ALLEPAD SOLAR

PLANT RESCUE & PROTECTION PLAN

PRODUCED FOR SAVANNAH ENVIRONMENTAL;

ON BEHALF OF ILENERGY DEVELOPMENT (PTY) LTD

BY

3Foxes Biodiversity Solutions

Simon.Todd@3foxes.co.za

February 2019

MANAGEMENT PLAN OBJECTIVES

The purpose of the Allepad Solar plant rescue and protection plan is to implement avoidance and mitigation measures to reduce the impact of the development of the Allepad Solar Facility on listed and protected plant species and their habitats during construction and operation. This subplan is a requirement of the EIA process and is also required in order to ensure compliance with national and provincial legislation for vegetation clearing and any required destruction or translocation of provincially and nationally protected species within the footprint of the Solar Facility.

The Plan first provides some legislative background on the regulations relevant to listed and protected species, under the Northern Cape Conservation Act (2009) and trees protected under the DAFF National List of Protected Tree Species. This is followed by an identification of protected species present at the Allepad Solar site and actions that should be implemented to minimise impact on these species and comply with legislative requirements.

IDENTIFICATION OF SPECIES OF CONSERVATION CONCERN

Plant species are protected at the national level as well as the provincial level and different permits may be required for different species depending on their protection level. At the national level, protected trees are listed by DAFF under the National List of Protected Trees, which is updated on a regular basis. Any clearing of nationally protected trees requires a permit from DAFF. At the provincial level, all species red-listed under the Red List of South African plants (http://redlist.sanbi.org/) as well as species listed under the Northern Cape Nature Conservation Act (No. 9 of 2009) are protected and require provincial permits. The Northern Cape Conservation Act lists a variety of species as protected but also several whole families and genera as protected. Of particular relevance to the current study are the following, which are extracted from the legislation and are not intended to provide a comprehensive list of all protected species, only those which are likely to be encountered in the area. The reader is referred to the schedules of the Act for a full list of species listed under the act.

Under the Northern Cape Nature Conservation Act (No. 9 of 2009), the following are highlighted as potentially being present at the site:

Schedule 1: Specially Protected Flora

- Family GERANIACEAE - *Pelargonium* spp. all species

Schedule 2 Protected Flora

- *Amaryllidaceae* – All species
- *Apiaceae* – All Species
- *Apocynaceae* – All Species
- *Asphodelaceae* – All species except *Aloe ferox*
- *Iridaceae* – All species
- *Mesembryanthemaceae* – All species
- *Androcymbium* spp. - All species
- *Crassulaceae* - All species except those listed in Schedule 1
- *Euphorbiaceae* - *Euphorbia* spp. All species
- *Oxalidaceae* - *Oxalis* spp - All species
- *Portulacaceae* - *Anacampseros* spp. - All species

A full list of plant species known from the broad area around Allepad Solar site is provided in Annex 1. This includes their protection status according to the Northern Cape Conservation Act and whether they are listed under the national list of protected trees. It is important to note that authorisation of the project by DEA does not free the developer from complying with the provincial legislation and permitting requirements with regards to protected species.

MITIGATION & AVOIDANCE OPTIONS

The primary mitigation and avoidance measure that must be implemented at the preconstruction phase is the Preconstruction Walk-Through of the development footprint. This defines which and how many individuals of listed and protected species are found within the development footprint. This information is required for the DAFF and Northern Cape Nature Conservation permits which must be obtained before construction can commence.

Where listed plant species fall within the development footprint and avoidance is not possible, then it may be possible to translocate the affected individuals outside of the development footprint. However, not all species are suitable for translocation as only certain types of plants are able to survive the disturbance. Suitable candidates for translocation include most geophytes and succulents. Although there are exceptions, the majority of woody species do not survive translocation well and it is generally not recommended to try and attempt to translocate such species. Recommendations in this regard would be made following the walk-through of the facility footprint before construction, where all listed and protected species within the development footprint will be identified and located.

RESCUE AND PROTECTION PLAN

Preconstruction

- Identification of all listed species which may occur within the site, based on the SANBI POSA database as well as the specialist EIA studies for the site and any other relevant literature.

