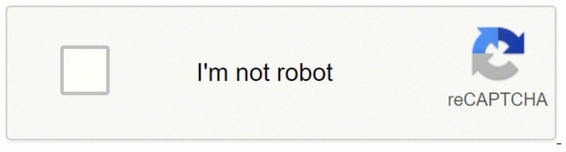

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Cactus and succulents identification pdf

Cacti guide. Succulent identification. Succulent species.

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2-8317-0390-5 Pachypodium namaquanum, the renowned 'Half Mens' from the Richtersveld, at one time listed on CITES Appendix I; now considered relatively safe, but still Vulnerable in parts of its range. (National Botanical Institute) Zebra, Cheltenham, UK International Centre for Conservation Education, Greenfield House, Guiting Power, Cheltenham, Gloucestershire, GL54 5TZ, UK South Western Printers Ltd, Caerphilly, UK IUCN Publications Services Unit 219~ Huntingdon Road, Cambridge CB3 ODL, United Kingdom Tel: +44 1223 277894, Fax +44 1223 277175 E-mail: WWW: A catalogue of IUCN publications is also available. The text of this book is printed on Zanders Mega paper, 100 gsm, manufactured from 50% TCF pulps and 50% recycled pulps including de-inked waste. Contents Foreword ..... V Acknowledgements ..... vi Executive Summary ..... vii (English, Spanish, French) Acronyms ..... X Introduction ..... 1 Chapter 1. Taxonomic Groups ..... .3 Agavaceae ....3 Aizoaceae ....8 Aloaceae.....lO Asclepiadaceae. ..... 14 Cactaceae.. ....17 Crassulaceae.....2 0 Euphorbiaceae ..... .23 Portulacaceae ....2 6 Chapter 2. Conservation Measures ..... .28 National legislation ..... .28 International legislation ..... .30 The Convention on Biological Diversity. ..... 30 The Berne Convention ..... .30 The EC Habitats Directive. ..... .30 Controlling the trade. ..... .31 CITES.....3 1 Illegal trade. ..... .36 Trade in non-CITES succulents. ..... .37 In situ conservation ..... .37 Protecting the habitats of threatened species. .. .37 Protected areas ..... .38 International designations ..... .38 National designations ..... .40 Private land. .....
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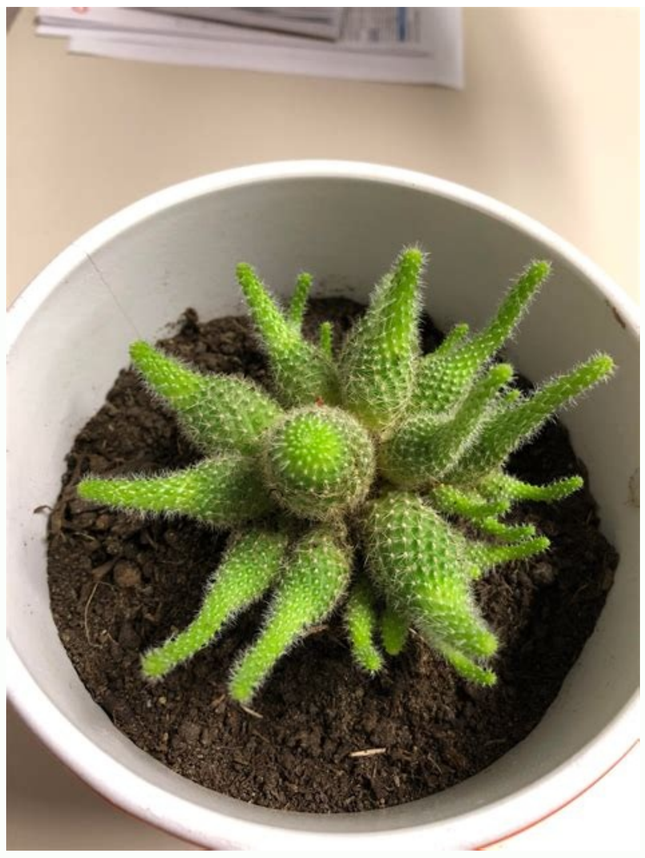

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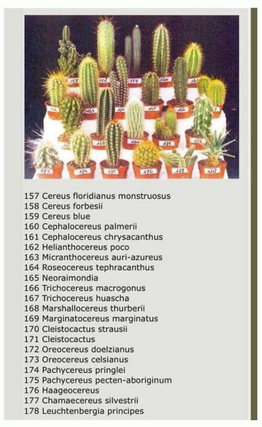

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. .208 iv Foreword The sight was depressing. We looked closely at the huge pile of dead cacti to see if any had survived, but none were found. Commercial collectors had dug up these hundreds of plants, but for some reason had simply left them behind to die. I had seen the destruction of cactus populations in other places, where whole hillsides of cacti had been removed and carried away, but nowhere nearly as many plants had been ruthlessly removed and left to die as in this remote area of the Chihuahuan Desert. Devastation of populations of cacti and succulents has occurred in many parts of the world, sometimes through greed and selfishness of people who wish to make money from the plants, but at other times as land is converted to agriculture, bulldozed for houses or highways, or flooded to create dams. For 40 years I have travelled throughout the arid regions of both North and South America doing research on cacti. I have been fortunate to see some of the rarest cacti known, but have also witnessed their pillage by people who fail to understand their importance in the wild and who do not care if they are destroyed, thus depriving future generations of the experience of seeing them. The same things are happening in areas of Africa and Madagascar.

Cacti and succulents face terrible threats as the human population grows and land is converted from its natural state.

Scientists are struggling to learn what they can before some of these populations of plants disappear, but it is discouraging to see tagged plants removed from study sites by unscrupulous collectors, or a study area bulldozed to make a wider road. At times the frustration has been so great that one is led to wonder if conservation activities are worth the time and effort. But then one hears the statement that "if only people knew what was happening, then they might stop this needless destruction." Or we see a piece of countryside that has been set aside specifically to protect and preserve a population of rare plants. We may read a report that collectors have been arrested for illegally removing plants. These are what give us hope; perhaps we can inform and educate people of the importance of preserving cacti and succulents in the wild, and, as a result, species can be saved from extinction. This Action Plan is a much-needed publication on cacti and succulents, for it brings together data that have never been compiled before, which should help greatly in conservation efforts of cacti and succulents throughout the world. Included is information on eight succulent families, as well as nine geographic regions of the world, plus conservation strategies including trade control. However, the most important part of the Action Plan is the section dealing with proposals for conservation actions.

These are both timely and practical, for experts from various regions have described how conservation efforts can be carried out. It is hoped that these proposals will stimulate governments, foundations, other organisations and individuals to respond to this ever- increasing crisis concerning the conservation of cacti and succulents.

It has been my privilege to serve as Chair of the Cactus and Succulent Specialist Group of the Species Survival Commission for nearly ten years. The conception and writing of this Action Plan is clearly the most significant contribution of this Group. It has been a challenge developing this work, for the Group wanted the expertise of the world's authorities, who are often heavily committed to other projects.

Those that responded with contributions have made this Action Plan unique and of considerable value. Their willingness to contribute chapters or sections is greatly appreciated.

Special thanks go to Sara Oldfield, Secretary of the Group, for overseeing and compiling the material as it was submitted. The project would never have been possible without her efforts. Wendy Strahm and Robin Sears of the Species Survival Commission also deserve many thanks for seeing the Plan through to its final production. As one looks at this Action Plan, I ask that it be read with deep appreciation, not only of the plants described, but also for the contributions of so many who work with them. Hopefully, this publication will facilitate conservation efforts on behalf of the cacti and succulents, a remarkable group of plants that must be preserved for eternity. Dr. Edward F. Anderson Chair, IUCN/SSC Cactus and Succulent Specialist Group Acknowledgements The preparation of this SSC Action Plan has been a collaborative and largely voluntary venture to which many specialists have given freely of their time and expertise. Authors and contributors to the Plan are listed in Annex 17.

Their work on this document, both in the initial preparation of the manuscripts, and subsequent help with additional information, review, and provision of illustrations is greatly appreciated. In turn, the authors have consulted widely in the preparation of their accounts and acknowledgements are given at the end of individual sections as appropriate.

All members of the SSC Group have been involved in the preparation of the SSC Action Plan in some way, together with many members of the 10s and experts in conservation organisations. Sincere thanks to everyone involved. Special thanks are due to Ted Anderson, Susan Carter-Holmes, Craig Hilton- Taylor, Gideon Smith, Diedrich Supthut, and Nigel Taylor for guidance and encouragement in developing the Action Plan, and to Wendy Strahm and Robin Sears for ensuring its completion. Robin Sears played a particularly important role in assisting with the final editing, picture research and preparation of the report for publication. Thanks also go to Gary Lyons and Rob Wallace for final review of the text; and to Juan Manuel Lopez Ramirez for the Spanish translation, and Paul Strahm and Bertrand de Montmollin for the French translation of the Executive Summary.

Institutional support is acknowledged from the Desert Botanical Garden, Phoenix; Royal Botanic Gardens, Kew; and World Conservation Monitoring Centre. Financial support for preparation of the Action Plan was provided by the Peter Scott IUCN/SSC Action Plan fund. Sara Oldfield Secretary, IUCN/SSC Cactus and Succulent Specialist Group vi Executive Summary The often bizarre growth-forms and attractive flowers of cacti and other succulents have promoted widespread interest in this group of plants and horticultural popularity worldwide. Succulent plants are also of great ecological and economic significance, particularly in arid and semi-arid parts of the world. Although the definition of succulence as applied to plants is constantly under debate, about 10,000 plant species are generally recognised as succulent, within thirty plant families. Of these succulent plant species, an estimated 2000 species are threatened with global extinction in the wild, and many more are regionally or nationally threatened.

Habitat destruction is the major threat, and in common with other horticulturally desirable plant groups, over- collection for international trade remains a significant problem.

