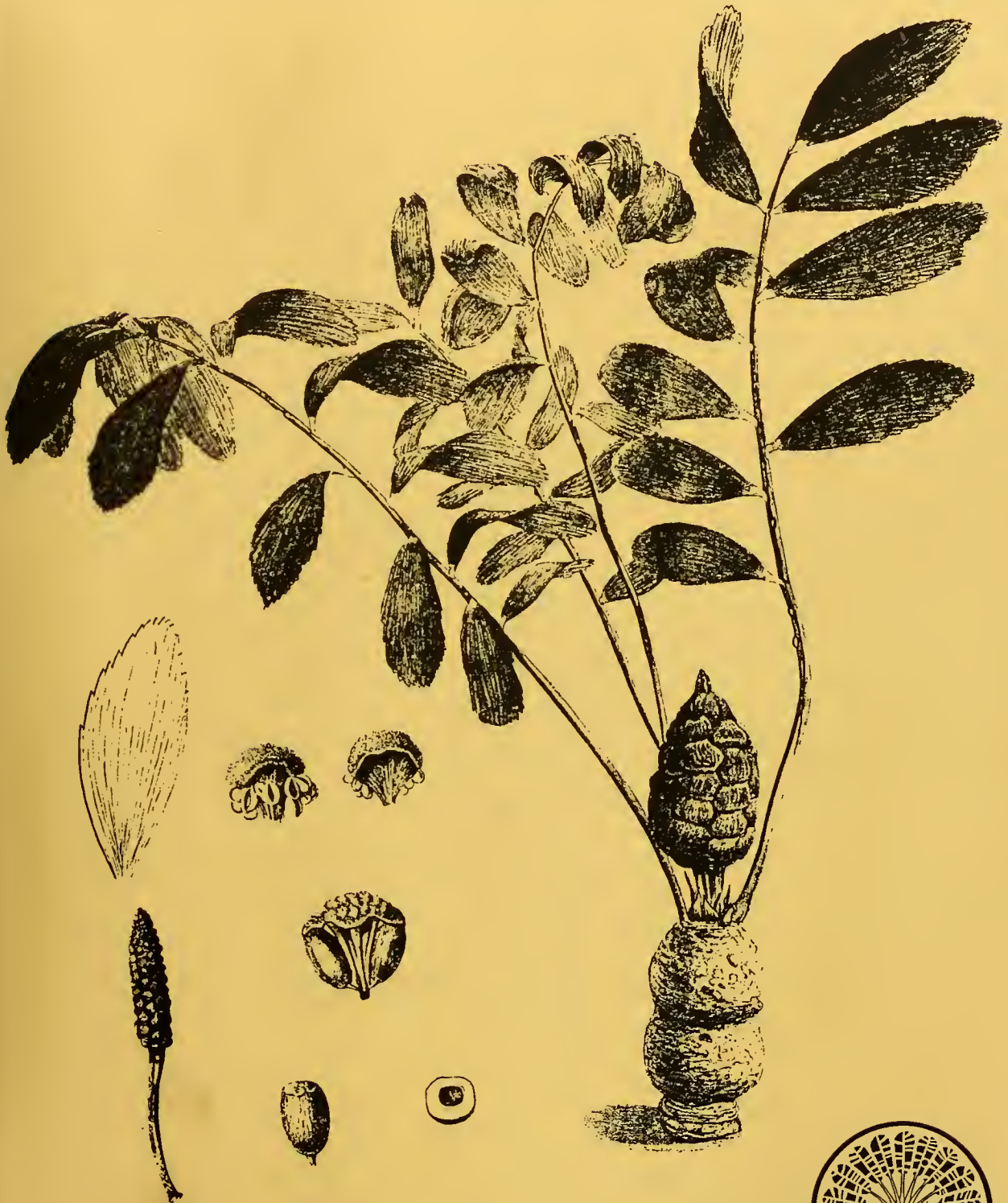


**RARE AND THREATENED PLANTS OF CUBA:
EX SITU CONSERVATION IN BOTANIC GARDENS**



IUCN Botanic Gardens Conservation Secretariat



Cover illustration:
Microcycas ottonis Miq. (Zamiaceae)
in Verh. Kl. I. Nederl. Inst. Wet.
Amsterdam, ser. III. iv. t.2 (1851).



**RARE AND THREATENED PLANTS OF CUBA:
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This report contains a list of the rare and threatened plants of Cuba, indicating their IUCN Conservation (Red Data Book) categories and including a list, as known, of the occurrence of each in botanic gardens collections. Further copies are available for botanic gardens and can be obtained by writing to:
The IUCN Botanic Gardens Conservation Secretariat,
53 the Green, Kew, Richmond, Surrey, TW9 3AA, U.K.

The report has been compiled

by the

IUCN Botanic Gardens Conservation Secretariat

in co-operation with

The Threatened Plants Unit

of

The World Conservation Monitoring Centre

JANUARY 1989

Introduction

We are pleased to produce a report on the *ex situ* conservation of the rare and threatened Cuban flora in Botanic Gardens, together with a recently updated list of endangered taxa. A previous list was circulated to members of the IUCN Botanic Gardens Conservation Co-ordinating Body in August 1985 and much of the knowledge of Cuban species in botanic gardens cultivation has been gained from responses provided to that survey. We are most grateful to all the Garden Directors who responded to that questionnaire. To date, a list of rare and threatened Cuban plants has been distributed by IUCN to about 300 botanic gardens worldwide. Nevertheless if readers of this report know of important collections of Cuban plants in cultivation which have not been included in the results presented here we would be very pleased to have this information.

During 1988 Dra Angela Leiva and the staff of the Jardín Botánico Nacional, Cuba also supplied a list of the native plants contained in their collection, as well as providing many corrections and additions to the threatened plants list for the country. For this assistance we are very grateful. Thus, this list includes a complete compilation of the rare and threatened endemics and their conservation status as are currently known. The threatened plants list has been compiled from the database of the Threatened Plants Unit of the World Conservation Monitoring Centre and the records of species in cultivation from the associated database of the IUCN Botanic Gardens Conservation Secretariat.

We have presented the full Cuban threatened plants list in this report, in the form of a questionnaire, so that botanic gardens which hold stocks of Cuban plants will be enabled in future to copy the list for annotation to be returned to the Secretariat so that we can constantly update and add to the information we hold on the plants from this archipelago.

As Dra Leiva outlines in her articles included in this publication, the native flora of Cuba is very rich. The list we present here contains over 800 taxa, of which, to date, only 55 are known to be in cultivation in the Gardens we have surveyed. Of those, 44 are cultivated at the Jardín Botánico Nacional, Cuba and 33 in only one botanic garden. It must obviously therefore become a priority in the coming years for botanic gardens worldwide to assist their efforts and cultivate more of these important but declining endemics and ensure their adequate distribution to other institutions. The Jardín Botánico Nacional, Cuba is generously offering to distribute its duplicate material as seeds to other botanic gardens and Garden Directors are invited to write to Dra Leiva if they are keen to cultivate any of the species marked + in the list. As well as that, a further list of species available for exchange from Cuba is given in **Botanic Gardens Conservation News**, 1(3), page 58. It includes several species of palm offered as wild collected seed.

Acknowledgements

We are very grateful to Dra Angela Leiva for her assistance and advice during the preparation of this report, without which it could not have been produced. We also acknowledge with thanks the assistance given by Christine Leon and Steve Davis of the Threatened Plants Unit of the World Conservation Monitoring Centre for their valuable collaboration.

This report has been compiled and edited by E.A. Leadlay and P.S. Wyse Jackson for the IUCN Botanic Gardens Conservation Secretariat.

January 1989

Background

The island of Cuba covers an area of 114,524 sq. km and has a population of about 10 million. Its vegetation is semi-desert of thornbush and savannah vegetation at lower altitudes with siliceous savannah in the west. In the mountains, evergreen and tropical cloud and rain forest occur. Pine forests occur at the eastern and western parts of the island. The mountains reach their highest altitude of about 2,000 m in the east and broadly occur in three separate regions in the east, west and centre, separated by areas of lowland. Species-rich pine forests occur on serpentine soils, with submontane rain forest along the north-east and semi-dry mountain forest along the south-east coast, and mangrove and tropical salt marsh along the west coast (Davis *et al.*, 1986).

Further details on the Checklists and Floras published and threatened plants of Cuba are given in *Plants in Danger: What do we know?*, Davis, S. *et al.* 1986, published by IUCN, Gland, Switzerland and Cambridge, U.K. and so will not be repeated here.

The IUCN Plant Red Data Book (Lucas, G. and Synge, H., 1978) contains information on two Cuban species, *Cereus robinii* (Lemaire) L. Benson (Cactaceae) and *Microcycas calocoma* (Miq.) A.DC. (Zamiaceae) the latter of which is endemic to the island.

Cuba has several botanic gardens which are active in plant conservation. The largest is the Jardín Botánico Nacional, described in detail in Dra Leiva's article reprinted here from *Botanic Gardens Conservation News* 1(3). Other botanic gardens are:

Jardín Botánico de Cienfuegos, Apartado 414, Cienfuegos

This garden was established in 1902 and is 90 ha in area. It is government supported and the collections are especially rich in specimens of woody Leguminosae, Palmae and Moraceae.

Jardín Botánico de Copeñicí, Guisa, Bayamo, Granma Province

This garden was established in 1983 and is about 100 ha in area. Of this about 30% is native seasonal evergreen forest. An adjacent reserve of 150 ha of similar vegetation has recently been brought under the control of the garden. The garden is supported by the Municipal Government of Guisa, with the scientific collaboration of the Jardín Botánico Nacional.

Orquídeario de Soroa, Universidad de Pinar del Río, Candelaria, Pinar del Río

This garden is about 3 ha in extent and specializes in the cultivation of orchids, both native and otherwise. Its facilities include a specialized library, several shade houses and a tissue culture unit. Scientific collaboration is carried out with the Jena Botanic Gardens, G.D.R. and the Jardín Botánico Nacional.

We are also told that new botanic gardens are planned at Santiago de Cuba, Holguín, Las Tunas and Sancti Spiritus in these province capitals, with the collaboration and advice of the Jardín Botánico Nacional and the Institute of Ecology and Systematics of the Cuban Academy of Sciences.

Plant Conservation in Cuba

The floristic richness and high endemism of the Cuban archipelago is well known. According to recent reports (Borhidi and Muñiz, 1983) the Cuban vascular flora embraces 6,700 species (500 Pteridophytes and 6,200 Phanerophytes of which about 20 are Gymnosperms and the rest Angiosperms), grouped in 1,300 genera and 181 families. A figure of 51% endemism has been reported thus making about 3,100 endemic species. Moreover, Cuban natural ecosystems have been strongly altered during the last 200 years; about 16% of its phanerogamic flora is threatened and probably 2% is already extinct.

Before the first arrival of aboriginal people (about 4,000 years ago) primary forest ecosystems covered more than 95% of the total area. High tropical forests probably accounted for 70-80%, and the rest was occupied by low altitude broad-leaved forests, pine forests and other vegetation types.

In the sixteenth century, the colonization of the country by Spaniards began. During the seventeenth and eighteenth centuries, economical activity was negligible. It has been estimated that in 1812, 90% of the territory was still covered by original forest. In 1900 this area had diminished to 54%, mainly due to intensive cattle-raising, and sugar cane plantation. In 1926 only 23% of the surface was still covered by forests. In 1959, 14% of natural forest remained, more or less undisturbed.

Among neotropical countries, Cuba occupies fourth place amongst those which have had drastic and intensive destruction of natural environment; in this ranking Cuba is preceded by Barbados, Haiti and Puerto Rico. About 90,000 square kms of forests were destroyed in the course of five centuries. The early introduction of some invasive species such as *Dichrostachys cinerea* and *Syzygium jambos*, had displaced native species in both low and high altitude ecosystems (Del Risco, 1982). As is well known, island ecosystems are extremely vulnerable to external effects. In the case of Cuba, this vulnerability is much more pronounced because, among other reasons, its endemic flora is mostly adapted to extreme, oligotrophic biotopes and hence the competitiveness of native organisms is diminished (Borhidi, 1985).

In the last decade, between 8 and 9% of the whole surface of the country has been proposed for different degrees of protection. But too much still remains to be done for the system to function efficiently.

In 1977 the National Committee for Protection of Environment and Conservation of Natural Resources (COMARNA) was created. In every province and municipality there is a committee attached to the local government with executive powers to decide on problems concerning protection of environment and conservation. As well as this, a broadly based public educational campaign is being developed. Since 1980, a new Law (No. 33) has been established for the protection of the environment and rational use of natural resources. Several scientific institutions carry out important research projects on the conservation of threatened ecosystems and/or species.

Four Biosphere Reserves have been declared by UNESCO in Cuba covering very representative areas of high plant diversity and endemism.

Nevertheless, the critical amount of destruction caused to Cuban natural ecosystems in the last 200 years, together with the real demographic and economic growth, and to some extent, by the virtual absence of conservationist traditions, impose on Cuban scientists and government authorities a great responsibility for the present and future preservation of Cuba's natural heritage. We are optimists and all know and remember that the quality of life of future generations strongly depends on nature conservation, and it must be preserved and improved.

Dra Angela Leiva
Director
Jardín Botánico Nacional, Cuba

Literature

Borhidi, A. and O. Muñiz (1983). **Catálogo de Plantas Cubanas amenzadas o extinguidas.** Editorial Academia, La Habana.

Borhidi, A. (1985). Phytogeographic survey of Cuba I. The phytogeographic characteristics and evolution of The Flora of Cuba. **Acta Bot. Acad. Sci. Hung.** 31: 3-34.

Del Risco, E. (1982). La Conservación de la Naturaleza y los Jardines Botánicos. **Rev. Jard. Bot. Nac.** 3(1): 167-195.



The National Botanic Garden of Cuba

Dr Angela Leiva,
 Director,
 Jardín Botánico Nacional,
 Carretera del Rocío KM 3 1-2 Calabazar,
 Boyeros, Ciudad Habana, Cuba

In 1967, the Cuban Government suggested to the University of Havana the development of a modern botanic garden of national scope, recognizing the rôle of such institutions as important tools for education, scientific research and recreation. A year later, the general plan for the National Botanic Garden was produced. A piece of good land, 600 ha. in size and covered with pasture and secondary vegetation was earmarked to develop the ambitious project. It is located 25 km. south of the centre of the capital, Sixteen years later, on 24th March 1984, the garden was opened to the public.

