

## 8. REFERENCES

- Barnes, K.N. (ed.). 1998. The Important Bird Areas of Southern Africa. BirdLife South Africa, Johannesburg.
- Bates, M., Branch, W., Bauer, A., Burger, M., Marais, J., Alexander, G., et al. (2014). *Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland (reprint 2014)*. (M. Bates, W. Branch, A. Bauer, M. Burger, J. Marais, G. Alexander, et al., Eds.) *Suricata* (1), 1-504.
- De Castro, A. 2006. Floristic survey of Spitskop Mine, Breyten. Unpublished report prepared for Clean Stream Environmental Services.
- De Castro, A. & McClelland, W. 2015. Baseline Vegetation Update of the Verkeerdepán Extension Project Area (Carolina, Mpumalanga). Unpublished report for Clean Stream Environmental Services.
- Du Preez, L., & Carruthers, V. (2009). *A complete guide to the frogs of southern Africa*. Cape Town: Random House Struik.
- Edwards, 1983. A broad-scale structural classification of vegetation for practical purposes. *Bothalia* 14:705-712.
- Fishpool, L. D. C. and Evans, M. I., (eds.). 2001. Important Bird Areas in Africa and associated islands: Priority sites for conservation. Newbury and Cambridge.
- FrogMAP. (2017). *The Southern African Frog Atlas Project*. Retrieved from <http://vmus.adu.org.za/>
- Herzog, S.K., Kessler, M. & Cahill, T.M. 2002. Estimating species richness of tropical bird communities from rapid assessment data. *Auk* 119:749–769.
- International Union for the Conservation of Nature (IUCN) 2012. IUCN Red List of Threatened Species. Version 2012.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>
- Kent, M. & Coker, P. 1992. *Vegetation Description and Analysis: a practical approach*. John Wiley & Sons, London.
- Marneweck, M.D., Retief, E.F., Theron, N.T., Wright, D.R. & Anderson, T.A. 2015. *Important Bird and Biodiversity Areas of South Africa*. Johannesburg, BirdLife South Africa.
- Minter, L., Burger, M., Harrison, J., Braack, H., Bishop, P., & Kloepfer, D. (2004). *Atlas and Red Data Book of the frogs of South Africa, Lesotho and Swaziland. SI/MAB Series #9*. Smithsonian Institution, Willbehington DC.
- O'Dea, N., Watson, J.E.M. & Whittaker, R.J. 2004. Rapid assessment in conservation research: a critique of avifaunal assessment techniques illustrated by Ecuadorian and Madagascan case study data. *Diversity and Distributions* 10:55-63.

- Raimondo, D., von Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C., Kamundi, D.A. and Manyama, P.A. 2009. Red List of South African Plants. *Strelitzia* 25. South African National Biodiversity Institute, Pretoria.
- ReptileMap. (2017). *The Southern African Reptile Atlas Project*. Retrieved from <http://vmus.adu.org.za/>
- Taylor, M.R., Peacock, F., Wanless, R.W. (eds). 2015. *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland*. Birdlife South Africa, Johannesburg.
- Van Wyk, A. E. & Smith, G. F. 2001. Regions of floristic endemism in southern Africa: A review with emphasis on succulents. Umdaus Press, Pretoria.
- von Staden, L., Lötter, M. & Winter, P.J.D. 2009. *Alepidea longeciliata* Schinz ex Dummer. National Assessment: Red List of South African Plants version 2017.1. Accessed on 2018/11/14
- White, F. 1983. The vegetation of Africa, a descriptive memoir to accompany the UNESCO/AETFAT/UNSO Vegetation Map of Africa. UNESCO. Paris.

## 9. APPENDICES

### APPENDIX 1. LIST OF PLANTS RECORDED FROM A 20KM RADIUS OF THE STUDY AREA (BODATSA)

Taxa	Red Data	Provincial Endemic	Protected
<b>Family Acanthaceae</b> <i>Crossandra greenstockii</i> S.Moore <i>Justicia anagalloides</i> (Nees) T.Anderson <i>Thunbergia atriplicifolia</i> E.Mey. ex Nees			
<b>Family Agavaceae</b> <i>Chlorophytum bowkeri</i> Baker <i>Chlorophytum cooperi</i> (Baker) Nordal			
<b>Family Aizoaceae</b> <i>Delosperma</i> sp. <i>Khadia carolinensis</i> (L.Bolus) L.Bolus <i>Ruschia</i> sp.	VU	x	
<b>Family Alliaceae</b> <i>Tulbaghia acutiloba</i> Harv. <i>Tulbaghia ludwigiana</i> Harv.			
<b>Family Amaranthaceae</b> <i>Hermbstaedtia odorata</i> (Burch.) T.Cooke var. <i>odorata</i>			
<b>Family Amaryllidaceae</b> <i>Boophone disticha</i> (L.f.) Herb. <i>Brunsvigia radulosa</i> Herb. <i>Crinum macowanii</i> Baker <i>Crinum bulbispermum</i> (Burm.f.) Milne-Redh. & Schweick. <i>Cyrtanthus breviflorus</i> Harv. <i>Cyrtanthus tuckii</i> Baker var. <i>transvaalensis</i> I.Verd. <i>Cyrtanthus tuckii</i> Baker var. <i>tuckii</i> <i>Haemanthus humilis</i> Jacq. subsp. <i>hirsutus</i> (Baker) Snijman <i>Scadoxus puniceus</i> (L.) Friis & Nordal			MNCA MNCA MNCA MNCA MNCA MNCA MNCA MNCA MNCA
<b>Family Anacardiaceae</b> <i>Searsia discolor</i> (E.Mey. ex Sond.) Moffett <i>Searsia magalismontana</i> (Sond.) Moffett subsp. <i>magalismontana</i> <i>Searsia tumulicola</i> (S.Moore) Moffett var. <i>meeuseana</i> (R.Fern. & A.Fern.) Moffett forma <i>pumila</i> (Moffett) Moffett			
<b>Family Apiaceae</b> <i>Afroscidium magalismontanum</i> (Sond.) P.J.D.Winter <i>Alepidea longeciliata</i> Schinz ex Dummer	EN	x	
<b>Family Apocynaceae</b> <i>Ancylobotrys capensis</i> (Oliv.) Pichon <i>Asclepias multicaulis</i> (E.Mey.) Schltr. <i>Asclepias eminens</i> (Harv.) Schltr. <i>Asclepias dissona</i> N.E.Br. <i>Asclepias adscendens</i> (Schltr.) Schltr. <i>Asclepias albens</i> (E.Mey.) Schltr. <i>Asclepias aurea</i> (Schltr.) Schltr. <i>Asclepias cucullata</i> (Schltr.) Schltr. subsp. <i>cucullata</i>	CE (PE)	x	

<i>Asclepias stellifera</i> Schltr.			
<i>Aspidoglossum biflorum</i> E.Mey.			
<i>Aspidoglossum ovalifolium</i> (Schltr.) Kupicha			
<i>Aspidoglossum glabrescens</i> (Schltr.) Kupicha			
<i>Aspidoglossum xanthosphaerum</i> Hilliard	VU	x	
<i>Brachystelma angustum</i> Peckover	VU	x	MNCA
<i>Gomphocarpus rivularis</i> Schltr.			
<i>Gomphocarpus physocarpus</i> E.Mey.			
<i>Huernia loeseneriana</i> Schltr.			MNCA
<i>Pachycarpus concolor</i> E.Mey. subsp. <i>transvaalensis</i> (Schltr.) Goyder			
<i>Pachycarpus suaveolens</i> (Schltr.) Nicholas & Goyder	VU	x	
<i>Raphionacme hirsuta</i> (E.Mey.) R.A.Dyer			
<i>Riocreuxia aberrans</i> R.A.Dyer	NT	x	
<i>Schizoglossum periglossoides</i> Schltr.			
<i>Schizoglossum nitidum</i> Schltr.			
<i>Xysmalobium undulatum</i> (L.) Aiton f. var. <i>undulatum</i>			
<b>Family Aponogetonaceae</b>			
<i>Aponogeton natalensis</i> Oliv.			
<b>Family Araceae</b>			
<i>Zantedeschia albomaculata</i> (Hook.) Baill. subsp. <i>macrocarpa</i> (Engl.) Letty			
<b>Family Asparagaceae</b>			
<i>Asparagus fractiflexus</i> (Oberm.) Fellingham & N.L.Mey.	EN	x	
<b>Family Asphodelaceae</b>			
<i>Aloe greatheadii</i> Schonland var. <i>davyana</i> (Schonland) Glen & D.S.Hardy			MNCA
<i>Bulbine capitata</i> Poelln.			
<i>Bulbine inflata</i> Oberm.			
<i>Kniphofia triangularis</i> Kunth subsp. <i>obtusiloba</i> (A.Berger) Codd	Rare		
<i>Kniphofia porphyrantha</i> Baker			MNCA
<i>Kniphofia multiflora</i> J.M.Wood & M.S.Evans			MNCA
<i>Trachyandra saltii</i> (Baker) Oberm. var. <i>saltii</i>			
<i>Trachyandra asperata</i> Kunth var. <i>carolinensis</i> Oberm.		x	
<i>Trachyandra asperata</i> Kunth var. <i>nataglencoensis</i> (Kuntze) Oberm.			
<i>Trachyandra asperata</i> Kunth var. <i>macowanii</i> (Baker) Oberm.			
<b>Family Asteraceae</b>			
<i>Afroaster serrulatus</i> (Harv.) J.C.Manning & Goldblatt			
<i>Berkheya zeyheri</i> Oliv. & Hiern subsp. <i>zeyheri</i>			
<i>Berkheya setifera</i> DC.			
<i>Callilepis leptophylla</i> Harv.			
<i>Callilepis salicifolia</i> Oliv.			
<i>Cyanthillium wollastonii</i> (S.Moore) H.Rob., Skvarla & V.A.Funk			
<i>Denekia capensis</i> Thunb.			
<i>Dimorphotheca jucunda</i> E.Phillips			
<i>Dimorphotheca caulescens</i> Harv.			
<i>Dimorphotheca spectabilis</i> Schltr.			
<i>Euryops transvaalensis</i> Klatt subsp. <i>transvaalensis</i>			
<i>Euryops laxus</i> (Harv.) Burtt Davy			
<i>Euryops gilfillanii</i> Bolus			
<i>Felicia mossamedensis</i> (Hiern) Mendonça			
<i>Gerbera aurantiaca</i> Sch.Bip.	EN		
<i>Gazania krebsiana</i> Less. subsp. <i>serrulata</i> (DC.) Roessler			
<i>Geigeria burkei</i> Harv. subsp. <i>burkei</i> var. <i>burkei</i>			
<i>Gerbera ambigua</i> (Cass.) Sch.Bip.			
<i>Gnaphalium filagopsis</i> Hilliard & B.L.Burtt			
<i>Haplocarpha</i> sp.			
<i>Haplocarpha scaposa</i> Harv.			
<i>Helichrysum aureonitens</i> Sch.Bip.			
<i>Helichrysum lepidissimum</i> S.Moore			