The Cactus and Succulent Plants Action Plan, produced by members of the Species Survival Commission of IUCN-The World Conservation Union, brings together current information, never before compiled, on the population status, threats, and conservation of this group of important plants from around the world. From this compilation, priorities for conservation action are emphasised, providing direction for funding in plant conservation work. Conservationists, scientists, government officials, protected area managers, educators, and grant awarding bodies alike should find this document helpful in their work to conserve global and local flora. The contributors to this Action Plan encourage collaborative work among these interested parties. The publication comprises four chapters and a series of annexes that provide readers with concise information on the current status of cactus and succulent populations. The extensive bibliography provides a comprehensive resource for more information on this group of plants.

The Plan begins with overviews, written by botanists who specialise in the study of these particular plant families, of the distribution, diversity, threats, and status of eight main taxonomic groups of succulents including the Agavaceae, Aizoaceae, Aloaceae, Asclepiadaceae, Cactaceae, Crassulaceae, Euphorbiaceae, and Portulacaceae. Some of these groups are of great economic importance, many in the ornamental trade industry, and others, such as the Agavaceae, in the fibre and food industries. Chapter 2 of the Action Plan describes and reviews existing conservation measures for succulent plants around the world with information on legislation, controlling the trade, and in situ and ex situ conservation. The intention of this chapter is to identify successful conservation activities which can be used as models elsewhere, and also to highlight priorities for further action. It is particularly important in reviewing international conservation measures to show how succulent plant conservation needs can be linked into broader initiatives and frameworks for biodiversity conservation. Action for succulent plant conservation must take place primarily at the national and local levels and be implemented as far as possible by in-country agencies and local experts. This is accepted throughout the Action Plan, and Chapter 3, the regional accounts, has been largely prepared by experts within the regions concerned. Chapter 3 concentrates on the regions of the world which have the major concentrations of succulent p lants.

The final chapter of the Plan describes the priority conservation action proposals, developed by the members of the SSC Cactus and Succulent Plant Specialist Group, for succulent plants around the world. Implementing these proposals will save the maximum diversity of succulents based on our present knowledge. The SSC Cactus and Succulent Specialist Group calls for: Field research to support understanding of the taxonomy and conservation status of succulent plants, Increased in situ protection for succulent plant species through the development of protected area networks, Coordinated ex situ protection of threatened succulent species to support the conservation of species in their natural habitats wherever possible, Effective national legislation for all threatened succulent plant species, Effective trade controls for all wild succulent plant species threatened by exploitation for international commerce, Education on the value of succulent plants and the need for their conservation and sustainable use. vii Redmen Las a menudo extranas formas de crecimiento y las flores atractivas de cactus y otras plantas suculentas han logrado un inter& general por este grupo de plantas y una popularidad para su utilization en horticultura en todo el mundo. La s plantas suculentas importancia ecologica y economica son tambie n de gran icularm ente en las zonas aridas y semiaridas de todo el mundo. Aunque la definition de suculencia aplicada a las plantas esta constantemente en debate, cerca de unas 10.000 especies de plantas, clasificadas en unas 30 familias, son reconocidas generalmente De estas especies de corn0 planta suculentas.

s suculentas, unas 2.000 estan globalmente amenazadas en la naturaleza con la extincion, y muchas otras en peligro regional o national. La destruction de1 habitat es la mayor amenaza, y es compartida con otros grupos atractivos de plantas de jardineria, en donde su sobreexplotacion para el comercio international es un problema de gran trascendencia. El Plan de Action para Cactus y Plantas Suculentas, que elaboraron 10s miembros de la Comision de Supervivencia de Especies (CSE) de la UICN - Union Mundial para la directrices para el financiamiento de1 trabajo de conservation de las plantas. Conservacionistas, cientificos, funcionarios, gestores de areas protegidas, educadores y organismos financiadores, de1 mismo modo, podrian encontrar ayuda en este document0 para sus trabajos de conservation de la flora local y global. Los contribuidores a este Plan de Action animan al trabajo de colaboracion entre estos grupos interesados. La publication consta de quatro capitulos y una serie de anexos que proporcionan a 10s lectores una information concisa sobre el estado actual de las poblaciones de cactus y suculentas. La extensa bibliografia proporciona una amplia fuente de information suplementaria sobre cactus y plantas suculentas. El Plan comienza con resumenes, que escriben botanicos especializados en el estudio de estas familias especificas de plantas, acerca de la distribution, diversidad, amenazas y el estado de echo grupos taxonomicos principales de cactus y suculentas entre las que se encuentran las familias Agavaceae, Aizorceae, Aloaceae, Asclepiadaceae, Cactaceae, Crassulaceae, Euphorbiaceae, y Portulaceae. Algunos de estos grupos son de gran importancia economica, muchos de ellos incluidos en el comercio de ornamentales.

v otros coma las Agavaceas, en las industrias alimentaria y textil. El Capitulo 2 de este Plan de Action describe y examina las medidas de conservation existentes para las plantas suculentas de todo el mundo, con information sobre legislation, control de1 comercio y conservation in situ y ex situ. El objetivo de este capitulo es identificar las actividades exitosas de conservation que pueden ser usadas como modelos en otros lugares y muestra ademas las prioridades para una action mas completa. Es particularmente importante en el analisis de las medidas de conservation international, mostrar coma las necesidades de conservation de las plantas suculentas pueden ser unidas dentro de las iniciativas generales de conservation y en 10s marcos para la conservation de la biodiversidad. La action para la conservation de las plantas suculentas debe tomarse ante todo en 10s niveles locales y nacionales y ser llevada a cabo tanto coma sera possible por agencias estatales y locales especializadas. Esto es aceptado en todo el Plan de Action, y en el Capitulo 3,10s informes regionales han sido preparados por expertos de las propias regiones. El Capitulo 3 se concentra en las regiones de1 mundo que tienen el mayor numero de plantas suculentas.

El capitulo final describe las propuestas de acciones prioritarias para la conservation para las plantas suculentas de todo el mundo. Lo elaboraran miembros de1 Grupo Especialista de la CSE/UICN en Cactaceas y Suculeantas. Hacienda efectivas estas propuestas, basadas en nuestros conocimientos actuales, salvaremos al maxim0 la diversidad de las suculentas. El Grupo Especialista CSE en Cactus y Suculentas pide: Una investigation de campo para apoyar el entendimiento de la taxonomia y el estado de conservation de las plantas suculentas, Aumento de la protection in situ de las especies de plantas suculentas a traves de1 desarrollo de redes de areas protegidas, Coordination de la protection ex situ de las plantas suculentas para apoyar la conservation de especies en sus hgbitats naturales dondequiera que sea posible, Una legislation national eficaz para todas las especies de plantas suculentas amenazadas, Controles efectivos sobre el comercio de todas las plantas suculentas silvestres amenazadas por la sobreexplotacion en el comercio international, Education sobre el valor de las plantas suculentas y la necesidad de conservation y uso sostenible. . . . VIII R&urn6 L'aspect souvent particulier ainsi que la beaute des fleurs des cactus et d'autres plantes succulentes suscitent beaucoup d'interet de la part du public pour ce type de vegetation dont la culture est tres repandue.

Les plantes succulentes ont egalement une grande importance ecologique et economique a travers le monde, particulierement dans les regions arides ou semi-arides. Bien que la definition de ce quest exactement une plante "succulente" fasse toujours l'objet de discussions, on peut considerer que quelque 10,000 especes, subdivisees en trente familles, font partie de ce groupe de planks. Au niveau mondial, on estime que pres de 2,000 especes de plantes succulentes sont menacees d'extinction dans leur habitat naturel.

Un nombre bien plus eleve est menace de disparition a une echelle regionale ou nationale. La menace la plus importante pour les plantes succulentes est la destruction de leurs habitats, puis, comme pour beaucoup d'autres groupes de plantes attractives, une recolte trop intensive pour satisfaire les besoins du commerce international constitue un probleme tout particulier. Le Plan d'Action pour les cactus et les plantes succulentes publie par les membres de la Commission de la sauvegarde des especes (CSE) de IUnion mondiale pour la nature (UICN) r&nit toutes les informations au niveau mondial - ce qui n'avait encore jamais ete fait - au sujet de la repartition, des menaces et de la conservation de cet important groupe de plantes. Sur la base de cette compilation, des priori& de conservation sont degagees, en indiquant les directions a suivre pour rechercher des financements pour les actions de conservation. Ce document constitue une base de travail pour la conservation de la flore au niveau mondial ou local a l'intention des acteurs de la conservation, des scientifiques, des dirigeants gouvernementaux, des gestionnaires d'espaces proteges, des enseignants et des organes de subventionnement. Les auteurs du Plan d'Action encouragent une collaboration etroite entre toutes les parties concernees. Cet ouvrage, constitue de quatre chapitres et d'une serie d'annexes, offre au lecteur des renseignements concis sur l'etat actuel de conservation des populations de cactus et de plantes succulentes. Une abondante bibliographie offre une liste tres complete de references sur ce groupe de plantes. Dans la premiere partie du Plan d'action, des botanistes specialistes des differentes familles, decrivent la repartition, la diversite, les menaces et Mat de conservation des huit principaux groupes taxonomiques de cactus et de plantes succulentes, notamment les Agavaceae, Aizoaceae, Aloaceae, Asclepiadaceae, Cactaceae, Crassulaceae, Euphorbiaceae et Portulacaceae. Certaines de ces familles ont une grande importance economique, principalement dans le cadre du commerce de plantes ornementales, d'autres, telles que les Agavaceae, sont utilisees dans les industries des fibres et des aliments. Le second chapitre du Plan d'Action decrit et evalue les mesures de conservation des plantes succulentes existant a travers le monde, y compris la reglementation relative a leur commerce et les mesures de conservation in situ ou ex situ. L'objectif de ce chapitre est d'identifier les actions de conservation reussies qui pourraient servir de modeles dans d'autres situations et de mettre en evidence des priori& pour la poursuite des activites de conservation. En analysant les mesures de conservation prises au niveau international, il est particulierement important de montrer comment les exigences de la conservation des plantes succulentes peuvent etre integrees dans le cadre plus general de la conservation de la biodiversite.