In Figure 1, the general layout of the Garden is shown. Emphasis has been placed upon world tropical flora, but in particular, native flora and vegetation. Special attention is given to the development of a native vascular plant collection, mainly arranged according to a phytogeographical approach. This collection covers an area of 120 ha. It plays an important rôle in research on our national flora, in *ex situ* conservation of endangered species and in general education.

LEGEND

- 1 - System
- 2 - Ecological-Didactic and Pavillions for display
- 3 - Economic plants
- 4 - Cuban Phytogeography
- 5 - Antillias
- 6 - Mexico
- 7 - Central America
- 8 - South America
- 9 - Africa
- 10 - Asio
- 11 - Oceania
- 12 - Australia
- 13 - Fernery
- 14 - Palmetum
- 15 - Archaic Forest
- 16 - Experimental area

SYMBOLS

- ➔ Main entrance
- Limits of the Garden
- Limits of areas
- Main road
- Secondary roads
- ▨ Artificial ponds

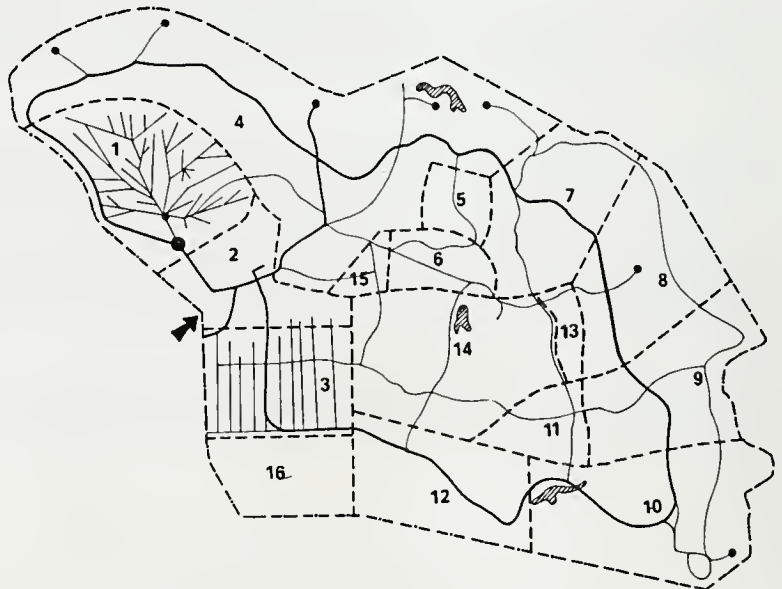


Figure 1 : General organization of the National Botanic Garden



Figure 2 : A recent view of the Serpentine vegetation area



Figure 3 : A mature plant of *Coccothrinax crinita*, a very endangered palm, in full fruit in the Garden

According to current research, the Cuban phanerogamic flora include a total of 181 families (none of them endemic), about 1,300 genera (71 endemics) and approximately 6,140 species of native phanerophytes from which 3,150 (51.3%) are endemic. For Pteridophytes, a conservative number of 480 species has been estimated.

From these, nearly 800 Cuban taxa, 700 phanerophytes (11.4% of the flora), and 100 pteridophytes (21%) are under cultivation. The outdoor collection amounts to about 300 native taxa. The number of threatened Cuban endemic taxa under cultivation is 55 (6% of the total).

One of the particularly impressive features of the Garden is the four hectares of thorny coastal thicket vegetation in which an aesthetically pleasing rocky arrangement of shrubs, succulents and palms, evokes for visitors the proximity of the sea. Interesting plants such as *Spathelia vemica*, *Agave albescens*, *Dendrocereus nudiflorus*, *Leptocereus wrightii*, *Coccothrinax guantanamensis*, *Calliandra colletioides*, are among more than a hundred species, which grow luxuriantly.

The dry forests that in nature occur inland from the coastal vegetation of Cuba are also represented. One of the most outstanding species that can be seen there is the very rare *Crescentia mirabilis*. Semi-deciduous forests contain very valuable species such as *Mimosa catalinae*, *Hildegardia cubensis*, *Hebestigma cubense*, *Bombacopsis cubensis* which feature among nearly a hundred other species. The microphyllous variant of these forests, rich in *Bucida* trees, *Copernicia* and *Sabal* palms which has been established today has a very natural appearance.

Pine forests, with interesting elements such as *Jacaranda arborea*, *Manilkara mayarensis*, *Coccothrinax orientalis*, *Coccothrinax yuraguana* and *Colpothrinax wrightii*, give a particular charm to this part of the garden.

An area of no more than a hectare has been created with serpentinic soil and is now rich in about 200 species planted representative of serpentinic vegetation. Rare plants such as *Sauvallella immarginata*, *Moacrotan revolutus*, *Gochnatia intertexta*, *Acacia daemon* and *Coccothrinax clarensis* (all of them threatened endemic species) are growing very well there (see Figure 2).

The Palmetum contains a good sample of Cuban palms, numbering around 40 taxa. The overall collection of palms amounts to a total of 150 taxa (Figures 3 and 4).

Most of these collections of Cuban plants have been assembled during on-going exploration of Cuba over the last two decades, as part of the flora research work.

It must be pointed out that it has been possible to cultivate large numbers of specimens of each species by the extension of our garden to 600 hectares. Furthermore, for each native species we try to grow specimens from different populations, thus minimizing the hazards to genetic diversity that are inherent in *ex situ* conservation.

In this connection, the number of native species offered in our seed list from 1973 to 1988 has increased steadily from 29 to 412.

Current research in the National Botanic Garden is focussed primarily on the study of our national flora. The Garden's herbarium contains 65,000 Cuban plants and 5,800 fungi, all collected after 1966.

The Plant Physiology Laboratory is concerned with investigation into propagation methods and reproductive strategy of the threatened endemic cycad *Microcycas calocoma*. *In situ* experiments on pollination, monitoring of seed formation, germination, *in vitro* propagation, and re-introduction into the wild of young plants obtained by seed germination and *in vitro* embryo culture to enhance populations in protected natural areas, are the main tasks thus so far achieved. As well as this, work has been started to increase the number of threatened species under cultivation in the Garden.



Figure 4 : Fruit-producing trees of Colpothrinax wrightii growing at the Garden. It is a member of a threatened palm species endemic to Western Cuba



Figure 5 : A partial view of the new complex of display pavilions

To this end, the preparation of artificial conditions of soils, rainfall and shade are essential. Last March, a new complex of display pavilions was opened. It is a building covering 3,300 square metres and incorporating special environmental conditions, for example, high insolation and drainage for desert plants, or a high degree of shade and humidity and special soils (including acidic soils) for rainforest plants. This complex has enabled us to increase the number of taxa that can be cultivated in the Garden. The very rich and endemic flora of Cuban rainforests can now be grown with success. By now a total of 1,450 taxa representing 440 genera and 90 families are exhibited at the Pavilions, and we anticipate that these figures will soon increase (Figure 5).

Computerization of records has been underway since the beginning of 1988 and the database is contains in the order of 3,000 accessions. For the database we use a personal computer with hard disk storage capacity of 20 Mb, and the D-Base III Plus system. As we have recently received the **International Transfer Format for Botanic Garden Records**, any necessary adjustments are now being made.

The Cuban National Botanic Garden maintains a very fruitful collaboration in the form of a long-term research project into Cuban flora with the Botanic Garden of Jena University, and the Arboretum of Humboldt University in Berlin. A very intensive exchange of scientists, gardeners, plants and experience has been conducted since 1975. More recently, an agreement has been signed with the Cordoba Botanic Garden in Spain to collaborate in topics related to micropropagation techniques, germplasm conservation, the cultivation of special groups of plants, and other subjects of mutual interest.

We are involved in seed exchange with 265 other institutions in 42 countries. Our publication, **Revista del Jardín Botánico Nacional** is sent to many institutions all over the world and appears three times a year.

Currently, new projects for botanic gardens are being developed in the cities of Santiago de Cuba, Holguin, Bayamo, Las Tunas and Sancti Spiritus. In each garden there is an emphasis on local flora and vegetation, but in addition, there are collections of tropical flora, economic plants, ornamental plants, historical or traditional gardening, greenhouses and shadehouses for cultivation and display, etc. In the case of each of these five projects, work is undertaken in close collaboration with the National Botanic Garden.

Two national meetings of Cuban Botanic Gardens have been held. The first took place in Cienfuegos Botanic Garden in 1981 on the occasion of that Garden's 80th Anniversary. The abstracts and papers presented were published in the **Revista del Jardín Botánico Nacional**. The second meeting was held at the National Botanic Garden itself in 1985. Nearly 80 people attended including representatives of several Botanic Gardens in Mexico and the Dominican Republic.

The Cuban National Botanic Garden is actively working on the organization of a new Latin American and Caribbean Section of IABG which will be officially established in July of 1990 on the occasion of the 5th Latin American Botanical Congress that will be held in Habana.

The Garden is open all year, Wednesday to Sunday from 9 a.m. to 5 p.m. Guided tours, leisure conferences and an amusement park for children, are among the features available to visitors. The Educational Programme includes visits of pupils from primary and secondary schools, television and radio programmes. More than half a million visitors have visited the Garden since it was opened in 1984.



Cynometra cubensis A. Rich (Leguminosae)
in La Sagra, Ic. Fl. Cub. Pl. Vasc. t.41. (1863).

GYMNOSPERMAE

ZAMIACEAE

- Microcycas calocoma (Miq.) A.DC. AMD, BRIST, FRP, FTG+, HAJB+,
HNT, K, LE, M, WAI
- Zamia ottonis Miq. br, hajb, z

ANGIOSPERMAE

APOCYNACEAE

- Tabernaemontana apoda C.Wright HAJB

ARACEAE

- Anthurium cubense Engler hajb, K, MTJB
- Anthurium gymnopus Griseb. HAJB
- Philodendron scaberulum C.Wright HAJB

BEGONIACEAE

- Begonia libanensis Urban HAJB

BIGNONIACEAE

- Crescentia mirabilis Ekman HAJB+
- Tabebuia pulverulenta Urban HAJB

BUXACEAE

- Buxus heterophylla Urban HAJB

CACTACEAE

- Cereus robinii (Lemaire) L.Benson FTG, HAJB+
- Dendrocereus nudiflorus (Engelm.)
Britton & Rose boch, BR, HAJB, HNT, K, ZSS
- Harrisia earlei Britton & Rose HNT, ZSS
- Harrisia fernowii Britton BR, HNT, MEL
- Harrisia taylori Britton B, HAJB, ZSS
- Leptocereus ekmanii (Werderm.) Knuth hajb
- Leptocereus sylvestris Britton & Rose HAJB
- Leptocereus wrightii Leon HAJB

Rare and Threatened Plants of Cuba in Botanic Garden Cultivation

CACTACEAE

<u>Mammillaria prolifera</u> (Mill.) Haw. var. <u>prolifera</u>	<u>H</u> <u>A</u> <u>J</u> <u>B</u>
<u>Melocactus actinacanthus</u> Areces	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
<u>Melocactus borhidii</u> Meszaros	ZSS
<u>Melocactus evae</u> Meszaros	hajb+, ZSS
<u>Melocactus guitarti</u> Leon	<u>B</u> <u>E</u> <u>R</u> <u>N</u> , <u>H</u> <u>A</u> <u>J</u> <u>B</u> +, <u>H</u> <u>N</u> <u>T</u> , ZSS
<u>Melocactus harlowii</u> (Britton & Rose) Vaupel	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +, ZSS
<u>Melocactus holguinensis</u> Areces	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
<u>Melocactus matanzanus</u> Leon	<u>B</u> , <u>B</u> <u>E</u> <u>R</u> <u>N</u> , <u>B</u> <u>R</u> <u>I</u> <u>S</u> <u>T</u> , <u>D</u> <u>U</u> <u>N</u> , <u>H</u> <u>A</u> <u>J</u> <u>B</u> +, <u>H</u> <u>N</u> <u>T</u> , <u>M</u> <u>E</u> <u>L</u> , <u>M</u> <u>T</u> <u>J</u> <u>B</u> , <u>O</u> <u>R</u> <u>T</u> +, ZSS
<u>Opuntia militaris</u> Britton & Rose	<u>H</u> <u>A</u> <u>J</u> <u>B</u>

COMPOSITAE

<u>Gochnatia intertexta</u> (C.Wright) Jervis & Alain	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
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ERICACEAE

<u>Lyonia affinis</u> (A.Rich) Urban	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
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EUPHORBIACEAE

<u>Moacroton revolutus</u> Alain	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
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LEGUMINOSAE

<u>Acacia daemon</u> Ekman & Urban	<u>H</u> <u>A</u> <u>J</u> <u>B</u>
<u>Erythrina acunae</u> Borh.	<u>K</u>
<u>Erythrina elenae</u> Howard & Briggs	hajb, <u>W</u> <u>A</u> <u>I</u>
<u>Mimosa catalinae</u> Leon	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
<u>Sauvallella immarginata</u> (C.Wright) Rydb.	<u>H</u> <u>A</u> <u>J</u> <u>B</u>
<u>Sophora polyphylla</u> Urban	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +

ORCHIDACEAE

<u>Dilomilis bissei</u> H.Dietrich	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +
<u>Phytinga polygonata</u> (Lindl.) H.Dietrich	<u>H</u> <u>A</u> <u>J</u> <u>B</u> +

Rare and Threatened Plants of Cuba in Botanic Garden Cultivation

PALMAE

<u>Acrocomia pilosa</u> Leon	<u>HAJB+</u> , VENTU
<u>Coccothrinax borhidiana</u> Muniz	ftg, <u>HAJB+</u> , VENTU+
<u>Coccothrinax clarensis</u> Leon subsp. <u>brevifolia</u> (Leon) Borhidi & Muniz	VENTU+
<u>Coccothrinax crinita</u> Becc.	darw, FTG+, hnt, K, LASCR
<u>Coccothrinax crinita</u> Becc. subsp. <u>crinita</u>	FTG+, <u>HAJB+</u> , VENTU+
<u>Coccothrinax crinita</u> Becc. subsp. <u>brevicrinis</u> Borhidi & Muniz	ftg, <u>HAJB+</u>
<u>Coccothrinax pseudorigida</u> Leon	<u>HAJB</u>
<u>Colpotherinax wrightii</u> Griseb. & H.Wendl.	FTG, <u>HAJB+</u> , VENTU+
<u>Copernicia curbeloi</u> Leon	<u>HAJB</u>
<u>Copernicia fallaensis</u> Leon	<u>HAJB+</u> , VENTU
<u>Copernicia gigas</u> E.L.Ekman ex Burret	FTG+, <u>HAJB+</u> , VENTU+
<u>Copernicia humicola</u> Leon	<u>FTG</u>
<u>Copernicia oxycalyx</u> Burret	<u>HAJB</u>
<u>Copernicia roigii</u> Leon	<u>HAJB</u>
<u>Roystonea regia</u> (H.B. & K.) O.F.Cook	CAIR+, darw+, <u>LASCR</u> , USCG, VENTU
<u>Roystonea regia</u> (H.B. & K.) O.F.Cook var. <u>pinguis</u> L.H.Bailey	<u>FTG+</u>
<u>Thrinax ekmaniana</u> (Burret) Borhidi & Muniz	ventu