Before construction commences at the site, the following actions should be taken:

- A walk-through of the final development footprint by a suitably qualified botanist/ecologist to locate and identify all listed and protected species which fall within the development footprint. This should happen during the flowering season at the site which depending on rainfall is likely to be during spring to early summer (August-October).
- A walk-through report following the walk-through which identifies areas where minor deviations to roads and other infrastructure can be made to avoid sensitive areas and important populations of listed species. The report should also contain a full list of localities where listed species occur within the development footprint and the number of affected individuals in each instance, so that this information can be used to comply with the permit conditions required by the authorization as well as provincial requirements.
- A permit to clear the site and relocated species of concern is required from Northern Cape DENC before construction commences. A tree clearing permit is also required from DAFF to clear protected trees from the site.
- Once the permits have been issued, there should be a search and rescue operation of all listed species which have been identified in the walk-through report as being suitable for search and rescue within the development footprint that cannot be avoided. Affected individuals should be translocated to a similar habitat outside of the development footprint and marked for monitoring purposes. Those species suitable for search as rescue should be identified in the walk-through report. It is important to note that a permit is required to translocate or destroy any listed and protected species even if they do not leave the property.

Construction

- Vegetation clearing should take place in a phased manner, so that large cleared areas are not left standing with no activity for long periods of time and pose a wind and water

erosion risk. This will require coordination between the contractor and ECO, to ensure that the ECO is able to monitor activities appropriately.

- All cleared material should be handled according to the Revegetation and Rehabilitation Plan and used to encourage the recovery of disturbed areas.
- ECO to monitor vegetation clearing at the site. Any deviations from the plans that may be required should first be checked for listed species by the ECO and any listed species present which are able to survive translocation should be translocated to a safe site.
- All areas to be cleared should be demarcated with construction tape, survey markers or similar. All construction vehicles should work only within the designated area.
- Plants suitable for translocation or for use in rehabilitation of already cleared areas should be identified and relocated before general clearing takes place.
- Any listed species observed within the development footprint that were missed during the preconstruction plant sweeps should be translocated to a safe site before clearing commences.
- Many listed species are also sought after for traditional medicine or by collectors and so the ECO should ensure that all staff attend environmental induction training in which the legal and conservation aspects of harvesting plants from the wild are discussed.
- The ECO should monitor construction activities in sensitive habitats such as in dune areas carefully to ensure that impacts to these areas are minimised.

Operation

- Access to the site should be strictly controlled and all personnel entering or leaving the site should be required to sign and out with the security officers.
- The collecting of plants of their parts should be strictly forbidden and signs stating so should be placed at the entrance gates to the site.

IDENTIFICATION OF LISTED SPECIES

In this section, the listed species observed to occur within the broader site are identified and listed below. Those present and the number affected within the development footprint would be clarified following the preconstruction walk-through. The list is not considered exhaustive and additional species may be observed to be present during the preconstruction walk-through, which should be conducted at a favourable time of year, such that there is a maximal chance of picking up geophytes and other species which may not be easily observed at other times of the year.

Family	Species	IUCN Status	NC Status	DAFF Status
AMARYLLIDACEAE	*Boophone disticha*	LC	Schedule 2	
APOCYNACEAE	*Hoodia gordonii*	LC	Schedule 2	
CELASTRACEAE	*Gymnosporia buxifolia*	LC	Schedule 2	
FABACEAE	*Vachellia erioloba*	LC		Protected
FABACEAE	*Vachellia haematoxylon*	LC		Protected
OXALIDACEAE	*Oxalis lawsonii*	LC	Schedule 2	
CAPPARACEAE	*Boscia albitrunca*	LC		Protected
CAPPARACEAE	*Boscia foetida subsp. foetida*	LC	Schedule 2	

MONITORING & REPORTING REQUIREMENTS

The following reporting and monitoring requirements are recommended as part of the plant rescue and protection plan:

- Preconstruction walk-through report detailing the location and distribution of all listed and protected species. This should include a walk-through of all infrastructure including all new access roads, cables, power line routes, buildings and substations. The report should include recommendations of route adjustments where necessary, as well as provide a full accounting of how many individuals of each listed species will be impacted by the development.
- Permit application to NC-DENC. This requires the walk-through report as well as the identification and quantification of all listed and protected species within the development footprint. The permit is required before and search and rescue can take place. Where large numbers of listed species are affected a site inspection and additional requirements may be imposed by NC-DENC as part of the permit conditions. All documentation associated with this process needs to be retained and the final clearing permit should be kept at the site.
- Active daily monitoring of clearing during construction by the ECO to ensure that listed species and sensitive habitats are avoided. All incidents should be recorded along with the remedial measures implemented.
- Post construction monitoring of plants translocated during search and rescue to evaluate the success of the intervention. Monitoring for a year post-transplant should be sufficient to gauge success.