Les actions de conservation pour les plantes succulentes doivent etre planifiees en priorite au niveau national et local et etre realisees autant que possible par des acteurs des pays concern& et des experts locaux. Ce principe s'applique a tout le Plan d'action et, par consequent, dans le troisieme chapitre du Plan d'Action, les comptes rendus regionaux, ont ete prepares principalement par des experts des regions concernees. Ce troisieme chapitre met l'accent sur les regions du monde qui sont les plus riches en plantes succulentes. Le dernier chapitre du Plan d'Action decrit les actions de conservation prioritaires proposees a l'echelle mondiale par les membres du Groupe de specialistes des cactus et des plantes succulentes. Basee sur nos connaissances actuelles, la mise en oeuvre de ces propositions permettra de sauvegarder la plus grand diversite possible de plantes succulentes. En conclusion, les recommandations du Groupe de specialistes des cactus et des plantes succulentes de la CSE sont les suivantes : l Effectuer des recherches sur le terrain pour verifier la taxonomie et l'etat de conservation des plants succulentes, l Ameliorer la protection in situ des plantes succulentes en developpant le reseau d'aires protegees, l Coordonner la conservation ex situ des especes menacees de plantes succulentes pour renforcer, quand cela est possible, leur conservation dans leur habitat nature& l Mettre en oeuvre des reglementations nationales efficaces pour toutes les especes de plantes succulentes menacees, l Controler de man&e stricte le commerce de toutes les plantes succulentes sauvages menacees par le commerce international, l Sensibiliser le public et les autorites sur la valeur des plantes succulentes, le besoin de les conserver pour le futur et l'importance de leur utilisation durable. ix Acronyms used in this Action Plan International Plant Genetic Resources Institute International Succulent Institute International Organization for Succulent Plant Study International Union for Conservation of Nature and Natural Resources - The World Conservation Union Jardin Botanic0 National "Rafael M. Moscoso" [Dominican Republic] Universidad National Autonoma de Mexico Viceministerio Forestal, Ministerio de Agricultura [Cuba] Museo National de Historia Natura [Cuba] National Botanical Institute [South Africa] Natural History Society [Jamaica] Natural Resource Conservation Department [Jamaica] National Trust for the Cayman Islands The New York Botanical Gardens Instituto Politecnico National, CIIDIR [Mexico] Reconstruction and Development Programme [South Africa] Repertorium Plantarum Succulentamm Southern African Development Community Secretaria de Agricultura y Recursos Hidraulicos [Mexico] Secretaria de Desarrollo Social [Mexico] Secretaria de Medio Ambient, Recursos Naturales y Peces [Mexico] Universidad Autonoma de San Luis Potosi, [Mexico] Protocol on Specially Protected Areas and Wildlife for the Caribbean Region of the Cartagena Convention Species Survival Commission [IUCN] Trade Records Analysis of Flora and Fauna in Commerce Universidad Autonoma de Tamaulipas [Mexico] United Nations Commission on Environment and Development United Nations Educational, Scientific and Cultural Organization United States Fish and Wildlife Service World Conservation Monitoring Centre [United Kingdom] World Wide Fund for Nature Stadtische Sukkulenten-Sammlung Zurich [Switzerland] AGUAT AIAS ANAE Universidad de San Carlos [Guatemala] IPGRI Italian Succulent Plant Society N Environmental ational Association for Actions [Madagascar] IS1 10s Agence Nationale pour la Gestion des Aires Protegees [Madagascar] ANGAP IUCN Australian Network for Plant Conservation Universidad Autonoma de Baja California [Mexico] ANPC BCMEX Botanical Gardens Conservation International (formerly BGCS) JBN-RMM BGCI MEXU CAMPFIRE Corn munal Areas Managem for Indigenous Resources ent Programme MINAGRI CBHL The Council on Botanical and Horticultural Libraries MNHN NBI NHS NRCD Centro de Education Ambiental [Puerto Rico] Instituto de Historia Natural de Chiapas [Mexico] Centro de Information Ambiental de1 Caribe [Puerto Rico] Centro de Investigaciones Biologicas [Mexico] Centro Interdisciplinario de Investigation para el Desarrollo Integral [Mexico] Convention on International Trade in Endangered Species of Wild Fauna and Flora CEA CHIP CIAC NTCI NYBG OAX CIB CIIDIR RDP CITES RPS SADC SARH Comision para la Protection de la Flora, la Fauna y el uso rational de 10s Recursos Naturales [Cuba] La Comision National de la Biodiversidad [Mexico] Consejo National de Ciencias y Technologia [Mexico] COMARNA SEDESOL SEMARNAP CONABIO SLPM CONACYT SPAW CPC CPD DEF DES DNP Center for Plant Conservation [USA] Centres of Plant Diversity Direction des Eaux et For&s [Madagascar] Desert Botanical Garden [USA] Direction National de Parques [Dominican Republic] Departamento de Recursos Naturales [Puerto Rico] ssc TRAFFIC UAT DRN UNCED EC FSA HNT IABG European Community Flora of southern Africa region Huntington Botanic Gardens [USA] International Association of Botanic UNESCO Gardens USFWS WCMC IBUG IES INE Universidad de Guadalajara [Mexico] Instituto de Ecologia y Sistematica [Cuba] Instituto National de Ecologia [Mexico] WWF zss Introduction Succulent plants have a global distribution and are of Conduct has been widely publicised through national represented in nearly all habitat types. Over 30 botanical cactus and succulent societies and has provided a model families have succulent plant species, ranging from tiny for use by other specialist plant societies. The Code of annual plants to huge trees. The Cactaceae is the largest Conduct was updated in 1990 (Oldfield 1990). and perhaps the best known of the succulent plant The 10s Conservation Section provided the basis for families. The unifying characteristic of succulent plants is the formation of the IUCNSSC Cactus and Succulent their ability to store water in one or more organs of the Specialist Group in 1984, and the two groups continue to plant, giving rise to stem succulents, leaf succulents, and work together sharing a common membership and regular root succulents - the so-called caudiciform plants. meetings. The SSC Cactus and Succulent Specialist "A succulent (or succophyte) is a plant possessing at least one succulent tissue. A succulent tissue is a living tissue that, besides possible other tasks, serves and guarantees an at least temporary storage of utilisable water, which makes the plant temporarily independent from external water supply when soil water conditions have deteriorated such that the root is no longer able to provide the necessary water from soil." von Willert et al. (1992) Succulents, with their often bizarre growth-forms and attractive flowers have long attracted the attention of botanists, both amateur and professional, and horticultural enthusiasts. Despite the widespread interest in succulent plants, and their ecological and economic Strombocactus disciformis, Mexico. importance, relatively little attention has been paid to their conservation needs, outside the confines of the specialist societies. The International Organization for Succulent Plant Study (10s) has been instrumental in promoting conservation mainly through the publication of a Code of Conduct. First published in 1973, the 10s Code Group has undertaken important conservation fieldwork in Chile, Mexico and Ecuador, has acted as an expanded network for conservation discussion and exchange of information, and has contributed to CITES matters. The idea for an SSC Action Plan for cacti and succulents was first discussed by the Specialist Group in 1990 at the Group's meeting held in Bonn, Germany. There was general agreement that preparation of the Plan should proceed as rapidly as possible.

There is a sense of urgency in all plant conservation matters and particularly so for groups of plants where information, although by no means complete, is sufficient to prioritise and initiate long overdue conservation activities. Arrangements for the preparation of the Action Plan were confirmed in 1993 at the Group's meeting in Malta and a first draft was prepared in time for the 1994 Group meeting, coincident with the 23rd 10s Congress and 24th AETFAT Congress held in Wageningen. The taxonomic accounts for the Action Plan were prepared in 1993 together with the general sections on legislation and controlling the trade. Preparation of the regional accounts, which generally necessitated information gathering from diverse sources and wider consultation amongst local organisations and experts, was finalised at the end of 1995. The Wageningen meeting provided a particularly useful opportunity to discuss the African and Madagascan accounts for the Action Plan, and the CITES Plants Committee meeting held in San Miguel de Allende, Mexico in May 1994, provided an opportunity to review the Mexican account. The timespan involved in preparation of the Action Plan already means that updates will be necessary for certain sections with regard particularly to taxonomic references now published and CITES trade information. However, the Group's main priority, following this period of information gathering, is now to implement the Action Plan. 1 The Action Plan aims to bring together current information on the conservation of cacti and succulents from around the world in order to provide a summary of the present situation. This provides the background against which to set priorities for conservation action. In preparing an overview Action Plan of this nature it has not proved possible to be fully comprehensive in the species and areas covered. The north temperate regions of Europe and Asia, for example, which are not covered specifically in the Action Plan, are by no means without succulents but do not have the same diversity, degree of endemism, and urgency for succulent plant conservation as, for example, Madagascar, Mexico, and Namibia. The Specialist Group is keen to learn of other succulent plant species and other areas of succulent plant diversity which are in need of conservation attention and also of ongoing conservation initiatives to which it can contribute. The annexes to this Plan provide various regional taxonomic lists of succulents. Unless otherwise noted, the conservation status given for each taxon follows the IUCN Red List categories. With the exception of the Brazil Cactaceae reported by Nigel Taylor, all of the lists follow the old criteria (pre-1994). Work is ongoing by specialists to apply the new criteria which offer a more objective and detailed evaluation of these species' threat of extinction. Annex 16 details both versions of the IUCN Red List categories. A precise definition of the term 'succulent' has not been attempted for the purposes of the Action Plan and some doubtfully succulent species have been included where these are of conservation concern. Some of the caudiciform plants, for example, are marginally succulent, but are fashionable at present with succulent plant collectors and subject to trade pressures. Cycads and some orchids can also be considered succulent, but these are not included in the Action Plan because they fall within separate SSC Action Plans (for Orchids see IUCN/SSC Orchid Specialist Group 1996; IUCN/SSC Cycad Action Plan, in prep). Certain genera of the Bromeliaceae are included within the Action Plan because plants of this family often have similar lifeforms, grow in similar habitats, and face the same threats as plants more commonly treated as succulents. It is, however, hoped that the Bromeliaceae will soon have an SSC Conservation Action Plan of their own. Further field research and taxonomic studies are urgently needed as a preliminary conservation activity for succulent plant species is various parts of the world. The need for further information should not, however, hold up the implementation of in situ and ex situ conservation activities as outlined in the Action Plan. Members of the SSC Group have expertise in succulent plant taxonomy, ecology, conservation planning, conservation legislation, information management, development of recovery plans and cultivation of succulent plants. Integration of different approaches and methodologies for conservation will be important to ensure the conservation of maximum succulent plant diversity. The preparation of the Action Plan is not an end in itself but a beginning. The SSC Cactus and Succulent Specialist Group is committed to implementation of the Plan and offers its assistance to all who are in a position to take the action proposals forward. Chapter 1 Taxonomic Groups Agavaceae Wendy Hodgson The Agave family (Agavaceae Endlicher) is a group of economically important succulent plants with a natural distribution in the drier regions of the tropics and subtropics. The botanical limits of the family are undecided, but for the purposes of this Action Plan the Agavaceae is considered to comprise 18 genera and approximately 625 species.