<p><i>Helichrysum griseum</i> Sond.  <i>Helichrysum nudifolium</i> (L.) Less. var. <i>nudifolium</i>  <i>Helichrysum adenocarpum</i> DC. subsp. <i>adenocarpum</i>  <i>Helichrysum oreophilum</i> Klatt  <i>Helichrysum miconiifolium</i> DC.  <i>Helichrysum rugulosum</i> Less.  <i>Helichrysum cephaloideum</i> DC.  <i>Helichrysum chionosphaerum</i> DC.  <i>Helichrysum argyrolepis</i> MacOwan  <i>Helichrysum pallidum</i> DC.  <i>Helichrysum caespitium</i> (DC.) Harv.  <i>Hilliardiella hirsuta</i> (DC.) H.Rob.  <i>Hypochaeris radicata</i> L.  <i>Macledium zeyheri</i> (Sond.) S.Ortiz subsp. <i>zeyheri</i>  <i>Nidorella anomala</i> Steetz  <i>Nolletia rarifolia</i> (Turcz.) Steetz  <i>Oncosiphon piluliferus</i> (L.f.) Kallersjo  <i>Othonna natalensis</i> Sch.Bip.  <i>Pegolettia lanceolata</i> Harv.  <i>Philyrophyllum schinzii</i> O.Hoffm.  <i>Phymaspermum athanasioides</i> (S.Moore) Kallersjo  <i>Pseudognaphalium luteoalbum</i> (L.) Hilliard &amp; B.L.Burt  <i>Pseudopegolettia tenella</i> (DC.) H.Rob., Skvarla &amp; V.A.Funk  <i>Senecio scitrus</i> Hutch. &amp; Burt Davy  <i>Senecio polyodon</i> DC. var. <i>polyodon</i>  <i>Senecio bupleuroides</i> DC.  <i>Senecio discodregeanus</i> Hilliard &amp; B.L.Burt  <i>Senecio othonniflorus</i> DC.  <i>Senecio erubescens</i> Aiton var. <i>erubescens</i>  <i>Seriphium plumosum</i> L.  <i>Ursinia montana</i> DC. subsp. <i>montana</i>  <i>Ursinia nana</i> DC.</p>			
<p><b>Family Boraginaceae</b>  <i>Cynoglossum austroafricanum</i> Hilliard &amp; B.L.Burt  <i>Cynoglossum lanceolatum</i> Forssk.  <i>Myosotis afropalustris</i> C.H.Wright</p>			
<p><b>Family Brassicaceae</b>  <i>Heliophila rigidiuscula</i> Sond.</p>			
<p><b>Family Campanulaceae</b>  <i>Wahlenbergia denticulata</i> (Burch.) A.DC. var. <i>transvaalensis</i> (Adamson) W.G.Welman  <i>Wahlenbergia undulata</i> (L.f.) A.DC.</p>			
<p><b>Family Capparaceae</b>  <i>Maerua cafra</i> (DC.) Pax</p>			
<p><b>Family Caryophyllaceae</b>  <i>Cerastium arabis</i> E.Mey. ex Fenzl  <i>Cerastium capense</i> Sond.  <i>Dianthus mooiensis</i> F.N.Williams subsp. <i>mooiensis</i> var. <i>dentatus</i> Burt Davy  <i>Dianthus transvaalensis</i> Burt Davy  <i>Silene burchellii</i> Otth subsp. <i>modesta</i> J.C.Manning &amp; Goldblatt  <i>Silene burchellii</i> Otth subsp. <i>pilosellifolia</i> (Cham. &amp; Schtdl.) J.C.Manning &amp; Goldblatt</p>			
<p><b>Family Colchicaceae</b>  <i>Colchicum striatum</i> (Hochst. ex A.Rich.) J.C.Manning &amp; Vinn.</p>			
<p><b>Family Commelinaceae</b>  <i>Commelina africana</i> L. var. <i>africana</i>  <i>Commelina africana</i> L. var. <i>krebsiana</i> (Kunth) C.B.Clarke  <i>Cyanotis speciosa</i> (L.f.) Hassk.</p>			

<b>Family Convolvulaceae</b> <i>Convolvulus natalensis</i> Bernh. ex Krauss <i>Convolvulus thunbergii</i> Roem. & Schult. <i>Falkia oblonga</i> Bernh. ex C.Krauss <i>Ipomoea crassipes</i> Hook. var. <i>crassipes</i> <i>Ipomoea ommanneyi</i> Rendle <i>Ipomoea bathycolpos</i> Hallier f. <i>Ipomoea oblongata</i> E.Mey. ex Choisy			
<b>Family Crassulaceae</b> <i>Cotyledon orbiculata</i> L. var. <i>oblonga</i> (Haw.) DC. <i>Crassula alba</i> Forssk. var. <i>alba</i>			
<b>Family Cucurbitaceae</b> <i>Cucumis hirsutus</i> Sond. <i>Trochomeria hookeri</i> Harv.			
<b>Family Cyperaceae</b> <i>Abildgaardia ovata</i> (Burm.f.) Kral <i>Ascolepis capensis</i> (Kunth) Ridl. <i>Bulbostylis humilis</i> (Kunth) C.B.Clarke <i>Bulbostylis schoenoides</i> (Kunth) C.B.Clarke <i>Bulbostylis</i> sp. <i>Cyperus sphaerospermus</i> Schrad. <i>Cyperus parvinox</i> C.B.Clarke <i>Cyperus obtusiflorus</i> Vahl var. <i>flavissimus</i> (Schrad.) Boeck. <i>Cyperus obtusiflorus</i> Vahl var. <i>obtusiflorus</i> <i>Cyperus tenax</i> Boeck. <i>Dracoscirpoides surculosa</i> Muasya, Reynders & Goetgh. <i>Fuirena pubescens</i> (Poir.) Kunth var. <i>pubescens</i> <i>Isolepis fluitans</i> (L.) R.Br. var. <i>fluitans</i> <i>Isolepis costata</i> Hochst. ex A.Rich. <i>Kyllinga melanosperma</i> Nees <i>Kyllinga pulchella</i> Kunth <i>Pycneus macranthus</i> (Boeck.) C.B.Clarke <i>Pycneus</i> sp. <i>Rhynchospora brownii</i> Roem. & Schult. <i>Schoenoplectus decipiens</i> (Nees) J.Raynal <i>Schoenoplectus corymbosus</i> (Roth ex Roem. & Schult.) J.Raynal <i>Scirpoides burkei</i> (C.B.Clarke) Goetgh., Muasya & D.A.Simpson <i>Scleria woodii</i> C.B.Clarke			
<b>Family Dipsacaceae</b> <i>Scabiosa columbaria</i> L.			
<b>Family Droseraceae</b> <i>Drosera burkeana</i> Planch.			
<b>Family Dryopteridaceae</b> <i>Dryopteris athamantica</i> (Kunze) Kuntze			
<b>Family Ebenaceae</b> <i>Diospyros lycioides</i> Desf. subsp. <i>guerkei</i> (Kuntze) De Winter			
<b>Family Ericaceae</b> <i>Erica oatesii</i> Rolfe var. <i>oatesii</i> <i>Erica cerinthoides</i> L. var. <i>cerinthoides</i>			
<b>Family Eriocaulaceae</b> <i>Eriocaulon hydrophilum</i> Markotter			
<b>Family Euphorbiaceae</b> <i>Acalypha caperonioides</i> Baill. var. <i>caperonioides</i> <i>Clusia natalensis</i> Bernh. <i>Euphorbia gueinzii</i> Boiss. <i>Euphorbia clavarioides</i> Boiss.			
<b>Family Fabaceae</b>			