ANNEX 1. LIST OF PLANT SPECIES

List of plant species known from the broad area around the Allepad Solar site based on records from the SANBI POSA database.

Family	Species
ACANTHACEAE	*Acanthopsis disperma*
ACANTHACEAE	*Acanthopsis hoffmannseggiana*
ACANTHACEAE	*Barleria lichtensteiniana*
ACANTHACEAE	*Barleria rigida*
ACANTHACEAE	*Blepharis mitrata*
ACANTHACEAE	*Monechma genistifolium subsp. australe*
ACANTHACEAE	*Monechma genistifolium subsp. genistifolium*
ACANTHACEAE	*Monechma incanum*
ACANTHACEAE	*Monechma spartioides*
AIZOACEAE	*Aizoon asbestinum*
AIZOACEAE	*Aizoon schellenbergii*
AIZOACEAE	*Galenia africana*
AIZOACEAE	*Galenia crystallina*
AIZOACEAE	*Galenia sarcophylla*
AIZOACEAE	*Plinthus cryptocarpus*
AIZOACEAE	*Plinthus karooicus*
AIZOACEAE	*Plinthus sericeus*
AIZOACEAE	*Tetragonia arbuscula*
AIZOACEAE	*Tetragonia reduplicata*
AIZOACEAE	*Trianthema parvifolia var. parvifolia*
AMARANTHACEAE	*Amaranthus praetermissus*
AMARANTHACEAE	*Amaranthus thunbergii*
AMARANTHACEAE	*Leucosphaera bainesii*
AMARANTHACEAE	*Sericocoma avolans*
AMARANTHACEAE	*Sericocoma pungens*
AMARYLLIDACEAE	*Boophone disticha*
AMARYLLIDACEAE	*Crinum bulbispermum*
AMARYLLIDACEAE	*Haemanthus humilis subsp. humilis*
AMARYLLIDACEAE	*Nerine laticoma*
ANACARDIACEAE	*Searsia lancea*
ANACARDIACEAE	*Searsia pendulina*
APOCYNACEAE	*Adenium oleifolium*
APOCYNACEAE	*Cynanchum orangeanum*
APOCYNACEAE	*Gomphocarpus fruticosus subsp. fruticosus*
APOCYNACEAE	*Hoodia gordonii*
APOCYNACEAE	*Larryleachia marlothii*
APOCYNACEAE	*Sarcostemma viminale subsp. viminale*
APOCYNACEAE	*Tridentea marientalensis subsp. marientalensis*
ASPARAGACEAE	*Asparagus denudatus*