Many of these species remain poorly known in the wild. Herbaria and field surveys are urgently needed to determine conservation status for the species. Despite lack of detailed field information, progress has been made towards developing a conservation programme, particularly for the American species, for example through the SSC Agavaceae Action Plan Workshop held at the Desert Botanical Garden, Phoenix, in 1992. agaves in this respect while other genera now considered in Agavaceae (Nolina and Dracaena) do not. Cronquist (1981) considered the Aloaceae and Agavaceac as parallel derivatives from the Liliaceae with only slight differences. McVaugh (1989) points out that unless some basis other than plant habit can be found, it is impossible to distinguish between the Agavaceae and Liliaceae in the Nueva Galicia flora of western Mexico. In Manfreda, Polianthes, and Prochynanthes, genera generally considered to be closely related to Agave, plants are herbaceous, commonly have fleshy roots developed from a short rhizome, and have soft, thin, slightly succulent leaves which in most species die back annually; marginal teeth, if present, are soft.

McVaugh (1989) suggests one solution might be to include all herbaceous genera in the Liliaceae, and only the more woody groups in Agavaceae. However, the problem is more complicated in that there Box 1 .I Botanical characteristics of Agavaceae The Agave Family is characterised by stout, simple or sparingly branched, arborescent shrubs (or sometimes trees), or short-stemmed, somewhat herbaceous plants with a short rhizome or erect caudex; leaves simple, alternate, sessile, tending to be crowded in dense rosettes at ends of stems or branches or at ground-level on a short stem, generally thickened, leathery or firm-succulent (in contrast to soft-succulent as in Aloaceae), often prickly on margins and spine- tipped; flowers in dense racemes or panicles or heads terminating the stem (plants are monocarpic, as in Agave), or axillary and subterminal (plants are polycarpic, as in Yucca); perfect, sometimes unisexual, perianth consisting of tepals arranged in 2 whorls of 3, petaloid, often thick and fleshy, distinct or fused below to form a tube, stamens 6, filaments distinct, fused to tepals or base of tube, ovary superior or inferior, 3-carpeled, usually with nectaries style usually terminal with 3 stigmas, ovules l-many, fruit a loculicidal capsule or berry, seeds flattened; chromosome counts vary from x= 16- 30+.

Systematic treatment The Agavaceae has undergone many changes since it was proposed by Endlicher in 1841. Cronquist (1981) maintains the Agavaceae as a family distinct from the Liliaceae and Amaryllidaceae based on the specialised growth habit. Agavaceae are characterised by being stout, simple or branched shrubs or trees, or herbaceous plants arising from a caudex, often forming succulent rosettes as opposed to Liliaceae and Amaryllidaceae which are herbaceous perennials, usually dying back to the ground. Yucca and Agave share the karyotype of 20 small and 5 large chromosomes. This trait was considered unique at one time and provided the incentive to remove Yucca from the Amaryllidaceae to the Agavaceae. However, the presence of few large and many small chromosomes is more common throughout the Liliaceae than once thought. Hosta, a genus with a very different habit and included within the Liliaceae, resembles yuccas and are obvious similarities (and presumed relationships) between Agave and Manfreda. In addition, Manfreda is closely rela... There are over 10,000 different types of succulents around the world. Many are continually being crossbred by nurseries worldwide, with new cultivars appearing on the market nearly every week! It is sometimes difficult to identify the exact type of succulent if it is a hybrid species, especially if it is a second or a third generation hybrid. Many of a hybrid succulent's features and characteristics will closely resemble its parent species, making succulent identification a more difficult task compared to the past. Besides the succulent plant representative species like the Jade Plant, Burro's Tail, Echeveria Elegans, Snake Plant, and Aloe Vera, here are over 1,000 types of succulents with pictures for succulent identification, separated by their genera. The key features to note when identifying a succulent are its color, leaf shape, leaf size, and overall shape. Adenium is a genus of flowering plants in the family Apocynaceae first described as a genus in 1819. It is native to Africa and the Arabian Peninsula. Adeniums are appreciated for their colorful flowers, but also for their unusual, thick caudices. They can be grown for many years in a pot and are commonly used for bonsai.

Examples of Adenium succulents: Adenium arabicum Adenium boehmianum Adenium obesum Adenium swazicum Related Post:Desert Rose Care Guide Adromischus is a genus of easily propagated leaf succulents from the Crassulaceae family. Adromischus are endemic to southern Africa. The name comes from the ancient Greek "adros" (meaning thick) and "mischos" (meaning stem). Examples of Adromischus succulents: Adromischus antidorcatum A. maculatus 'Calico Hearts' Adromischus marianae herrei A. cristatus 'Key Lime Pie' Related Post:30 Exquisite Adromischus Species [With Pictures] Aeonium, the tree houseleeks, is a genus of about 35 species of succulent, subtropical plants of the family Crassulaceae. Many species are popular in horticulture. The genus name comes from the ancient Greek "aionos" (ageless). While most of them are native to the Canary Islands, some are found in Madeira, Morocco, and in East Africa (for example in the Semien Mountains of Ethiopia). Examples of Aeonium succulents: Aeonium arboreum Aeonium kiwi Aeonium Zwartkopf Aeonium 'Mardi Gras' Related Posts:58 Stunning Aeonium Varieties [With Pictures] Agave is a genus of monocots native to the hot and arid regions of the Americas, although some Agave species are also native to tropical areas of South America. The genus Agave is primarily known for its succulent and xerophytic species that typically form large rosettes of strong, fleshy leaves.

Examples of Agave succulents: Agave blue glow Agave lophantha quadricolor Maguey Chato Agave Agave Victoria Reginae Related Posts:70+ Types of Agave [With Pictures] Albuca is a genus of flowering plants in the family Asparagaceae, subfamily Scilloideae.

The genus is distributed mainly in southern and eastern Africa, with some species occurring in northern Africa and the Arabian Peninsula. Plants of the genus are known commonly as slime lilies. These are perennial herbs growing from bulbs.

Examples of Albuca succulents: Albuca contrata Albuca namaquensis Albuca sp augrabies hills Albuca spiralis Aloe is a genus containing over 500 species of flowering succulent plants.

The genus is native to tropical and southern Africa, Madagascar, Jordan, the Arabian Peninsula, and various islands in the Indian Ocean (Mauritius, Réunion, Comoros, etc.). A few species have also become naturalized in other regions (Mediterranean, India, Australia, North and South America, Hawaiian Islands, etc.). Examples of Aloe succulents: Aloe Blizzard Aloe Christmas Carol Aloe Delta Dawn Aloe Juvenna Related Post:40+ Interesting Types Of Aloe Plants [With Pictures] Aloinopsis is a genus of ice plants from South Africa. Aloinopsis species have a rather large tuberous root system and are occasionally cultivated for their looks. They also tend to grow more "heads" when they are raised. Most Aloinopsis are winter growers and can react badly to too much water at the wrong time. Examples of Aloinopsis succulents: Aloinopsis luckhoffii Aloinopsis malherbei Aloinopsis rosulatum Aloinopsis schooneesii x Alworthia are succulent plants that are hybrid crosses between Aloe and Haworthia.

Examples of x Alworthia succulents: Alworthia Pentagona 'Black Gem' Alworthia 'Black Gem' Variegata Anacampseros is a genus comprising about a hundred species of small perennial succulent plants native to Southern Africa. Plants in the genus Anacampseros are perennial. In habit they are small undershrubs or sprawling herbs that may form dense mats.

Mature plants of many of the species form a small caudex or a tuberous root-stock. Examples of Anacampseros succulents: Anacampseros retusa Anacampseros rufescens Anacampseros telephiastrum variegata 'Sunrise' Anacampseros telephiastrum Related Post:25 Types of Anacampseros [With Pictures] The genus Antegibbaeum is a flowering succulent plant in the family Aizoaceae. There is only one species in the monospeciefic genus Antegibbaeum. Example of Antegibbaeum succulent: Antegibbaeum fissoides Antimima is a succulent plant genus in the family Aizoaceae, indigenous to South Africa and Namibia. The Greek word "antimimos" means "imitating", and refers to the similarity some species have to the different genus Argyroderma. The species of this varied genus typically grow as dense cushions or mats. Otherwise, Antimima species are very similar in their superficial looks to the related genus Ruschia, with 3-sided waxy succulent leaves, and pink or white flowers.

Examples of Antimima succulents: Antimima argentea Antimima dekenahii Antimima evoluta Antimima turneriana Aptenia is a small genus of flowering plants in the family Aizoaceae. They are native to southern Africa. These are succulent subshrubs growing from a system of fibrous, often fleshy roots. There are only 4 species of Aptenia succulents.

Examples of Aptenia succulents: Aptenia cordifolia Aptenia geniculiflora Aptenia Haeckeliana Aptenia lancifolia Related Posts:4 Types of Aptenia [With Pictures] Argyroderma is a genus of flowering succulent plants in the iceplant family Aizoaceae from South Africa. Examples of Argyroderma succulents: Argyroderma crateriforme Argyroderma fissum Argyroderma gifberg Argyroderma pearsonni Astridia is a genus of plants in the family Aizoaceae. It is named after the wife Astrid of the German botanist and archaeologist Gustav Schwantes (1881 – 1960). Examples of Astridia succulents: Astridia citrina Astridia hallii Astridia herrei Astridia longifolia Astroloba is a genus of flowering plants in the family Asphodelaceae, subfamily Asphodeloideae, native to the Cape Province of South Africa. Examples of Astroloba succulents: Astroloba bullulata Astroloba congesta Astroloba corrugata Astroloba foliolosa x Astroworthia is a hybrid genus between Astroloba and Haworthia. Example of x Astroworthia succulent: Astroworthia bicarinata Avonia is a genus of succulent plants in the Portulacaceae family. It was formerly a subgenus of Anacampseros and became its own genus in 1994. Examples of Avonia succulents: Avonia buderiana Avonia papyracea Avonia quinaria alstonii Avonia recurvata The genus Bergeranthus is a member of the Aizoaceae family, in the major group Angiosperms (flowering plants). It is a small genus of 10 species that all occur in the Eastern Cape of South Africa.

