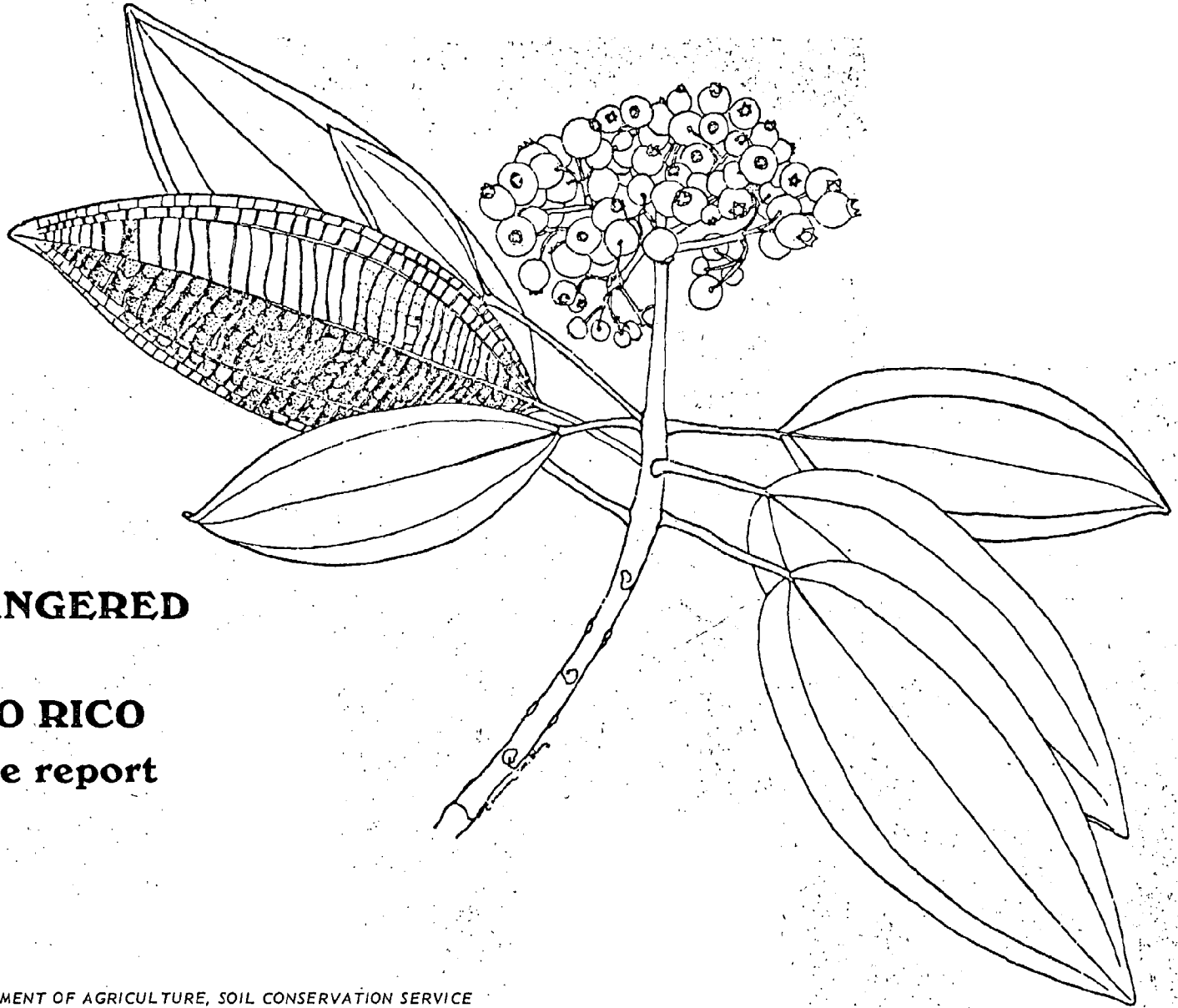


Rare and endangered plants of Puerto Rico

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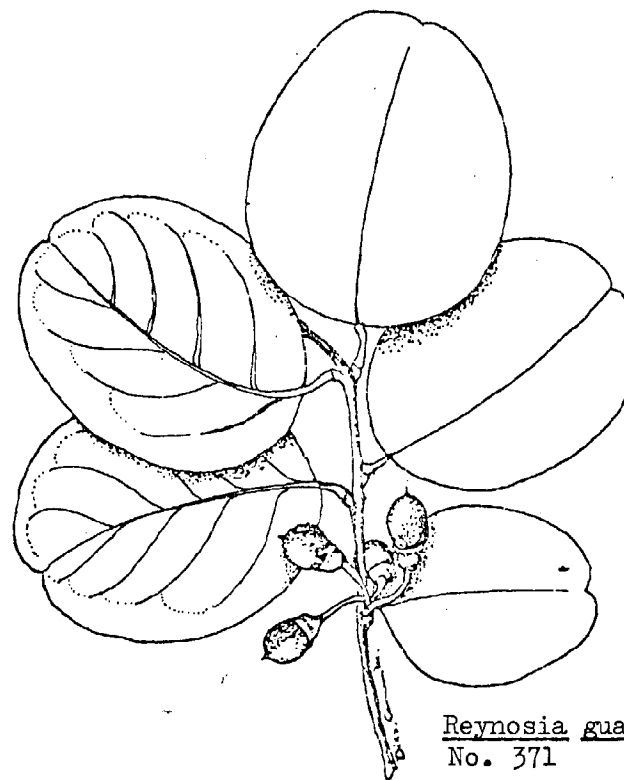
**RARE
AND ENDANGERED
PLANTS
OF PUERTO RICO**
a committee report



Published by: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE
In Cooperation with the DEPARTMENT OF NATURAL RESOURCES
COMMONWEALTH OF PUERTO RICO

1975

**RARE
AND ENDANGERED
PLANTS
OF PUERTO RICO**
a committee report



Reynosia guama, Guama
No. 371

Published by: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE
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COMMONWEALTH OF PUERTO RICO 1975



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U. S. Forest Service, Río Piedras, Puerto Rico.

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Number 135--Rare Endemic Plant Species of Puerto Rico.

AUTHORSHIP

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PREFACE

In an effort to prepare a watchlist of rare and endangered plant species for Puerto Rico, the Soil Conservation Service consulted with agencies, organizations, and individuals and a committee was organized December 4, 1973, to accomplish this objective --a similar committee published a report of rare and endangered animal species of Puerto Rico.

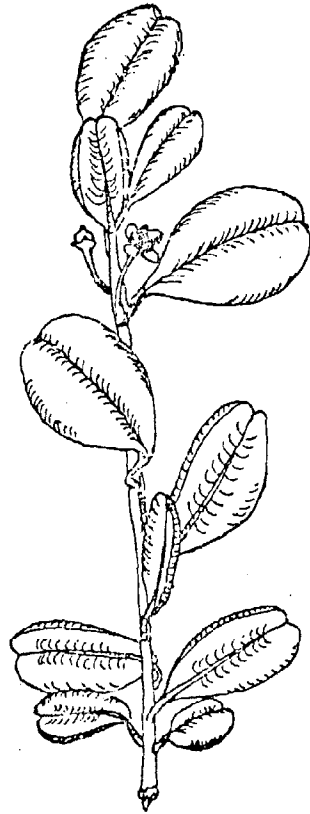
The Committee is greatly indebted to the USDA-Soil Conservation Service and agencies of the Commonwealth Government of Puerto Rico, particularly, the Department of Natural Resources, which so generously allowed their employees and consultants to participate.

The Committee also expresses its deepest appreciation to Miss Quirina Rivera, of the USDA-Soil Conservation Service, for her assistance in the preparation of this manuscript.

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INTRODUCTION AND DEFINITIONS



Concern for vanishing species has traditionally focused on the animal kingdom, particularly, the higher orders of the animal kingdom. Toads and snails get scant attention; plants receive even less. Yet, we have come to realize that life is a web, no part of which is entirely independent. It is a concern for the integrity of the whole web of life, as well as the intrinsic value of individual plant species, that has drawn this committee together and is the spirit of this report. Our hope is that this document, probably the most comprehensive work yet assembled on endangered local plants of a region, will stimulate greater interest in the diverse and unique flora of Puerto Rico and will lead to a more effective protection of this natural heritage. We further hope that this publication will serve to stimulate works of a similar nature in other regions of the world.