ASPARAGACEAE	*Asparagus pearsonii*
ASPHODELACEAE	*Aloe claviflora*
ASPHODELACEAE	*Aloe dichotoma*
ASPHODELACEAE	*Aloe gariepensis*
ASPHODELACEAE	*Aloe hereroensis var. hereroensis*
ASTERACEAE	*Amellus tridactylus subsp. arenarius*
ASTERACEAE	*Arctotis leiocarpa*
ASTERACEAE	*Berkheya annectens*
ASTERACEAE	*Berkheya spinosissima subsp. namaensis var. namaensis*
ASTERACEAE	*Berkheya spinosissima subsp. spinosissima*
ASTERACEAE	*Bidens bipinnata*
ASTERACEAE	*Dicoma capensis*
ASTERACEAE	*Dimorphotheca polyptera*
ASTERACEAE	*Eriocephalus ambiguus*
ASTERACEAE	*Eriocephalus microphyllus var. pubescens*
ASTERACEAE	*Felicia deserti*
ASTERACEAE	*Felicia muricata subsp. cinerascens*
ASTERACEAE	*Felicia muricata subsp. muricata*
ASTERACEAE	*Geigeria filifolia*
ASTERACEAE	*Geigeria ornativa*
ASTERACEAE	*Geigeria pectidea*
ASTERACEAE	*Helichrysum gariepinum*
ASTERACEAE	*Helichrysum micropoides*
ASTERACEAE	*Hirpicium echinus*
ASTERACEAE	*Ifloga molluginoides*
ASTERACEAE	*Kleinia longiflora*
ASTERACEAE	*Laggera decurrens*
ASTERACEAE	*Leysera tenella*
ASTERACEAE	*Litogyne gariepina*
ASTERACEAE	*Nolletia arenosa*
ASTERACEAE	*Osteospermum microcarpum subsp. microcarpum*
ASTERACEAE	*Pegolettia retrofracta*
ASTERACEAE	*Pentzia pinnatisecta*
ASTERACEAE	*Pentzia sp.*
ASTERACEAE	*Pentzia spinescens*
ASTERACEAE	*Pteronia leucoclada*
ASTERACEAE	*Pteronia mucronata*
ASTERACEAE	*Pteronia unguiculata*
ASTERACEAE	*Rosenia oppositifolia*
ASTERACEAE	*Senecio consanguineus*
ASTERACEAE	*Senecio glutinarius*
ASTERACEAE	*Tripteris microcarpa subsp. microcarpa*
ASTERACEAE	*Verbesina encelioides var. encelioides*
AZOLLACEAE	*Azolla filiculoides*
BIGNONIACEAE	*Rhigozum obovatum*

BIGNONIACEAE	*Rhigozum trichotomum*
BORAGINACEAE	*Codon royenii*
BORAGINACEAE	*Ehretia rigida subsp. rigida*
BRASSICACEAE	*Heliophila carnosa*
BRASSICACEAE	*Heliophila minima*
BRASSICACEAE	*Heliophila sp.*
BRASSICACEAE	*Heliophila trifurca*
BRASSICACEAE	*Sisymbrium burchellii var. burchellii*
BURSERACEAE	*Commiphora gracilifrondosa*
CAMPANULACEAE	*Wahlenbergia denticulata var. denticulata*
CAPPARACEAE	*Boscia foetida subsp. foetida*
CAPPARACEAE	*Boscia albitrunca*
CAPPARACEAE	*Cadaba aphylla*
CAPPARACEAE	*Cleome angustifolia subsp. diandra*
CAPPARACEAE	*Cleome gynandra*
CARYOPHYLLACEAE	*Pollichia campestris*
CELASTRACEAE	*Gymnosporia linearis subsp. lanceolata*
CHENOPODIACEAE	*Atriplex semibaccata var. appendiculata*
CHENOPODIACEAE	*Atriplex semibaccata var. typica*
CHENOPODIACEAE	*Chenopodium glaucum*
CHENOPODIACEAE	*Salsola barbata*
CHENOPODIACEAE	*Salsola glabrescens*
CHENOPODIACEAE	*Salsola kali*
CHENOPODIACEAE	*Salsola namibica*
CHENOPODIACEAE	*Salsola rabieana*
CHENOPODIACEAE	*Salsola tuberculata*
CHENOPODIACEAE	*Suaeda caespitosa*
CHENOPODIACEAE	*Suaeda merxmuelleri*
COLCHICACEAE	*Androcymbium melanthioides subsp. melanthioides*
COLCHICACEAE	*Colchicum melanthoides subsp. melanthoides*
COLCHICACEAE	*Ornithoglossum vulgare*
CONVOLVULACEAE	*Convolvulus sagittatus*
CRASSULACEAE	*Adromischus sp.*
CRASSULACEAE	*Cotyledon orbiculata var. dactylopsis*
CRASSULACEAE	*Crassula muscosa var. muscosa*
CUCURBITACEAE	*Coccinia rehmannii*
CUCURBITACEAE	*Cucumis africanus*
CUCURBITACEAE	*Kedrostis capensis*
CYPERACEAE	*Bulbostylis hispidula*
CYPERACEAE	*Cyperus capensis*
CYPERACEAE	*Cyperus fulgens var. contractus*
CYPERACEAE	*Cyperus longus var. tenuiflorus*
CYPERACEAE	*Cyperus marginatus*
CYPERACEAE	*Cyperus usitatus*
CYPERACEAE	*Scirpoides dioecus*

