophora	Bulinidae	*Bulinus forskali*	Snails						L	
		Stylommatophora	Achatinidae	*Achatina dammarensis*		X	L	L				L
			Corallidae	*Sculptaria damarensis*		X	L	L				
			Dorcasiidae	*Dorcasia alexandri*		nr	L	L	L	L	L	
			Ferussaciidae	*Cecilioides* sp.			L	L				
			Pupillidae	*Pupilla fontana*								L
				Pupoides minisculus			L	L		L		
			Streptaxidae	*Gulella caryatis*			L	L				
			Subulinidae	*Subulina vitrea*		X	L	L				
				Xerocerastes nitens		X	L	L				
				Xerocerastus sericus			L	L				
				Xerocerastus robustus					L			
Nematoda					Roundworms		E	E	E	E	E	

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	Secernentea	Tylenchida	Belonolaimidae	*Histotylenchus histoides*								L
Platy-helminthes	Cestoda				Tapeworms		E	E	E	E	E	E
	Turbellaria	Rhabdocoela	Typhloplanidae	*Metamesostoma damariense*	Flatworms						L	