The report contains a list of rare and endangered species, a discussion of causes of endangerment and endangered habitats, and recommendations for a plan of action. The species list is arranged in two general sections: those plants which are endangered and those considered rare. These sections, in turn, have been organized in groups of endemic and nonendemic plants.

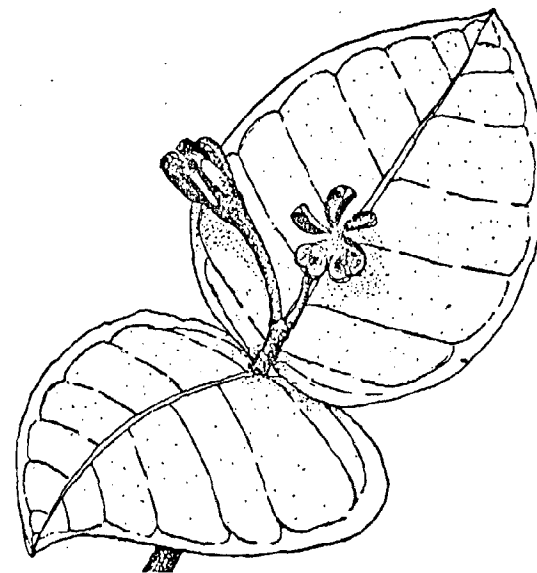
Ilex sintenisii
No. 126

Introduction and Definitions (Con.)

Within each category of this text, the species are presented in alphabetical order by family. Under each family, plants are listed alphabetically by scientific names.

Although the arrangement generally connotes an order of priority, the reader should not conclude that the lowest priority is therefore not critical. The fact that a plant is nonendemic does not mean it can be found in abundance elsewhere. For some nonendemic species, the greatest number found anywhere in the world is the small endangered population found here in Puerto Rico (e.g.: *Cóbana negra*, *Stahlia monosperma*, though considered non-endemic in Puerto Rico, is only known outside the Island from a single collection in Hispaniola).

The list is long. This is the result of several factors: the Island has extraordinary plant diversity due to its proximity to Central and South America --the greatest centers of floral speciation in the world. Yet, as species became established or evolved in Puerto Rico, they filled limited niches on a very limited land mass. Their distribution was, thus, greatly restricted. A further factor in causing endangerment has been the increasing pressure of the Island's human population on plant habitats. This final factor is the one responsible for extensive additions to the list and is the only controllable one.



Ravenia urbanii
No. 103

Tortugo prieto

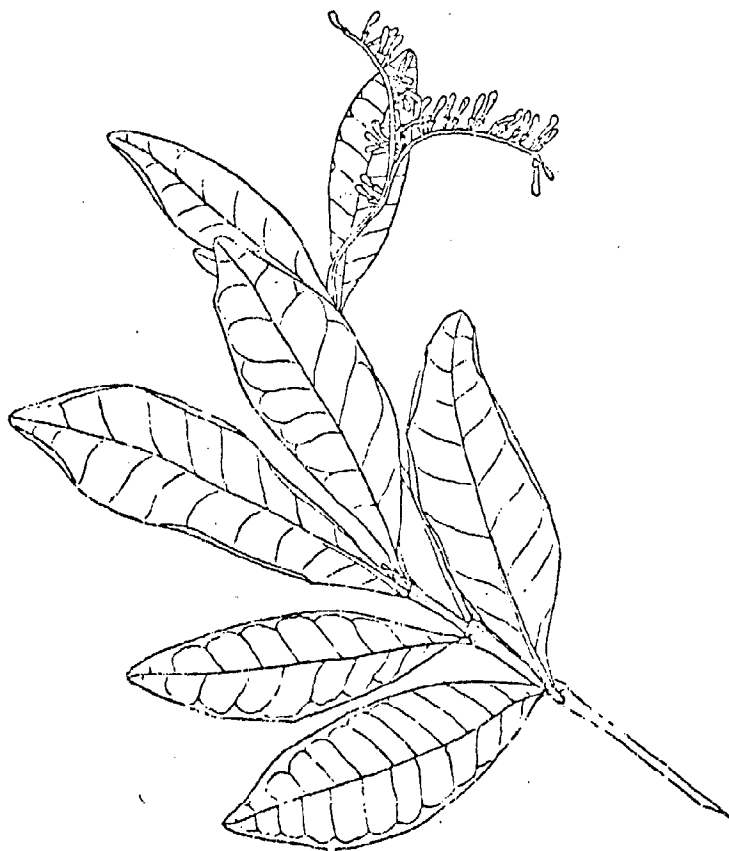
DEFINITIONS

THE FOLLOWING ARE THE DEFINITIONS USED IN THIS PUBLICATION:

R A R E --Those species which occur in small numbers, usually in a limited range or such restricted or specialized habitat that an increase in pressure on them or their habitat could cause their endangerment.

E N D A N G E R E D --Species that are in immediate danger of extinction and are unlikely to survive without special protective measures. They usually occur in small numbers and have a specialized habitat or limited range.

E N D E M I C --A species of extremely limited range. In this list, it applies to species found only in Puerto Rico.



Quina

Antirhea sintenistii
No. 97

Definitions (Con.)

NON ENDEMIC --A species of broad range. In this list it applies to indigenous or native forms that occur outside Puerto Rico as well as on the Island.

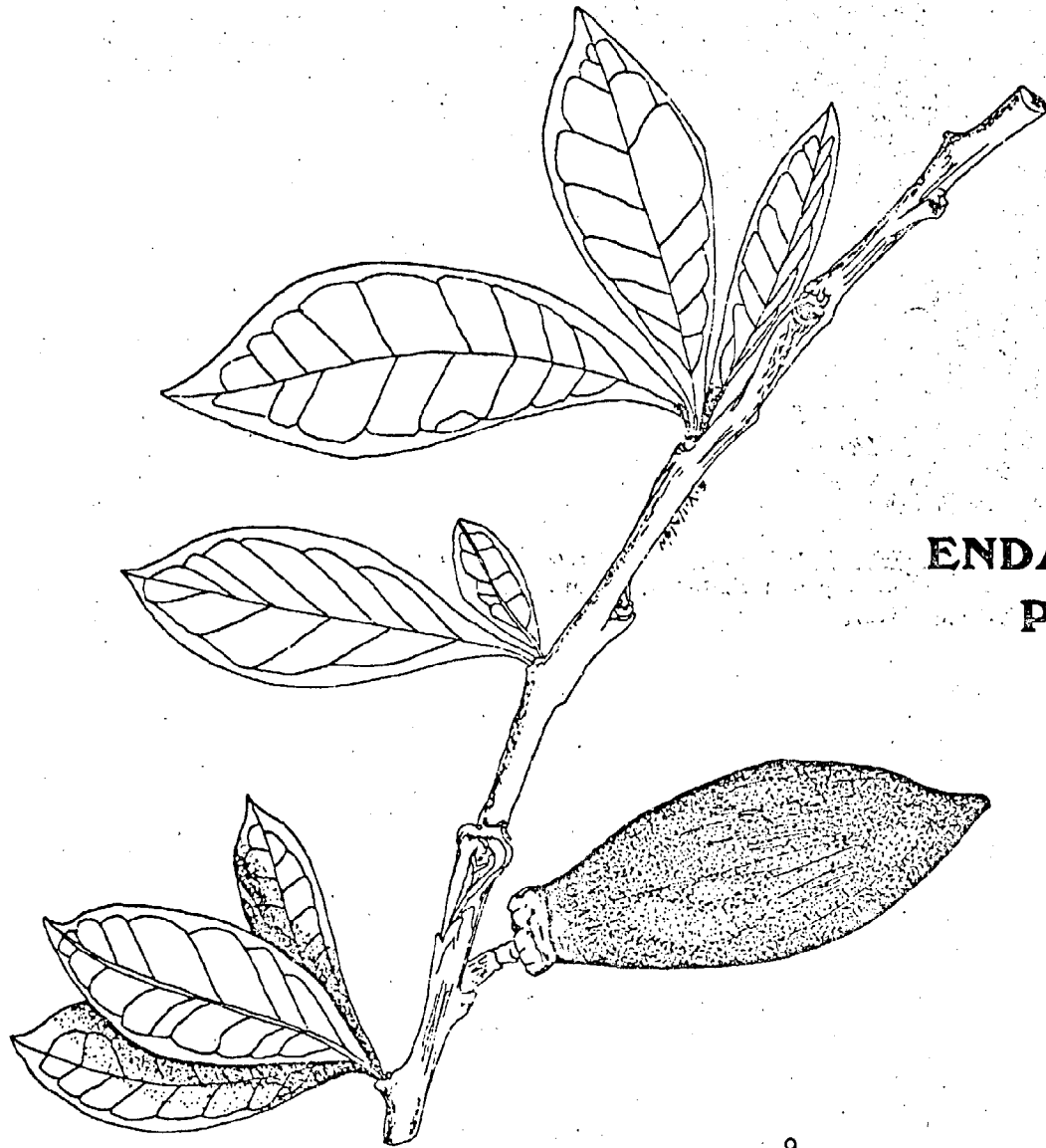
LIMITED DISTRIBUTION -- Refers to species with restricted ranges or those with scattered or local populations spread over large areas.