The genus Bergeranthus occurs only in the spring and autumn rainfall area of the Eastern Cape Province, South Africa. Examples of Bergeranthus succulents: Bergeranthus concavus Bergeranthus katbergensis Bergeranthus scapigera Bergeranthus vespertinus Bijlia is a genus of flowering succulent plants in the ice plant family Aizoaceae from South Africa. The genus Bijlia is restricted to the Little Karoo in the Western Cape Province, South Africa. Examples of Bijlia succulents: Bijlia cana Bijlia dilatata Bijlia tugwelliae Braunsia is a genus of flowering succulent plants in the ice plant family Aizoaceae from the southwestern part of the Western Cape Province in South Africa. Examples of Braunsia succulents: Braunsia apiculata Braunsia maximiliani Braunsia stayneri Braunsia vanrensburgii Callisia is a genus of flowering plants in the spiderwort family, Commelinaceae. Members of the genus are commonly known as roselings. It is native to the Western Hemisphere from the southern United States to Argentina. The generic name is derived from the Greek word καλλον, meaning "beauty." Examples of Callisia succulents: Callisia gentlei var. elegans Callisia micrantha Callisia navicularis 'Chain Plant' Callisia repens 'Turtle Vine' Carruanthus is a genus of flowering plants from the ice plant family Aizoaceae. Examples of Carruanthus succulents: Carruanthus peersii Carruanthus ringens Cephalophyllum is a genus of flowering plants from the ice plant family Aizoaceae. Examples of Cephalophyllum succulents: Cephalophyllum diversiphyllum Cephalophyllum ebracteatum Cephalophyllum pillansii Cephalophyllum tricolorum Related Post:27 Types Of Cephalophyllum Succulents [With Pictures] Ceropegia is a genus of plants within the family Apocynaceae, native to Africa, southern Asia, and Australia. They have many common names including lantern flower, parasol flower, parachute flower, bushman's pipe, string of hearts, snake creeper, wine-glass vine, rosary vine, and necklace vine. Examples of Ceropegia succulents: Ceropegia hayghartii Ceropegia occulta Ceropegia rendallii Ceropegia woodii Cheiridopsis is a genus that consists of 100 species of flowering succulent perennial plants, native to semi-arid regions in the far west of Namibia and South Africa. Examples of Cheiridopsis succulents: Cheiridopsis candidissima 'Lobster Claws' Cheiridopsis cigarettifera Cheiridopsis pillansii Cheiridopsis speciosa Related Post:16 Unique Types of Cheiridopsis Succulents [With Pictures] Conophytum is a genus of South African and Namibian succulent plants that belong to the family Aizoaceae. The name is derived from the Latin conus and Greek phytum. The plants are also known as knopies, waterblasies, sphaeroids, conos, cone plants, dumplings, or button plants. Examples of Conophytum succulents: Conophytum calculus Conophytum corniferum Conophytum flavum Conophytum friedrichiae triebneri Related Post:143 Types of Conophytum [With Pictures] Corpuscularia is a small genus of succulent plants in the ice plant family Aizoaceae, from the coastal belt of the southern Cape, South Africa. Examples of Corpuscularia succulents: Corpuscularia lehmannii Corpuscularia taylori Cotyledon is a genus of succulent plants in the Crassulaceae family. Mostly from Southern Africa, they also occur throughout the drier parts of Africa as far north as the Arabian peninsula. Members of the genus are shrublets, generally succulent, with fleshily woody, brittle stems and persistent succulent leaves. Examples of Cotyledon succulents: Cotyledon orbiculata flanaganii Cotyledon pendens Cotyledon tomentosa Cotyledon orbiculata oophylla Crassula is a genus of succulent plants containing about 200 accepted species, including the popular jade plant (Crassula ovata).

They are members of the stonecrop (Crassulaceae) family and are native to many parts of the globe, but cultivated varieties originate almost exclusively from species from the Eastern Cape of South Africa. Examples of Crassula Succulents: Crassula 'Calico Kitten' Crassula campfire Crassula nudicaulis 'Devil's Horns' Crassula ovata crosbys compact Related Posts:22 Popular Kinds of Jade Plants [With Pictures]12 Crassula Lower Classifications [With Pictures] × Cremnosedum is a hybrid genus produced from crosses involving the genera Cremnophila and Sedum. Example of x Cremnosedum succulent: Cremnosedum 'Little Gem' Dinteranthus is a genus of plants in the family Aizoaceae.

It occurs in the arid northwestern parts of the Northern Cape Province, South Africa and the southeastern parts of Namibia. Dinteranthus is an intriguing solitary or clumping plant with attractive bodies and flowers that are very similar to Lithops in shape and colors but with no apparent dormant period. Its sunken growth form is understood as a development parallel to that in Lithops. Examples of Dinteranthus succulents: Dinteranthus microspermus Dinteranthus pole-evansii Dinteranthus puberulus Dinteranthus vanzylii Dischidia is a genus of plants in the family Apocynaceae. They are epiphytes native to tropical areas of China, India and most areas of Indo-China. Dischidia formosana Dischidia ovata Dischidia platyphylla Dischidia ruscifolia Related Posts:16 Types of Dischidia [With Pictures] Dudleya is a genus of succulent perennial plants, consisting of about 45 species in southwestern North America. Many plants in the Dudleya genus were formerly classified as Echeveria. Dudleya species are widespread in their range, typically found in rock outcroppings, cliff faces, or road cuts, where their leaves help them store water in a setting too dry for most types of plants. Most are small and inconspicuous when not in bloom.

The genus is named after William Russell Dudley, the first head of the botany department at Stanford University. In horticulture, Dudleya should be planted at an angle. This allows accumulated water to drain from the nestlike center of the plant, thus preventing microbial decay.

Examples of Dudleya succulents: Dudleya anthonyi Dudleya brittonii Dudleya palmeri Dudleya stolonifera Related Posts:52 Types of Dudleya [With Pictures] Dyckia is a genus of plants in the family Bromeliaceae, subfamily Pitcairnioideae.

Considered to be the most ancient lineage of bromeliads, they are endemic to arid and high-altitude regions of Brazil and the central part of South America.

Examples of Dyckia succulents: Dyckia alba Dyckia brevifolia Dyckia marnier-lapostollei Dyckia platyphylla Ebracteola is a small genus of flowering succulent plants in the ice plant family Aizoaceae. Examples of Ebracteola succulents: Ebracteola candida Ebracteola Fulleri Ebracteola wilmaniae Ebractolea montis-molkei Echeveria is a large genus of flowering plants in the family Crassulaceae, native to semi-desert areas of Central America, Mexico and northwestern South America. Many Echeveria species are popular as ornamental garden plants. They are drought-resistant, although they do better with regular deep watering and fertilizing. Most will tolerate shade and some frost, although hybrids tend to be less tolerant. Most lose their lower leaves in winter; as a result, after a few years, the plants lose their compact appearance and need to be re-rooted or propagated. In addition, if not removed, the shed leaves may decay, harboring fungus that can then infect the plant. Examples of Echeveria succulents: Echeveria 'Blue Heron' Echeveria 'Cassyz Winter' Echeveria domingo Echeveria nodulosa Related Post:160+ Unique Echeveria Types [With Pictures] Echidnopsis is a genus of succulent, cactus-like plants in the family Apocynaceae.

They are native to eastern Africa and the Arabian Peninsula. Examples of Echidnopsis succulents: Echidnopsis cereiformis Echidnopsis ericiflora Echidnopsis scutellata Echidnopsis sharpei Euphorbia is a very large and diverse genus of flowering plants, commonly called spurge, in the spurge family.

There are over 2000 species of Euphorbias in the world.

They range from annual weeds to trees. They all have latex and a unique flower structure. A significant percentage is succulent, but they are mostly originating from Africa and Madagascar.

The Euphorbias are named after a Greek surgeon called Euphorbus. He was a physician of Juba II who was the Romanised king of a North African kingdom and is supposed to have used their milky latex as an ingredient for his potions. Examples of Euphorbia succulents: Euphorbia anoplia tanzania Euphorbia mammillaris Variegata Euphorbia monstrose Euphorbia obesa Related Post:200+ Types of Euphorbia Plants [With Pictures] The popular genus Faucaria is found in the Eastern Cape Province into the Little and Great Karoo of the Western Cape Province. The genus is characterized by its triangular, mottled leaves, the margins of which have rows of soft teeth that curve inward. The flower color ranges from yellow to white and even pink. The various species make excellent pot subjects and have been cultivated in Europe for over three hundred years. All species are active in summer. Some species, such as F. tigrina, are quite hardy, while others can be prone to stem rot. Plants are easily propagated by seed. Examples of Faucaria succulents: Faucaria candida Faucaria hooleae Faucaria tigrina Faucaria tuberculosa 'Sato' Fenestraria is a monotypic genus comprising only one species and one subspecies. On each leaf of this plant, there is a transparent window-like area at the top, it is for these windows (in Latin "fenestra") that the genus name is derived from. Commonly called "Baby Toes", Fenestaria has small club-shaped leaves with fenestrate ends and form large clumps by offsetting. Flower colors range from pure white to rich golden yellow. The var. aurantiaca distinguish for the flowers that are bright golden yellow colored (never white). Examples of Fenestaria succulents: Fenestraria aurantiaca Fenestraria rhopalophylla Related Post:3 Types of Fenestraria [With Pictures] Frithia is a genus of succulent plant in the family Aizoaceae, indigenous to several small rocky areas in the vicinity of Gauteng Province, South Africa. They are low-growing evergreen succulent perennials with erect, club-shaped leaves with a clear window at the apex, and solitary, daisy-like red to purple flowers in late winter. Examples of Frithia succulents: Frithia humilis Frithia pulchra Furcraea plants are originally from the tropical regions of both Americas but today, you can find them in many different parts of the world like Thailand, India, Portugal and Australia thanks to the love everyone seems to have for domestic gardening. Furcraea foetida (Green Aloe) is the most commonly grown domestic species and smells like rotten leaves.