<p><i>Aeschynomene rehmannii</i> Schinz var. <i>leptobotrya</i> (Harms ex Baker f.) J.B.Gillett  <i>Argyrolobium tuberosum</i> Eckl. &amp; Zeyh.  <i>Crotalaria globifera</i> E.Mey.  <i>Dichilus lebeckioides</i> DC.  <i>Elephantorrhiza elephantina</i> (Burch.) Skeels  <i>Eriosema simulans</i> C.H.Stirt.  <i>Erythrina zeyheri</i> Harv.  <i>Indigastrium fastigiatum</i> (E.Mey.) Schrire  <i>Indigofera rostrata</i> Bolus  <i>Indigofera hilaris</i> Eckl. &amp; Zeyh. var. <i>hilaris</i>  <i>Indigofera dimidiata</i> Vogel ex Walp.  <i>Indigofera hedyantha</i> Eckl. &amp; Zeyh.  <i>Leobordea carinata</i> (E.Mey.) B.-E.van Wyk &amp; Boatwr.  <i>Leobordea mucronata</i> (Conrath) B.-E.van Wyk &amp; Boatwr.  <i>Leobordea corymbosa</i> (E.Mey.) B.-E.van Wyk &amp; Boatwr.  <i>Leobordea foliosa</i> (Bolus) B.-E.van Wyk &amp; Boatwr.  <i>Listia solitudinis</i> (Dummer) B.-E.van Wyk &amp; Boatwr.  <i>Mundulea sericea</i> (Willd.) A.Chev. subsp. <i>sericea</i>  <i>Neorautanenia ficifolia</i> (Benth. ex Harv.) C.A.Sm.  <i>Rhynchosia reptabunda</i> N.E.Br.  <i>Rhynchosia nervosa</i> Benth. ex Harv. var. <i>nervosa</i>  <i>Rhynchosia totta</i> (Thunb.) DC. var. <i>totta</i>  <i>Rhynchosia adenodes</i> Eckl. &amp; Zeyh.  <i>Senna italica</i> Mill. subsp. <i>arachoides</i> (Burch.) Lock  <i>Senna bicapsularis</i> (L.) Roxb.  <i>Tephrosia elongata</i> E.Mey. var. <i>elongata</i>  <i>Trifolium africanum</i> Ser. var. <i>lydenburgense</i> J.B.Gillett  <i>Vicia sativa</i> L. subsp. <i>sativa</i>  <i>Vigna unguiculata</i> (L.) Walp. subsp. <i>unguiculata</i> var. <i>unguiculata</i></p>			
<p><b>Family Gentianaceae</b>  <i>Chironia purpurascens</i> (E.Mey.) Benth. &amp; Hook.f. subsp. <i>humilis</i> (Gilg) I.Verd.  <i>Chironia palustris</i> Burch. subsp. <i>transvaalensis</i> (Gilg) I.Verd.  <i>Sebaea leiostyla</i> Gilg</p>			
<p><b>Family Geraniaceae</b>  <i>Geranium multisectum</i> N.E.Br.  <i>Monsonia angustifolia</i> E.Mey. ex A.Rich.  <i>Pelargonium luridum</i> (Andrews) Sweet</p>			
<p><b>Family Gesneriaceae</b>  <i>Streptocarpus pentherianus</i> Fritsch</p>			
<p><b>Family Hyacinthaceae</b>  <i>Albuca setosa</i> Jacq.  <i>Albuca virens</i> (Ker Gawl.) J.C.Manning &amp; Goldblatt subsp. <i>virens</i>  <i>Drimia</i> sp.  <i>Drimia depressa</i> (Baker) Jessop  <i>Drimia calcarata</i> (Baker) Stedje  <i>Ledebouria undulata</i> (Jacq.) Jessop  <i>Ledebouria ovatifolia</i> (Baker) Jessop  <i>Ledebouria cooperi</i> (Hook.f.) Jessop  <i>Merwillia plumbea</i> (Lindl.) Speta</p>	NT		
<p><b>Family Hypericaceae</b>  <i>Hypericum aethiopicum</i> Thunb. subsp. <i>sonderi</i> (Bredell) N.Robson  <i>Hypericum lalandii</i> Choisy</p>			
<p><b>Family Hypoxidaceae</b>  <i>Empodium elongatum</i> (Nel) B.L.Burtt  <i>Hypoxis iridifolia</i> Baker  <i>Hypoxis rigidula</i> Baker var. <i>rigidula</i>  <i>Hypoxis filiformis</i> Baker</p>			

<b>Family Iridaceae</b> <i>Aristea torulosa</i> Klatt <i>Dierama mobile</i> Hilliard <i>Dierama insigne</i> N.E.Br. <i>Gladiolus crassifolius</i> Baker <i>Gladiolus longicollis</i> Baker subsp. <i>platypetalus</i> (Baker) Goldblatt & J.C.Manning <i>Gladiolus malvinus</i> Goldblatt & J.C.Manning <i>Gladiolus woodii</i> Baker <i>Gladiolus paludosus</i> Baker <i>Gladiolus papilio</i> Hook.f. <i>Gladiolus dalenii</i> Van Geel subsp. <i>dalenii</i> <i>Hesperantha candida</i> Baker <i>Moraea stricta</i> Baker <i>Moraea pallida</i> (Baker) Goldblatt <i>Watsonia latifolia</i> N.E.Br. ex Oberm.	VU	x	MNCA MNCA MNCA MNCA MNCA MNCA MNCA MNCA MNCA
<b>Family Juncaceae</b> <i>Juncus oxycarpus</i> E.Mey. ex Kunth <i>Juncus effusus</i> L. <i>Juncus dregeanus</i> Kunth subsp. <i>dregeanus</i>			
<b>Family Lamiaceae</b> <i>Acrotome hispida</i> Benth. <i>Mentha longifolia</i> (L.) Huds. subsp. <i>polyadena</i> (Briq.) Briq. <i>Rothea hirsuta</i> (Hochst.) R.Fern. <i>Salvia runcinata</i> L.f. <i>Salvia stenophylla</i> Burch. ex Benth. <i>Stachys erectiuscula</i> Gurke <i>Stachys natalensis</i> Hochst. var. <i>galpinii</i> (Briq.) Codd <i>Stachys hyssopoides</i> Burch. ex Benth. <i>Stachys simplex</i> Schltr. <i>Syncolostemon pretoriae</i> (Gurke) D.F.Otieno			
<b>Family Lentibulariaceae</b> <i>Utricularia</i> sp.			
<b>Family Linaceae</b> <i>Linum thunbergii</i> Eckl. & Zeyh.			
<b>Family Linderniaceae</b> <i>Craterostigma wilmsii</i> Engl. ex Diels			
<b>Family Lobeliaceae</b> <i>Lobelia erinus</i> L. <i>Monopsis decipiens</i> (Sond.) Thulin			
<b>Family Malvaceae</b> <i>Corchorus confusus</i> Wild <i>Hermannia cristata</i> Bolus <i>Hermannia</i> sp. <i>Hermannia lancifolia</i> Szyszyl. <i>Hibiscus trionum</i> L. <i>Hibiscus microcarpus</i> Garcke <i>Hibiscus aethiopicus</i> L. var. <i>ovatus</i> Harv.			
<b>Family Menyanthaceae</b> <i>Nymphoides thunbergiana</i> (Griseb.) Kuntze			
<b>Family Molluginaceae</b> <i>Psammotropha mucronata</i> (Thunb.) Fenzl var. <i>foliosa</i> Adamson <i>Psammotropha myriantha</i> Sond.			
<b>Family Myrtaceae</b> <i>Leptospermum laevigatum</i> (Gaertn.) F.Muell.			
<b>Family Ochnaceae</b> <i>Ochna natalitia</i> (Meisn.) Walp.			
<b>Family Oleaceae</b>			



<i>Jasminum quinquatum</i> Schinz			
<b>Family Onagraceae</b>			
<i>Ludwigia palustris</i> (L.) Elliott			
<b>Family Orchidaceae</b>			
<i>Brownleea parviflora</i> Harv. ex Lindl.			MNCA
<i>Disa baurii</i> Bolus			MNCA
<i>Disa cooperi</i> Rchb.f.			MNCA
<i>Disa versicolor</i> Rchb.f.			MNCA
<i>Eulophia ovalis</i> Lindl. var. <i>ovalis</i>			MNCA
<i>Eulophia hians</i> Spreng. var. <i>hians</i>			MNCA
<i>Eulophia streptopetala</i> Lindl.			MNCA
<i>Eulophia ovalis</i> Lindl. var. <i>bainesii</i> (Rolfe) P.J.Cribb & la Croix			MNCA
<i>Eulophia cooperi</i> Rchb.f.			MNCA
<i>Habenaria dregeana</i> Lindl.			MNCA
<i>Habenaria dives</i> Rchb.f.			MNCA
<i>Orthochilus leontoglossus</i> (Rchb.f.) Bytebier			MNCA
<i>Orthochilus vinosus</i> (McMurtry & McDonald) Bytebier			MNCA
<i>Satyrium parviflorum</i> Sw.			MNCA
<b>Family Orobanchaceae</b>			
<i>Alectra capensis</i> Thunb.			
<i>Buchnera</i> sp.			
<i>Buchnera simplex</i> (Thunb.) Druce			
<i>Sopubia cana</i> Harv. var. <i>cana</i>			
<i>Striga elegans</i> Benth.			
<i>Striga bilabiata</i> (Thunb.) Kuntze subsp. <i>bilabiata</i>			
<b>Family Oxalidaceae</b>			
<i>Oxalis smithiana</i> Eckl. & Zeyh.			
<i>Oxalis corniculata</i> L.			
<i>Oxalis obliquifolia</i> Steud. ex A.Rich.			
<b>Family Papaveraceae</b>			
<i>Papaver aculeatum</i> Thunb.			
<b>Phrymaceae</b>			
<i>Mimulus gracilis</i> R.Br.			
<b>Family Phytolaccaceae</b>			
<i>Phytolacca heptandra</i> Retz.			
<b>Family Plantaginaceae</b>			
<i>Linaria vulgaris</i> Mill.			
<b>Family Poaceae</b>			
<i>Agrostis lachnantha</i> Nees var. <i>lachnantha</i>			
<i>Alloteropsis semialata</i> (R.Br.) Hitchc. subsp. <i>semialata</i>			
<i>Alloteropsis semialata</i> (R.Br.) Hitchc. subsp. <i>eckloniana</i> (Nees) Gibbs Russ.			
<i>Andropogon appendiculatus</i> Nees			
<i>Andropogon schirensis</i> Hochst. ex A.Rich.			
<i>Aristida sciurus</i> Stapf			
<i>Arundinella nepalensis</i> Trin.			
<i>Brachiaria serrata</i> (Thunb.) Stapf			
<i>Ctenium concinnum</i> Nees			
<i>Cynodon hirsutus</i> Stent			
<i>Digitaria tricholaenoides</i> Stapf			
<i>Diheteropogon filifolius</i> (Nees) Clayton			
<i>Elionurus muticus</i> (Spreng.) Kunth			
<i>Eragrostis plana</i> Nees			
<i>Eragrostis curvula</i> (Schrad.) Nees			
<i>Eragrostis capensis</i> (Thunb.) Trin.			
<i>Eragrostis racemosa</i> (Thunb.) Steud.			
<i>Festuca caprina</i> Nees			
<i>Hemarthria altissima</i> (Poir.) Stapf & C.E.Hubb.			