HABITAT DESTRUCTION -- The complete or partial alteration of a natural environment by man.



Persea krugii
No. 254

Canela



**ENDANGERED ENDEMIC
PLANT SPECIES**

Crescentia portoricensis, Higuero de Sierra
Number 8--Endangered Endemic Plant Species
of Puerto Rico.

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
1	ACANTHACEAE <u>Diapedium krugii</u>		Herb	Wooded slopes by Utuado and ravines near Coamo.	Habitat destruction
2	<u>Justicia borinquensis</u>		Herb	Open wooded areas of Monte Cerrote, Adjuntas.	Limited distribution
3	<u>Justicia culebritae</u>		Herb	Culebrita-wooded slopes.	Limited distribution
4	APOCYNACEAE <u>Plumeria portoricensis</u>	Alelí cimarrón Frangipani	Tree	Río Maricao. One collection.	Unknown
5	AQUIFOLIACEAE <u>Ilex cookii</u>	Té Holly	Tree	Limited to peaks and upper wet ridges of Toro Negro.	Limited distribution
6	ASCLEPIADACEAE <u>Cynanchium monense</u>		Herb vine	Rare on plateau of Mona.	Limited distribution
7	<u>Marsdenia elliptica</u>		Herb vine	One collection in mountain forests - Luquillo.	Unknown
8	BIGNONIACEAE <u>Crescentia portoricensis</u>	Higüero de sierra Calabash	Tree	Wet forests of upper Monte del Estado, Maricao.	Limited distribution
9	BORAGINACEAE <u>Heliotropium guanicense</u>	Cotorrilla Heliotrope	Shrub	Only in Punta Aguila, Cabo Rojo.	Limited distribution
10	BROMELIACEAE <u>Tillandsia lineatispica</u>	Pifión	Epiphyte	On rocks and bases of trees of Vieques and Culebra.	Limited distribution
11	CACTACEAE <u>Harrisia portoricensis</u>	Higo chumbo	Tree	Being attacked by the larva of the Cactus moth. Restricted to Mona, Monito, and Desecheo.	Cactus moth and limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
12	CACTACEAE (Con.) <u>Leptocereus quadricostatus</u>	Sebucán	Tree	Limited to southwestern Puerto Rico.	Limited distribution
13	<u>Opuntia borinquensis</u>	Olaga	Shrub	Morrillos de Cabo Rojo.	Habitat destruction
14	CANELLACEAE <u>Pleodendron macranthum</u>	Chupagallo	Tree	Very rare on moist-to-wet western slopes of the Luquillo Mountains.	Limited distribution
15	CANNACEAE <u>Canna pertusa</u>	Maraca	Shrub	Along banks and streams - central and western mountains.	Limited distribution
16	CASSIACEAE <u>Caesalpinia culebrae</u>	Mato amarillo Smooth yellow nicker	Woody vine	Sandy beaches of Culebra.	Limited distribution
17	<u>Caesalpinia monensis</u>	Mato negro Black nicker	Tree	Plateau of Mona.	Limited distribution
18	<u>Caesalpinia portoricensis</u>	Mato Brown nicker	Woody vine	Beaches of Guánica.	Limited distribution
19	<u>Cassia exunguis</u>	Tamarindillo	Shrub	Open slopes - Coamo area.	Habitat destruction
20	<u>Cassia mirabilis</u>		Shrub	Moist sand, Dorado and Tortuguero.	Habitat destruction
21	GELASTRACEAE <u>Maytenus elongata</u>	Cuero de sapo	Tree	Scattered in moist areas from El Verde, Luquillo, to Monte del Estado, Maricao.	Limited distribution
22	<u>Maytenus ponceana</u>	Cuero de sapo	Tree	A small tree of moist areas near Florida and Río Portugués (north of Ponce).	Habitat destruction and limited distribution
23	COMPOSITAE <u>Eupatorium droserolepis</u>	Oreganillo	Shrub	Summits of Central Cordillera.	Habitat destruction

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
24	COMPOSITAE (Con.) <u>Mikania stevensiana</u>	Guaco	Slender vine	Ravines - Monte del Estado, Maricao.	Limited distribution
25	CONVOLVULACEAE <u>Ipomoea krugii</u>	White morning glory	Slender vine	Marshes of western Puerto Rico.	Habitat destruction
26	<u>Ipomoea palustris</u>	Bejuco de puerco Morning glory	Slender vine	Swamps in siliceous sand - Bayamón principally, also Dorado and Tortuguero.	Limited distribution and habitat de- struction
27	CUCURBITACEAE <u>Anguria cookiana</u>	Algodoncillo	Slender vine	Ravine north of Coamo.	Habitat destruction
28	CYATHEACEAE <u>Cyathea dryopteroides</u>	Helecho	Shrub	Upper forests - Central Cordillera.	Habitat destruction
29	EHRETACEAE <u>Cordia bellonis</u>		Shrub	Wet serpentine forests - Maricao.	Limited distribution
30	<u>Cordia wagnerorum</u>		Shrub	Wet mountain ridges - Luquillo.	Limited distribution
31	CYPERACEAE <u>Cyperus urbani</u>		Sedge	Very rare in Coamo area and Vieques on grassy slopes.	Limited distribution
32	<u>Scleria doradoensis</u>		Sedge	Marshy areas - Tortuguero and Dorado.	Habitat destruction
33	<u>Scleria stevensiana</u>		Sedge	One collection in swamp near Lares. Not recently seen.	Unknown
34	EUPHORBIACEAE <u>Chamaesyce monensis</u>	Lechecillo	Herb	Rare on Mona plateau.	Limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
35	EUPHORBIACEAE (Con.) <u>Croton impressus</u>	Croton	Shrub	Very local on moist serpentine mountain slopes.	Habitat destruction
36	<u>Hyeronima olusioides</u>	Cedro macho	Tree	Good wood. Moist hills and mountain forests - central and western Puerto Rico.	Lumbering and limited distribution
37	FLACOURTIACEAE <u>Banara portoricensis</u>	Palo de Ramón	Tree	Higher moist areas of the Central Cordillera.	Limited distribution
38	<u>Banara vanderbiltii</u>		Tree	Very rare in moist limestone hills near Bayamón. Only a few trees known.	Limited distribution
39	<u>Xylosma pachyphyllum</u>		Tree	Higher elevations in Monte del Estado, Maricao.	Limited distribution
40	<u>Xylosma schwaneckeanum</u>	Palo de candela	Tree	Of wet to moist slopes in Carite and El Verde.	Limited distribution
41	GESNERIACEAE <u>Gesneria pauciflora</u>		Herb	Upper mountain drainage areas of Monte del Estado.	Limited distribution
42	GRAMINEAE <u>Aristida portoricensis</u>	Pelos del diablo Triple-awned grass	Grass	Serpentine slopes of western Puerto Rico.	Limited distribution
43	<u>Panicum stevensianum</u>		Grass	Margin of Tortuguero Lake only.	Very limited distribution
44	ICACINACEAE <u>Ottoschulzia rhodoxylon</u>	Palo de rosa	Tree	Very rare - found near Mayaguez.	Unknown
45	LYCOPODIACEAE <u>Lycopodium portoricensis</u>	Club moss	Herb	Wet banks in Luquillo Mountains.	Limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
46	LORANTHACEAE <u>Dendropemon sintenisii</u>	Hicaquillo Mistletoe	Epiphyte	One collection near Aibonito.	Limited distribution
47	MAGNOLIACEAE <u>Magnolia portoricensis</u>	Jagüilla	Tree	Virgin wet forest of Central Cordillera. Wet central mountain ridge.	Habitat destruction
48	<u>Magnolia splendens</u>	Laurel sabino	Tree	Excellent wood. Limited to wet, middle and upper regions of Luquillo Mountains.	Lumbering, slow reproduction
49	MALPIGHIACEAE <u>Byrsonima horniana</u>	Maricao cimarrón	Tree	Very rare and local on moist slopes of western Puerto Rico.	Habitat destruction
50	<u>Byrsonima ophiticola</u>	Maricao cimarrón	Tree	Of moist slopes and scattered distribution in western Puerto Rico.	Habitat destruction
51	<u>Byrsonima wadsworthii</u>	Almendrillo	Tree	Few in numbers widely scattered in wet mountains at middle to high elevations.	Unknown
52	<u>Malpighia shaferi</u>	Olaga	Tree	Only in moist ravines on Vieques. Pasture destroying habitat.	Habitat destruction
53	MALVACEAE <u>Abutilon commutatum</u>	Terciopelo	Shrub	Thickets of Guánica.	Limited distribution
54	<u>Montezuma speciosissima</u>	Maga	Tree	Valuable wood of moist to wet woods and on roadsides.	Habitat destruction
55	MELASTOMACEAE <u>Clidemia umbrosa</u>	Camasey	Tree	Limited to Carite Forest at middle elevations in wet areas.	Limited distribution
56	<u>Henrietella membranifolia</u>	Camasey	Tree	Moist hills between Lares and Aguada.	Limited distribution
57	<u>Ossaea krugiana</u>	Camasey	Tree	Upper Central Cordillera.	Limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
58	MELIACEAE <u>Trichilia triacantha</u>	Bariaco	Tree	Rare in dry southwestern Puerto Rico.	Limited distribution
59	MIMOSACEAE <u>Schrankia portoricensis</u>	Zarzarilla	Shrub	Dry to moist open forests - Coamo area.	Habitat destruction
60	MYRICACEAE <u>Myrica holdridgii</u>	Arrayán Wax-berry	Tree	Upper Luquillo Mountains.	Limited distribution
61	MYRSINACEAE <u>Grammadenia sintensisii</u>		Tree	Local in upper Luquillo Mountains.	Limited distribution
62	MYRTACEAE <u>Calyptranthes luquillensis</u>		Tree	Middle elevation wet areas of El Verde region of Luquillo Mountains.	Limited distribution
63	<u>Calyptranthes peduncularis</u>		Tree	Upper moist regions of Monte del Estado, Maricao.	Limited distribution
64	<u>Calyptranthes portoricensis</u>		Tree	Upper moist areas of Monte del Estado, Maricao.	Limited distribution
65	<u>Calyptranthes triflorum</u>		Tree	Upper moist regions of Monte del Estado, Maricao.	Limited distribution
66	<u>Calypptropsidium sintensisii</u>	Hoja menuda	Tree	Rare in wet upper forests of Luquillo Mountains.	Limited distribution
67	<u>Eugenia bellonis</u>		Shrub	Dry rocky slopes - Guánica and Caja de Muertos. Not well known.	Unknown
68	<u>Eugenia boqueronensis</u>		Tree	Coastal slopes. Not well known.	Unknown
69	<u>Eugenia corozalensis</u>		Tree	Limestone hills - Corozal. Not well known.	Unknown