Key to the Botanic Garden Codes

- AMD Hortus Botanicus of the University of Amsterdam, Plantage Middenlaan 2, 1018 DD AMSTERDAM, The Netherlands.
- B Botanischer Garten und Museum Berlin-Dahlem, Konigin-Luise-Strasse 6-8, D-1000 BERLIN 33, Federal Republic of Germany.
- BERN Botanischer Garten der Universitat Bern, Altenbergrain 21, CH-3013 BERN, Switzerland.
- BOCH Botanischer Garten Ruhr-Universitat Bochum, Universitatstrasse 150, Postfach 102148, D-4630 BOCHUM 1, Federal Republic of Germany.
- BR Jardin Botanique National de Belgique, Domaine de Bouchout, B-1860 MEISE, Belgium.
- BRIST University of Bristol Botanic Garden, Department of Botany, Woodland Road, BRISTOL BS8 1UG, U.K.
- CAIR The Flecker Botanic Gardens, Cairns Parks and Gardens Recreation Department, Cairns City Council, P.O. Box 359, CAIRNS, Queensland 4870, Australia.
- DARW Darwin Botanic Garden, Parks Curator, Town Clerk, P.O. Box 84, Darwin NT 5794, Australia.
- DUN Dunedin Botanic Garden, P.O. Box 5045, Dunedin, New Zealand.
- FRP Palmengarten der Stadt Frankfurt, Siesmayerstrasse 61, D-6000 FRANKFURT AM MAIN-1, Federal Republic of Germany.
- FTG Fairchild Tropical Garden, 10901 Old Cutler Road, MIAMI, Florida 33156, U.S.A.
- HAJB Jardin Botanico Nacional, Universidad de La Havana, Carretera del Rocio, Km 3.5 Calabazar, Boyeros, Havana, Cuba.
- HNT Huntington Botanical Gardens, 1151 Oxford Road, SAN MARINO, California 91108, U.S.A.
- K Royal Botanic Gardens, KEW, Richmond, Surrey TW9 3AB, U.K.
- LASCR Jardin Botanico "Robert y Catherine Wilson", Organizacion para Estudios Tropicales, Apartado 676-2050, San Pedro de Montes de Oca, San Jose, Costa Rica
- LE Botanical Garden, Komarov Botanical Institute, Academy of Sciences, Professor Popov Street 2, 197022 LENINGRAD 22, U.S.S.R.
- M Botanischer Garten Munchen-Nymphenburg,, Menzingerstrasse 61, D-8000 MUNCHEN 19, Federal Republic of Germany.
- MEL Royal Botanic Gardens of Melbourne, Birdwood Avenue, SOUTH YARRA, Victoria 3141, Australia.
- MTJB Jardin Botanique de Montreal, 4101 est, rue Sherbrooke, MONTREAL, Quebec H1X 2B2, Canada.

Key to the Botanic Garden Codes

ORT	Jardin de Aclimatacion de la Orotava, Puerto de la Cruz, TENERIFE, Canary Islands, Spain.
USCG	Jardin Bot. Universidad de San Carlos de Guatemala, Facultad de Ciencias Quimicas y Farmacia, Centro de Estudios Conservacionistas, (CECON), Avenida de La Reforma 0-63, Zona 10, Guatemala
VENTU	Ventura County Community College District, 71 Day Road Ventura CA 93003 U.S.A.
WAI	Waimea Arboretum & Botanical Garden, 59-864 Kamehameha Highway, HALEIWA, Hawaii 96712, U.S.A.
Z	University of Zurich Botanic Garden, Zollikerstrasse 107, CH-8008 ZURICH, Switzerland.
ZSS	Stadt. Sukkulenten-Sammlung, Mythenquai 88, CH-8002 ZURICH, Switzerland.

Notes

Upper case underlined (e.g. ABCD) indicates plants of known wild origin

Upper case alone (e.g. ABCD) indicates plants of known cultivated source.

Lower case alone (e.g. abcd) indicates plants from an unknown source.

+ following the code indicates that duplicate material is available.

Where a garden holds both wild and cultivated source material the wild source code is used as, clearly, the wild source material is the more valuable.

Definitions of the IUCN Conservation (Red Data Book) Categories

A. THREATENED CATEGORIES

Extinct (Ex)

Taxa which are no longer known to exist in the wild after repeated searches of their type localities and other known or likely places.

Endangered (E)

Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating.

Included are taxa whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction.

Vulnerable (V)

Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating.

Included are taxa of which most or all the populations are *decreasing* because of over-exploitation, extensive destruction of habitat or other environmental disturbance; taxa with populations that have been seriously *depleted* and whose ultimate security is not yet assured; and taxa with populations that are still abundant but are *under threat* from serious adverse factors throughout their range.

Rare (R)

Taxa with small world populations that are not at present Endangered or Vulnerable, but are at risk.

These taxa are usually localized within restricted geographical areas or habitats or are thinly scattered over a more extensive range.

Indeterminate (I)

Taxa *known* to be Extinct, Endangered, Vulnerable or Rare but where there is not enough information to say which of the four categories is appropriate.

B. UNKNOWN CATEGORIES

Status Unknown (?)

No information.

Insufficiently known (K)

Taxa that are suspected but not definitely known to belong to any of the above categories, following assessment, because of the lack of information.

C. NOT THREATENED CATEGORY

Safe (nt)

Neither rare nor threatened.

CUBA



Geographic Distribution (Provinces)

Pinar del Río (PR)
La Habana (LH)
Isla de la Juventud (formerly Isla de Pinos) (IJ)
Matanzas (Ma)
Cienfuegos (Ci)
Sancti Spiritus (SS)
Camagüey (Ca)
Holguín (Ho)
Granma (Gr)
Santiago de Cuba (SC)
Guantánamo (Gu)
Ciego de Avila (Ci)
Las Tunas (LT)
Villa Clara (VC)
Las Villas (LV)*
Oriente (Or)*

* Old political administrative division, used when available information on locality is not very accurate.

RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
<u>PTERIDOPHYTA</u>					
<u>CYATHEACEAE</u>					
Alsophila brooksii (Maxon) R.Tryon	Cuba I, Hispaniola I, Puerto Rico I	I	I	Y	C W U D
Trichipteris strigillosa (Maxon) R.Tryon	Cuba V	V	V		C W U D
<u>GYMNOSPERMAE</u>					
<u>CUPRESSACEAE</u>					
Juniperus saxicola Britton & P.Wilson	Cuba (Granma; Santiago de Cuba) R	R	R		C W U D
<u>PODOCARPACEAE</u>					
Podocarpus angustifolius Griseb.	Cuba (Las Villas; Pinar del Rio) E	E	E		C W U D
<u>ZAMIACEAE</u>					
Microcycas calocoma (Miq.) A.DC.	Cuba (Pinar del Rio) E	E	E		C W U D
Zamia angustifolia Jacq.	Bahamas (Eleuthera) E, Cuba E	E	E	Y	C W U D
Zamia ottonis Miq.	Cuba R	R	R		C W U D
Zamia silicea Britton	Cuba (I. Juventud) I	I	I		C W U D
<u>ANGIOSPERMAE</u>					
<u>ACANTHACEAE</u>					
Apassalus parvulus Alain & Leonard	Cuba (Guantanamo) E	E	E		C W U D
Drejerella maestrensis Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Elytraria bissei H.Dietrich	Cuba (Guantanamo) V	V	V		C W U D
Elytraria filicaulis Borh. & Muniz	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Elytraria spathulifolia Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
Justicia agria Alain & Leonard	Cuba (Granma) I	I	I		C W U D
Justicia stenophylla Urban & Britton	Cuba (Camaguey) I	I	I		C W U D
Oplonia acunae Borh.	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
Oplonia moana Borh.	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Phidiasia lindavii Urban	Cuba (Holguin) R	R	R		C W U D
Sapphoa ekmanii Borh.	Cuba (Guantanamo) I	I	I		C W U D
Stenandrium arnoldii H.Dietrich	Cuba (Holguin) V	V	V		C W U D
Stenandrium ekmanii Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Stenandrium pallidum H.Dietrich	Cuba (Guantanamo) V	V	V		C W U D
<u>AGAVACEAE</u>					
Agave acicularis Trel.	Cuba (Cienfuegos) E	E	E		C W U D
Agave grisea Trel.	Cuba (Cienfuegos) E	E	E		C W U D
Agave papyrocarpa Trel.	Cuba (Isla de la Juventud) E	E	E		C W U D
<u>AIZOACEAE</u>					
Cypselea rubriflora Urban	Cuba (Matanzas; Cienfuegos) I	I	I		C W U D
Mollugo brevipes Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Mollugo cubensis Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Mollugo deltoidea Leon	Cuba (Holguin) E	E	E		C W U D
Mollugo enneandra C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
Mollugo pinosia Urban	Cuba (I. Juventud) E	E	E		C W U D
<u>AMARANTHACEAE</u>					
Alternanthera crassifolia (Standley) Alain	Cuba (Santiago de Cuba) E	E	E		C W U D
Goerziella minima (Standley) Urban	Cuba (Pinar del Rio) R	R	R		C W U D
<u>ANACARDIACEAE</u>					
Euleria tetramera Urban	Cuba (Ci; VC; SS) R	R	R		C W U D
<u>ANNONACEAE</u>					
Annona cristalensis (Alain) Borh. & Moncada	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Annona ekmanii R.E.Fries	Cuba (Holguin) I	I	I		C W U D
Annona elliptica R.E.Fries	Cuba (Pinar del Rio) I	I	I		C W U D
Annona havanensis R.E.Fries	Cuba (Ciud. Habana; Matanzas) E	E	E		C W U D
Annona moaensis Leon & Alain	Cuba (Holguin) E	E	E		C W U D
Annona oblongifolia R.E.Fries	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Desmopsis neglecta (A.Rich.) R.E.Fries	Cuba (Pinar del Rio; Cienfuegos) I	I	I		C W U D
Xylopia acunae Borh. & Risco	Cuba (Sancti Spiritus) I	I	I		C W U D

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RARE AND THREATENED PLANTS OF CUBA

Plant name	Distribution (Cons. status)	1	2	3	Circle:
ANNONACEAE (Cont.)					
<i>Xylopia ekmanii</i> R.E.Fries	Cuba (Guantanamo) I	I	I		C W U D
APOCYNACEAE					
<i>Cameraria microphylla</i> Britton	Cuba (Ciego de Avila; Camaguey) E	E	E		C W U D
<i>Cameraria obovalis</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Neobraccia acunaiana</i> Lippold	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Neobraccia martiana</i> Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Neobraccia susannina</i> Borh.	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Rauvolfia linearifolia</i> Britton & P.Wilson	Cuba (Santiago de Cuba; Holguin) V	V	V		C W U D
<i>Tabernaemontana apoda</i> C.Wright	Cuba (Sancti Spiritus) I	I	I		C W U D
AQUIFOLIACEAE					
<i>Ilex moana</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Ilex nannophylla</i> Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
ARACEAE					
<i>Anthurium cubense</i> Engler	Cuba (SC; Gu) I	I	I		C W U D
<i>Anthurium gymnopus</i> Griseb.	Cuba (Pinar del Rio) R	R	R		C W U D
<i>Philodendron clementis</i> C.Wright ex Griseb.	Cuba (PR; LV; LH) Ex	Ex	Ex		C W U D
<i>Philodendron scaberulum</i> C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
ARALIACEAE					
<i>Megalopanax rex</i> Ekman	Cuba (H; VC; SS) E	E	E		C W U D
ASCLEPIADACEAE					
<i>Cynanchum ekmanii</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Cynanchum wrightianum</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Matelea acuminata</i> (Griseb.) Woods.	Cuba E	E	E		C W U D
<i>Matelea bayatensis</i> (Urban) Woods.	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Matelea grisebachiana</i> (Schltr.)	Cuba E	E	E		C W U D
<i>Matelea tigrina</i> (Griseb.) Woods.	Cuba E	E	E		C W U D
BEGONIACEAE					
<i>Begonia bissei</i> J.Sierra	Cuba (Guantanamo) V	V	V		C W U D
<i>Begonia cowellii</i> Wash	Cuba (Granma) Ex	Ex	Ex		C W U D
<i>Begonia cubensis</i> Hassk.	Cuba (Santiago de Cuba) V	V	V		C W U D
<i>Begonia leivae</i> J.Sierra	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Begonia libanensis</i> Urban	Cuba (Guantanamo) V	V	V		C W U D
<i>Begonia lomensis</i> Britton & P.Wilson	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Begonia maestrensis</i> Urban	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Begonia wrightiana</i> A.DC	Cuba (Guantanamo) V	V	V		C W U D
BIGNONIACEAE					
<i>Catalpa brevipes</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Crescentia mirabilis</i> Ekman	Cuba (Camaguey) E	E	E		C W U D
<i>Synopsis ilicifolia</i> Griseb.	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Tabebuia acunana</i> Borh. & Muniz	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Tabebuia anafensis</i> Urban	Cuba (Ciud. Habana; Matanzas) I	I	I		C W U D
<i>Tabebuia bibracteolata</i> (Griseb.) Britton	Cuba E	E	E		C W U D
<i>Tabebuia capotei</i> Borh.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Tabebuia del-riscoi</i> Borh.	Cuba (Pinar del Rio; Holguin) I	I	I		C W U D
<i>Tabebuia furfuracea</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Tabebuia geronensis</i> Britton	Cuba (I. Juventud) E	E	E		C W U D
<i>Tabebuia jackiana</i> Ekman	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Tabebuia jojoana</i> Britton & P.Wilson	Cuba (Guantanamo) I	I	I		C W U D
<i>Tabebuia leonis</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Tabebuia linearis</i> Alain	Cuba (Holguin) E	E	E		C W U D
<i>Tabebuia oligolepis</i> Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Tabebuia pergracilis</i> Britton & P.Wilson	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Tabebuia picotensis</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Tabebuia pulverulenta</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Tabebuia sagraei</i> Urban	Cuba E	E	E		C W U D
<i>Tabebuia saxicola</i> Britton	Cuba (Villa Clara) E	E	E		C W U D
<i>Tabebuia zolyomiana</i> Borh.	Cuba (Holguin) I	I	I		C W U D