<p><i>Heteropogon contortus</i> (L.) Roem. &amp; Schult.  <i>Holcus lanatus</i> L.  <i>Koeleria capensis</i> (Steud.) Nees  <i>Loudetia simplex</i> (Nees) C.E.Hubb.  <i>Melinis nerviglumis</i> (Franch.) Zizka  <i>Microchloa caffra</i> Nees  <i>Monocymbium cerasiiforme</i> (Nees) Stapf  <i>Odontelytrum abyssinicum</i> Hack.  <i>Panicum hygrocharis</i> Steud.  <i>Panicum schinzii</i> Hack.  <i>Paspalum dilatatum</i> Poir.  <i>Pennisetum sphacelatum</i> (Nees) T.Durand &amp; Schinz  <i>Pennisetum thunbergii</i> Kunth  <i>Pogonarthria squarrosa</i> (Roem. &amp; Schult.) Pilg.  <i>Rendlia altera</i> (Rendle) Chiov.  <i>Setaria nigrirostris</i> (Nees) T.Durand &amp; Schinz  <i>Setaria sphacelata</i> (Schumach.) Stapf &amp; C.E.Hubb. ex M.B.Moss var. <i>torta</i> (Stapf) Clayton  <i>Sorghum</i> sp.  <i>Sporobolus pectinatus</i> Hack.  <i>Sporobolus</i> sp.  <i>Stiburus conrathii</i> Hack.  <i>Stipagrostis zeyheri</i> (Nees) De Winter subsp. <i>sericans</i> (Hack.) De Winter  <i>Themeda triandra</i> Forssk.  <i>Trachypogon spicatus</i> (L.f.) Kuntze  <i>Tristachya leucothrix</i> Trin. ex Nees  <i>Tristachya</i> sp.</p>			
<p><b>Family Polygalaceae</b>  <i>Polygala gracilenta</i> Burt Davy  <i>Polygala rehmannii</i> Chodat  <i>Polygala gerrardii</i> Chodat  <i>Polygala uncinata</i> E.Mey. ex Meisn.  <i>Polygala leendertziae</i> Burt Davy</p>			
<p><b>Family Polygonaceae</b>  <i>Oxygonum dregeanum</i> Meisn. subsp. <i>canescens</i> (Sond.) Germish. var. <i>canescens</i>  <i>Persicaria lapathifolia</i> (L.) Gray  <i>Rumex dregeanus</i> Meisn. subsp. <i>montanus</i> B.L.Burt  <i>Rumex acetosella</i> L. subsp. <i>angiocarpus</i> (Murb.) Murb.  <i>Rumex woodii</i> N.E.Br.</p>			
<p><b>Family Pteridaceae</b>  <i>Actiniopteris radiata</i> (J.Konig ex Sw.) Link  <i>Cheilanthes hirta</i> Sw. var. <i>brevipilosa</i> W.Jacobsen &amp; N.Jacobsen forma <i>brevipilosa</i>  <i>Cheilanthes multifida</i> (Sw.) Sw. subsp. <i>lacerata</i> N.C.Anthony &amp; Schelpe  <i>Cheilanthes hirta</i> Sw. var. <i>hyaloglandulosa</i> (W.Jacobsen &amp; N.Jacobsen) J.E.Burrows</p>			
<p><b>Family Ranunculaceae</b>  <i>Ranunculus multifidus</i> Forssk.  <i>Ranunculus dregei</i> J.C.Manning &amp; Goldblatt</p>			
<p><b>Family Rhamnaceae</b>  <i>Ziziphus zeyheriana</i> Sond.</p>			
<p><b>Family Rosaceae</b>  <i>Alchemilla woodii</i> Kuntze  <i>Cliffortia linearifolia</i> Eckl. &amp; Zeyh.</p>			
<p><b>Family Rubiaceae</b>  <i>Anthospermum rigidum</i> Eckl. &amp; Zeyh. subsp. <i>pumilum</i> (Sond.) Puff  <i>Anthospermum rigidum</i> Eckl. &amp; Zeyh. subsp. <i>rigidum</i></p>			

<i>Galium capense</i> Thunb. subsp. <i>capense</i> <i>Kohautia amatymbica</i> Eckl. & Zeyh. <i>Pachystigma thamnus</i> Robyns <i>Pachystigma pygmaeum</i> (Schltr.) Robyns <i>Pavetta</i> sp. <i>Pentanisia prunelloides</i> (Klotzsch ex Eckl. & Zeyh.) Walp. subsp. <i>prunelloides</i> <i>Pentanisia angustifolia</i> (Hochst.) Hochst. <i>Pygmaeothamnus chamaedendrum</i> (Kuntze) Robyns var. <i>chamaedendrum</i> <i>Spermacoce natalensis</i> Hochst.			
<b>Family Rusceae</b> <i>Eriospermum cooperi</i> Baker var. <i>cooperi</i> <i>Eriospermum mackenii</i> (Hook.f.) Baker subsp. <i>mackenii</i>			
<b>Family Santalaceae</b> <i>Thesium exile</i> N.E.Br.			
<b>Family Scrophulariaceae</b> <i>Chaenostoma neglectum</i> J.M.Wood & M.S.Evans <i>Chaenostoma polelense</i> (Hiern) Kornhall subsp. <i>fraterna</i> (Hilliard) Kornhall <i>Diclis rotundifolia</i> (Hiern) Hilliard & B.L.Burt <i>Hebenstretia comosa</i> Hochst. <i>Hebenstretia oatesii</i> Rolfe subsp. <i>oatesii</i> <i>Jamesbrittenia</i> sp. <i>Jamesbrittenia aurantiaca</i> (Burch.) Hilliard <i>Manulea rhodantha</i> Hilliard subsp. <i>aurantiaca</i> Hilliard <i>Melanospermum transvaalense</i> (Hiern) Hilliard <i>Nemesia fruticans</i> (Thunb.) Benth. <i>Selago</i> sp. <i>Selago welwitschii</i> Rolfe var. <i>holubii</i> (Rolfe) Brenan <i>Selago densiflora</i> Rolfe <i>Selago capitellata</i> Schltr. <i>Zaluzianskya elongata</i> Hilliard & B.L.Burt <i>Zaluzianskya pulvinata</i> Killick <i>Zaluzianskya spathacea</i> (Benth.) Walp.			
<b>Family Solanaceae</b> <i>Solanum capense</i> L. <i>Solanum retroflexum</i> Dunal <i>Withania somnifera</i> (L.) Dunal			
<b>Family Thymelaeaceae</b> <i>Gnidia fastigiata</i> Rendle <i>Gnidia gymnostachya</i> (C.A.Mey.) Gilg <i>Gnidia</i> sp. <i>Lasiosiphon caffer</i> Meisn. <i>Lasiosiphon microcephalus</i> (Meisn.) J.C.Manning & Magee <i>Lasiosiphon kraussianus</i> (Meisn.) Meisn.			
<b>Family Valerianaceae</b> <i>Valeriana capensis</i> Thunb. var. <i>capensis</i>			
	<b>13</b>	<b>11</b>	<b>37</b>

NT = Near Threatened

VU = Vulnerable

EN = Endangered

CE PE - Critically Endangered (Presumed Extinct)

MNCA = Mpumalanga Nature Conservation Act No. 10 (1998)

**APPENDIX 2. POTENTIALLY OCCURRING PLANT SPECIES OF CONSERVATION CONCERN**

Species	Family	Red Data Status	Habitat	Likelihood	Reason
<i>Khadia carolinensis</i>	Aizoaceae	VU	Well-drained, sandy loam soils among rocky outcrops, or at the edges of sandstone sheets, Highveld Grassland	High	Confirmed in 2630AA (Carolina Town and Townlands 43 IT, Groenvallei 40 IT, Jagtlust 47 IT)
<i>Alepidea longeciliata</i>	Apiaceae	EN	Highveld grassland, may be associated with pans	High	Confirmed in 2629BB (Bankfontein 215 IS, Jagtlust 47 IT)
<i>Asclepias dissona</i>	Apocynaceae	CE (PE)	Damp grassland	Low	Confirmed in 2630AA (Boesmanspruit 9 IT) but last recorded in 1932. Possibly extinct
<i>Aspidoglossum xanthosphaerum</i>	Apocynaceae	VU	Montane grassland, Highveld grassland, marshy sites	Moderate	Some suitable habitat present
<i>Brachystelma angustum</i>	Apocynaceae	VU	Pockets of shallow, humic soils on white quartzitic ridges	Low	Only known from north of Carolina
<i>Riocreuxia aberrans</i>	Apocynaceae	NT	Wedged in cracks among rocks on exposed quartzite ridges	Low	Unsuitable habitat present
<i>Pachycarpus suaveolens</i>	Apocynaceae	VU	Short or annually burnt grasslands, 1400-2000 mamsl	Low	Although historically recorded from the Carolina district, it is a very rare species and only known from eight localities
<i>Asparagus fractiflexus</i>	Asparagaceae	EN	High altitude, open grasslands, on rocky outcrops or among boulders	Low	Although historically recorded from the Carolina district, it is a very rare species and only known from four localities