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
70	MYRTACEAE (Con.) <u>Eugenia eggersii</u>	Guasávara	Tree	Very rare at middle to higher elevations.	Limited distribution
71	<u>Eugenia fajardensis</u>		Tree	Moist forest, Fajardo. Not well known.	Unknown
72	<u>Eugenia haematocarpa</u>		Tree	Wet middle areas of El Verde, Luquillo.	Limited distribution
73	<u>Eugenia margarettae</u>		Tree	Upper wet regions of Toro Negro.	Limited distribution
74	<u>Eugenia serrasuela</u>	Serrasuela	Tree	Collected by Bello near Anones, Las Marías. Not well known.	Unknown
75	<u>Eugenia underwoodiana</u>		Tree	Moist hills near Yauco.	Limited distribution and habitat destruction
76	<u>Marlierea sintenisii</u>	Murta	Tree	Upper wet ridges in the Luquillo Mountains.	Limited distribution
77	<u>Myrcia pagani</u>	Ausí	Tree	Western moist limestone hills.	Habitat destruction
78	OLACACEAE <u>Schoepfia arenaria</u>	Araña	Tree	Moist hills of the north coast.	Habitat destruction
79	OLEACEAE <u>Linociera holdridgii</u>	Hueso prieto	Tree	Local in dry forests of Guánica and Susúa, Yauco.	Limited distribution
80	ORCHIDACEAE <u>Brachionidium ciliatum</u>		Epiphyte	Mossy forest - East Peak area of Luquillo Mountains.	Limited distribution
81	<u>Epidendrum krugii</u>		Epiphyte	Southwestern areas.	Collecting and limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
82	ORCHIDACEAE (Con.) <u>Epidendrum lacerum</u>		Epiphyte	Monte Cedro, thickets (Adjuntas). Not well known. Reported from Cuba.	Unknown
83	<u>Lepanthes dodiana</u>		Epiphyte	Upper eastern mountains, very local.	Limited distribution
84	<u>Lepanthes eltoensis</u>		Epiphyte	Upper Luquillo Mountains. Two locations only.	Limited distribution
	PALMACEAE				
85	<u>Aiphanes acanthophylla</u>	Coyure Ruffle palm	Tree	Of moist limestone hills. An understory palm of scattered distribution.	Limited distribution
86	<u>Calyptrogyne rivalis</u>	Manaca	Tree	Of moist limestone hills. Very rare and local, only two small colonies known.	Limited distribution
87	<u>Goussia attenuata</u>	Llume	Tree	Near the tops of moist limestone hills.	Limited distribution
88	<u>Sabal causiarum</u>	Palma de sobrero Puerto Rican hat palm	Tree	Mainly of western Puerto Rico near Ramey Base and Joyuda Lagoon, Mayagüez.	Harvesting and habitat destruction
	PAPILIONACEAE				
89	<u>Erythrina horrida</u>	Piñón espinoso Cockspur	Tree	Moist limestone hills of north coast.	Limited distribution
	PIPERACEAE				
90	<u>Peperomia wheeleri</u>	Peperomia	Herb	On forest rocks, Culebra.	Habitat destruction
	POLYGALACEAE				
91	<u>Polygala cowellii</u>	Palo de violeta Violet tree	Tree	Used for fences. Of wide distribution, but rare in dry-to-moist coastal hills.	Poor reproduction and lumbering
92	<u>Polygala portoricensis</u>		Tree	Upper dry slopes of Monte del Estado, Maricao.	Limited distribution
	POLYGONACEAE				
93	<u>Coccoloba rugosa</u>	Ortegón	Tree	In coastal hills of northeast and east coasts.	Habitat destruction and collection

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
94	POLYGONACEAE (Con.) <u>Coccoloba sintenisii</u> var. <u>alba</u>	Uvero del monte	Tree	Confined to dry upper slopes above Coamo.	Habitat destruction
95	RHAMNACEAE <u>Reynosia krugii</u>		Tree	Very scattered moist forests in the mountains and wet limestone hills.	Habitat destruction and limited distribution
96	RUBIACEAE <u>Antirhea portoricensis</u>	Quina	Tree	Moist forests - local.	Habitat destruction
97	<u>Antirhea sintenisii</u>	Quina	Tree	Moist forests - local.	Habitat destruction
98	<u>Erithalis revoluta</u>		Shrub	Coastal forest - Caña Gorda, Guánica.	Habitat destruction
99	<u>Mitracarpus maxwelliae</u>		Herb	Coastal plate rock - Guánica.	Limited distribution
100	<u>Mitracarpus polycladus</u>		Herb	Coastal rocky thicket - Guánica.	Limited distribution
101	<u>Palicourea brevithyrsa</u>		Shrub	Mountain forests of Monte Cerrote, Adjuntas.	Limited distribution
102	<u>Randia portoricensis</u>		Shrub	Coastal thickets and hills - Ponce to Guánica.	Limited distribution and habitat destruction
103	RUTACEAE <u>Ravenia urbania</u>	Tortugo prieto	Tree	Of ornamental value with limited distribution in wet mountains at middle elevations. Local in El Verde and Carite.	Limited distribution
104	<u>Zanthoxylum bifoliatum</u>		Tree	Moist to dry upper slopes of Monte del Estado, Maricao, and Susúa, Yauco.	Limited distribution
105	<u>Zanthoxylum thomsonianum</u>		Tree	Dry ridges and slopes near Río Cuyón to Asomante, Aibonito. Possibly St. Thomas, V. I.	Limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