ERIOSPERMACEAE	*Eriospermum bakerianum subsp. bakerianum*
EUPHORBIACEAE	*Euphorbia glanduligera*
EUPHORBIACEAE	*Euphorbia inaequilatera var. inaequilatera*
EUPHORBIACEAE	*Euphorbia rudis*
EUPHORBIACEAE	*Euphorbia spinea*
FABACEAE	*Acacia erioloba*
FABACEAE	*Acacia karroo*
FABACEAE	*Acacia mellifera subsp. detinens*
FABACEAE	*Acacia pendula*
FABACEAE	*Adenolobus garipensis*
FABACEAE	*Cullen tomentosum*
FABACEAE	*Cyamopsis serrata*
FABACEAE	*Hoffmannseggia lactea*
FABACEAE	*Indigastrum argyraeum*
FABACEAE	*Indigofera alternans var. alternans*
FABACEAE	*Indigofera auricoma*
FABACEAE	*Indigofera heterotricha*
FABACEAE	*Indigofera pungens*
FABACEAE	*Indigofera rhytidocarpa subsp. rhytidocarpa*
FABACEAE	*Lebeckia spinescens*
FABACEAE	*Lotononis platycarpa*
FABACEAE	*Lotononis rabenaviana*
FABACEAE	*Melolobium candicans*
FABACEAE	*Melolobium macrocalyx*
FABACEAE	*Parkinsonia africana*
FABACEAE	*Prosopis chilensis*
FABACEAE	*Prosopis glandulosa var. glandulosa*
FABACEAE	*Prosopis glandulosa var. torreyana*
FABACEAE	*Prosopis sp.*
FABACEAE	*Prosopis velutina*
FABACEAE	*Ptycholobium biflorum subsp. biflorum*
FABACEAE	*Requienia sphaerosperma*
FABACEAE	*Senna italica subsp. arachoides*
FABACEAE	*Tephrosia burchellii*
FABACEAE	*Tephrosia dregeana var. dregeana*
GERANIACEAE	*Monsonia burkeana*
GERANIACEAE	*Monsonia luederitziana*
GERANIACEAE	*Sarcocaulon patersonii*
GISEKIACEAE	*Gisekia africana var. africana*
GISEKIACEAE	*Gisekia pharnacioides var. pharnacioides*
HYACINTHACEAE	*Dipcadi ciliare*
HYACINTHACEAE	*Dipcadi glaucum*
HYACINTHACEAE	*Dipcadi gracillimum*
HYACINTHACEAE	*Dipcadi papillatum*
HYACINTHACEAE	*Drimia intricata*