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RARE AND THREATENED PLANTS OF CUBA

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BORAGINACEAE					
<i>Cordia acunae</i> (Mold.) Alain	Cuba (Holguin) E	E	E		C W U D
<i>Cordia corallicola</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Cordia dumosa</i> Alain	Cuba (Las Tunas; Guantanamo) I	I	I		C W U D
<i>Cordia iberica</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Cordia intricata</i> C.Wright	Cuba (Sancti Spiritus) I	I	I		C W U D
<i>Cordia suffruticosa</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Cordia valenzuelana</i> A.Rich.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Cordia van-hermannii</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Heliotropium myriophyllum</i> Urban	Cuba (Camaguey) I	I	I		C W U D
<i>Heliotropium serpylloides</i> Griseb.	Cuba (SC; Gu) I	I	I		C W U D
<i>Rochefortia oblongata</i> Urban & Ekman	Cuba (Santiago de Cuba) I	I	I		C W U D
BUXACEAE					
<i>Buxus acuminata</i> (Griseb.) Muell. Arg.	Cuba (Guantanamo) I	I	I		C W U D
<i>Buxus acunae</i> Borh. & Muniz	Cuba (Holguin) E	E	E		C W U D
<i>Buxus baracoensis</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Buxus cubana</i> Baill.	Cuba (Guantanamo) I	I	I		C W U D
<i>Buxus heterophylla</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Buxus moana</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Buxus muelleriana</i> Urban	Cuba E	E	E		C W U D
<i>Buxus revoluta</i> (Britton) Alain	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Buxus rotundifolia</i> (Britton) Mathou	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Buxus vaccinioides</i> (Britton) Urban	Cuba (SC; Ho; Gu) I	I	I		C W U D
CACTACEAE					
<i>Cereus robinii</i> (Lemaire) L.Benson var. <i>robinii</i>	Cuba V Florida (5 populations remaining) E	V E	V	?	C W U D
<i>Consolea macracantha</i> (Griseb.) Berg.	Cuba V	V	V		C W U D
<i>Dendrocereus nudiflorus</i> (Engelm.) Britton & Rose	Cuba V	V	V		C W U D
<i>Harrisia earlei</i> Britton & Rose	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Harrisia fernowii</i> Britton	Cuba R	R	R		C W U D
<i>Harrisia taylori</i> Britton	Cuba V	V	V		C W U D
<i>Leptocereus arboreus</i> Britton & Rose	Cuba (C; Ci; SS) V	V	V		C W U D
<i>Leptocereus assurgens</i> (C.Wright) Britton & Rose	Cuba R	R	R		C W U D
<i>Leptocereus ekmanii</i> (Werderm.) Knuth	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Leptocereus leonii</i> Britton & Rose	Cuba (Holguin) E	E	E		C W U D
<i>Leptocereus maxonii</i> Britton & Rose	Cuba (SC; Gu) R	R	R		C W U D
<i>Leptocereus prostratus</i> Britton & Rose	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Leptocereus sylvestris</i> Britton & Rose	Cuba (Granma) R	R	R		C W U D
<i>Leptocereus wrightii</i> Leon	Cuba (Ciud. Habana; Prov. Habana) Ex	Ex	Ex		C W U D
<i>Mammillaria prolifera</i> (Mill.) Haw. var. <i>prolifera</i>	Cuba V, Haiti ?	I	I		C W U D
<i>Melocactus actinacanthus</i> Areces	Cuba (Guantanamo) E	E	E		C W U D
<i>Melocactus borhidii</i> Meszaros	Cuba (Guantanamo) E	E	E		C W U D
<i>Melocactus evae</i> Meszaros	Cuba (Guantanamo) E	E	E		C W U D
<i>Melocactus guitarti</i> Leon	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Melocactus harlowii</i> (Britton & Rose) Vaupel	Cuba (Guantanamo) E	E	E		C W U D
<i>Melocactus holguinensis</i> Areces	Cuba (Holguin) E	E	E		C W U D
<i>Melocactus matanzanus</i> Leon	Cuba (Matanzas) E	E	E		C W U D
<i>Melocactus nagyii</i> Meszaros	Cuba (Granma; Santiago de Cuba) E	E	E		C W U D
<i>Melocactus radoczii</i> Meszaros	Cuba (Guantanamo) E	E	E		C W U D
<i>Opuntia auberi</i> Pfeiffer	Cuba R	R	R		C W U D
<i>Opuntia militaris</i> Britton & Rose	Cuba (Guantanamo) E	E	E		C W U D
<i>Pereskia cubensis</i> Britton & Rose	Cuba (Or; Ca; LV) E	E	E		C W U D
<i>Selenicereus brevispinus</i> Britton & Rose	Cuba (Camaguey) R	R	R		C W U D
CAMPANULACEAE					
<i>Siphocampylus impressus</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Siphocampylus libanensis</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Siphocampylus undulatus</i> Urban	Cuba (G; SC; Ho) I	I	I		C W U D
<i>Siphocampylus yumuriensis</i> Kirouac	Cuba (Guantanamo) E	E	E		C W U D

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RARE AND THREATENED PLANTS OF CUBA

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CANELLACEAE					
Cinnamodendron cubense Urban	Cuba (Oriente) R	R	R		C W U D
CAPPARACEAE					
Cleome gamboensis Urban	Cuba (Las Tunas; Granma) E	E	E		C W U D
Cleome tenuicaulis Urban	Cuba (Camaguey; Las Tunas) E	E	E		C W U D
Forchhammeria polyandra (Griseb.) Alain	Cuba (Holguin; Guantanamo) I	I	I		C W U D
CARYOPHYLLACEAE					
Pinosia glandulosa Alain	Cuba (Guantanamo) I	I	I		C W U D
CELASTRACEAE					
Crossopetalum ekmanii (Urban) Alain	Cuba (Sancti Spiritus) I	I	I		C W U D
Crossopetalum rostratum (Urban) Rothm.	Cuba (Pinar del Rio) I	I	I		C W U D
Gyminda orbicularis Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
Maytenus lineata C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
Salacia wrightii Urban	Cuba (Guantanamo) E	E	E		C W U D
CHLORANTHACEAE					
Hedyosmum leonis Kirouac	Cuba (Holguin) I	I	I		C W U D
Hedyosmum subintegrum Urban	Cuba (Holguin; Guantanamo) I	I	I		C W U D
CLUSIACEAE					
Clusia alainii Borh.	Cuba (Guantanamo) I	I	I		C W U D
Clusia moensis Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
Garcinia clarensis Borh.	Cuba (Matanzas; Villa Clara) I	I	I		C W U D
Rhedia aristata Griseb.	Cuba (LH; PR; IJ) R	R	R		C W U D
COMBRETACEAE					
Bucida molineti (M.Gomez) Alwan ined.	Cuba R, Belize R, Guatemala R	R	R	Y	C W U D
Terminalia eriostachya A.Rich.	Cuba (Or; LV; LH; PR) R	R	R		C W U D
Terminalia intermedia (A.Rich.) Urban	Cuba (Or; LV; LH; PR) R	R	R		C W U D
Terminalia pachystyla Borh.	Cuba (Holguin) I	I	I		C W U D
COMMELINACEAE					
Sauvallea blainii C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
COMPOSITAE					
Aster grisebachii Britton	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
Baccharis orientalis (Alain)Borh.	Cuba (Las Tunas) I	I	I		C W U D
Chaptalia comptonioides Britton & P.Wilson	Cuba (Granma) I	I	I		C W U D
Chaptalia ekmanii Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Chaptalia turquinensis Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
Ciceronia chaptalioides Urban	Cuba (Holguin) I	I	I		C W U D
Ekmania lepidota (Griseb.) Gleas.	Cuba (Guantanamo) I	I	I		C W U D
Elephantopus arenarius Britton & P.Wilson	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
Epaltes mattfeldii Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Erigeron libanensis Urban	Cuba (Guantanamo) I	I	I		C W U D
Erigeron paucilobus Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Erigeron taylori Britton & P.Wilson	Cuba (Santiago de Cuba) E	E	E		C W U D
Eupatorium atroglandulosum Alain	Cuba (Sancti Spiritus) I	I	I		C W U D
Eupatorium breviflorum Alain	Cuba (Pinar del Rio) I	I	I		C W U D
Eupatorium chalceorithales Robins.	Cuba E	E	E		C W U D
Eupatorium imbricatum (Griseb.) Urban	Cuba (Guantanamo) I	I	I		C W U D
Eupatorium oligadenium Alain	Cuba (Guantanamo) I	I	I		C W U D
Feddea cubensis Urban	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Gochnatia ekmanii (Urban) Jervis & Alain	Cuba (Pinar del Rio) I	I	I		C W U D
Gochnatia gomezii (Leon) Jervis & Alain	Cuba (Holguin) I	I	I		C W U D
Gochnatia intertexta (C.Wright) Jervis & Alain	Cuba (Pinar del Rio) V	V	V		C W U D
Gochnatia maisiana (Leon) Jervis & Alain	Cuba (Guantanamo) I	I	I		C W U D
Gochnatia mantuensis (C.Wright) Jervis & Alain	Cuba (Pinar del Rio) E	E	E		C W U D
Gochnatia montana (Britton) Jervis & Alain	Cuba (Pinar del Rio) I	I	I		C W U D

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RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
COMPOSITAE (Cont.)					
Gochnatia parvifolia (Britton) Jervis & Alain	Cuba (Holguin) I	I	I		C W U D
Gochnatia wilsoni (Britton) Jervis & Alain	Cuba (Sancti Spiritus) E	E	E		C W U D
Helenium scaposum Britton	Cuba (I. Juventud) E	E	E		C W U D
Heptanthus brevipes C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
Heptanthus cochlearifolius Griseb.	Cuba (Pinar del Rio; I. Juventud) V	V	V		C W U D
Heptanthus yumuriensis Borh.	Cuba (Guantanamo) I	I	I		C W U D
Isocarpha glabrata Blake	Cuba (Camaguey) I	I	I		C W U D
Koehneola repens (Griseb.) Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Lantanopsis tomentosa Borh. & Moncada	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
Mikania hioramii Britton & Robins.	Cuba (Guantanamo) I	I	I		C W U D
Pectis havanensis Urban	Cuba (Ciud. Habana) I	I	I		C W U D
Pectis juniperina Rydb.	Cuba (Pinar del Rio) E	E	E		C W U D
Pectis leonis Rydb.	Cuba (Sancti Spiritus) E	E	E		C W U D
Pectis pinosia Urban	Cuba (I. Juventud) E	E	E		C W U D
Pectis ritlandii Howard & Briggs	Cuba (Cienfuegos) I	I	I		C W U D
Rhodogeron coronopifolius Griseb.	Cuba (Villa Clara) I	I	I		C W U D
Sachsia tricephala Griseb.	Cuba (Pinar del Rio) E	E	E		C W U D
Salmea caleoides Griseb.	Cuba (Pinar del Rio) I	I	I		C W U D
Salmea glaberrima C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
Salmea umratilis Robins.	Cuba (Pinar del Rio) I	I	I		C W U D
Senecio azulensis Alain	Cuba (Guantanamo) I	I	I		C W U D
Senecio carinatus Greenman	Cuba (Holguin) I	I	I		C W U D
Senecio moaensis Alain	Cuba (Holguin) I	I	I		C W U D
Senecio molddenkei Greenman	Cuba (Holguin) I	I	I		C W U D
Senecio pachylepis Greenman	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Senecio sauetii Alain	Cuba (Guantanamo) I	I	I		C W U D
Spaniopappus ekmanii Robins.	Cuba (Guantanamo) I	I	I		C W U D
Tetraperone bellioides (Griseb.) Urban	Cuba (Pinar del Rio) E	E	E		C W U D
Thymopsis polyantha (Urban) Borh. & Muniz	Cuba (Matanzas; Villa Clara) E	E	E		C W U D
Verbesina angulata Urban	Cuba (Ciud. Habana; Prov. Habana) I	I	I		C W U D
Vernonia aronifolia Gleas.	Cuba (Pinar del Rio) I	I	I		C W U D
Vernonia cristalensis Alain	Cuba (Holguin) I	I	I		C W U D
Vernonia leonis Alain	Cuba (Guantanamo) I	I	I		C W U D
Vernonia maestralis Ekman & Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
Vernonia reedii Ekman & Urban	Cuba (Sancti Spiritus) E	E	E		C W U D
Vernonia viminalis Gleas.	Cuba E	E	E		C W U D
Vernonia yunquensis Gleas.	Cuba (Guantanamo) I	I	I		C W U D
CONVOLVULACEAE					
Evolvulus siliceus Britton & P.Wilson	Cuba (I. Juventud) E	E	E		C W U D
Ipomoea alterniflora Griseb.	Cuba (PR; ?G; ?SC;) I	I	I		C W U D
Ipomoea erosa Urban	Cuba (Holguin) I	I	I		C W U D
Ipomoea excisa Urban	Cuba (Prov. Habana) I	I	I		C W U D
Ipomoea flavo-purpurea Urban	Cuba (Sancti Spiritus) I	I	I		C W U D
Turbina wrightii (House) Alain	Cuba E	E	E		C W U D
CUCURBITACEAE					
Cayaponia excisa (Griseb.) Cogn.	Cuba (Pinar del Rio) I	I	I		C W U D
CYPERACEAE					
Carex cubensis Kuk.	Cuba (Santiago de Cuba) I	I	I		C W U D
Cyperus pinetorum Britton	Cuba (Pinar del Rio; I. Juventud) I	I	I		C W U D
Fimbristylis ophiticola Britton	Cuba (H; CH; C) I	I	I		C W U D
Kyllinga urbanii Kuk.	Cuba (Pinar del Rio) I	I	I		C W U D
Rhynchospora bucherorum Leon	Cuba (Holguin) E	E	E		C W U D
Rhynchospora grisebachii Boeckl.	Cuba (Pinar del Rio) I	I	I		C W U D
Rhynchospora joveroensis Britton	Cuba (Pinar del Rio) E	E	E		C W U D
Rhynchospora nuda Gale	Cuba (I. Juventud) E	E	E		C W U D
Rhynchospora schmidtii Kuk.	Cuba (Pinar del Rio) I	I	I		C W U D
Rhynchospora siguaneana Britton	Cuba (I. Juventud) I	I	I		C W U D
Rhynchospora squamulosa Kuk.	Cuba (Pinar del Rio) E	E	E		C W U D
Rhynchospora subimberbis Griseb.	Cuba (Pinar del Rio) I	I	I		C W U D
Scleria motemboensis Britton	Cuba (Matanzas; Villa Clara) E	E	E		C W U D