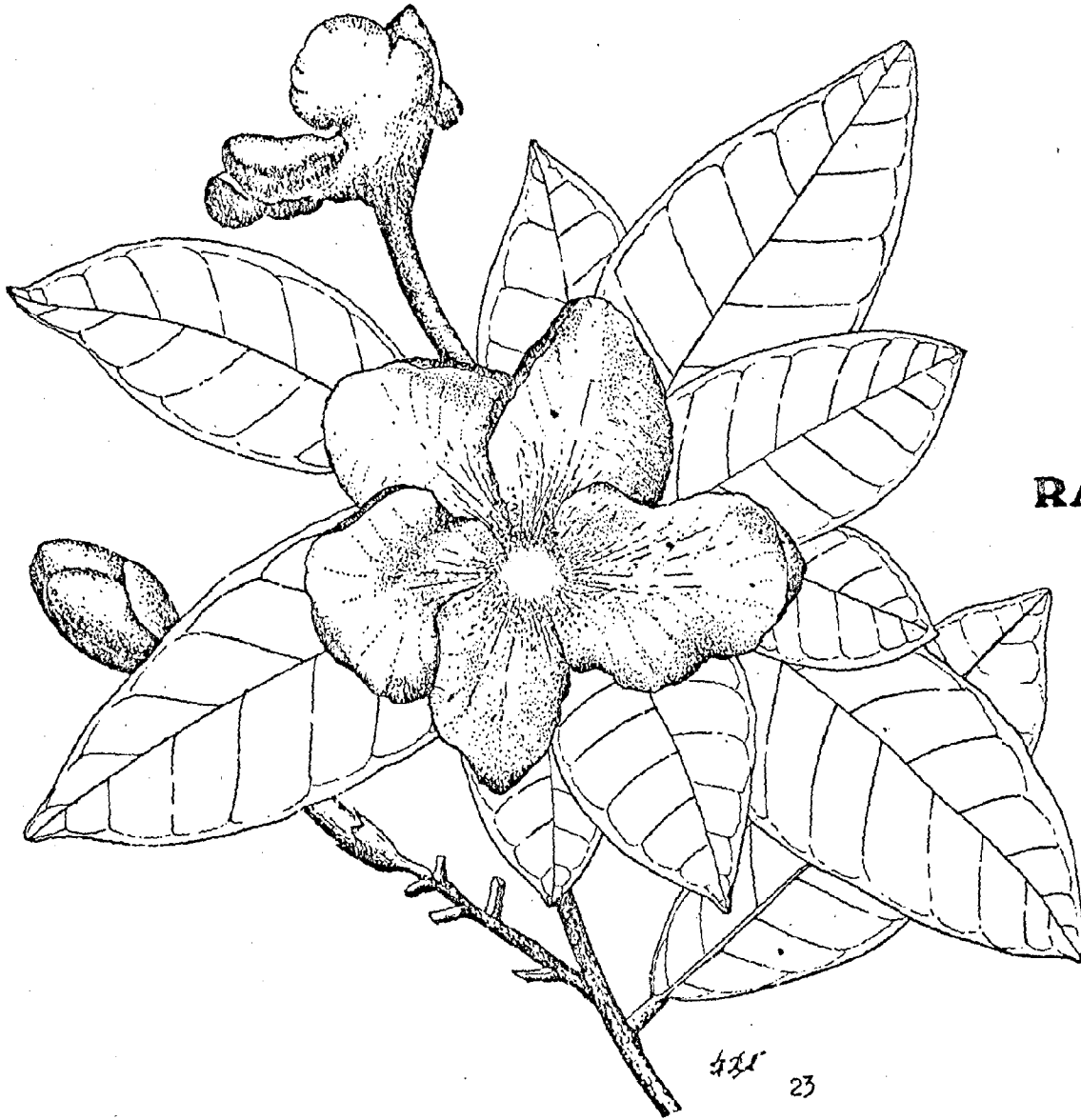
Page 20

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
106	SABIACEAE <u>Meliosma obtusifolia</u>	Arroyo	Tree	Scattered on middle moist slopes.	Limited distribution
107	SAPOTACEAE <u>Dipholis bellonis</u>	Tabloncillo	Tree	Western districts. Not well known.	Unknown
108	SOLANACEAE* <u>Brunfelsia portoricensis</u>		Shrub	Wet forests - El Verde, Luquillo.	Limited distribution
109	<u>Goetzea elegans</u>	Mata buey	Tree	Extremely local in moist woodlands.	Limited distribution
110	<u>Solanum drymophilum</u>	Erubia	Tree	Wet mountain forests - very local.	Limited distribution
111	<u>Solanum mucronatum</u>		Shrub	Mountain woodlands - Coamo area. Possibly in St. John and St. Thomas, U.S. Virgin Islands. Not well known.	Unknown
112	<u>Solanum riedlei</u>		Shrub	Not well known. Reported from Puerto Rico.	Unknown
113	STYRACACEAE <u>Styrax portoricensis</u>	Palo de jazmín	Tree	Local in Luquillo Mountains.	Limited distribution
114	SYMPLOCACEAE <u>Symplocos lanata</u>	Níspero cimarrón	Tree	Mountain forests near Adjuntas.	Limited distribution
115	THEACEAE <u>Laplacea portoricensis</u>	Niño de oota, Maricao Verde	Tree	Wet-to-moist western slopes of the Luquillo Mountains.	Limited distribution
116	<u>Ternstroemia heptasepala</u>		Tree	Wet ridges only in the Luquillo Mountains.	Limited distribution

ENDANGERED ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
117	THEACEAE (Con.) <u>Ternstroemia luquillensis</u>	Palo colorado	Tree	Very wet areas or peaks and ridges in the Luquillo Mountains.	Limited distribution
118	<u>Ternstroemia subsessilis</u>		Tree	Mountain peaks in Luquillo and Monte del Estado, Maricao.	Limited distribution
119	URTICACEAE <u>Ureca chlorocarpa</u>	Ortiga colorada Nettle	Tree	Virgin forest of Central Cordillera.	Limited distribution
120	<u>Pilea leptophylla</u>		Herb	Cerro la Pandura, Maunabo.	Habitat destruction
121	<u>Pilea multicaulis</u>		Herb	Eastern mountains. One collection.	Very limited distribution
122	VERBENACEAE <u>Callicarpa ampla</u>	Capa rosa	Tree	Moist-to-wet mountain forests. Very local.	Limited distribution
123	<u>Cornutia obovata</u>	Nigua	Tree	Mountain peaks, Monte La Torrecilla.	Habitat destruction
124	<u>Priva portoricensis</u>	Vervain	Herb	Thickets near Guánica.	Habitat destruction
125	ZANNICHELLIACEAE <u>Ruppia anomala</u>	Yerba de zanja	Herb	Aquatic plant, Guánica only.	Habitat destruction
*	SOLANACEAE <u>Solanum woodburyi</u> (Insert after No. 112)		Shrub	Wet, upper Luquillo Mountains. Very local.	Limited distribution



**RARE ENDEMIC
PLANT SPECIES**

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Brunfelsia lactea, Vega blanca
Number 143--Rare Endemic Plant Species
of Puerto Rico

RARE ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
126	AQUIFOLIACEAE <u>Ilex sintenisii</u>		Tree	Wet montane peaks - Luquillo Mountains only.	Limited distribution
127	ARALIACEAE <u>Didymopanax Gleasoni</u>	Yuquilla	Tree	Scattered and rare in upper mountain forests.	Limited distribution
128	COMPOSITAE <u>Eupatorium oteroi</u>		Shrub	Coastal cliffs - Mona and Quebradillas.	Limited distribution
129	<u>Osmia borinquensis</u>		Slender vine	Wet limestone hills - western areas.	Habitat destruction
130	<u>Vernonia borinquensis</u>		Shrub	Moist-to-wet western hills.	Habitat destruction
131	EBENACEAE <u>Diospyros sintenisii</u>	Guayabota, níspero	Tree	Local in moist forests of middle and western Puerto Rico.	Limited distribution
132	ECHECACEAE <u>Cordia rupicola</u>		Shrub	Dry thickets - southwestern Puerto Rico.	Habitat destruction
133	MELASTOMACEAE <u>Menendezia stahlia</u>	Camasey	Tree	Wet mountains of El Verde, Guavate, and Bayamón. May not be distinct from <u>M. urbanii</u> .	Unknown
134	<u>Miconia foveolata</u>	Camasey	Tree	Only in the upper ridges and peaks of the Luquillo Mountains.	Limited distribution
135	<u>Miconia pycnoneura</u>	Camasey	Tree	Only on the peaks of the Luquillo Mountains and Cerro de Punta area, Jayuya.	Limited distribution
136	MYRSINACEAE <u>Ardisia luquillensis</u>	Mameyuelo	Tree	Upper Luquillo Mountains.	Limited distribution