HYACINTHACEAE	*Drimia physodes*
HYACINTHACEAE	*Ledebouria sp.*
HYACINTHACEAE	*Ledebouria undulata*
HYACINTHACEAE	*Ornithogalum suaveolens*
HYACINTHACEAE	*Ornithogalum tenuifolium subsp. aridum*
HYACINTHACEAE	*Ornithogalum tenuifolium subsp. tenuifolium*
IRIDACEAE	*Ferraria variabilis*
IRIDACEAE	*Gladiolus saccatus*
IRIDACEAE	*Moraea polystachya*
LAMIACEAE	*Leucas capensis*
LAMIACEAE	*Salvia verbenaca*
LOASACEAE	*Kissenia capensis*
LOPHIOCARPACEAE	*Lophiocarpus polystachyus*
LORANTHACEAE	*Tapinanthus oleifolius*
MALVACEAE	*Abutilon angulatum var. angulatum*
MALVACEAE	*Corchorus asplenifolius*
MALVACEAE	*Hermannia abrotanoides*
MALVACEAE	*Hermannia bicolor*
MALVACEAE	*Hermannia coccocarpa*
MALVACEAE	*Hermannia minutiflora*
MALVACEAE	*Hermannia modesta*
MALVACEAE	*Hermannia sp.*
MALVACEAE	*Hermannia spinosa*
MALVACEAE	*Hermannia stricta*
MALVACEAE	*Hermannia tomentosa*
MALVACEAE	*Melhania didyma*
MALVACEAE	*Sida rhombifolia subsp. rhombifolia*
MELIACEAE	*Nymania capensis*
MESEMBRYANTHEMACEAE	*Dinteranthus wilmotianus*
MESEMBRYANTHEMACEAE	*Lithops bromfieldii*
MESEMBRYANTHEMACEAE	*Mesembryanthemum crystallinum*
MESEMBRYANTHEMACEAE	*Mesembryanthemum guerichianum*
MESEMBRYANTHEMACEAE	*Prenia tetragona*
MESEMBRYANTHEMACEAE	*Psilocaulon articulatum*
MESEMBRYANTHEMACEAE	*Psilocaulon coriarium*
MESEMBRYANTHEMACEAE	*Psilocaulon subnodosum*
MESEMBRYANTHEMACEAE	*Ruschia barnardii*
MESEMBRYANTHEMACEAE	*Ruschia divaricata*
MESEMBRYANTHEMACEAE	*Ruschia kenhardtensis*
MOLLUGINACEAE	*Limeum aethiopicum subsp. aethiopicum var. aethiopicum*
MOLLUGINACEAE	*Limeum argute-carinatum var. argute-carinatum*
MOLLUGINACEAE	*Limeum fenestratum var. fenestratum*
MOLLUGINACEAE	*Limeum myosotis var. confusum*
MOLLUGINACEAE	*Limeum sulcatum var. gracile*
MOLLUGINACEAE	*Mollugo cerviana var. cerviana*

MONTINIACEAE	*Montinia caryophyllacea*
NEURADACEAE	*Grielum humifusum var. humifusum*
NYCTAGINACEAE	*Phaeoptilum spinosum*
OXALIDACEAE	*Oxalis lawsonii*
PAPAVERACEAE	*Argemone mexicana forma mexicana*
PEDALIACEAE	*Pterodiscus luridus*
PEDALIACEAE	*Sesamum capense*
PHYLLANTHACEAE	*Phyllanthus humilis*
PHYLLANTHACEAE	*Phyllanthus maderaspatensis*
PLUMBAGINACEAE	*Dyerophytum africanum*
POACEAE	*Anthephora pubescens*
POACEAE	*Aristida adscensionis*
POACEAE	*Aristida congesta subsp. barbicollis*
POACEAE	*Aristida congesta subsp. congesta*
POACEAE	*Aristida diffusa subsp. burkei*
POACEAE	*Aristida engleri var. engleri*
POACEAE	*Aristida vestita*
POACEAE	*Brachiaria glomerata*
POACEAE	*Cenchrus ciliaris*
POACEAE	*Centropodia glauca*
POACEAE	*Digitaria sanguinalis*
POACEAE	*Digitaria sp.*
POACEAE	*Dinebra retroflexa*
POACEAE	*Echinochloa holubii*
POACEAE	*Echinochloa stagnina*
POACEAE	*Enneapogon cenchroides*
POACEAE	*Enneapogon desvauxii*
POACEAE	*Enneapogon scaber*
POACEAE	*Eragrostis annulata*
POACEAE	*Eragrostis aspera*
POACEAE	*Eragrostis biflora*
POACEAE	*Eragrostis brizantha*
POACEAE	*Eragrostis lehmanniana var. lehmanniana*
POACEAE	*Eragrostis porosa*
POACEAE	*Eragrostis procumbens*
POACEAE	*Eragrostis rotifer*
POACEAE	*Eriochloa fatmensis*
POACEAE	*Fingerhuthia africana*
POACEAE	*Melinis repens subsp. grandiflora*
POACEAE	*Melinis repens subsp. repens*
POACEAE	*Melinis sp.*
POACEAE	*Phalaris canariensis*
POACEAE	*Schmidtia kalahariensis*
POACEAE	*Setaria italica*
POACEAE	*Setaria pumila*