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RARE AND THREATENED PLANTS OF CUBA

Plant name	Distribution (Cons. status)	1	2	3	Circle:
CYRILLACEAE					
<i>Purdiaea ekmanii</i> Kirouac	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Purdiaea microphylla</i> Britton & P. Wilson	Cuba (Holguin; Guantanamo) I	I	I		C W U D
DICHAPETALACEAE					
<i>Tapura orbicularis</i> Ekman	Cuba (Holguin) I	I	I		C W U D
DIOSCOREACEAE					
<i>Dioscorea ekmanii</i> Knuth	Cuba (H; CH; VC) E	E	E		C W U D
<i>Dioscorea herradurensis</i> (Knuth) P. Wilson	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Rajania hermannii</i> Knuth	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Rajania prestoniensis</i> Knuth	Cuba (Holguin) Ex	Ex	Ex		C W U D
<i>Rajania theresensis</i> Uline	Cuba E	E	E		C W U D
ERICACEAE					
<i>Kalmiella aggregata</i> Small	Cuba (I. Juventud) V	V	V		C W U D
<i>Kalmiella ericoides</i> C. Wright	Cuba (Pinar del Rio; I. Juventud) V	V	V		C W U D
<i>Kalmiella simulata</i> Britton & P. Wilson	Cuba (I. Juventud) E	E	E		C W U D
<i>Lyonia affinis</i> (A. Rich.) Urban	Cuba (Santiago de Cuba; Holguin) R	R	R		C W U D
<i>Lyonia clementis</i> Acuna & Roig	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Lyonia ekmanii</i> Urban	Cuba (Pinar del Rio) V	V	V		C W U D
<i>Lyonia glandulosa</i> (A. Rich.) Griseb. var. <i>toaensis</i> (Acuna & Roig) R. Berazain	Cuba (Guantanamo) R	R	R		C W U D
<i>Lyonia latifolia</i> (A. Rich.) Griseb. ssp. <i>latifolia</i>	Cuba (SC; Gu) R	R	R		C W U D
<i>Lyonia latifolia</i> (A. Rich.) Griseb. ssp. <i>calycosa</i> (Small) Borh.	Cuba (SC; Gu) R	R	R		C W U D
<i>Lyonia leonis</i> Acuna & Roig	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Lyonia maestrensis</i> Acuna & Roig	Cuba (Granma) R	R	R		C W U D
<i>Vaccinium shaveri</i> Acuna & Roig	Cuba (Holguin; Guantanamo) R	R	R		C W U D
ERIOCAULACEAE					
<i>Eriocaulon arenicola</i> Britton & Small	Cuba (I. Juventud) E	E	E		C W U D
<i>Eriocaulon cubense</i> Ruhl.	Cuba (I. Juventud) E	E	E		C W U D
<i>Eriocaulon echinospermoideum</i> Ruhl.	Cuba (Villa Clara) Ex	Ex	Ex		C W U D
<i>Eriocaulon ekmanii</i> Ruhl.	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eriocaulon fusiforme</i> Britton & Small	Cuba (I. Juventud) I	I	I		C W U D
<i>Eriocaulon minutissimum</i> Ruhl.	Cuba (Pinar del Rio) Ex	Ex	Ex		C W U D
<i>Eriocaulon miserrimum</i> Ruhl.	Cuba (I. Juventud) E	E	E		C W U D
<i>Eriocaulon oliveaceum</i> Mold.	Cuba (I. Juventud) E	E	E		C W U D
<i>Eriocaulon ovoideum</i> Britton & Small	Cuba (I. Juventud) I	I	I		C W U D
<i>Lachnocaulon cubense</i> Ruhl.	Cuba (Villa Clara) Ex	Ex	Ex		C W U D
<i>Paepalanthus nipensis</i> L. Gonzalez Geigel	Cuba (Holguin) R	R	R		C W U D
<i>Paepalanthus pungens</i> Griseb.	Cuba (Holguin) V	V	V		C W U D
<i>Syngonanthus insularis</i> Mold.	Cuba (I. Juventud) V	V	V		C W U D
ERYTHROXYLACEAE					
<i>Erythroxylum baracoense</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Erythroxylum clarensense</i> Borh.	Cuba (Ci; SS) I	I	I		C W U D
<i>Erythroxylum dumosum</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Erythroxylum echinodendron</i> Ekman	Cuba (VC; SS) I	I	I		C W U D
<i>Erythroxylum horridum</i> Borh. & Oviedo	Cuba (Holguin) I	I	I		C W U D
EUPHORBIACEAE					
<i>Acalypha hutchinsonii</i> Britton	Cuba (Ci; SS) I	I	I		C W U D
<i>Acalypha nana</i> Griseb.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Acidocroton acunae</i> Borh. & Muniz	Cuba (Villa Clara) I	I	I		C W U D
<i>Acidocroton ekmanii</i> Urban	Cuba (G; SC; Ho) I	I	I		C W U D
<i>Acidocroton trichophyllus</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Andrachne brittonii</i> Urban	Cuba (Guantanamo) E	E	E		C W U D
<i>Argythamnia microphylla</i> Pax	Cuba (Camaguey) I	I	I		C W U D
<i>Bernardia venosa</i> Griseb.	Cuba (Guantanamo) E	E	E		C W U D
<i>Bonania myrcifolia</i> (Griseb.) Benth. & Hook.	Cuba (Guantanamo) I	I	I		C W U D
<i>Chaetocarpus humilis</i> (Ekman) Borh.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Cnidoscopus fragrans</i> (H.B.K.) Pohl	Cuba (Ciud. Habana) Ex	Ex	Ex		C W U D

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RARE AND THREATENED PLANTS OF CUBA

Plant name	Distribution (Cons. status)	1	2	3	Circle:
EUPHORBIACEAE (Cont.)					
<i>Cnidoscopus matosii</i> Leon	Cuba (Guantanamo) R	R	R		C W U D
<i>Cnidoscopus quinquelobatus</i> (Mill.) Leon	Cuba (Prov. Habana, Ciud. Habana) I	I	I		C W U D
<i>Cnidoscopus rangel</i> (M.Gomez) McVaugh	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Croton acunae</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Croton clavuliger</i> Muell. Arg.	Cuba (G; SC; Gu) I	I	I		C W U D
<i>Croton corallicola</i> Borh.	Cuba (Granma) I	I	I		C W U D
<i>Croton cycloideus</i> Borh. & Muniz	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Croton excisus</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Croton jaucoensis</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Croton moanus</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Croton nipensis</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Croton pachyrachis</i> Alain	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Croton panduraeformis</i> Muell. Arg.	Cuba E	E	E		C W U D
<i>Croton prostratus</i> Urban	Cuba (VC; SS; SC; Ho) I	I	I		C W U D
<i>Croton subdecumbens</i> Borh. & Muniz	Cuba (Cienfuegos) I	I	I		C W U D
<i>Croton yunquensis</i> Griseb.	Cuba (Guantanamo) I	I	I		C W U D
<i>Drypetes triplinervia</i> Muell. Arg.	Cuba E	E	E		C W U D
<i>Euphorbia cubensis</i> Boiss.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Euphorbia munizii</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Hyeronima crassistipula</i> Urban	Cuba (I. Juventud) E	E	E		C W U D
<i>Lasiocroton gracilis</i> Britton & P.Wilson	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Leucocroton bracteosus</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Leucocroton brittonii</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Leucocroton discolor</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Leucocroton moncadae</i> Borh.	Cuba (H; CH; VC; C) I	I	I		C W U D
<i>Leucocroton pallidus</i> Britton	Cuba (Guantanamo) I	I	I		C W U D
<i>Moacroton leonis</i> Croizat	Cuba (Holguin) I	I	I		C W U D
<i>Moacroton revolutus</i> Alain	Cuba (Prov. Habana; Matanzas) V	V	V		C W U D
<i>Moacroton tetramerus</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Pera ovalifolia</i> Urban	Cuba (C; T; Ho) I	I	I		C W U D
<i>Phyllanthus apiculatus</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Phyllanthus cardiophyllus</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Phyllanthus chryseus</i> Howard	Cuba (Holguin) I	I	I		C W U D
<i>Phyllanthus comosus</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Phyllanthus cristalensis</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Phyllanthus echinospermus</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Phyllanthus nanus</i> Millsp.	Cuba (I. Juventud) E	E	E		C W U D
<i>Phyllanthus pinosius</i> Urban	Cuba (I. Juventud) E	E	E		C W U D
<i>Phyllanthus pulverulentus</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Platygyne leonis</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Victorinia regina</i> (Leon) Leon	Cuba (Guantanamo) R	R	R		C W U D
FLACOURTIACEAE					
<i>Banara acunae</i> Borh. & Muniz	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Banara riscoi</i> Borh. & Muniz	Cuba (I. Juventud) I	I	I		C W U D
<i>Banara wilsoni</i> Alain	Cuba (Las Tunas) I	I	I		C W U D
<i>Lunania dodecandra</i> C.Wright	Cuba (Guantanamo) R	R	R		C W U D
<i>Lunania elongata</i> Britton & P.Wilson	Cuba (Sancti Spiritus) I	I	I		C W U D
<i>Lunania sauvallii</i> Griseb.	Cuba (Pinar del Rio) R	R	R		C W U D
<i>Samyda lunana</i> P.Wilson	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Xylosma roigiana</i> Borh.	Cuba (Las Tunas) I	I	I		C W U D
GESNERIACEAE					
<i>Gesneria glandulosa</i> (Griseb.) Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Gesneria gloxinioides</i> (Griseb.) Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Gesneria lindmanii</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Gesneria wrightii</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Pheidonocarpa cubensis</i> (Morton) Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Phinaea pulchella</i> (Griseb.) Morton	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Rhytidophyllum minus</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Rhytidophyllum rhodocalyx</i> Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D

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GRAMINEAE					
Aristida brittonorum Hitchc.	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
Aristida laevigata Hitchc. & Ekman	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Chloris arenaria Hitchc. & Ekman	Cuba (Pinar del Rio; Cienfuegos) E	E	E		C W U D
Digitaria pinetorum Hitchc.	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
Eragrostis ekmanii Hitchc.	Cuba (I. Juventud) E	E	E		C W U D
Lepturidium insulare Hitchc. & Ekman	Cuba (I. Juventud) E	E	E		C W U D
Panicum beyeri Hitchc. & Ekman	Cuba (SC; PR; Ho) I	I	I		C W U D
Panicum lacustre Hitchc. & Ekman	Cuba (Pinar del Rio) E	E	E		C W U D
Paspalum acutifolium Leon	Cuba (M; VC; LH) I	I	I		C W U D
Paspalum amhicarpum Ekman	Cuba (Prov. Habana) Ex	Ex	Ex		C W U D
Paspalum edmondi Leon	Cuba (Matanzas; Villa Clara) I	I	I		C W U D
Paspalum insulare Ekman	Cuba (IJ; PR) I	I	I		C W U D
Paspalum wrightii Hitchc. & Chase	Cuba (Pinar del Rio) E	E	E		C W U D
Saugetia pleiostachya Hitchc. & Ekman	Cuba (Pinar del Rio) I	I	I		C W U D
Schizachyrium parvifolium (Hitchc.) Borh. & Catusus	Cuba (Pinar del Rio) E	E	E		C W U D
Triscentia ovina Griseb.	Cuba (Ho; GR; GT) I	I	I		C W U D
HALORAGACEAE					
Myriophyllum sparsiflorum C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
HERNANDIACEAE					
Hernandia cubensis Griseb.	Cuba (Guantanamo) E	E	E		C W U D
HYDROPHYLLACEAE					
Hydrolea cubana (P.Wilson) Alain	Cuba (Camaguey) I	I	I		C W U D
LABIATAE					
Eriope trichopes Epling	Cuba (I. Juventud) I	I	I		C W U D
Hyptis cubensis Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Hyptis pedalis Griseb.	Cuba (Pinar del Rio) E	E	E		C W U D
Hyptis rivularis Britton	Cuba (Sancti Spiritus) E	E	E		C W U D
Hyptis shafeti Britton	Cuba (Pinar del Rio) E	E	E		C W U D
Micromeria bucheri P.Wilson	Cuba (Santiago de Cuba) I	I	I		C W U D
Micromeria suborbicularis (Alain) Borh.	Cuba (Guantanamo) I	I	I		C W U D
Salvia nigrescens Alain	Cuba (SC; Gu) I	I	I		C W U D
Salvia scabrata Britton & P.Wilson	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Salvia strobilanthiodes C.Wright	Cuba (Guantanamo) I	I	I		C W U D
LAURACEAE					
Persea acunae Borh. & Imkhan.	Cuba (Pinar del Rio) I	I	I		C W U D
Persea nummularia Trel.	Cuba (Pinar del Rio) E	E	E		C W U D
Persea shaferei P.Wilson	Cuba (Holguin; Guantanamo) I	I	I		C W U D
LEGUMINOSAE					
Acacia belairioides Urban	Cuba (Holguin) E	E	E		C W U D
Acacia bucheri Marie-Vict.	Cuba (Holguin; Guantanamo) R	R	R		C W U D
Acacia cowellii (Britton & Rose) Leon	Cuba (Santiago de Cuba) I	I	I		C W U D
Acacia cupeyensis Leon	Cuba (Las Tunas; Holguin) E	E	E		C W U D
Acacia curbeloi Leon	Cuba (Las Tunas) E	E	E		C W U D
Acacia daemon Ekman & Urban	Cuba (Ca; LV; Ma; LH) R	R	R		C W U D
Acacia polypyrigenes Greenman	Cuba (Cienfuegos) I	I	I		C W U D
Acacia roigii Leon	Cuba (Las Tunas) E	E	E		C W U D
Acacia seifriziana Leon	Cuba (Guantanamo) I	I	I		C W U D
Acacia zapatensis Urban & Ekman	Cuba (Matanzas) I	I	I		C W U D
Ateleia gummifera D.Dietr.	Cuba (Oriente; Matanzas) R	R	R		C W U D
Ateleia salicifolia Mohl.	Cuba (Ci; VC; SS) I	I	I		C W U D
Behaimia cubensis Griseb.	Cuba (Or; LV; Ma; LH; PR; IJ) R	R	R		C W U D
Behaimia roigii Borh.	Cuba (Matanzas) I	I	I		C W U D
Belairia nipensis Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Belairia parvifolia Britton	Cuba (Granma) I	I	I		C W U D
Bembicidium cubense Rydb.	Cuba (Guantanamo) I	I	I		C W U D
Caesalpinia guanensis (Britton) Leon	Cuba (Pinar del Rio) E	E	E		C W U D
Caesalpinia hermeliae Léon	Cuba (Holguin) E	E	E		C W U D
Caesalpinia hornei Britton	Cuba (Ciego de Avila) E	E	E		C W U D
Canavalia microperma Urban	Cuba (Pinar del Rio) E	E	E		C W U D
Cassia acunae Borh.	Cuba (Pinar del Rio) I	I	I		C W U D
Cassia bucheriae (Mold.) Leon	Cuba (Holguin) I	I	I		C W U D