Examples of Furcraea succulents: Furcraea foetida variegata Furcraea gigantea variegata Furcraea hexapetala Furcraea macdougallii Related Post:18 Types of Furcraea False Agave [With Pictures] x Gasteraloe is a genus of hybrid plants, from mixtures of species from the Aloe or Aristaloe and Gasteria genera. x Gasteraloe hybrids are typically stemless or almost stemless. Their succulent leaves, which are usually spotted or marked and have toothed margins, form rosettes. Examples of x Gasteraloe succulents: x Gasteraloe beguinii lizard tail x Gasteraloe 'Green Gold' x Gasteraloe 'Royal Highness' x Gasteraloe variegata x Gasterhaworthia is a hybrid genus produced from crosses involving the genera Gasteria and Haworthia. Examples of x Gasterhaworthia succulents: x Gasterhaworthia bayfieldii x Gasterhaworthia Hayashi x Gasterhaworthia longiasii x Gasterhaworthia Ventescar Gasteria is a genus of succulent plants, native to South Africa. It sometimes goes by the colloquial name "ox tongue," after the long, rough texture of the leaves. The plant is named for the sac-like shape of its flowers, which are supposed to resemble a stomach.

Examples of Gasteria succulents: Gasteria armstrongii Gasteria bicolor lilliputana Gasteria glomerata 'Ox Tongue' Gasteria Little Warty Related Posts:9 Rare Types of Gasteria Succulents [With Pictures] Gibbaeum is a genus of about 21 species of small succulent plants of the family Aizoaceae, indigenous to the Little Karoo region of South Africa. The name "Gibbaeum" comes from the Latin gibbosus (hunchback). Examples of Gibbaeum succulents: Gibbaeum album Gibbaeum comptonii Gibbaeum dispar Gibbaeum pilosulum Glottiphyllum is a genus of about 57 species of succulent subtropical plants of the family Aizoaceae. It is closely related to the Gibbaeum and Faucaria genera. The plants of the genus Glottiphyllum are small and characterized by long fleshy leaves, oblong, sometimes wider or more cylindrical, depending on the species: it is the shape of the leaves that gives the name to this genre. The stems are short, not particularly hard, and give the plant a drooping posture: the plant is well suited in fact to be grown in hanging baskets or pots, from which the long leaves fall down with a very pleasant decorative effect. The flowers are yellow, shaped like a daisy and rather large; the bloom is in winter and the flowers tend to open only in the late afternoon. The length of the leaves, which gives the measure of the plant as a whole, since it is the most visible part, can reach 10-12 cm. Examples of Glottiphyllum succulents: Glottiphyllum depressum Glottiphyllum latifolium Glottiphyllum longum Glottiphyllum nelii Graptopetalum (leatherpetal) is a plant genus of the family Crassulaceae. They are perennial succulent plants and native to Mexico and Arizona. They grow usually in a rosette. There are around 19 species in this genus. The name for the genus comes from the Greek words "graptos", meaning "marked" or "inscribed" and "petalon", meaning "petals" for the markings on the flower petals of many of the species. Examples of Graptopetalum succulents: Graptopetalum pachyphyllum Graptopetalum amethystinum Graptopetalum paraguayense Graptopetalum superbum Related Post:20 Types Of Graptopetalum [With Pictures] x Graptosedum are succulent plants that are hybrid crosses between Graptopetalum and Sedum. Examples of x Graptosedum succulents: x Graptosedum California Sunset x Graptosedum Darley Sunshine x Graptosedum Vera Higgins X Graptosedum 'Ghosty' Related Post:5 Special Graptosedum Varieties [With Pictures] x Graptoveria are succulent plants that are hybrid crosses between Graptopetalum and Echeveria. Examples of x Graptoveria succulents: Graptoveria Amethorum x Graptoveria Silver Star Graptoveria Fred Ives Graptoveria Opalina Related Post:20 Unique Graptoveria Types [With Pictures] Haworthia is a large genus of small succulent plants endemic to Southern Africa (Mozambique, Namibia, Lesotho, Swaziland and South Africa).

Like the aloes, they are members of the subfamily Asphodeloideae and they generally resemble miniature aloes, except in their flowers, which are distinctive in appearance. They are popular garden and container plants. The leaves can be hard, soft, long, short, stacked, grass-like, and in a full range of colors with windows, lines, flecks, bumps, bands, pearls, hairs, spines, and rasps. Haworthia taxonomy, as indicated by the sheer number of sub-specific varieties, is a complicated and far from a settled matter. Examples of Haworthia succulents: Haworthia cooperi Haworthia cymbiformis obtusa Haworthia limifolia Twister Haworthia venosa tessellata Related posts:14 Haworthia Types [With Pictures] Hesperaloe, or false yucca, refers to a whole genus of flowering succulents that belong to the family Asparagaceae and subfamily Agavoideae. Hesperaloe gets its name from "hesperos", which means "western" in Greek and its second half, "aloe", because of its resemblance to the aloe plant. Hesperaloe campanulata Hesperaloe chiangii Hesperaloe funifera Hesperaloe parviflora Related Posts:7 Types of Hesperaloe [With Pictures] The genus Huernia consists of perennial, stem succulents from Eastern and Southern Africa and Arabia, first described as a genus in 1810. The flowers are five-lobed, usually somewhat more funnel- or bell-shaped than in the closely related genus Stapelia, and often striped vividly in contrasting colors or tones, some glossy, others matte and wrinkled depending on the species concerned. Frequently the flowers are colored a variation of red, yellow or brown. The genus is considered close to the genera Stapelia and Hoodia. Phylogenetic studies have shown the genus to be monophyletic, and most closely related to the genus Tavaresia, and to a widespread branch of stapeliads comprising the genera Orbea, Piaranthus and Stapelia. Examples of Huernia succulents: Heurnia primulina Heurnia zebrina Huernia Mccoyi Huernia thuretii Related Post:46 Types of Huernia [With Pictures] Ihlenfeldtia is a succulent genus from the ice plant family of Aizoaceae. Both species of Ihlenfeldtia occur in the Northern Cape Province, South Africa. The compact plants have keeled three-sided leaves and showy flowers. They resemble Cheiridopsis species but the seed capsules resemble those of Titanopsis. They blossom in early spring and the flowers open midday and close at dusk. They need warmth, well-drained soil for succulents, and plenty of water during their active season in autumn and winter. They are easily propagated by seed. Examples of Ihlenfeldtia succulents: Ihlenfeldtia excavata Ihlenfeldtia vanzylii Jensenobotrya is a genus of succulent plant in the family Aizoaceae that is endemic to Namibia. Its natural habitat is rocky areas. It grows at Dolphin Head in Spencer Bay where it obtains moisture from the saline mists.

It is threatened by habitat loss. Jensenobotrya lossowiana is the only species of genus Jensenobotrya. Example of Jensenobotrya succulent: Jensenobotrya lossowiana Juttadinteria genus is an Aizoaceae from Namibia's desert areas and savannahs. They are small plants: they reach 20-25 cm in height, they have slow growth.

From the green stem, a series of triangular, succulent (as well as the stem, the rest) and elongated leaves come out. They grow paired, placing themselves on opposite sides of the stem. The flowers are daisy-shaped, mostly white, and flourish in autumn and winter: due to the origin of the plant, below the equator, its life cycle is in fact inverted. Examples of Juttadinteria succulents: Juttadinteria albata Juttadinteria deserticola Juttadinteria kovisimontana Juttadinteria simpsonii Kalanchoe is a genus of about 125 species of tropical, succulent flowering plants in the family Crassulaceae, mainly native to Madagascar and tropical Africa. Most are shrubs or perennial herbaceous plants, but a few are annual or biennial. The largest, Kalanchoe beharensis from Madagascar, can reach 6 m (20 ft) tall, but most species are less than 1 m (3 ft) tall. Kalanchoes are characterized by opening their flowers by growing new cells on the inner surface of the petals to force them outwards, and on the outside of the petals to close them. Kalanchoe flowers are divided into 4 sections with 8 stamens. The petals are fused into a tube, in a similar way to some related genera such as Cotyledon. Examples of Kalanchoe succulents: Kalanchoe Lavendar Scallops Kalanchoe Thyrsiflora 'Flapjack' Kalanchoe Tomentosa Chocolate Soldier Kalanchoe x houghtonii Related Posts:6 Peculiar Mother of Thousands Varieties [With Pictures]40+ Kalanchoe Lower Classifications [With Pictures] Lampranthus is a fairly large genus with 100 to 150 species coming from South Africa. It provides some of the most spectacular displays of bright flowers from the succulent world and is widely used as ground cover, either annual or perennial as the climate allows. Several species are used for landscaping and vary from shrubby to trailing. All the species tend to become woody as they age.

Lampranthus aurantiacus Lampranthus densifolius Lampranthus falcatus Lampranthus glaucus Related Post:67 Types of Lampranthus [With Pictures] Lapidaria is a monotypic genus of dwarf succulent plants in the family Aizoaceae. The only species it contains is Lapidaria margaretae, also known as the Karoo rose. Example of Lapidaria succulent: Lapidaria margaretae Larryleachia is a genus of stapeliad succulent flowering plants in the family Apocynaceae. Phylogenetic studies have shown the genus to be monophyletic, and most closely related to the stapeliad genera Richtersveldtia and Notechidnopsis. Marginally more distantly related is a sister branch of related genera including Lavrania and Hoodia.