<i>Kniphofia triangularis subsp. obtusiloba</i>	Asphodelaceae	Rare	Quartzitic rocky outcrops in montane grasslands	Low	Confirmed in 2630AA (near Slaaihoek), but in high-lying wetter areas of the Escarpment
<i>Gerbera aurantiaca</i>	Asteraceae	EN	Mistbelt grassland, well-drained doleritic areas	Low	Unsuitable habitat present
<i>Merwillia plumbea</i>	Hyacinthaceae	NT	Montane mistbelt and Ngongoni grassland, rocky areas on steep, well drained slopes	Low	Unsuitable habitat present
<i>Gladiolus malvinus</i>	Iridaceae	VU	Dolerite outcrops in grassland, around 2000 m	Low	Unsuitable geology and habitat present
<i>Gladiolus paludosus</i>	Iridaceae	VU	Wetlands or marshes in high altitude grassland that remain wet throughout the year or dry out for only a short period	Low	Rare and localised species

NT = Near Threatened  
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 EN = Endangered  
 CE - Critically Endangered  
 PE = Presumed Extinct

### APPENDIX 3. LIST OF MAMMALS RECORDED FROM THE VICINITY OF THE STUDY AREA

Common Name	Scientific Name	Red Data	Provincial Endemic	Protected - NEMRA ToPS	Protected - MNCA	QDS	
						2629BB	2630AA
<b>ORDER: AFROSORICIDA</b> <b>Family Chrysochloridae (golden moles)</b> Hottentot's Golden Mole Highveld Golden Mole	<i>Amblysomus hottentotus</i> <i>Amblysomus septentrionalis</i>	NT					X X
<b>ORDER: EULIPOTYPHLA</b> <b>Family Erinaceidae (hedgehogs)</b> Southern African Hedgehog	<i>Atelerix frontalis</i>	NT		P R			X
<b>Family Soricidae (shrews)</b> Swamp Musk Shrew Forest Shrew	<i>Crocidura mariquensis</i> <i>Myosorex varius</i>	NT				X	X
<b>ORDER: LAGOMORPHA</b> <b>Family Leporidae (rabbits and hares)</b> Cape Hare Scrub Hare	<i>Lepus capensis</i> <i>Lepus saxatilis</i>						X X
<b>ORDER: RODENTIA</b> <b>Family Hystricidae (Old World porcupines)</b> Cape Porcupine	<i>Hystrix africaeaustralis</i>						X
<b>ORDER: CARNIVORA</b> <b>Family Canidae (dogs, jackals &amp; allies)</b> Black-backed Jackal Bat-eared Fox Cape Fox	<i>Canis mesomelas</i> <i>Otocyon megalotis</i> <i>Vulpes chama</i>			P R P R		X	X X
<b>Family Mustelidae (otters, badgers &amp; allies)</b> Striped Polecat	<i>Ictonyx striatus</i>						X
<b>Family Herpestidae (mongooses)</b> Yellow Mongoose Slender Mongoose Suricate	<i>Cynictis penicillata</i> <i>Herpestes sanguineus</i> <i>Suricata suricatta</i>					X X X	X X
<b>Family Hyaenidae (hyaenas)</b> Brown Hyaena Aardwolf	<i>Parahyaena brunnea</i> <i>Proteles cristatus</i>	NT		P R	MNC A MNC A		X X
<b>Family Felidae (cats)</b> Serval	<i>Leptailurus serval</i>	NT		P R			X
<b>ORDER: TUBULIDENTATA</b> <b>Family Orycteropodidae (Aardvark)</b> Aardvark	<i>Orycteropus afer</i>			P R	MNC A		X
<b>ORDER: PERRISODACTYLA</b> <b>Family Equidae (horses)</b> Plains (Burchell's) Zebra	<i>Equus quagga burchellii</i>			P R			X
<b>ORDER: CETARTIODACTYLA</b> <b>Family Suidae (pigs)</b>							

Bushpig	<i>Potamochoerus larvatus</i>						X
<b>Family Bovidae (cattle &amp; antilopes)</b>							
Red Hartebeest	<i>Alcelaphus buselaphus caama</i>			PR			X
Springbok	<i>Antidorcas marsupialis</i>						X
Black Wildebeest	<i>Connochaetes gnou</i>			PR	MNC		X
Blesbok	<i>Damaliscus pygargus phillipsi</i>			PRE	A		X
Oribi	<i>Ourebia ourebi ourebi</i>	EN		REN	MNC		X
Grey Rhebok	<i>Pelea capreolus</i>	NT			A		X
Steenbok	<i>Raphicerus campestris</i>				MNC		X
Southern Reedbuck	<i>Redunca arundinum</i>				A		X
Southern Mountain Reedbuck	<i>Redunca fulvorufula fulvorufula</i>	EN			MNC		X
Common Duiker	<i>Sylvicapra grimmia</i>				A	X	X
Eland	<i>Tragelaphus oryx</i>				MNC		X
<b>Family Cervidae (deer)</b>					A		
Persian Fallow Deer	<i>Dama dama</i>						X
<b>TOTAL</b>	<b>33</b>	<b>8</b>	<b>0</b>	<b>11</b>	<b>10</b>	<b>5</b>	<b>30</b>

NT = Near Threatened

VU = Vulnerable

EN = Endangered

E = Endemic to South Africa, Lesotho & Swaziland

Q!DS = Quarter Degree Square

NEMBA ToPS = National Environmental Management: Biodiversity Act: Threatened or Protected Species

PR = Protected

MNCA = Mpumalanga Nature Conservation Act

## APPENDIX 4. LIST OF BIRDS RECORDED FROM THE VICINITY OF THE STUDY AREA (SABAP2)

Common Name	Scientific Name	Red Data	Biome-	Protected -	2610_3000	2605_3000	2610_2955	2605_2955	2629BB	2630AA	
<b>ORDER: ANSERIFORMES</b>											
<b>Family Anatidae (ducks, geese and swans)</b>											
Egyptian Goose	<i>Alopochen aegyptiaca</i>	NT			X	X	X	X			
Red-billed Teal	<i>Anas erythrorhyncha</i>						X				
Cape Shoveler	<i>Anas smithii</i>					X	X				
Yellow-billed Duck	<i>Anas undulata</i>					X	X	X			
Southern Pochard	<i>Netta erythrophthalma</i>					X	X	X			
Maccoa Duck	<i>Oxyura maccoa</i>							X	X	X	
Spur-winged Goose	<i>Plectropterus gambensis</i>					X	X	X	X		
South African Shelduck	<i>Tadorna cana</i>							X			
	<i>Thalassornis leuconotus</i>							X			
White-backed Duck								X			
<b>ORDER: GALLIFORMES</b>											
<b>Family Numididae (guineafowl)</b>											
Helmeted Guineafowl	<i>Numida meleagris</i>				X	X	X	X			
<b>Family Phasianidae (pheasants, fowl and allies)</b>											
Common Quail	<i>Coturnix coturnix</i>				X	X	X				
Natal Spurfowl	<i>Pternistis natalensis</i>						X	X			
Swainson's Spurfowl	<i>Pternistis swainsonii</i>				X	X	X	X			
Grey-winged Francolin	<i>Scleroptila africana</i>					X					
Red-winged Francolin	<i>Scleroptila levaillantii</i>					X	X				
<b>ORDER: PODICIPEDIFORMES</b>											
<b>Family Podicipedidae (grebes)</b>											
Little Grebe	<i>Tachybaptus ruficollis</i>				X	X	X	X			
<b>ORDER: PHOENICOPTERIFORMES</b>											
<b>Family Phoenicopteridae (flamingos)</b>											
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT								X	
Greater Flamingo	<i>Phoenicopterus roseus</i>	NT					X		X		
<b>ORDER: CICONIIFORMES</b>											
<b>Family Ciconiidae (storks)</b>											
White Stork	<i>Ciconia ciconia</i>				X						
<b>ORDER: PELECANIFORMES</b>											
<b>Family Threskiornithidae (ibises and spoonbills)</b>											
Hadedda Ibis	<i>Bostrychia hagedash</i>	VU		VU	X	X	X	X			
Southern Bald Ibis	<i>Geronticus calvus</i>		X		X		X		X		
Glossy Ibis	<i>Plegadis falcinellus</i>					X	X				
	<i>Threskiornis aethiopicus</i>					X	X				
African Sacred Ibis	<i>Platalea alba</i>					X	X				
African Spoonbill						X	X				
<b>Family Ardeidae (herons and bitterns)</b>											
Great Egret	<i>Ardea alba</i>					X	X				
Grey Heron	<i>Ardea cinerea</i>					X	X	X			