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RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
LEGUMINOSAE (Cont.)					
<i>Cassia diffusissima</i> (Britton) Leon	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Cassia esmeraldensis</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Cassia niqueroensis</i> Urban & Ekman	Cuba (Granma) I	I	I		C W U D
<i>Cassia roigii</i> (Britton) Leon	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Cassia scleroxyla</i> Britton	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Cassia turquinae</i> (Britton) Leon	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Crotalaria urbaniana</i> Senn	Cuba (Granma) EX	EX	EX		C W U D
<i>Cynometra cubensis</i> A.Rich.	Cuba (Pinar del Rio) R	R	R		C W U D
<i>Erythrina acunae</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Erythrina elenae</i> Howard & Briggs	Cuba (Cienfuegos) I	I	I		C W U D
<i>Galactia acunana</i> Borh. & Muniz	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Galactia herraduraensis</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Galactia isopoda</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Galactia jenningsii</i> Britton	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
<i>Harpalyce acunae</i> Borh. & Muniz	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Harpalyce angustiflora</i> Leon & Alain	Cuba (Holguin) I	I	I		C W U D
<i>Harpalyce baracoensis</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Harpalyce borhidii</i> Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Harpalyce ekmanii</i> Urban	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Harpalyce flexuosa</i> Leon & Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Harpalyce foliosa</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Harpalyce maisiana</i> Leon & Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Harpalyce moana</i> Borh. & Muniz	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Harpalyce toaensis</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Hymenaea torrei</i> Leon	Cuba (Oriente; Camaguey) V	V	V		C W U D
<i>Indigofera cubensis</i> Urban	Cuba (Ciud. Habana; Matanzas) E	E	E		C W U D
<i>Mimosa apleura</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Mimosa catalinae</i> Leon	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Mimosa moaensis</i> Britton & P.Wilson	Cuba (Holguin) I	I	I		C W U D
<i>Notodon cayensis</i> Britton & Wilson	Cuba (Camaguey) I	I	I		C W U D
<i>Pithecellobium savannarum</i> Britton	Cuba (Holguin) I	I	I		C W U D
<i>Sauvallella immarginata</i> (C.Wright) Rydb.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Sophora polyphylla</i> Urban	Cuba (Holguin) V	V	V		C W U D
LOGANIACEAE					
<i>Spigelia ambigua</i> C.Wright	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
LORANTHACEAE					
<i>Dendropemon acutifolius</i> Urban	Cuba (Santiago de Cuba) R	R	R		C W U D
<i>Dendrophthora amoebandra</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Dendrophthora lanceifolia</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Dendrophthora mancinellae</i> (C.Wright) Eichl.	Cuba (Pinar del Rio) V	V	V		C W U D
<i>Dendrophthora picotensis</i> Urban	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Dendrophthora sessilifolia</i> (Griseb.) Krug & Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Phoradendron lapatanum</i> Trel.	Cuba (Matanzas) I	I	I		C W U D
LYTHRACEAE					
<i>Ginoria koehneana</i> Urban	Cuba (Las Tunas; Holguin) I	I	I		C W U D
<i>Ginoria thomasiana</i> Alain	Cuba (Pinar del Rio) I	I	I		C W U D
MAGNOLIACEAE					
<i>Magnolia cacuminicola</i> Bisse	Cuba (Guantanamo) R	R	R		C W U D
<i>Magnolia cubensis</i> Urban ssp. <i>acunae</i> Imkhanitskaya	Cuba (Las Villas) E	E	E		C W U D
<i>Talauma orbiculata</i> Britton & P.Wilson	Cuba (Oriente) R	R	R		C W U D
MALPIGHIACEAE					
<i>Bunchosia linearifolia</i> P.Wilson	Cuba (Guantanamo) I	I	I		C W U D
<i>Byrsonima moensis</i> Acuna & Roig	Cuba (Holguin) I	I	I		C W U D
<i>Malpighia acunana</i> Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Malpighia wrightiana</i> Acuna & Roig	Cuba (Pinar del Rio) I	I	I		C W U D
MALVACEAE					
<i>Hibiscus eggertii</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Hibiscus urbanii</i> Helwig	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Pavonia calicicola</i> (Britton) Ekman	Cuba (Ci; SS) I	I	I		C W U D

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MARANTACEAE					
<i>Thalia angustifolia</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
MELASTOMATACEAE					
<i>Calycogonium acunatum</i> Borh. & Muniz	Cuba (Holguin) E	E	E		C W U D
<i>Calycogonium ellipticum</i> C.Wright	Cuba E	E	E		C W U D
<i>Calycogonium microphyllum</i> C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Calycogonium plicatum</i> Griseb.	Cuba (Guantanamo) I	I	I		C W U D
<i>Calycogonium rubens</i> Borh.	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Calycogonium saxicola</i> Britton & P.Wilson	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Calycogonium susannae</i> Borh.	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Clidemia macrandra</i> (C.Wright) Cogn.	Cuba (I. Juventud) E	E	E		C W U D
<i>Henriettea punctata</i> (Griseb.) M.Gomez	Cuba (Guantanamo) I	I	I		C W U D
<i>Henriettea squamata</i> (Alain) Alain	Cuba (Holguin) I	I	I		C W U D
<i>Henriettea granularis</i> Urban	Cuba (Pinar del Rio) R	R	R		C W U D
<i>Miconia acunae</i> Borh.	Cuba (Granma; Santiago de Cuba) E	E	E		C W U D
<i>Miconia cordifolia</i> (Alain) Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Miconia lenticellata</i> Alain	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Miconia perelegans</i> Urban	Cuba (I. Juventud) I	I	I		C W U D
<i>Miconia petersonii</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Miconia remotiflora</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Miconia uninervis</i> Alain	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Mouriri maestralis</i> Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Ossaea baracoensis</i> Borh. & Muniz	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Ossaea costata</i> Urban	Cuba (Guantanamo) E	E	E		C W U D
<i>Ossaea cubana</i> Alain	Cuba E	E	E		C W U D
<i>Ossaea elliptica</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Ossaea filisepala</i> Urban	Cuba (Guantanamo) E	E	E		C W U D
<i>Ossaea heterotricha</i> (Griseb.) C.Wright	Cuba (Guantanamo) I	I	I		C W U D
<i>Ossaea hypoglauca</i> (C.Wright) M.Gomez	Cuba E	E	E		C W U D
<i>Ossaea micarensis</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Ossaea neurotricha</i> C.Wright	Cuba (Guantanamo) E	E	E		C W U D
<i>Ossaea pulchra</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Ossaea wilsoni</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Pachyanthus clementis</i> P.Wilson	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Pachyanthus lunanus</i> Britton & P.Wilson	Cuba (Ci; VC; SS) E	E	E		C W U D
<i>Pachyanthus oleifolius</i> Griseb.	Cuba (SC; Ho; Gu) I	I	I		C W U D
<i>Pachyanthus pedicellatus</i> Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Pachyanthus tetramerus</i> Urban & Ekman	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Tetrazygia aurea</i> Howard & Briggs	Cuba (Sancti Spiritus) I	I	I		C W U D
<i>Tetrazygia elegans</i> Urban	Cuba (SC; Gu) I	I	I		C W U D
<i>Tetrazygiopsis ekmanii</i> (Urban) Borh.	Cuba (Granma) I	I	I		C W U D
MELIACEAE					
<i>Trichilia pungens</i> Urban	Cuba (Camaguey, Las Tunas, Holguin) V	V	V		C W U D
<i>Trichilia trachyantha</i> (Griseb.) C.DC.	Cuba (Oriente; Las Villas) V	V	V		C W U D
MENISPERMACEAE					
<i>Cissampelos reticulata</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Hyperbaena acutifolia</i> Britton	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Hyperbaena macrophylla</i> Ekman	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Hyperbaena obovata</i> Urban	Cuba (Holguin; Guantanamo) Ex	Ex	Ex		C W U D
<i>Hyperbaena ovata</i> Urban	Cuba (Sancti Spiritus) I	I	I		C W U D
<i>Hyperbaena paucinervis</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
MENYANTHACEAE					
<i>Nymphoides ekmanii</i> (Urban) Alain	Cuba (I. Juventud) E	E	E		C W U D
MORACEAE					
<i>Dorstenia crenulata</i> C.Wright	Cuba (Guantanamo) I	I	I		C W U D
<i>Dorstenia ekmanii</i> Urban	Cuba (Cienfuegos; Villa Clara) E	E	E		C W U D
<i>Dorstenia erythrandra</i> C.Wright	Cuba (Guantanamo) I	I	I		C W U D
<i>Dorstenia nipensis</i> Urban & Ekman	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Dorstenia nummularia</i> Urban & Ekman	Cuba (Cienfuegos; Villa Clara) E	E	E		C W U D
<i>Dorstenia rocana</i> Britton	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Dorstenia roigii</i> Britton	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Dorstenia tuberosa</i> C.Wright	Cuba (Guantanamo) I	I	I		C W U D
<i>Ficus ekmanii</i> Rossb.	Cuba (Santiago de Cuba) I	I	I		C W U D

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MORACEAE (Cont.)					
<i>Ficus meizonochlamys</i> Rossb.	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
MYRTACEAE					
<i>Calycolpus exisus</i> (Urban) Bisse	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Calycorectes moana</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes acunae</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes albicans</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes anacletoi</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Calyptranthes arenicola</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Calyptranthes baracoensis</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Calyptranthes clementis</i> Britton & Wilson	Cuba (Ci; VC; SS) E	E	E		C W U D
<i>Calyptranthes cristalensis</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes ermitensis</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Calyptranthes exasperata</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes flavo-viridis</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Calyptranthes leonis</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Calyptranthes linearis</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes mayarensis</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes minutiflora</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes munizii</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes pocsiana</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Calyptranthes polyneura</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Calyptranthes pozasiana</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Calyptranthes pseudomoaensis</i> Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
<i>Calyptranthes rostrata</i> Griseb.	Cuba (Guantanamo) E	E	E		C W U D
<i>Calyptranthes toaensis</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Eugenia aceitillo</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Eugenia acunai</i> Alain	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Eugenia acutissima</i> Urban & Ekman	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Eugenia amblyophylla</i> Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Eugenia anafensis</i> Britton & P.Wilson	Cuba (Prov. Habana) E	E	E		C W U D
<i>Eugenia atricha</i> Urban	Cuba (Prov. Habana; Ciud. Habana) I	I	I		C W U D
<i>Eugenia bayatensis</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Eugenia ceibana</i> Urban	Cuba (I. Juventud) E	E	E		C W U D
<i>Eugenia duplicata</i> Britton & P.Wilson	Cuba (Prov. Habana) E	E	E		C W U D
<i>Eugenia eriantha</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Eugenia grifensis</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eugenia guanensis</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eugenia ignota</i> Britton & P.Wilson	Cuba (I. Juventud) E	E	E		C W U D
<i>Eugenia iteophylla</i> Krug & Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Eugenia libanensis</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Eugenia moensis</i> Britton & P.Wilson	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Eugenia mollifolia</i> Urban	Cuba (Ciud. Habana) I	I	I		C W U D
<i>Eugenia naguana</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Eugenia oligadenia</i> Urban	Cuba (Granma) E	E	E		C W U D
<i>Eugenia peninsularis</i> Urban	Cuba (Granma) I	I	I		C W U D
<i>Eugenia petrophila</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Eugenia phyllocardia</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Eugenia pinariensis</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Eugenia pozasia</i> Urban & Ekman	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eugenia psiloclada</i> Urban	Cuba (Holguin) E	E	E		C W U D
<i>Eugenia pteroclada</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Eugenia rocana</i> Britton & P.Wilson	Cuba (Pinar del Rio; Prov. Habana) I	I	I		C W U D
<i>Eugenia roigii</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eugenia sebastiani</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Eugenia serrei</i> Urban	Cuba (Prov. Habana; Ciud. Habana) I	I	I		C W U D
<i>Eugenia shaferi</i> Urban	Cuba (Camaguey) I	I	I		C W U D
<i>Eugenia stenoptera</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Eugenia victorini</i> Alain	Cuba (I. Juventud) I	I	I		C W U D
<i>Eugenia woodfrediana</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Krokia cainitoides</i> (Urban) Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Krokia leonis</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Krokia moaensis</i> (Areces) Borh. & Muniz	Cuba (Holguin) E	E	E		C W U D