RARE ENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
137	MYRTACEAE <u>Eucenia stewardsonii</u>		Tree	Upper Central Cordillera.	Limited distribution
138	ORCHIDACEAE <u>Epidendrum brittonianum</u>		Epiphyte	Confined and widespread on Mona.	Limited distribution
139	PORTULACACEAE <u>Portulaca caulerpoides</u>		Herb	Coastal limestone on Caja de Muertos and Mona.	Limited distribution
140	RUBIACEAE <u>Scelosanthus grandifolius</u>	Espuela de galán	Shrub	Upper western mountains - local.	Limited distribution
141	SAPINDACEAE <u>Thouinia portoricensis</u>	Serrasueta, Quebracho	Tree	Dry woodland and thickets - southwestern Puerto Rico.	Habitat destruction
142	SOLANACEAE <u>Brunfelsia densifolia</u>		Tree	Upper serpentine slopes, western Puerto Rico.	Limited distribution
143	<u>Brunfelsia lactea</u>	Vega blanca	Tree	Upper-wet eastern mountains.	Limited distribution
144	SAPOTACEAE <u>Pouteria dictyoneura</u>		Tree	Few mature trees. Moist limestone hills of north coast.	Limited distribution
145	URTICACEAE <u>Pilea yunquensis</u>		Herb	Upper wet mountains of Luquillo and Toro Negro.	Limited distribution



**ENDANGERED
NONENDEMIC
PLANT SPECIES**

Persea krugii, Canela
Number 254--Endangered Nonendemic Plant Species
of Puerto Rico

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
146	AIZOACEAE <u>Sesuvium maritimum</u>	Verdolaga del mar Sea purslane	Herb	Margin of Guánica Lake. Widespread elsewhere.	Habitat destruction
147	AMARANTHACEAE <u>Acnida cuspidata</u>	Elero de agua Water hemp	Shrub	Coastal marshes of Tortuguero. Through Florida and West Indies.	Habitat destruction
148	<u>Achyranthes ramosissima</u>		Herb	Coastal sands of San Juan. Also Florida, Central and South America.	Habitat destruction
149	<u>Celosia virgata</u>	Albahaca	Herb	Monte Ventana, Vieques. Also Cuba, Central and South America.	Limited distribution
150	ANNONACEAE <u>Oxandra lanceolata</u>	Haya prieta Lancewood	Tree	Forests near Cabo Rojo and Quebradillas. Through Greater Antilles.	Harvesting and habitat destruction
151	<u>Rollinia mucosa</u>	Anón cimarrón	Tree	Good wood. Rare in moist forests. Through West Indies and Mexico.	Lumbering
152	APOCYNACEAE <u>Anechites nerium</u>		Woody vine	One collection. Open areas near Vega Baja. Also Greater Antilles and South America.	Habitat destruction
153	AQUIFOLIACEAE <u>Ilex urbaniana</u>	Cuero de sapo	Tree	Forests near Utuado. Also Tortola.	Limited distribution
154	ARACEAE <u>Dracontium polyphyllum</u>	Guapa	Shrub	Individual plants near streams. Also Hispaniola and northern South America.	Habitat destruction
155	<u>Montrichardia arborescens</u>	Yautía madera	Shrub	Marsh plant not seen recently. Lesser Antilles to South America.	Unknown
156	<u>Philodendron fragrantissima</u>		Epiphyte	Local in two river canyons. Also South America.	Ornamental value and limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
157	ASCLEPIADACEAE <u>Oxypetalum cordifolium</u>		Herb vine	Recorded from Puerto Rico. Scattered in American tropics.	Limited distribution
158	BALANOPHORACEAE <u>Scybalium jamaicense</u>		Herb	Cerro Garzas, Adjuntas. Throughout Greater Antilles.	Very limited distribution
159	BIGNONIACEAE <u>Arrabidaea chica</u>		Woody vine	Forests of Bayamón Area. Also Trinidad and South America.	Limited distribution
160	BORAGINACEAE <u>Heliotropium antillanum</u>		Herb	One collection - coastal plain by Vega Baja. Also Cuba.	Limited distribution
161	BROMELIACEAE <u>Aechmea nudicaulis</u>		Epiphyte	Rocks and bases of trees near Punta Picúa, Luquillo, and Garrochales, Barceloneta. Through tropical America.	Very limited distribution
162	<u>Guzmania erythrolepis</u>	Pirigallo	Epiphyte	On rocks and bases of trees on Monte Alegrillo, Maricao. Also Jamaica and Cuba.	Limited distribution
163	<u>Tillandsia araujei</u>		Epiphyte	One collection on dry mountain ridge south of Río Cuyón, Aibonito. Also Brazil.	Very local distribution
164	<u>Tillandsia juncea</u>		Epiphyte	One collection near Adjuntas. From Florida to South America.	Very limited distribution
165	<u>Tillandsia pruinosa</u>		Epiphyte	Rare in Susúa Forest, Yauco. Florida to Brazil.	Limited distribution
166	<u>Vriesia ringens</u>	Pirigallo	Epiphyte	Only two small locations in Luquillo Mountains. Lesser Antilles to South America.	Limited distribution
167	<u>Wittmackia lingulata</u>	Piña cortadora	Epiphyte	On rocks near Caguas. Also Lesser Antilles.	Limited distribution
168	BUXACEAE <u>Buxus citrifolia</u>		Tree	Moist forests - very local. Also Venezuela.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
169	BUXACEAE (Con.) <u>Buxus vahlia</u>		Tree	Very local in coastal limestone hills near Bayamón, Rincón, and Ponce. St. Croix and Jamaica (?). May be endemic. Requires more study.	Limited distribution
170	CACTACEAE <u>Opuntia moniliformis</u>	Tuna	Tree	Forest thickets of Desecheo and Mona. Also Hispaniola.	Cactus moth and limited distribution
171	CAPPARIDACEAE <u>Morisonia americana</u>	Palo de peo	Tree	Moist forests of Desecheo, Culebra, and Vieques. Also common in the Lesser Antilles.	Habitat destruction
172	CASSIACEAE <u>Caesalpinia bunduc</u>	Mato Yellow nicker	Woody vine	Coastal area near Isabela. Widespread in tropics.	Unknown
173	<u>Caesalpinia melanosperma</u>	Mato Black nicker	Woody vine	Mona coastal plain. Also Lesser Antilles.	Limited distribution
174	<u>Cassia bacillaris</u>	Cockrico bush	Woody vine	Lower Luquillo Mountains. Lesser Antilles to South and Central America.	Habitat destruction
175	<u>Stahlia monosperma</u>	Cóbana negra	Tree	Furniture wood. Margins of mangroves, southwestern and eastern coasts of Vieques. Also Hispaniola.	Limited distribution and lumbering
176	<u>Cymometra portoricensis</u>	Oreganillo	Tree	Moist limestone hills. Also Hispaniola.	Limited distribution and habitat destruction
177	CELASTRACEAE <u>Maytenus cymosa</u>		Tree	Coastal forests of eastern Puerto Rico. Also Lesser Antilles.	Limited distribution
178	CHENOPODIACEAE <u>Salicornia bigelowii</u>	Chifle Glasswort	Herb	Salt flat near Cabo Rojo. Widespread elsewhere.	Very limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
179	COMMELINACEAE <u>Campelia zanonii</u>	Cohitre blanco	Shrub	Craggy mountain slopes - Coamo area. Greater Antilles, Central and South America.	Limited distribution
180	COMPOSITAE <u>Ambrosia tenuifolia</u>		Herb	Tortuguero - dry siliceous sand.	Habitat destruction
181	<u>Baccharis dioica</u>	Broom bush	Shrub	Coastal rocky slopes. Through West Indies.	Limited distribution
182	<u>Wedelia gracilis</u>		Herb	Reported from eastern Puerto Rico. Through Greater Antilles.	Limited distribution
183	CONVOLVULACEAE <u>Ipomoea carnea</u>	Gloria de la mañana Morning glory	Woody vine	Moist ravines, Coamo area and east. Scattered in West Indies, Central and South America.	Limited distribution
184	<u>Ipomoea horsfalliae</u>	Gloria de la mañana roja Red morning glory	Slender vine	Southern moist slopes in woodland. Also in Jamaica and cultivated in tropics. Of ornamen- tal value.	Collecting and limited distribution
185	<u>Ipomoea tricolor</u>		Slender vine	One collection near Mayaguez.	Limited distribution
186	CUCURBITACEAE <u>Anguria ottoniana</u>		Slender vine	One collection. Also Cuba, Tobago, and Venezuela.	Limited distribution
187	<u>Anguria trifoliata</u>		Slender vine	One collection. Also Hispaniola.	Limited distribution
188	CUSCUTACEAE <u>Cuscuta indecora</u>	Bejuco de Mona Dodder	Epiphyte	Shore of Lake Guánica. Widespread in American tropics.	Habitat destruction
189	CYATHEACEAE (Fern) <u>Cyathea brooksii</u>		Shrub	Upper western mountains. Through Greater Antilles.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
190	CYATHEACEAE (Con.) <u>Hemitelia escuaguensis</u>	Helecho arbóreo Tree fern	Tree	Wet Central Cordillera and western mountains. Also Venezuela.	Limited distribution
191	CYPERACEAE <u>Bulbostylis curassavica</u>	Junquillo	Sedge	Dry wooded areas - Guánica and Caja de Muertos. Through West Indies.	Limited distribution
192	<u>Bulbostylis junciformis</u>	Junquillo	Sedge	Dry-to-moist siliceous sand - Tortuguero. Also Lesser Antilles to South America.	Limited distribution
193	<u>Cyperus confertus</u>		Sedge	Local coastal plant of Cataño area. Of wide tropical distribution.	Very limited distribution
194	<u>Cyperus eggersii</u>		Sedge	High swampy areas from Guajataca to Lares. Through Greater Antilles.	Limited distribution
195	<u>Cyperus flavescens</u>		Sedge	Moist grassy areas in Dorado and Bayamón. Widespread in tropics.	Limited distribution
196	<u>Cyperus fuliginosus</u>		Sedge	Open areas on Icacos Cay, Pajardo. Florida and West Indies.	Limited distribution
197	<u>Cyperus nanus</u> var. <u>subtenuis</u>		Sedge	Only one collection near Yauco. Rare in Cuba and Jamaica.	Limited distribution
198	<u>Cyperus swartzii</u>		Sedge	Only two collections in Guánica and Peñuelas. Scattered in West Indies.	Limited distribution
199	<u>Cyperus unioloides</u>		Sedge	Wet grasslands - Only one collection near Lares. A little known species. Greater Antilles, Central and South America.	Unknown
200	<u>Cyperus virens</u>		Sedge	Swampy grassland west of Bayamón. Widespread in tropics and subtropics.	Habitat destruction
201	<u>Eleocharis fallax</u>	Junco	Sedge	Guánica Lake and one location in the Luquillo Mountains. Rare in the Greater Antilles.	Habitat destruction