Goliath Heron	<i>Ardea goliath</i>				X	X				
Black-headed Heron	<i>Ardea melanocephala</i>				X	X	X	X		
Western Cattle Egret	<i>Bubulcus ibis</i>				X	X	X			
Little Egret	<i>Egretta garzetta</i>					X	X			
Yellow-billed Egret	<i>Egretta intermedia</i>				X	X	X	X		
Little Bittern	<i>Ixobrychus minutus</i>					X				
<b>Family Scopidae (Hamerkop)</b>										
Hamerkop	<i>Scopus umbretta</i>					X				
<b>ORDER: SULIFORMES</b>										
<b>Family Phalacrocoracidae (cormorants and shags)</b>										
Reed Cormorant	<i>Microcarbo africanus</i>				X	X	X	X		
White-breasted Cormorant	<i>Phalacrocorax lucidus</i>				X		X			
<b>ORDER: ACCIPITRIFORMES</b>										
<b>Family Sagittariidae (Secretarybird)</b>										
Secretarybird	<i>Sagittarius serpentarius</i>	V U			X					X
<b>Family Accipitridae (kites, hawks and eagles)</b>										
Common Buzzard	<i>Buteo buteo</i>				X	X	X			
Jackal Buzzard	<i>Buteo rufofuscus</i>						X			
Black-shouldered Kite	<i>Elanus caeruleus</i>			E N	X	X	X	X		
Cape Vulture	<i>Gyps coprotheres</i>	E N		E N						X
African Harrier-Hawk	<i>Polyboroides typus</i>				X					
<b>ORDER: OTIDIFORMES</b>										
<b>Family Otididae (bustards)</b>										
Blue Korhaan	<i>Eupodotis caerulescens</i>	N T*			X					
White-bellied Korhaan	<i>Eupodotis senegalensis</i>	V U U U							X	
Denham's Bustard	<i>Neotis denhami</i>	V U		V U						X
<b>ORDER: GRUIFORMES</b>										
<b>Family Rallidae (rails, crakes and coots)</b>										
Black Crake	<i>Amaurornis flavirostra</i>						X			
Red-knobbed Coot	<i>Fulica cristata</i>				X	X	X	X		
Common Moorhen	<i>Gallinula chloropus</i>				X	X	X			
African Swampphen	<i>Porphyrio madagascariensis</i>						X			
African Rail	<i>Rallus caerulescens</i>				X	X				
<b>Family Gruidae (cranes)</b>										
Grey Crowned Crane	<i>Balearica regulorum</i>	E N N		E N P R C R						X
Blue Crane	<i>Grus paradiseus</i>	N T C R							X	X
Wattled Crane	<i>Grus carunculatus</i>								X	X
<b>ORDER: CHARADRIIFORMES</b>										
<b>Family Burhinidae (thick-knees)</b>										
Spotted Thick-knee	<i>Burhinus capensis</i>						X			
<b>Family Recurvirostridae (stilts and avocets)</b>										
Black-winged Stilt	<i>Himantopus himantopus</i>				X		X			
Pied Avocet	<i>Recurvirostra avocetta</i>				X		X			
<b>Family Charadriidae (plovers)</b>										
Kittlitz's Plover	<i>Charadrius pecuarius</i>				X					
Three-banded Plover	<i>Charadrius tricollaris</i>				X		X			
Blacksmith Lapwing	<i>Vanellus armatus</i>				X	X	X	X		



Red-capped Lark	<i>Calandrella cinerea</i>				X	X	X		
Spike-heeled Lark	<i>Chersomanes</i>				X				
Rufous-naped Lark	<i>Albifasciata</i>								
	<i>Mirafra africana</i>							X	
<b>Family Pycnonotidae (bulbuls)</b>									
Dark-capped Bulbul	<i>Pycnonotus tricolor</i>			X	X	X			
<b>Family Hirundinidae (swallows and martins)</b>									
Greater Striped Swallow	<i>Cecropis cucullata</i>			X	X	X			
White-throated Swallow	<i>Hirundo albigularis</i>			X	X				
Barn Swallow	<i>Hirundo rustica</i>			X	X	X	X		
	<i>Petrochelidon</i>								
	<i>spilodera</i>					X			
South African Cliff Swallow	<i>Ptyonoprogne fuligula</i>					X			
Rock Martin	<i>Riparia cincta</i>					X	X		
Banded Martin	<i>Riparia paludicola</i>					X	X		
Brown-throated Martin									
<b>Family Acrocephalidae (reed warblers and allies)</b>									
African Reed Warbler	<i>Acrocephalus baeticatus</i>					X			
	<i>Acrocephalus gracilirostris</i>					X			
Lesser Swamp Warbler									
<b>Family Locustellidae (grassbirds and allies)</b>									
Little Rush Warbler	<i>Bradypterus baboecala</i>					X			
<b>Family Cisticolidae (cisticolas and allies)</b>									
Wing-snapping Cisticola	<i>Cisticola ayresii</i>			X	X	X			
	<i>Cisticola</i>								
Pale-crowned Cisticola	<i>cinnamomeus</i>			X					
Neddicky	<i>Cisticola fulvicapilla</i>						X		
Zitting Cisticola	<i>Cisticola juncidis</i>			X	X	X			
Cloud Cisticola	<i>Cisticola textrix</i>			X	X				
Levaillant's Cisticola	<i>Cisticola tinniens</i>			X	X	X	X		
Black-chested Prinia	<i>Prinia flavicans</i>					X			
Tawny-flanked Prinia	<i>Prinia subflava</i>			X					
<b>Family Sturnidae (starlings)</b>									
Common Myna	<i>Acridotheres tristis</i>						X	X	
Pied Starling	<i>Lamprotornis bicolor</i>			X	X	X	X		
<b>Family Muscipidae (chats and Old World flycatchers)</b>									
Cape Robin-Chat	<i>Cossypha caffra</i>			X	X				
	<i>Myrmecocichla formicivora</i>			X	X	X	X		
Ant-eating Chat	<i>Myrmecocichla monticola</i>					X	X		
Mountain Wheatear	<i>Oenanthe pileata</i>					X	X		
Capped Wheatear	<i>Saxicola torquatus</i>			X	X	X	X		
African Stonechat									
<b>Family Passeridae (Old World sparrows)</b>									
Southern Grey-headed Sparrow	<i>Passer diffusus</i>						X	X	
House Sparrow	<i>Passer domesticus</i>						X	X	X
Cape Sparrow	<i>Passer melanurus</i>			X	X	X	X		
<b>Family Ploceidae (weavers and widowbirds)</b>									
Yellow-crowned Bishop	<i>Euplectes afer</i>			X	X	X	X		
Red-collared Widowbird	<i>Euplectes ardens</i>							X	
Fan-tailed Widowbird	<i>Euplectes axillaris</i>			X	X	X	X		
Southern Red Bishop	<i>Euplectes orix</i>			X	X	X	X		
Long-tailed Widowbird	<i>Euplectes progne</i>			X	X	X	X		
Cape Weaver	<i>Ploceus capensis</i>					X			
Southern Masked Weaver	<i>Ploceus velatus</i>			X	X	X	X		

Red-billed Quelea <b>Family Estrildidae (waxbills, munias and allies)</b>	<i>Quelea quelea</i>					X	X		X			
Red-headed Finch	<i>Amadina erythrocephala</i>									X		
Common Waxbill	<i>Estrilda astrild</i>					X	X	X	X			
	<i>Ortygospiza fuscocrissa</i>					X	X	X				
Quail-Finch <b>Family Viduidae (indigobirds and whydahs)</b>												
Pin-tailed Whydah	<i>Vidua macroura</i>					X	X					
<b>Family Motacillidae (wagtails and pipits)</b>												
African Pipit	<i>Anthus cinnamomeus</i>					X	X	X				
Cape Longclaw	<i>Macronyx capensis</i>					X	X	X	X			
Cape Wagtail	<i>Motacilla capensis</i>					X	X	X	X			
<b>Family Fringillidae (finches and canaries)</b>												
Black-throated Canary	<i>Crithagra atrogularis</i>					X	X	X	X			
Cape Canary	<i>Serinus canicollis</i>					X	X	X	X			
<b>Family Emberizidae (buntings and New World sparrows)</b>												
Golden-breasted Bunting	<i>Emberiza flaviventris</i>									X		
<b>TOTAL</b>	<b>134</b>	13	1	6	8	7	9	8	5	1	5	1

NT = Near Threatened  
 VU = Vulnerable  
 EN = Endangered  
 CR = Critically Endangered  
 NEMBA ToPS = National Environmental Management: Biodiversity Act: Threatened or Protected Species  
 PR = Protected

## APPENDIX 5. LIST OF HERPETOFAUNA OCCURRING IN THE VICINITY OF THE STUDY AREA

Common Name	Scientific Name	Red Data	QDS	
			2629BB	2630AA
<b>REPTILES</b>				
<b>Family Cordylidae (girdled lizards)</b>				
Common Girdled Lizard	<i>Cordylus vittifer</i>			X
Common Crag Lizard	<i>Pseudocordylus melanotus melanotus</i>		X	X
<b>Family Gerrhosauridae (plated lizards)</b>				
Yellow-throated Plated Lizard	<i>Gerrhosaurus flavigularis</i>			X
<b>Family Scincidae (skinks)</b>				
Thin-tailed Legless Skink	<i>Acontias gracilicauda</i>			X
Wahlberg's Snake-eyed Skink	<i>Panaspis wahlbergii</i>			X
Cape Skink	<i>Trachylepis capensis</i>		X	
Speckled Rock Skink	<i>Trachylepis punctatissima</i>		X	X
Variable Skink	<i>Trachylepis varia</i>		X	X
<b>Family Chamaeleonidae (chameleons)</b>				
Common Flap-neck Chameleon	<i>Chamaeleo dilepis dilepis</i>			X
<b>Family Agamidae (agamas)</b>				
Distant's Ground Agama	<i>Agama aculeata distanti</i>			X
Southern Rock Agama	<i>Agama atra</i>		X	X
<b>Family Typhlopidae (blind snakes)</b>				
Bibron's Blind Snake	<i>Afrotrophlops bibronii</i>			X
Delalande's Beaked Blind Snake	<i>Rhinotyphlops lalandei</i>			X
<b>Family Leptotyphlopidae (thread snakes)</b>				
Eastern Thread Snake	<i>Leptotyphlops scutifrons conjunctus</i>		X	
<b>Family Viperidae (vipers)</b>				
Puff Adder	<i>Bitis arietans arietans</i>			X
Snouted Night Adder	<i>Causus defilippii</i>			X
Rhombic Night Adder	<i>Causus rhombeatus</i>		X	
<b>Family Lamprophiidae (African snakes)</b>				
Black-headed Centipede-eater	<i>Aparallactus capensis</i>		X	X
Spotted Harlequin Snake	<i>Homoroselaps lacteus</i>		X	
Dusky-bellied Water Snake	<i>Lycodonomorphus laevisissimus</i>			X
Brown Water Snake	<i>Lycodonomorphus rufulus</i>			X
Cross-marked Grass Snake	<i>Psammophis crucifer</i>			X
Western Yellow-bellied Sand Snake	<i>Psammophis subtaeniatus</i>		X	
Spotted Grass Snake	<i>Psammophylax rhombeatus rhombeatus</i>		X	X
Mole Snake	<i>Pseudaspis cana</i>		X	X
<b>Family Elapidae (cobras, mambas &amp; allies)</b>				
Sundevall's Garter Snake	<i>Elapsoidea sundevallii sundevallii</i>			X
Rinkhals	<i>Hemachatus haemachatus</i>		X	X
<b>Family Colubridae (colubrids)</b>				
Red-lipped Snake	<i>Crotaphopeltis hotamboeia</i>		X	X
Rhombic Egg-eater	<i>Dasypeltis scabra</i>		X	X
Spotted Bush Snake	<i>Philothamnus semivariegatus</i>			X
<b>TOTAL</b>	<b>30</b>	<b>1</b>	<b>15</b>	<b>25</b>
<b>AMPHIBIANS</b>				
<b>Family Bufonidae (toads)</b>				
Raucous Toad	<i>Sclerophrys capensis</i>		X	X
Guttural Toad	<i>Sclerophrys gutturalis</i>		X	X