Examples of Larryleachia succulents: Larryleachia cactiformis Larryleachia dinteri Larryleachia felina Larryleachia marlothii Lenophyllum is a genus of flowering plants in the orpine family, Crassulaceae. The roughly seven species it contains are distributed in Texas in the United States and northeastern Mexico. The name is derived from the Ancient Greek words ληνός (lenos), meaning "trough", and φύλλον (phyllon), meaning "leaf." Examples of Lenophyllum succulents: Lenophyllum acutifolium Lenophyllum guttatum Lenophyllum obtusum Lenophyllum reflexum Lithops (commonly called "flowering stones" or "living stones") are true mimicry plants: their shape, size and color cause them to resemble small stones in their natural surroundings. The plants blend in among the stones as a means of protection. Lithops is a genus of succulent plants in the ice plant family, Aizoaceae. Members of the genus are native to southern Africa. Examples of Lithops succulents: Lithops aucampiae Lithops lesliei albinaca Lithops olivacea Lithops salicola Related Posts:Lithops Life Cycle, Characteristics and Care x Mangave is an intergeneric hybrid derived from crosses of two North American genera, Agave and Manfreda.

x Mangave is often employed as an ornamental plant in dry environments, as the hybrid possesses traits of durability found in both Agave and Manfreda. The plant appears as a compact, symmetrical agave with succulent leaves. It grows up to four feet high and six feet wide. The leaves of the plant are stiff, fragile, and variable in foliage color and patterns. × Mangave flowers in June and July, producing brown flowers. × Mangave inherits the drought-resisting traits of both parent plants. They can resist high temperatures and direct sunlight, but prefer shade. The plant can survive below-freezing temperatures but can become damaged if the temperature drops below -6 degrees Celsius. Examples of x Mangave succulents: x Mangave 'Bloodspot' x Mangave 'Freckles & Speckles' x Mangave 'Inkblot' x Mangave 'Macho Mocha' Monanthes is a genus of small, succulent, subtropical plants of the family Crassulaceae. The about ten species are mostly endemic to the Canary Islands and the Savage Islands, with some found on Madeira. Monanthes are not frost-resistant. They are linked with the genera Sempervivum, Greenovia, Aichryson and Aeonium, which is obvious from their similar flowers. Examples of Monanthes succulents: Monanthes brachycaulos Monanthes muralis Monanthes pallens Monanthes polyphylla The plant genus Monilaria belongs to the Aizoaceae family or the fig-marigold family. The Monilaria are succulents native to South Africa. Examples of Monilaria succulents: Monilaria chrysoleuca Monilaria globosa Monilaria moniliformis Monilaria obconica Neohenricia is a genus of succulent plants in the family Aizoaceae. Neohenricia is a small (tiny) cousin of similar-looking species like Titanopsis, Aloinopsis, Rhinephyllum all with rough leaves but its tiny flowers on summer nights exhale a powerful tropical fragrance, perhaps the finest odor of all Mesembryanthemum — mixture of pineapple, coconut, and something musky. The collective scent can be detected many meters apart. What is really interesting is that at the beginning the color of the flowers is whitish or greenish not lilac or purple. But after a day or two, it becomes normal purple color. Examples of Neohenricia succulents: Neohenricia sibbettii Neohenricia spiculata Odontophorus is a genus of succulent plants in the family Aizoaceae. Examples of Odontophorus succulents: Odontophorus angustifolius Odontophorus marlothii Odontophorus nanus Odontophorus pusillus Orbea is a genus of flowering plants of the family Apocynaceae, first described as a genus in 1812. It is native to Africa. Orbeas are leafless, glabrous, succulent perennials that form compact to diffuse clumps. They branch from the base and often arise from rhizomatous rootstocks. The stems are erect to prostrate and sometimes exhibit a creeping nature. The four-angled stems are usually prominently sharp-toothed, with a soft tip. They usually have well-developed, tooth-like projections (tubercles) on the flanks and are always mottled purplish maroon on a green background, especially distinct when exposed to the sun. At the base of the tubercles, a pair of stipular denticles are found and the stems are without any well-developed leaves. Examples of Orbea succulents: Orbea lutea Orbea Variegata Orbea verrucosa Orbea woodii Orostachys is a genus of the succulent family Crassulaceae (stonecrop family) that contains about 15 species. It is a biennial herb growing in China, Japan, Kazakhstan, Korea, Mongolia, Russia.

Eight species occur in China. Orostachys are the most morphologically distinct member of subfamily Sedoideae, characterized by a semi-rosette habit, and spadix-like terminal, narrowly pyramidal to the cylindrical inflorescence.

leaves are linear to ovate, often with dull purple dots.

The stem arrangement is alternate, forming a crowded cauline rosette. The roots are fibrous and it has no rhizome. The flowering stem is solitary, arising from the center of the rosette in the second year. Examples of Orostachys succulents: Orostachys boehmeri Orostachys erubescens Orostachys fimbriata Orostachys japonica Oscularia is a genus of succulent flowering plants in the family Aizoaceae, native to semi-arid and rocky habitats in the Western Cape of South Africa. The most superficially recognizable feature of the genus is the strange shape of the leaves, which are grey-green and waxy. They are triangular in cross-section (3 angled) and can be sickle, club or mouth shaped. The name "Oscularia" actually means "group of tiny mouths" in Latin, and refers to the appearance of the toothed leaves in some species. The stems are often red, and the leaves can become red too during times of drought. Abundant, almond-scented, daisy-like white or pink flowers appear throughout the summer. Examples of Oscularia succulents: Oscularia caulescens Oscularia deltoides Oscularia major Oscularia pedunculata Othonna is a genus of African plants in the Asteraceae family. These are evergreen or deciduous geophytes, dwarf succulents or shrubs concentrated in the Western Cape Province of South Africa and also in southern Namibia. A few species occur in summer rainfall parts of southern Africa. The genus is closely allied to Senecio and can be distinguished principally by details of the involucre. Examples of Othonna succulents: Othonna acutiloba Othonna arbuscula Othonna cacalioides Othonna capensis Pachyphytum is a small genus of succulents in the Crassulaceae family, native from Mexico, which lands at 600 to 1,500 meters (2,000 to 4,900 ft) high. The name comes from the ancient Greek pachys (=thick) and phyton (=plant) because of the shape of the leaves.

Examples of Pachyphytum succulents: Pachyphytum compactum Pachyphytum hookeri Pachyphytum longifolium Pachyphytum oviferum Related Posts:14 Types of Pachyphytum [With Pictures] × Pachyveria is a hybrid cross between Pachyphytum and Echeveria. They typically grow to 2–6 inches. Examples of xPachyveria succulents: Pachyveria 'Blue Mist' Pachyveria 'Dr. Cornelius' Pachyveria glauca 'Little Jewel' Pachyveria haagei Related Post:9 Unique Pachyveria Species [With Pictures] Peperomia (radiator plant) is one of the two large genera of the family Piperaceae, with more than 1000 recorded species. Most of them are compact, small perennial epiphytes growing on rotten wood. Peperomia are wonderful plants to grow indoors as they have so many features that make them ideal houseplants. Examples of Peperomia succulents: Peperomia Caperata Peperomia dolabriformis Peperomia ferreyrae Peperomia Graveolens Pleiospilos is a genus of succulent flowering plants of the family Aizoaceae, native to South Africa. The name is derived from the Greek pleios "many" and spìlos "spot". The plants are characterized by their highly succulent, rock-like leaves that are heavily dotted. Pleiospilos nelii, perhaps the most common member of the genus in cultivation, blooms in the winter, while all other species flower in the autumn. The plants are active in the summer and should be kept dry in the winter, except the popular Pleiospilos nelii, which requires water throughout the winter if it is to do well. They are ideal pot subjects and require a sunny window, but can burn if care is not taken. They are susceptible to red spider mites. Examples of Pleiospilos succulents: Pleiospilos bolusii Pleiospilos compactus Pleiospilos nelii Pleiospilos nelii 'Royal Flush' Related Posts:9 Types of Pleiospilos [With Pictures] Portulaca is the type genus of the flowering plant family Portulacaceae, comprising about 40-100 species found in the tropics and warm temperate regions. They are also known as purslanes. Common purslane is widely considered an edible plant, and in some areas it is invasive. Portulaca is especially well-suited for growing in containers on patios and decks, with its fleshy, succulent leaves, red stems, and colorful cactus-like flowers in shades of red, orange, yellow, pink, purple and white. These plants prefer hot, dry, almost desert-like conditions. Examples of Portulaca succulents: Portulaca lutea Portulaca molokiniensis Portulaca oleracea Portulaca umbraticola Portulacaria afra (known as elephant bush, dwarf jade plant, pork bush and spekboom in Afrikaans) is a small-leaved succulent plant found in South Africa. These succulents commonly have a reddish stem and leaves that are green, but also a variegated cultivar is often seen in cultivation. Examples of Portulacaria succulents: Portulacaria afra Portulacaria afra macrophylla Portulacaria afra variegata Portulacaria armiana Prenia is a genus of succulent plants in the ice plant family Aizoaceae. The species Prenia vanrensburgii is a fast-growing, short-lived perennial succulent, endemic to the sunny, windy, littoral seafront or shoreline zone in the coastal parts of the eastern part of the Western Cape.