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RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
MYRTACEAE (Cont.)					
<i>Krokiá nipensis</i> Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Krokiá pilotoana</i> (Urban) Borh.	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Mosiera flavicans</i> (Urban & Ekman)	Cuba E	E	E		C W U D
<i>Bisse ssp. pastelillensis</i> (Urban) Bisse					
<i>Mozartia emarginata</i> Mold.	Cuba (Holguin) E	E	E		C W U D
<i>Mozartia maestrensis</i> Urban	Cuba (Oriente) R	R	R		C W U D
<i>Mozartia manacalensis</i> (Urban) Urban	Cuba (Granma; Santiago de Cuba) V	V	V		C W U D
<i>Mozartia oligostemon</i> Urban	Cuba (Cienfuegos; Villa Clara) E	E	E		C W U D
<i>Myrcia borhidii</i> Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Myrtus claraensis</i> (Urban) Bisse	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Myrtus crenulata</i> (Urban & Ekman) Bisse	Cuba (IJ; SS) E	E	E		C W U D
<i>Myrtus del-riscoi</i> Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Myrtus muniziana</i> (Borh.) Borh.	Cuba (Prov. Habana) E	E	E		C W U D
<i>Myrtus nummularioides</i> (Britton & P.Wilson) Urban	Cuba (Guantanamo) E	E	E		C W U D
<i>Plinia acunae</i> Borh. & Muniz	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Plinia dermatodes</i> Urban	Cuba (Pinar del Rio) V	V	V		C W U D
<i>Plinia formosa</i> Urban	Cuba (Guantanamo) I	I	I		C W U D
<i>Plinia moaensis</i> Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Plinia orthoclada</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Plinia ramosissima</i> (Urban) Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Plinia rubrinervis</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Plinia rupestris</i> Ekman & Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Plinia stenophylla</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Plinia toscanosa</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Psidium celastroides</i> Urban	Cuba (Cienfuegos; Villa Clara) E	E	E		C W U D
<i>Psidium havanense</i> Urban	Cuba (Prov. Habana; Ciud. Habana) E	E	E		C W U D
NYCTAGINACEAE					
<i>Caribea littoralis</i> Alain	Cuba (Guantanamo) R	R	R		C W U D
<i>Guapira clarensis</i> Borh.	Cuba (Las Villas) R	R	R		C W U D
<i>Guapira leonis</i> (Standley) Lundell	Cuba (Prov. Habana) E	E	E		C W U D
<i>Neea ekmanii</i> Heimerl	Cuba (Cienfuegos; Villa Clara) E	E	E		C W U D
<i>Pisonia ekmani</i> Heimerl	Cuba (Las Tunas; Holguin) R	R	R		C W U D
OCHNACEAE					
<i>Ouratea alternifolia</i> (A.Rich.) M.Gomez	Cuba (Prov. Habana) Ex	Ex	Ex		C W U D
OLACACEAE					
<i>Schoepfia cubensis</i> Britton & P.Wilson	Cuba (Holguin) I	I	I		C W U D
<i>Schoepfia stenophylla</i> Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
<i>Ximenia roigii</i> Leon	Cuba (Las Tunas) E	E	E		C W U D
OLEACEAE					
<i>Chionanthus acunae</i> (Borh. & Muniz) Borh.	Cuba (Camaguey) I	I	I		C W U D
<i>Chionanthus moncadae</i> (Borh. & Muniz) Borh.	Cuba (Holguin) I	I	I		C W U D
<i>Forestiera ekmanii</i> Borh.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Haenianthus grandifolius</i> Urban	Cuba (G; SC; Gu) I	I	I		C W U D
ONAGRACEAE					
<i>Ludwigia stricta</i> (C.Wright) C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
ORCHIDACEAE					
<i>Dilomilis bissei</i> H.Dietrich	Cuba (Guantanamo) V	V	V		C W U D
<i>Harrisiella uniflora</i> H.Dietrich	Cuba (Santiago de Cuba) V	V	V		C W U D
<i>Lepanthes trichodactyla</i> Lindley	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Lepanthesis microlepanthes</i> (Griseb.) Ames	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Oncidium usneoides</i> Lindley	Cuba (Guantanamo) E	E	E		C W U D
<i>Physinga polygonata</i> (Lindl.) H.Dietrich	Cuba (Guantanamo) E	E	E		C W U D
<i>Pleurothallis brachyglottis</i> Reichb. f.	Cuba (Guantanamo) I	I	I		C W U D
<i>Pleurothallis hymenantha</i> Lindley	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Pleurothallis mucronata</i> Lindley	Cuba (Guantanamo) E	E	E		C W U D
<i>Pleurothallis rhomboglossa</i> Reichb. f.	Cuba (Guantanamo) E	E	E		C W U D

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ORCHIDACEAE (Cont.)					
Pteroglossaspis ecristata (Fernald) Rolfe	Cuba (Pinar del Rio) I, Florida I, Georgia (US) I, Louisiana I, Mississippi I, N. Carolina I, S. Carolina I	I	I	?	C W U D
Triphora gentianoides (Sw.) Ames & Schlechter	Cuba (Las Villas) R	R	R		C W U D
OXALIDACEAE					
Oxalis cajalbanensis Urban	Cuba (Pinar del Rio) I	I	I		C W U D
PALMAE					
Acrocomia pilosa Leon	Cuba (Guantanamo) R	R	R		C W U D
Acrocomia subinermis Leon ex L.H.Bailey	Cuba (Ciud. Habana) I	I	I		C W U D
Calyptronoma microcarpa (Leon) A.D.Hawkes	Cuba (Ci; VC; SS) R	R	R		C W U D
Coccothrinax baracoensis Borhidi & Muniz	Cuba (Guantanamo) R	R	R		C W U D
Coccothrinax borhidiana Muniz	Cuba (Matanzas) E	E	E		C W U D
Coccothrinax camagueyana Borhidi & Muniz	Cuba (Camaguey) R	R	R		C W U D
Coccothrinax clarensis Leon ssp. brevifolia (Leon) Borhidi & Muniz	Cuba (Sancti Spiritus) R	R	R		C W U D
Coccothrinax crinita Becc. ssp. crinita	Cuba (Pinar del Rio) E	E	E		C W U D
Coccothrinax crinita Becc. ssp. brevicrinis Borhidi & Muniz	Cuba (Cienfuegos; S. Spiritus) R	R	R		C W U D
Coccothrinax fragildei Borhidi & Muniz	Cuba (Santiago de Cuba) R	R	R		C W U D
Coccothrinax nipensis Borhidi & Muniz	Cuba (Holguin) R	R	R		C W U D
Coccothrinax pauciramosa Burret	Cuba (Santiago de Cuba; Oriente) E	E	E		C W U D
Coccothrinax pseudorigida Leon	Cuba (Camaguey) R	R	R		C W U D
Coccothrinax savannarum (Leon) Borhidi & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
Coccothrinax victorini Leon	Cuba (Granma) E	E	E		C W U D
Coccothrinax yunquensis Borhidi & Muniz	Cuba (Guantanamo) R	R	R		C W U D
Colpothrinax wrightii Griseb. & H.Wendl.	Cuba (Pinar del Rio; I. de Pines) V	V	V		C W U D
Copernicia brittonorum Leon	Cuba (PR; M; Ci) R	R	R		C W U D
Copernicia curbeloi Leon	Cuba (Camaguey; Tunas; Holguin) R	R	R		C W U D
Copernicia fallaensis Leon	Cuba (VC; SS; CA; C) R	R	R		C W U D
Copernicia gigas E.L.Ekman ex Burret	Cuba (SS; CA; C; T; G; Ho) R	R	R		C W U D
Copernicia humicola Leon	Cuba (Granma) E	E	E		C W U D
Copernicia longiglossa Leon	Cuba (Las Tunas; Granma) I	I	I		C W U D
Copernicia oxycalyx Burret	Cuba (C; T; G; Ho) I	I	I		C W U D
Copernicia roigii Leon	Cuba (M; T; SC) R	R	R		C W U D
Roystonea regia (H.B. & K.) O.F.Cook var. pinguis L.H.Bailey	Cuba (Guantanamo) R	R	R		C W U D
Roystonea stellata Leon	Cuba (Guantanamo) I	I	I		C W U D
Roystonea violacea Leon	Cuba (Guantanamo) I	I	I		C W U D
Thrinax compacta (H.Wendl.) Borhidi & Muniz	Cuba (Santiago de Cuba, Holguin) I	I	I		C W U D
Thrinax ekmaniana (Burret) Borhidi & Muniz	Cuba (Vila Clara) E	E	E		C W U D
Thrinax rivularis (Leon) Borhidi & Muniz var. rivularis	Cuba (Guantanamo; Holguin) V	V	V		C W U D
Thrinax rivularis (Leon) Borhidi & Muniz var. savannarum (Leon) Borhidi & Muniz	Cuba (Guantanamo; Holguin) V	V	V		C W U D
PASSIFLORACEAE					
Passiflora dasyadenia Urban	Cuba (La Habana) E	E	E		C W U D
PIPERACEAE					
Peperomia acaulis Alain	Cuba (Ci; SS) R	R	R		C W U D
Peperomia guanensis Trel.	Cuba (Pinar del Rio) I	I	I		C W U D
Peperomia mutilata Trel.	Cuba (Guantanamo) E	E	E		C W U D
Piper brittonorum Trel.	Cuba (I.Juventud) E	E	E		C W U D
Piper cojimaranum Trel.	Cuba (Ciud. Habana) E	E	E		C W U D

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PIPERACEAE (Cont.)					
<i>Piper perditum</i> Trel.	Cuba (Pinar del Rio) R	R	R		C W U D
PODOSTEMACEAE					
<i>Marathrum cubanum</i> C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
POLYGALACEAE					
<i>Polygala brachyptera</i> Griseb.	Cuba E	E	E		C W U D
<i>Polygala rhynchosperma</i> Blake	Cuba (Guantanamo) I	I	I		C W U D
POLYGONACEAE					
<i>Coccoloba acuna</i> Howard	Cuba (Holguin) E	E	E		C W U D
<i>Coccoloba clementis</i> Howard	Cuba (Holguin) E	E	E		C W U D
<i>Coccoloba coriacea</i> A.Rich.	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Coccoloba munizii</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Coccoloba retirensis</i> Howard	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Coccoloba toaensis</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
PORTULACACEAE					
<i>Portulaca tuberculata</i> Leon	Cuba (Granma) I	I	I		C W U D
QUINACEAE					
<i>Quina ternatiflora</i> C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
RHAMNACEAE					
<i>Auerodendron acunae</i> Dorh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Auerodendron glaucescens</i> Urban	Cuba (Guantanamo) E	E	E		C W U D
<i>Auerodendron martii</i> Alain	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Doerpfeldia cubensis</i> (Britton) Urban	Cuba (Oriente; Las Villas) E	E	E		C W U D
<i>Gouania ekmanii</i> Alain	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Reynosia microphylla</i> Urban	Cuba (La Habana) R	R	R		C W U D
<i>Reynosia moaensis</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Rhamnidium brevifolium</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Rhamnidium poterilloanum</i> Borh. & Muniz	Cuba (Sancti Spiritus) I	I	I		C W U D
<i>Sarcophalus havanensis</i> (Kunth) Griseb.	Cuba (Or; LV; Ma; LH; PR) R	R	R		C W U D
<i>Ziziphus bidens</i> (Urban) M.C.Johnston	Cuba (Guantanamo) I	I	I		C W U D
RUBIACEAE					
<i>Antirhea nipensis</i> Borh. & Muniz	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
<i>Antirhea orbicularis</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Antirhea pedicellaris</i> Borh. & Bisse	Cuba (Holguin) I	I	I		C W U D
<i>Casasia acunae</i> Borh. & Fernandez	Cuba (Holguin) E	E	E		C W U D
<i>Catesbaea gamboana</i> Urban	Cuba (Las Tunas; Granma) I	I	I		C W U D
<i>Catesbaea macracantha</i> C.Wright	Cuba (Sancti Spiritus) E	E	E		C W U D
<i>Exostema lancifolium</i> Borh. & Acuna	Cuba (Holguin) I	I	I		C W U D
<i>Guettarda amblyophylla</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Guettarda retusa</i> C.Wright	Cuba (Santiago de Cuba) E	E	E		C W U D
<i>Guettarda nervosa</i> Urban & Ekman	Cuba (Ci; SS) E	E	E		C W U D
<i>Guettarda organosia</i> Urban	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Guettarda retusa</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Guettarda roigiana</i> Borh. & Muniz	Cuba (Villa Clara) E	E	E		C W U D
<i>Isidorea elliptica</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Isidorea leonis</i> Alain	Cuba (Guantanamo) I	I	I		C W U D
<i>Isidorea microphylla</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Isidorea polyneura</i> (Urban) Aiello	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Isidorea rheediioides</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Machaonia acunae</i> Borh. & Fernandez	Cuba (I. Juventud) I	I	I		C W U D
<i>Machaonia dumosa</i> Borh. & Fernandez	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Machaonia pubescens</i> Borh. & Fernandez	Cuba (Cienfuegos) I	I	I		C W U D
<i>Machaonia tiffina</i> Urban & Ekman	Cuba (SS; CA; C) I	I	I		C W U D
<i>Machaonia urbaniana</i> Standl.	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Machaonia urbinoi</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Mitracarpus acunae</i> Alain	Cuba (Santiago de Cuba) I	I	I		C W U D
<i>Mitracarpus depauperatus</i> Britton & P.Wilson	Cuba (I. Juventud) E	E	E		C W U D
<i>Mitracarpus scaberulus</i> Urban	Cuba (Pinar del Rio) I	I	I		C W U D
<i>Nodocarpaea radicans</i> A.Gray	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
<i>Phialanthus linearis</i> Alain	Cuba (Holguin) I	I	I		C W U D
<i>Phyllacanthus grisebachianus</i> Hook. f.	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Psychotria banaona</i> Urban	Cuba (Sancti Spiritus) E	E	E		C W U D