<b>Family Hyperoliidae (sedge and bush frogs)</b>				
Bubbling Kassina	<i>Kassina senegalensis</i>		X	X
Rattling Frog	<i>Semnodactylus wealii</i>		X	X
<b>Family Pipidae (clawed frogs)</b>				
Common Platanna	<i>Xenopus laevis</i>			X
<b>Family Ptychadenidae (grass frogs)</b>				
Striped Grass Frog	<i>Ptychadena porosissima</i>			X
<b>Family Pyxicephalidae (sand frogs)</b>				
Delalande's River Frog	<i>Amietia delalandii</i>		X	X
Cape River Frog	<i>Amietia fuscigula</i>		X	X
Common Caco	<i>Cacosternum boettgeri</i>		X	X
Striped Stream Frog	<i>Strongylopus fasciatus</i>		X	X
Clicking Stream Frog	<i>Strongylopus grayii</i>		X	X
Tremelo Sand Frog	<i>Tomopterna cryptotis</i>		X	X
Natal Sand Frog	<i>Tomopterna natalensis</i>		X	
Tandy's Sand Frog	<i>Tomopterna tandyi</i>		X	
<b>TOTAL</b>	<b>14</b>	<b>0</b>	<b>12</b>	<b>12</b>

NT\* = Near Threatened (Provincial Assessment)

**APPENDIX 6. POTENTIALLY OCCURRING FAUNA SPECIES OF CONSERVATION CONCERN**

Species	Scientific Name	Red Data	Habitat	SABAP2 Reporting Rate for 2629BB	SABAP2 Reporting Rate for 2630AA	Likelihood	Reason
<b>Mammals</b>							
Highveld Golden Mole	<i>Amblysomus septentrionalis</i>	NT	Highveld grassland			Moderate	Suitable habitat present
African Clawless Otter	<i>Aonyx capensis</i>	NT	Rivers and streams			Moderate	Suitable habitat present
Southern African Hedgehog	<i>Atelerix frontalis</i>	NT	Savanna, grassland			High	Recorded on an adjacent farm in 2015 (pers.obs.)
Swamp Musk Shrew	<i>Crocidura mariquensis</i>	NT	Wetlands in savanna biome			Moderate	Suitable habitat present
Spotted-necked Otter	<i>Hydrictis maculicollis</i>	VU	Rivers and streams			Moderate	Suitable habitat present
Serval	<i>Leptailurus serval</i>	NT	Grassland, wetlands			Moderate	Suitable habitat present
Oribi	<i>Ourebia ourebi ourebi</i>	EN	Grassland			Low	Although suitable habitat is present, there are no nearby records
Brown Hyaena	<i>Parahyaena brunnea</i>	NT	Wide variety of habitats but prefers more arid regions			Moderate	Suitable habitat present
Grey Rhebok	<i>Pelea capreolus</i>	NT	High-altitude grassland			Low	Requires large tracts of natural grassland
Southern Mountain Reedbuck	<i>Redunca fulvorufula fulvorufula</i>	EN	High-altitude grassland			Low	Requires large tracts of natural grassland
Subtotal	10	10					
<b>Birds</b>							
Grey Crowned Crane	<i>Balearica regulorum</i>	EN	Wetland and grassland	-	5.3%	Moderate	Suitable habitat present
Chestnut-banded Plover	<i>Charadrius pallidus</i>	NT	Saline pans, shorelines	-	-	Low	Very rare in the general area, one record from near Chrissiesmeer
Pallid Harrier	<i>Circus macrourus</i>	NT	Dry grasslands	-	-	Moderate	Suitable habitat present
Blue Korhaan	<i>Eupodotis caerulea</i>	NT*	Highveld grassland	8.0%	7.9%	High	Suitable habitat present and recorded from adjacent properties (pers.obs.)

White-bellied Korhaan	<i>Eupodotis senegalensis</i>	VU	Open woodland and grassland	4.0%	-	Low	Although suitable habitat is present, there are no nearby records
Lanner Falcon	<i>Falco biarmicus</i>	VU	Wide variety of habitats	-	5.3%	Moderate	Suitable foraging habitat present only
Southern Bald Ibis	<i>Geronticus calvus</i>	VU	Montane grassland, ploughed lands	12.0%	18.4%	Moderate	Suitable foraging habitat present only
Black-winged Pratincole	<i>Glareola nordmanni</i>	NT	Highveld grassland, wetland	4.0%	-	High	Suitable habitat present and recorded from adjacent properties (pers.obs.)
Wattled Crane	<i>Grus carunculatus</i>	CR	Undisturbed wetland and grassland	4.0%	-	Moderate	Suitable foraging habitat present only
Blue Crane	<i>Grus paradiseus</i>	NT	Undisturbed grassland in Mpumalanga	4.0%	-	Moderate	Suitable habitat present
Cape Vulture	<i>Gyps coprotheres</i>	EN	Wide variety of habitats, cliff nesting	-	-	Low	Although suitable habitat is present, there are no recent records
Denham's Bustard	<i>Neotis denhami</i>	VU	Fairly undisturbed grassland	4.0%	2.6%	Low	Suitable habitat present, but requires large tracts of natural grassland
Maccoa Duck	<i>Oxyura maccoa</i>	NT	Pans, dams, wetlands	20.0%	5.3%	Moderate	Suitable habitat present
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT	Saline pans	-	-	Moderate	Suitable habitat present
Greater Flamingo	<i>Phoenicopterus roseus</i>	NT	Saline pans	20.0%	-	Moderate	Suitable habitat present
Secretarybird	<i>Sagittarius serpentarius</i>	VU	Open woodland, grassland	-	13.1%	Moderate	Suitable habitat present
Botha's Lark	<i>Spizocorys fringillaris</i>	EN	Short, montane grassland	-	-	Low	Formerly recorded in 2629BB (SABAP1) but no recent records. May be locally extinct
African Grass Owl	<i>Tyto capensis</i>	VU	Grassland	-	-	Moderate	Suitable habitat present
Subtotal	18	18					
<b>Reptiles</b>							
Coppery Grass Lizard	<i>Chamaesaura aenea</i>	NT	Highveld and Escarpement grasslands			Low	Rare in the general area, poorly known species
Large-scaled Grass Lizard	<i>Chamaesaura macrolepis</i>	NT	Grassland and open woodland			Low	Rare in the general area, poorly known species



Striped Harlequin Snake	<i>Homoroselaps dorsalis</i>	NT	Mostly high altitude Escaprment grasslands in Mpumalanga			Low	No suitable habitat present
Spotted Harlequin Snake	<i>Homoroselaps lacteus</i>	NT#	Wide variety of habitats			Low	Rare in the general area, poorly known species
Subtotal	4	4					
<b>Frogs</b>							
Giant Bull Frog	<i>Pyxicephalus adspersus</i>	NT	Pans in arid savanna and grassland			Low	Very rare in Mpumalanga, no recent records near the study area
Subtotal	1	1					
<b>TOTAL</b>	<b>33</b>	<b>33</b>					

NT = Near-threatened
VU = Vulnerable
EN = Endangered
CR = Critically Endangered
E = Endemic to South Africa, Lesotho and Swaziland
MNCA = Mpumalanga Nature Conservation Act
NEMBA = National Environmental Management: Biodiversity Act
# = Provincial assessment
* = IUCN assessment

## APPENDIX 7. CV OF REPORT AUTHOR

**Name** : **Warren Lee McClelland**  
**Profession** : Terrestrial Ecologist  
**Date of Birth** : 7 Sep 1972  
**Name of Firm** : ECOREX Consulting Ecologists cc  
**Position in Firm** : Sole Member  
**Years with firm** : 11  
**Nationality** : South African



### Qualifications :

- N.Dip. [Nature Conservation] Cape Peninsula University of Technology 1993

### Membership in Professional Societies:

- South African Association of Botanists
- International Association for Impact Assessment (SA)

### Languages :

	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
English (home):	Excellent	Excellent	Excellent
Afrikaans:	Good	Good	Good
isiZulu:	Good	Fair	Fair
siSwati:	Fair	Poor	Poor

**Countries of Work Experience** : Angola, Botswana, Democratic Republic of the Congo, Kenya, Lesotho, Liberia, Malawi, Mali, Mozambique, Namibia, Republic of Guinea, Sierra Leone, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe.