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
202	CYPERACEAE (Con.) <u>Eleocharis pachystyla</u>	Junco	Sedge	Only one collection in wet siliceous sands of Dorado. West Indies to Central and South America.	Limited distribution
203	<u>Eleocharis radicans</u>	Junco	Sedge	One collection. Not recently seen. Local in tropical and temperate areas.	Unknown
204	<u>Hemicarpha micrantha</u>		Sedge	Local in siliceous sands of Tortuguero. Widespread in tropics and temperate regions.	Limited distribution
205	<u>Lagenocarpus guianensis</u>		Sedge	Low wet areas in siliceous sand of Dorado and Tortuguero. Lesser Antilles to South America.	Limited distribution
206	<u>Psilocarya nitens</u>		Sedge	Marshy areas about Lake Tortuguero. Subtropical to temperate United States.	Limited distribution
207	<u>Rhynchospora brachychata</u>		Sedge	Only one collection in Luquillo Mountains. A questionable species.	Limited distribution
208	<u>Rhynchospora filiformis</u>		Sedge	Reported from Puerto Rico. Not recently seen.	Unknown
209	<u>Rhynchospora hispidula</u>		Sedge	Recorded from Puerto Rico. Not recently seen.	Unknown
210	<u>Rhynchospora microcarpa</u>		Sedge	Rare in swamps of Tortuguero. Southern United States and West Indies.	Limited distribution
211	<u>Rhynchospora miliacea</u>		Sedge	Recorded from Puerto Rico. Not recently seen.	Unknown
212	<u>Rhynchospora odorata</u>		Sedge	One collection near Cataño Swamp. Greater Antilles and Southern United States.	Very limited distribution
213	<u>Rhynchospora oligantha</u>		Sedge	Wet grassy areas in the Luquillo Mountains, Tortuguero, and Dorado. Eastern United States and Greater Antilles.	Very limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
214	CYPERACEAE (Con.) <u>Rhynchospora oligantha</u> var. <u>brevisetata</u>		Sedge	Wet grassy areas - upper Luquillo Mountains, Tortuguero, and Dorado. In Florida and the Greater Antilles.	Limited distribution
215	<u>Rhynchospora podosperma</u>		Sedge	Recorded from Puerto Rico. Not recently seen.	Unknown
216	<u>Rhynchospora rariflora</u>		Sedge	Wet grassy areas around Lake Tortuguero. In Florida and the Greater Antilles.	Limited distribution
217	<u>Rhynchospora rufa</u>		Sedge	Swamps of north coast - two collections. Also Cuba and South and Central America.	Limited distribution
218	<u>Scleria gracilis</u>	Nut-rush	Sedge	Wet grassy areas of Tortuguero. Southern United States and West Indies.	Limited distribution
219	<u>Scleria mitis</u>	Cortadora	Sedge	One collection in Bayamón. West Indies, Central and South America. Not recently seen.	Unknown
220	<u>Scleria pauciflora</u>	Nut rush	Sedge	Wet grassy areas of Tortuguero. Eastern United States and West Indies.	Limited distribution
221	DILLENACEAE <u>Dolioscarpus brevipedicellatus</u>		Woody vine	Very local in coastal moist forests of north coast.	Limited distribution
222	DROSERACEAE <u>Drosera capillaris</u>	Sundew	Herb	Wet siliceous sand. Canada to Brazil.	Habitat destruction
223	EHRETIACEAE <u>Bourreria revoluta</u>		Tree	Moist coastal woodland - Quebradillas. Greater Antilles to Florida.	Limited distribution
224	<u>Rochefortia acanthophora</u>	Juso	Tree	Southwestern Puerto Rico - Coastal forests. Through West Indies.	Habitat destruction
225	<u>Rochefortia cuneata</u>	Espino	Tree	One collection at La Plata, Guánica. West Indies.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
226	EUPHORBIACEAE <u>Chamaesyce anegadensis</u>		Herb	Very rare on rocky plateau of Mona. Also Anegada.	Limited distribution
227	<u>Chamaesyce cowelii</u>		Herb	Dry coastal rocky thickets of southwestern Puerto Rico, Caja de Muertos, and Mona. Also Anegada and Dominican Republic.	Limited distribution
228	<u>Croton nummulariaefolius</u>		Shrub	Very local in rocky coastal thickets - Guánica. Also Cuba and Hispaniola.	Limited distribution
229	<u>Drypetes ilicifolia</u>	Encinillo	Tree	Rare in moist coastal hills of the north coast. Also Jamaica.	Habitat destruction and limited distribution
230	FLACOURTIACEAE <u>Lunania buchii</u>		Tree	Forest of upper Monte del Estado. Also Hispaniola.	Limited distribution
231	<u>Prockia cruiz</u>		Tree	Very local in Vieques and southeastern Puerto Rico - moist forests. Through tropical America.	Habitat destruction
232	GENTIANACEAE <u>Enicostema verlicillatum</u>		Herb	Recorded from Puerto Rico. Not recently seen. West Indies and Old World tropics.	Limited distribution
233	<u>Schultesia brachyptera</u>		Herb	Only one collection in wet sand near Bayamón. Through Greater Antilles, Central and South America.	Limited distribution
234	GRAMINEAE <u>Andropogon dominicensis</u>	Barbas Beardgrass	Grass	Only along Río Maricao, Puerto Rico. Occurs west to Florida.	Limited distribution
235	<u>Aristida cognata</u>	Pelos del diablo Triple-awned grass	Grass	Rocky slopes near Boquerón. Rare in the Lesser Antilles, Jamaica, and the Bahamas.	Limited distribution
236	<u>Aristida spiciformis</u>	Pelos del diablo Triple-awned grass	Grass	Moist siliceous sandy areas of Tortuguero. Also scattered in the Isle of Pines (Cuba), and Florida.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
237	GRAMINEAE (Con.) <u>Bouteloua juncea</u>	Lamilla	Grass	Dry coastal plain near Guánica. Also Hispaniola	Limited distribution
238	<u>Chusquea abietifolia</u>	Bambú trepador Bamboograss	Grass	Western mountains of Puerto Rico. Also Hispaniola and Jamaica.	Limited distribution
239	<u>Gymnopogon foliosus</u>	Matojo	Grass	Siliceous sand of Tortuguero. Also St. Thomas, Hispaniola, and South America.	Limited distribution
240	<u>Panicum fusiforme</u>	Panicum	Grass	Summit of El Yunque. Of wide tropical distribution.	Limited distribution
241	<u>Paspalum parviflorum</u>		Grass	One collection in Puerto Rico and rare in South America. Tortuguero.	Unknown
242	<u>Paspalum rupestre</u>	Matojito	Grass	Serpentine soils at higher elevations. Also in Cuba.	Limited distribution
243	<u>Sporobolus cubensis</u>	Matojo cubano Drop seed	Grass	Rare in Monte Mesa, Mayagüez. Also in Cuba.	Limited distribution