POACEAE	*Setaria sp.*
POACEAE	*Setaria verticillata*
POACEAE	*Stipagrostis amabilis*
POACEAE	*Stipagrostis anomala*
POACEAE	*Stipagrostis ciliata var. capensis*
POACEAE	*Stipagrostis hochstetteriana var. hochstetteriana*
POACEAE	*Stipagrostis obtusa*
POACEAE	*Stipagrostis uniplumis var. neesii*
POACEAE	*Stipagrostis uniplumis var. uniplumis*
POACEAE	*Tragus berteronianus*
POACEAE	*Tragus racemosus*
POACEAE	*Triraphis purpurea*
POACEAE	*Triraphis ramosissima*
POACEAE	*Urochloa panicoides*
POLYGALACEAE	*Polygala seminuda*
POLYGONACEAE	*Oxygonum alatum var. alatum*
PORTULACACEAE	*Anacampseros baeseckei*
PORTULACACEAE	*Anacampseros filamentosa subsp. filamentosa*
PORTULACACEAE	*Anacampseros filamentosa subsp. namaquensis*
PORTULACACEAE	*Anacampseros filamentosa subsp. tomentosa*
PORTULACACEAE	*Avonia albissima*
PORTULACACEAE	*Portulaca hereroensis*
PORTULACACEAE	*Portulaca kermesina*
PORTULACACEAE	*Portulaca pilosa*
PORTULACACEAE	*Portulaca quadrifida*
PORTULACACEAE	*Talinum arnotii*
RESEDACEAE	*Oligomeris dipetala var. dipetala*
RHAMNACEAE	*Ziziphus mucronata subsp. mucronata*
RUBIACEAE	*Kohautia cynanchica*
RUBIACEAE	*Kohautia ramosissima*
SALICACEAE	*Salix mucronata subsp. mucronata*
SANTALACEAE	*Thesium hystricoides*
SANTALACEAE	*Thesium lineatum*
SCROPHULARIACEAE	*Aptosimum albomarginatum*
SCROPHULARIACEAE	*Aptosimum elongatum*
SCROPHULARIACEAE	*Aptosimum junceum*
SCROPHULARIACEAE	*Aptosimum lineare*
SCROPHULARIACEAE	*Aptosimum lineare var. lineare*
SCROPHULARIACEAE	*Aptosimum marlothii*
SCROPHULARIACEAE	*Aptosimum procumbens*
SCROPHULARIACEAE	*Aptosimum spinescens*
SCROPHULARIACEAE	*Jamesbrittenia argentea*
SCROPHULARIACEAE	*Jamesbrittenia aridicola*
SCROPHULARIACEAE	*Jamesbrittenia integerrima*
SCROPHULARIACEAE	*Manulea schaeferi*

SCROPHULARIACEAE	*Peliostomum leucorrhizum*
SCROPHULARIACEAE	*Selago divaricata*
SCROPHULARIACEAE	*Selago paniculata*
SOLANACEAE	*Lycium bosciifolium*
SOLANACEAE	*Lycium cinereum*
SOLANACEAE	*Lycium oxycarpum*
SOLANACEAE	*Lycium pumilum*
SOLANACEAE	*Nicotiana glauca*
SOLANACEAE	*Solanum burchellii*
SOLANACEAE	*Solanum capense*
TAMARICACEAE	*Tamarix usneoides E.Mey. ex Bunge x T. ramosissima Ledeb.*
TECOPHILAEACEAE	*Cyanella lutea*
THYMELAEACEAE	*Gnidia polycephala*
URTICACEAE	*Forsskaolea candida*
VERBENACEAE	*Chascanum garipense*
VERBENACEAE	*Chascanum incisum*
VERBENACEAE	*Chascanum pumilum*
ZYGOPHYLLACEAE	*Augea capensis*
ZYGOPHYLLACEAE	*Fagonia sinaica var. minutistipula*
ZYGOPHYLLACEAE	*Tribulus cristatus*
ZYGOPHYLLACEAE	*Tribulus pterophorus*
ZYGOPHYLLACEAE	*Tribulus terrestris*
ZYGOPHYLLACEAE	*Tribulus zeyheri subsp. zeyheri*
ZYGOPHYLLACEAE	*Zygophyllum dregeanum*
ZYGOPHYLLACEAE	*Zygophyllum flexuosum*
ZYGOPHYLLACEAE	*Zygophyllum simplex*
ZYGOPHYLLACEAE	*Zygophyllum sp.*
ASTERACEAE	*Geigeria ornativa subsp. ornativa*