## OVERVIEW OF EXPERIENCE

- 15 years experience in conducting baseline surveys, data analysis and report writing in various biomes in southern and tropical Africa, particularly savannah, forest and grassland biomes.
- 5 years experience game reserve management (KwaZulu-Natal, Mpumalanga)
- **Co-author of acclaimed Field Guide to Trees and Woody Shrubs of Mpumalanga & Kruger National Park, Jacana Publishers, 2002.**
- Specialist knowledge of identification of plants, mammals, birds, reptiles and frogs.
- Experience in reporting according to IFC Performance Standards for numerous international projects in Sierra Leone, Angola, Democratic Republic of the Congo, Republic of Guinea, Tanzania, Malawi, Mali, Mozambique and Zambia.
- Accredited with the discovery of a number of new plant species, most notably *Gladiolus diluvialis* Goldblatt & Manning (Fish River Canyon, Namibia), *Streptocarpus sekhukhuniensis* ms (Stoffberg, Mpumalanga – manuscript currently being edited) and *Barleria lebomboensis* Darbyshire, McClelland & Froneman (Lebombo Mts, Swaziland).
- **2014 Recipient of the Marloth Medal** from the Botanical Society of South Africa for co-authoring the Kruger tree field guide.

### Employment Record:

2005 - present	ECOREX Consulting Ecologists CC	Ecologist; Sole Member
2001 - 2005	Lawson's Birding Tours	Specialist Guide
2000 - 2001	Escarpment Ecological Consultants cc	Founder Director
1996 – 2000	Crystal Springs Game Reserve	Reserve Manager
1995	Mutemwa Lodge, western Zambia	Lodge manager, guide
1993 - 1994	Natal Parks Board	Cadet field ranger

**SELECTED RECENT PROJECTS & EXPERIENCE**

<b>West Africa</b>			
<b>Mali</b>	<b>2014</b>	Biodiversity Baseline Study and Impact Assessment for Kalana Gold Mine, Yanfoliia	Epoch Resources – Fanie Coetzee (fanie@epochresources.co.za)
	<b>2013</b>	Biodiversity Baseline Study and Impact Assessment for Fekola Gold Mine, Fedougou	Epoch Resources – Fanie Coetzee (fanie@epochresources.co.za)
<b>Republic of Guinea</b>	<b>2012</b>	Review of Specialist Studies conducted for an EIA for an aluminium mine near Bel-Air, in Bofa Prefecture.	Epoch Resources – Fanie Coetzee (fanie@epochresources.co.za)
<b>Sierra Leone</b>	<b>2011</b>	Biodiversity Baseline Study and Impact Assessment for Marampa Iron Ore Mine, Lunsar	SRK (U.K.) - Nicola Rump (nrump@srk.co.uk)
<b>East Africa</b>			
<b>Tanzania</b>	<b>2011</b>	Biodiversity Baseline Study and Impact Assessment for Mkuju River Uranium Project, Selous Game Reserve, Songea	Epoch Resources – Fanie Coetzee (fanie@epochresources.co.za)
<b>Southern and South-central Africa</b>			
<b>Angola</b>	<b>2013</b>	Biodiversity Management Plan for the raising of the Cambambe Dam wall, Kwanza River, Dondo	ERM – Jessica Hughes (jessica.hughes@erm.com)
<b>Democratic Republic of the Congo</b>	<b>2014</b>	Biodiversity Baseline Study and Impact Assessment for Pumpi Copper Mine, Kolwezi	Epoch Resources – Fanie Coetzee (fanie@epochresources.co.za)
	<b>2013</b>	Biodiversity Assessment of selected wetland habitats, Kamoa Copper Mine, Kolwezi	Wetland Consulting Services – Gary Marneweck (GaryM@wetcs.co.za)
	<b>2009-2011</b>	Biodiversity Baseline Study and Impact Assessment for Kinsevere Copper Mine, Lubumbashi	Knight Piesold - Amelia Briel (abriel@knightpiesold.com)
	<b>2008</b>	Biodiversity Baseline Study for Ulindi Hydropower Scheme, Itombwe Mts, Kivu South	Knight Piesold - Amelia Briel (abriel@knightpiesold.com)
<b>Malawi</b>	<b>2015</b>	Terrestrial Ecology Survey of sugar mill site, Ethco, Dwangwa	ERM - Rachel Conti (Rachel.Conti@erm.com)
	<b>2010</b>	Terrestrial Ecology Survey of Kanyika Uranium Mine, Kasungu	Synergistics - Bronwyn Williams (bronwyn@synergistics.co.za)
<b>Mozambique</b>	<b>2016</b>	Biodiversity Baseline Study and Impact Assessment for an onshore gas pipeline, Inhassoro, Inhambane province	ERM – Jessica Hughes (jessica.hughes@erm.com)
	<b>2015</b>	Critical Habitat Assessment for coastal dry forest in Palma District, Cabo Delgado province	Enviro-Insight - Luke Verburt (luke@enviro-insight.co.za)
	<b>2015</b>	Biodiversity Baseline Study for a Regional ESIA of Seismic Exploration blocks, SASOL, Inhassoro	Golder - Warren Aken (waken@golder.co.za)
	<b>2014</b>	Biodiversity Baseline Study and Impact Assessment for a coastal road between Pemba and Palma, Cabo Delgado province	ERM – Jessica Hughes (jessica.hughes@erm.com)
	<b>2013</b>	Biodiversity Monitoring Plan for Benga Coal Mine, Moatize	Rio Tinto - Isaac Ndlovu (isaac.ndlovu@riotinto.com)
	<b>2012</b>	Biodiversity Baseline Study and Action Plan for the Muanza Quarry, Gorongosa NP, Sofala province	Nepid Consultants – Dr Rob Palmer (rob@nepid.co.za)
	<b>2011</b>	Terrestrial Ecology component of the Biodiversity Study for the Four Dams Project (Corumana Dam, Gorongosa Dam, Metuchira Weir, Ressano Weir), Maputo and Sofala provinces	Austral-Cowi - Jacob Ulrich (jacob.ulrich@australcowi.co.mz)
<b>Namibia</b>	<b>2009</b>	Biodiversity Baseline Study and Impact Assessment for Neckartal Dam, Keetmanshoop	Knight Piesold - Amelia Briel (abriel@knightpiesold.com)
<b>South Africa</b>	<b>2013</b>	Faunal Baseline Study and Impact Assessment for Riemvasmaak Hydro-electric Scheme, Augrabies Falls NP	Aurecon - Nelis Bezuidenhout (Nelis.Bezuidenhout@aurecongroup.com)
	<b>2010</b>	Biodiversity Baseline Study and Impact Assessment for Hoogland Chrome Mine, Steenkampsberg Mts, Mpumalanga	Metago Environmental Engineers - Hylton Allison (hallison@slrconsulting.com)
	<b>2010</b>	Assessment of the status of <i>Pelargonium sidosides</i> and harvesting potential in Lesotho and South Africa	South African National Biodiversity Institute - Domitilla Raimondo (Raimondo@sanbi.org)
<b>Swaziland</b>	<b>2014</b>	Biodiversity Baseline Study and Impact Assessment for Ethemba Dam, Hlatikulu	Knight Piesold - Neal Neervoort (nneervoort@knightpiesold.com)
		Biodiversity Value Assessment for the Mhlumeni Community Conservation land, Siteki	Rod de Vletter (devletter@gmail.com)
<b>Zambia</b>	<b>2015</b>	Botanical survey for ESIA for Ngonye Falls Hydropower Project, Zambezi River, Senanga	Ecotone - Michiel Jonker (michiel@ecotone-sa.co.za)
	<b>2013</b>	Biodiversity Baseline Study and Impact Assessment for Mulungushi Hydropower Project, Kabwe	ERM – Zoe Daniels (Zoe.Daniel@erm.com)
	<b>2008</b>	Biodiversity Baseline Study and Impact Assessment for Lumwana Copper Mine, Solwezi	Knight Piesold - Amelia Briel (abriel@knightpiesold.com)
<b>Zimbabwe</b>	<b>2011</b>	Biodiversity Baseline Study and Impact Assessment for Bokai Platinum Mine, Gweru	Epoch Resources - Fanie Coetzee (fanie.coetzee@epochresources.co.za)

## PUBLICATIONS

### Books

Schmidt, E., Lötter, M.C. & McClelland, W.L. 2002. *Field Guide to Trees and Woody Shrubs of Mpumalanga & Kruger National Park*. Jacana Publishers, Houghton.

### Peer-reviewed Journals

Darbyshire, I., McClelland, W.L. & Froneman, W. 2017. *Barleria lebomboensis* (Acanthaceae), an endangered new species from the Lebombo Mountains of Swaziland. *Phytotaxa* 323(2):173-181.

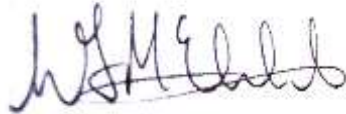
Cheek, M., Lawrence, P. & McClelland, W.L. 2018. *Cola dorrii* sp. nov. (Sterculiaceae) a threatened Maputaland Forest endemic of South Africa. *Kew Bulletin* 73(2).

McClelland, W.L. & Massingue, A. 2018. New populations and a conservation assessment of *Ecbolium hastatum* Vollesen. *Bothalia* 48(1).

## DECLARATION

I declare that the particulars above are accurate and true to the best of my knowledge and belief.

SIGNATURE:



DATE: 16 November 2018

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## APPENDIX 8: HERITAGE SCOPING STUDY REPORT