It is a useful ornamental plant, ideal for seafront gardens. Examples of Prenia succulents: Prenia pallens Prenia relaxata Prenia sladeniana Prenia vanrensburgii Pseudolithos is a genus of succulent flowering plants of the family Apocynaceae, indigenous to Somalia, Yemen and Oman. The plants were first described as a genus in 1965; the name "Pseudo-lithos" means "false-stone" and refers to their pebble-like appearance. All species in this genus are highly succulent, highly reduced, and exhibit tessellation on their stems' surface. Their small flowers appear on the spherical body's surface. Examples of Pseudolithos succulents: Pseudolithos cubiformis Pseudolithos harardheranus Pseudolithos mccoyi Pseudolithos migiurtinus Rabiea is a low-growing mat-forming succulent from South Africa. It is a genus of succulent plants in the family Aizoaceae. Examples of Rabiea succulents: Rabiea albinota Rabiea albipuncta Rabiea comptonii Rabiea difformis Rhombophyllum is a genus of succulent plants which contains approximately 3 to 6 species and belongs to the family of the Aizoaceae. It is native to South Africa, mainly to subtropical thicket vegetation in the Eastern Cape. However, the genus has also been observed in the south-eastern Northern Cape. Examples of Rhombophyllum succulents: Rhombophyllum dolabriforme Rhombophyllum nelii Rhombophyllum rhomboideum Rosularia is a small genus of the family Crassulaceae. It includes about 28-35 species from Europe, the Himalayas, and northern Africa. Rosularia grows in small rosettes with flat green succulent foliage, much like hens and chicks. Depending on the variety, Rosularia foliage often has red, purple or yellow margins that may be covered in tiny hairs, called cilia. When present, these small hairs help plants capture water and nutrients and transport them to the root zone. Rosularia chrysantha Rosularia platyphylla Rosularia sedoides Rosularia serpentinica Sansevieria, commonly known as Snake Plant or Mother-in-law's tongue, is a historically recognized genus of flowering plants in the Dracaenaceae family. Currently included in the genus Dracaena, it is native to Africa, Madagascar and southern Asia. Examples of Sansevieria succulents: Sansevieria pinguicula Sansevieria trifasciata 'MoonGlow' Sansevieria trifasciata 'Twister' Sansevieria 'Whale Fin' Related Posts:32 Types of Snake Plant: Sansevieria Varieties Identification [With Pictures] × Sedeveria is a hybrid cross between Sedum and Echeveria. Examples of x Sedeveria succulents: Sedeveria 'Letizia' Sedeveria Blue Elf Sedeveria Harry Butterfield Sedeveria Lilac Mist Related Post:14 Fantastic Sedeveria Hybrid Succulents [With Pictures] Sedum is a large genus of flowering plants in the family Crassulaceae, members of which are commonly known as stonecrops. The genus has been described as containing up to 600 species, subsequently reduced to 400–500. The plants vary from annual and creeping herbs to shrubs. Sedum is a genus that includes annual, biennial, and perennial herbs. They are characterized by succulent leaves and stems. The extent of morphological diversity and homoplasy make it impossible to characterize Sedum phenotypically. Examples of Sedum succulents: Sedum 'Little Missy' Sedum adolphii Sedum pachyphyllum 'Jelly Bean' Sedum spurium 'Dragon's Blood' Related Posts:130+ Attractive Sedum Varieties [With Pictures] Sempervivum is a genus of about 40 species of flowering plants in the Crassulaceae family, commonly known as houseleeks. Other common names include liveforever (the source of the taxonomical designation Sempervivum, literally "always/forever alive") and hen and chicks, a name shared with plants of other genera as well. They are succulent perennials forming mats composed of tufted leaves in rosettes. In favorable conditions, they spread rapidly via offsets, and several species are valued in cultivation as groundcover for dry, sunny locations. Sempervivums exist from Morocco to Iran, through the mountains of Iberia, the Alps, Carpathians, Balkan mountains, Turkey, the Armenian mountains, in the northeastern part of the Sahara Desert, and the Caucasus. Their ability to store water in their thick leaves allows them to live on sunny rocks and stony places in the mountain, subalpine and alpine belts. Most are hardy to US zone 4 and will handle warm climates to about zone 8. Examples of Sempervivum succulents: Sempervivum Calcareum Sempervivum Gunther Sempervivum Mahogany Sempervivum Red Lion Senecio is a genus of succulent plants in the family Asteraceae. The name of the genus means "old man". There are about 100 succulent Senecios. There are some large shrub varieties, but many are small, trailing plants or spreading ground covers. Examples of Senecio succulents: Senecio haworthii 'Cocoon' Senecio herreianus 'Raindrops' Senecio kleiniiformis 'Spearhead' Senecio peregrinus 'Dolphins' Related Posts:24 Senecio Lower Classifications [With Pictures] Sinocrassula is a genus of succulent, subtropical plants of the family Crassulaceae. The name "Sinocrassula" means "Chinese crassula". They come from the province Yunnan in the south of China, and also from the north of Burma. They grow at an altitude between 2.500 and 2.700 m. Sinocrassula presents rosettes of thin fleshy triangular brown leaves. The plants are up to 20 cm in height. They develop dense clumps. Sometimes, Sinocrassula shows monstrous forms. The inflorescence is a dense panicle up to 10–15 cm with whitish flowers and red-tipped petals. Sinocrassula densirosulata Sinocrassula indica Sinocrassula yunnanensis Stapelia is a genus of low-growing, spineless, stem succulent plants, predominantly from South Africa with a few from other parts of Africa. Known globally as African starfish flowers, and locally as carrion flowers, members of the genus Stapelia are usually characterized by their foul-smelling flowers reminiscent of the odor of rotting meat.

The Stapelia hairs, coloration and surface mimic decaying animal matter and attract mostly flies, which act as pollinators. The strong carrion scent is sometimes recognizable at a great distance, especially on hot afternoons.

Like other members of the Stapeliads, these succulents look like cactus and are often mistaken as such. Examples of Stapelia succulents: Stapelia divaricata Stapelia grandiflora Stapelia flavopurpurea Stapelia scitula Related Post:34 Types of Stapelia [With Pictures] Stapelianthus is a genus of flowering plants in the family Apocynaceae, first described as a genus in 1933. The entire genus is endemic to Madagascar and is concentrated in the far south of the island. The genus is defined by the unique corona structure of its flowers. Examples of Stapelianthus succulents: Stapelianthus decaryi Stapelianthus keraudreniae Stapelianthus madagascariensis Stapelianthus pilosus Stapeliopsis is a genus of succulent plants in the family Apocynaceae, native to southern Africa. Examples of Stapeliopsis succulents: Stapeliopsis neronis Stapeliopsis pillansii Stapeliopsis saxatilis Stapeliopsis urniflora Tavaresia is a genus of plants in the family Apocynaceae, first described as a genus in 1902. It is native to southern Africa. Examples of Tavaresia succulents: Tavaresia angolensis Tavaresia barklyi Tavaresia grandiflora Tavaresia meintjesii Titanopsis is a genus of about 10 species of succulent plants of the family Aizoaceae, indigenous to the arid regions of South Africa and Namibia. The name "Titanopsis" comes from the ancient Greek "titanos" (limestone) and "opsis" (looking like). Naturally growing in the Upper Karoo in South Africa, it is an attractive but quite unusual plant because of its formation. Examples of Titanopsis succulents: Titanopsis aloinopsis setifera Titanopsis calcarea Titanopsis fulleri Titanopsis hugo schlechteri Trachyandra is a genus of plant in the family Asphodelaceae, subfamily Asphodeloideae, first described as a genus in 1843. It is native to eastern and southern Africa, as well as to Yemen and Madagascar. Many of the species are endemic to South Africa. Examples of Trachyandra is a genus of plant in the family Asphodelaceae, subfamily Asphodeloideae, first described as a genus in 1843. It is native to eastern and southern Africa, as well as to Yemen and Madagascar. Many of the species are endemic to South Africa. Examples of Trachyandra succulents: Trachyandra falcata Trachyandra hirsuta Trachyandra tortilis Tradescantia (commonly known as Wandering Jew, Spiderwort or Indian paint) is a genus of 75 species of herbaceous perennial wildflowers in the family Commelinaceae, native to the New World from southern Canada to northern Argentina, including the West Indies. Examples of Tradescantia succulents: Tradescantia nanouk Tradescantia pallida Tradescantia spathacea Tradescantia zebrina Trichodiadema is a genus of succulent plants of the family Aizoaceae. Trichodiademas are small, short-stemmed succulents with small, elongated, alternating sections measuring 8 mm long. They are grey and green. At the apex of each alternating section is a ring of small bristles radiating around the center, that gives the appearance of a cactus areola. Trichodiadema looks surprisingly like a cactus but is not a cactus.

Its leaves are succulent and end in a circle of stiff hairs, giving the plant a similar appearance to some species in the cactus genus Mammillaria. Examples of Trichodiadema succulents: Trichodiadema bulbosum Trichodiadema densum Trichodiadema hallii Trichodiadema marlothii Tromotriche is a genus of plants in the family Apocynaceae. It is native to southern Africa. Its Greek name refers to the quivering hairs that surround the lobes of its flowers ("tromo", meaning "trembling" and "trichos", meaning "hair"). Examples of Tromotriche succulents: Tromotriche aperta Tromotriche longipes Tromotriche revoluta Tromotriche umdausensis Tylecodon is a genus of succulent plants in the family Crassulaceae, native to southern Africa. Until the late 1970s all these plants were included in the genus Cotyledon, but in 1978 Helmut Toelken of the Botanical Research Institute, Pretoria split them off into a genus of their own.

Tylecodon species are poisonous. Some of them are sufficiently hazardous to livestock to constitute an economic problem for stock farmers. Concerns also have been expressed on potential risks to collectors who handle the plants carelessly. The various species and even individual plants do however vary greatly in toxicity. Examples of Tylecodon succulents: Tylecodon grandiflorus Tylecodon sufultus Tylecodon sulphureus Tylecodon ventricosus Umbilicus is a genus of over ninety species of flowering plants in the family Crassulaceae. Examples of Umbilicus succulents: Umbilicus horizontalis Umbilicus intermedius Umbilicus oppositifolius Umbilicus rupestris Xerosicyos is a flowering plant genus of the family Cucurbitaceae. Its name comes from Greek xeros (meaning "dry") and sicyos ("cucumber"). There are three species, all endemic to Madagascar. Xerosicyos danguyi is a large liana with thick stems and round, gray succulent leaves. It is commonly called the "Silver Dollar Plant", "String of Coins Plant", "Dollar Vine" or "Penny Plant". Examples of Xerosicyos succulents: Xerosicyos danguyi Xerosicyos decaryi Xerosicyos perrieri Yucca is a genus of about 40 species of succulent plants in the agave subfamily of the asparagus family (Asparagaceae), native to southern North America.

Most species of yucca are stemless, with a rosette of stiff sword-shaped leaves at the base and clusters of waxy white flowers. Examples of Yucca succulents: Yucca aloifolia Yucca brevifolia (Joshua Tree) Yucca schidigera Related Post:61 Types Of Yucca Plants [With Pictures] Succulents have water-filled leaves. In fact, a "succulent" is just another name for a "xerophyte." A "xerophyte" is simply a plant that grows in dry soil. That doesn't mean it can't also grow in water – it just means it requires very little moisture. Sources: //www.theplantlist.org/ //www.succulentguide.com/ //www.giromagicactusandsucculents.com/