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RUBIACEAE (Cont.)					
Psychotria cathetoneura Urban	Cuba (Guantanamo) E	E	E		C W U D
Psychotria ekmanii Urban	Cuba (Granma) E	E	E		C W U D
Psychotria geronensis Urban	Cuba (I. Juventud) E	E	E		C W U D
Psychotria greeneana Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Psychotria martii Acuna & Roig	Cuba (Sancti Spiritus) I	I	I		C W U D
Psychotria rivularis Urban	Cuba (Pinar del Rio) E	E	E		C W U D
Psychotria subvelutina Ekman & Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Psychotria torrei Acuna & Roig	Cuba (Guantanamo) I	I	I		C W U D
Randia acunae Borh.	Cuba (Camaguey) I	I	I		C W U D
Richardia arenicola (B. & W.) W.Lewis & R.Oliver	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
Richardia ciliata (B. & W.) W.Lewis & R.Oliver	Cuba (I. Juventud) E	E	E		C W U D
Rondeletia apiculata Urban	Cuba (Santiago de Cuba) E	E	E		C W U D
Rondeletia bicolor Britton	Cuba (Sancti Spiritus) E	E	E		C W U D
Rondeletia diplocalyx Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Rondeletia ekmanii Britton & Standl.	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
Rondeletia gamboana Urban	Cuba (Las Tunas; Granma) E	E	E		C W U D
Rondeletia leonis Britton	Cuba (Ci; SS) E	E	E		C W U D
Rondeletia micarensis Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Rondeletia monantha Urban & Ekman	Cuba (Sancti Spiritus) E	E	E		C W U D
Rondeletia paucinervis Urban & Ekman	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Rondeletia pycnophylla Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Rondeletia rugelii Urban	Cuba (Matanzas) E	E	E		C W U D
Rondeletia ternifolia Urban	Cuba (Ciud. Habana) Ex	Ex	Ex		C W U D
Schmidtottia cucullata Borh.	Cuba (Holguin) I	I	I		C W U D
Schmidtottia marmorata Urban	Cuba (Guantanamo) I	I	I		C W U D
Schmidtottia monticola Borh.	Cuba (Holguin) I	I	I		C W U D
Schmidtottia parvifolia Alain	Cuba (Guantanamo) I	I	I		C W U D
Schmidtottia scabra Borh. & Acuna	Cuba (Holguin) I	I	I		C W U D
Schmidtottia sessilifolia (Britton) Urban	Cuba (Holguin) I	I	I		C W U D
Scolosanthus acunae Borh. & Muniz	Cuba (Pinar del Rio) I	I	I		C W U D
Scolosanthus granulatus Urban	Cuba (Guantanamo) E	E	E		C W U D
Scolosanthus hirsutus Borh.	Cuba (Guantanamo) I	I	I		C W U D
Scolosanthus hispidus Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
Scolosanthus moanus Borh. & Muniz	Cuba (Holguin) E	E	E		C W U D
Scolosanthus reticulatus Borh.	Cuba (Holguin) I	I	I		C W U D
Scolosanthus strictus Urban	Cuba (Guantanamo) I	I	I		C W U D
Scolosanthus wrightianus (Griseb.) C.Wright	Cuba E	E	E		C W U D
Shaferocharis cubensis Urban	Cuba (Holguin) I	I	I		C W U D
Shaferocharis multiflora Bohr. & Muniz	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Shaferocharis villosa Bohr. & Bisse	Cuba (Guantanamo) I	I	I		C W U D
Spermacoce exasperata Urban	Cuba (Guantanamo) E	E	E		C W U D
Spermacoce oligantha Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
RUTACEAE					
Amyris polymorpha Urban	Cuba (Granma) I	I	I		C W U D
Fagara curbeloi (Alain) Kereszty	Cuba (Las Tunas) I	I	I		C W U D
Fagara duplicipunctata (C.Wright) Krug & Urban	Cuba (Pinar del Rio) I	I	I		C W U D
Fagara leonis (Alain) Kereszty	Cuba (Prov. Habana; Matanzas) Ex	Ex	Ex		C W U D
Galipea ossana DC.	Cuba (Pinar del Rio; Prov.Habana) Ex	Ex	Ex		C W U D
Helietta glaucescens Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Kodalyodendron cubensis Borh. & Acuna	Cuba (Holguin) I	I	I		C W U D
Pilocarpus cubensis (Borh. & Muniz) Lippold	Cuba (Santiago de Cuba) I	I	I		C W U D
Ravenia baracoensis Borh. & Muniz	Cuba (Guantanamo) I	I	I		C W U D
Ravenia carabiai Kirouac	Cuba (Holguin) I	I	I		C W U D
Spathelia lobulata Urban	Cuba (Santiago de Cuba; Holguin) I	I	I		C W U D
Spathelia splendens Urban	Cuba (Holguin; Guantanamo) I	I	I		C W U D

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RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
SAPINDACEAE					
<i>Allophylus roigii</i> Lippold	Cuba (Pinar del Rio; I. Juventud) I	I	I		C W U D
<i>Euchorium cubense</i> Ekman & Radlk.	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Sapindus grandifolius</i> Lippold	Cuba (Guantanamo) I	I	I		C W U D
<i>Serjania linearifolia</i> Lippold	Cuba (Granma) I	I	I		C W U D
<i>Thouinia acunae</i> Borh. & Muniz	Cuba (Santiago de Cuba) I	I	I		C W U D
SAPOTACEAE					
<i>Bumelia acunae</i> Borh.	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Bumelia revoluta</i> Urban	Cuba (Holguin; Guantanamo) I	I	I		C W U D
<i>Chrysophyllum claraense</i> Urban	Cuba (Sancti Spiritus) I	I	I		C W U D
SCROPHULARIACEAE					
<i>Amphiolanthus longipes</i> Urban	Cuba (M; Ci; VC) E	E	E		C W U D
<i>Bacopa longipes</i> (Pennell) Standl.	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
<i>Bacopa minuta</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Cheilophyllum dentatum</i> Urban	Cuba (Matanzas; Villa Clara) E	E	E		C W U D
<i>Cheilophyllum micranthum</i> Urban	Cuba (Ciego de Avila; Camaguey) E	E	E		C W U D
<i>Cheilophyllum microphyllum</i> Pennell	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Cheilophyllum sphaerocarpum</i> Urban	Cuba (Villa Clara) I	I	I		C W U D
<i>Hemianthus reflexus</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Lendneria ageratifolia</i> (C.Wright) Pennell	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Lindernia alterniflora</i> (C.Wright) Alain	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
<i>Lindernia multicaulis</i> (Urban) Alain	Cuba (Matanzas; Cienfuegos) I	I	I		C W U D
<i>Micranthemum rotundatum</i> C.Wright	Cuba (Pinar del Rio; I. Juventud) E	E	E		C W U D
SIMAROUBACEAE					
<i>Castela victorinii</i> Acuna & Roig	Cuba (Guantanamo) I	I	I		C W U D
<i>Picrasma cubensis</i> Radlk. & Urban	Cuba (Pinar del Rio) I	I	I		C W U D
SOLANACEAE					
<i>Brunfelsia acunae</i> Hadac	Cuba (Holguin) I	I	I		C W U D
<i>Brunfelsia clarensis</i> Britton & P.Wilson	Cuba (Villa Clara) E	E	E		C W U D
<i>Brunfelsia linearis</i> Ekman	Cuba (SC; Ho; Gu) I	I	I		C W U D
<i>Brunfelsia pluriflora</i> Urban	Cuba (Holguin) I	I	I		C W U D
<i>Cestrum ekmanii</i> Urban & Schulz	Cuba (Guantanamo) I	I	I		C W U D
<i>Cestrum moaense</i> Borh. & Muniz	Cuba (Holguin) I	I	I		C W U D
<i>Lycium acnistoides</i> Griseb.	Cuba E	E	E		C W U D
<i>Solanum sagraeanum</i> A.Rich.	Cuba E	E	E		C W U D
STERCULIACEAE					
<i>Ayenia cajalbanensis</i> Alain	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Byttneria microphylla</i> Jacq.	Cuba (Oriente; Pinar del Rio) E	E	E		C W U D
<i>Byttneria scopiura</i> C.Wright	Cuba (PR; SC; Gu) I	I	I		C W U D
<i>Helicteres calcicola</i> Alain	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Melochia manducata</i> C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
<i>Waltheria nipensis</i> (Britton) Alain	Cuba (Holguin) E	E	E		C W U D
SYMPLOCACEAE					
<i>Symplocos cipunimoides</i> Griseb.	Cuba E	E	E		C W U D
<i>Symplocos moaensis</i> Borh.	Cuba (Guantanamo) I	I	I		C W U D
<i>Symplocos ovalis</i> C.Wright	Cuba (Pinar del Rio) I	I	I		C W U D
THEACEAE					
<i>Laplacea curtyana</i> A.Rich	Cuba (PR; IJ) E	E	E		C W U D
THEOPHRASTACEAE					
<i>Jacquinia aciphylla</i> L.Lepper	Cuba (Camaguey) V	V	V		C W U D
<i>Jacquinia acunana</i> Borh. & Muniz	Cuba (Holguin; Guantanamo) R	R	R		C W U D
<i>Jacquinia bissei</i> L.Lepper	Cuba (Santiago de Cuba) V	V	V		C W U D
<i>Jacquinia cristalensis</i> L.Lepper	Cuba (Holguin) R	R	R		C W U D
<i>Jacquinia curtissii</i> Britton	Cuba (I. Juventud) E	E	E		C W U D
<i>Jacquinia juniperifolia</i> L.Lepper	Cuba (Camaguey) V	V	V		C W U D
<i>Jacquinia lippoldii</i> L.Lepper	Cuba (Guantanamo) V	V	V		C W U D
<i>Jacquinia oligantha</i> Borh.	Cuba (Santiago de Cuba, Holguin) E	E	E		C W U D
<i>Jacquinia sessiliflora</i> Alain	Cuba (Santiago de Cuba; Holguin) R	R	R		C W U D
<i>Jacquinia verticillaris</i> Urban	Cuba (Santiago de Cuba) E	E	E		C W U D

Please indicate your holdings in the righthand column, CWUD, by circling the appropriate symbols.
 C - Plants from known cultivated source. W - Plants from a known wild source. U - Plants from an unknown source.
 D - Duplicate material available.

See end for contents of Fields labelled 1 to 3

RARE AND THREATENED PLANTS OF CUBA

<u>Plant name</u>	<u>Distribution (Cons. status)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Circle:</u>
THYMELAEACEAE					
Daphnopsis angustifolia C.Wright	Cuba (Holguin) I	I	I		C W U D
Daphnopsis calcicola Ekman	Cuba (Pinar del Rio) I	I	I		C W U D
TILLIACEAE					
Carpodiptera mirabilis Bisse	Cuba (Guantanamo) V	V	V		C W U D
Carpodiptera ophitica Bisse	Cuba (Prov. Habana) I	I	I		C W U D
ULMACEAE					
Trema cubensis Urban	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
UMBELLIFERAE					
Asciadium coronopifolium Griseb.	Cuba (Pinar del Rio) I	I	I		C W U D
Hydrocotyle oligantha Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Hydrocotyle pygmaea C.Wright	Cuba (Pinar del Rio) E	E	E		C W U D
URTICACEAE					
Phenax microphyllus Urban	Cuba E	E	E		C W U D
Pilea ambecarpa Urban	Cuba (Guantanamo) I	I	I		C W U D
Pilea carnosus Britton	Cuba (Granma; Guantanamo) I	I	I		C W U D
Pilea filipes (Griseb.) Urban	Cuba (Guantanamo) I	I	I		C W U D
Pilea gnidioides Griseb.	Cuba (Guantanamo) I	I	I		C W U D
Pilea laciniata Urban	Cuba (Guantanamo) E	E	E		C W U D
Pilea libanensis Urban	Cuba (Guantanamo) I	I	I		C W U D
Pilea loeseneri Urban & Ekman	Cuba (Guantanamo) I	I	I		C W U D
Pilea obtusangula Urban	Cuba (SC; Gu) I	I	I		C W U D
Pilea phaeocarpa Urban	Cuba (Guantanamo) I	I	I		C W U D
Pilea shaferi Britton & P.Wilson	Cuba (Guantanamo) I	I	I		C W U D
Pilea sumideroensis Britton	Cuba (Pinar del Rio) I	I	I		C W U D
VERBENACEAE					
Callicarpa crassinervis Urban	Cuba (Guantanamo) E	E	E		C W U D
Callicarpa floccosa Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Callicarpa leonis Mold.	Cuba (Holguin; Guantanamo) I	I	I		C W U D
Citharexylum ekmanii Mold.	Cuba (Cienfuegos; Villa Clara) I	I	I		C W U D
Citharexylum ternatum Mold.	Cuba (Granma) I	I	I		C W U D
Clerodendrum denticulatum Mold.	Cuba (Santiago de Cuba) I	I	I		C W U D
Clerodendrum tuberculatum A.Rich.	Cuba (Cienfuegos) I	I	I		C W U D
Duranta arida Britton & P.Wilson	Cuba (Guantanamo) I	I	I		C W U D
Duranta parviflora Turcz.	Cuba (Santiago de Cuba) E	E	E		C W U D
Duranta wrightii Mold.	Cuba E	E	E		C W U D
Lippia acuminata C.Wright	Cuba (Ci; VC; SS) E	E	E		C W U D
Nashia armata (Urban) Mold.	Cuba (Santiago de Cuba) I	I	I		C W U D
Nashia cayensis Britton	Cuba (Camaguey) I	I	I		C W U D
Nashia myrtifolia (Griseb.) Mold.	Cuba E	E	E		C W U D
Nashia nipensis (Urban) Mold.	Cuba (Holguin) I	I	I		C W U D
Nashia variifolia (Urban) Mold.	Cuba (C; LT; Ho) I	I	I		C W U D
Pseudocarpidium shaferi Britton	Cuba (Guantanamo) I	I	I		C W U D
Stachytarpheta subincisa Turcz.	Cuba (?Granma; ?Santiago de Cuba) E	E	E		C W U D
Vitex acunae Borh. & Muniz	Cuba (Pinar del Rio) I	I	I		C W U D
Vitex clementis Britton & P.Wilson	Cuba (Granma; Santiago de Cuba) I	I	I		C W U D
Vitex praetervisa Borh.	Cuba (Granma) I	I	I		C W U D
VITACEAE					
Cissus corallicola Urban	Cuba (Santiago de Cuba) I	I	I		C W U D
Cissus rupicola Urban	Cuba (Pinar del Rio) I	I	I		C W U D
XYRIDACEAE					
Xyris ekmanii Malme	Cuba (Pinar del Rio) E	E	E		C W U D
Xyris intermedia Malme	Cuba (Pinar del Rio) I	I	I		C W U D
Xyris longibracteata Britton & P.Wilson	Cuba (I. Juventud) E	E	E		C W U D

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RARE AND THREATENED PLANTS OF CUBA

EXPLANATION OF FIELDS LABELLED 1 TO 3

1. Regional (Caribbean) IUCN Red Data Book category for the degree of threat. Ex: Extinct; E: Endangered; V: Vulnerable; R: Rare; I: Indeterminate; K: Insufficiently known; C: Candidate; ?: no data; nt: neither rare nor threatened.
2. World IUCN Red Data Book category for the degree of threat. Ex: Extinct; E: Endangered; V: Vulnerable; R: Rare; I: Indeterminate; K: Insufficiently known; C: Candidate; ?: no data; nt: neither rare nor threatened.
3. Distribution completeness code. Y: Distribution complete; N: Distribution incomplete; ?: Not known whether distribution complete; Space: Taxon confined to one WCMC area.