244	<u>Syntherisma argillacea</u>	Pata de gallina Fingergrass	Grass	Western open areas and Tortuguero. Also in Cuba.	Habitat destruction
HIPPOCRATEACEAE					
245	<u>Hippocratea caribaea</u>		Woody vine	One collection from Cerro La Pandura. Also the Windward Islands. Not well known.	Habitat destruction
HYMENOPHYLLACEAE					
246	<u>Hymenophyllum asplenioides</u>		Epiphyte	Moist to wet forests - Maricao. Through Greater Antilles, Central and South America.	Limited distribution
ICACINACEAE					
247	<u>Mappia racemosa</u>		Tree	Very rare in coastal moist forest - Quebradillas area. Also Greater Antilles.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
248	JUGLANDACEAE <u>Juglans jamaicensis</u>	Nogal Tropical walnut	Tree	Central Cordillera and western mountains. Also Hispaniola. Not recently seen.	Limited distribution
249	LABIATAE (Lamiaceae) <u>Hyptis spicigera</u>	Marrubio	Shrub	One collection near Cabo Rojo. Greater Antilles, Central and South America.	Limited distribution
250	<u>Hyptis verticillata</u>	Marrubio	Shrub	Open slopes of eastern Puerto Rico. Also tropical America.	Habitat destruction
251	LAURACEAE <u>Aniba bracteata</u>	Canelillo	Tree	Moist eastern mountains. Also Lesser Antilles.	Limited distribution
252	<u>Ocotea foeniculacea</u>	Palo santo	Tree	Mountain peaks near Cerro de Punta. Also Cuba.	Limited distribution
253	<u>Ocotea wrightii</u>	Laurel canelón	Tree	Upper Central Cordillera. Also Cuba.	Limited distribution
254	<u>Persea krugii</u>	Canela	Tree	Upper western mountains. Also Hispaniola.	Limited distribution
255	LORANTHACEAE <u>Dendropemon purpureus</u>	Hicaquillo Mistletoe	Epiphyte	Dry forest near Guánica. Also Bahamas, Cuba, and Hispaniola.	Habitat destruction
256	<u>Eubrachion ambiguum</u>		Epiphyte	Monte del Estado (one peak). Also Hispaniola and Jamaica.	Very limited distribution
257	<u>Ixidium wrightii</u>		Epiphyte	Mountain forests. Also Hispaniola and Cuba.	Limited distribution
258	LYCOPODIACEAE <u>Lycopodium curvatum</u>	Club moss	Herb	Sphagnum areas of Luquillo Mountains. Also Jamaica.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
259	LYCOPODIACEAE (Con.) <u>Lycopodium meridionale</u>	Club moss	Herb	Wet, grassy areas of Luquillo Mountains. Tropical America.	Limited distribution
260	<u>Lycopodium tenuicaule</u>	Club moss	Epiphyte	Wet forests of Luquillo Mountains. Also Lesser Antilles.	Limited distribution
261	<u>Lycopodium wilsoni</u>	Club moss	Epiphyte	Upper Luquillo Mountains. Guadeloupe and Colombia.	Limited distribution
262	MALPIGHIACEAE <u>Banisteriopsis lucida</u>	Paralejo de monte	Woody vine	One collection, maybe exterminated. Also St. Vincent and northern South America.	Habitat destruction
263	<u>Bunchosia glandulifera</u>	Café falso	Tree	One locale in forests of Sierra de Yabucoa. Also Montserrat to South America.	Limited distribution
264	<u>Bunchosia nitida</u>		Tree	Recorded in woodland of southwestern Puerto Rico. Also Hispaniola and Lesser Antilles.	Limited distribution
265	<u>Heteropteris wyleriana</u>		Woody vine	Mountains of western Puerto Rico.	Habitat destruction
266	<u>Malpighia fucata</u>	Olaga	Tree	Coastal and river thickets. Also U.S. Virgin Islands and Jamaica.	Habitat destruction
267	<u>Malpighia infestissima</u>	Cowhage cherry	Tree	Coastal thickets. Very local distribution. Isla Maguey, Lajas. Also U.S. Virgin Islands.	Limited distribution
268	<u>Malpighia linearis</u>	Stinging bush	Tree	Coastal thickets of eastern Puerto Rico. Also Lesser Antilles to Montserrat.	Limited distribution
269	<u>Stigmaphyllon diversifolium</u>	Bejuco de paralejo	Woody vine	Two coastal records. Needs more study, very similar to another species. Also Hispaniola and Cuba.	Unknown
270	<u>Stigmaphyllon puberum</u>		Woody vine	Recorded from eastern Puerto Rico in small numbers. West Indies, Central and South America.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
271	MALVACEAE <u>Bastardia bivalvis</u>	Escoba babosa	Shrub	One collection. Fields near Coamo. Also tropical America.	Limited distribution
272	<u>Hibiscus clypeatus</u>	Huevo de gato	Tree	Dry forests near Guánica. Through Greater Antilles, Mexico, Cayman Islands.	Limited distribution
273	<u>Hibiscus trilobus</u>		Shrub	Rare in marshes. Also Hispaniola, Trinidad, Jamaica, and French Guiana.	Limited distribution
274	<u>Lebretonia paniculata</u>	Cadillo anaranjado	Shrub	Wet ground near Bayamón and Lares. Also Hispaniola, Guadeloupe, Central and South America.	Limited distribution
275	<u>Sida eggersii</u>		Tree	Hills of Culebra. Also Virgin Islands.	Limited distribution
276	MARATTIACEAE <u>Danaea jenmani</u>		Herb	Wet upper mountain forests - Adjuntas. Also Jamaica.	Limited distribution
277	MARSILIACEAE <u>Marsilia berteroi</u>		Herb	Borders of ponds. Local in tropics.	Habitat destruction
278	<u>Marsilia polycarpa</u>		Herb	Borders of ponds. Local in tropics.	Habitat destruction
279	MELIACEAE <u>Cedrela odorata</u>	Cedro Spanish cedar	Tree	Very good timber, but poor reproduction. Moist mountain woodlands. Planted in tropical America.	Lumbering and disease
280	MELASTOMACEAE <u>Conostegia hotteana</u>		Tree	Very local in wet forests of eastern mountains. Also Haiti.	Limited distribution
281	<u>Heterotrichum angustifolium</u>	Camasey	Tree	Recorded from Puerto Rico. Also Hispaniola.	Unknown

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
282	MELASTOMACEAE (Con.) <u>Miconia lanata</u>	Camasey	Tree	Recorded to have been collected in Puerto Rico. Also in Cuba, St. Vincent, Trinidad, northern South America.	Unknown
283	<u>Miconia microcarpa</u>	Camasey	Tree	Wet-to-moist upland forests near Juncos (Monte Santo de León). Also Cuba and French Guiana.	Unknown
284	<u>Miconia ottoschulzii</u>	Camasey	Tree	Recorded from forest at Isabón near Utuado. Also the Dominican Republic.	Limited distribution
285	<u>Miconia punctata</u>	Camasey	Tree	Mountain forests near Utuado. Also found in Cuba, Hispaniola, Guatemala, and Bolivia.	Limited distribution
286	<u>Miconia rubiginosa</u>	Camasey	Tree	Of middle elevations in western Puerto Rico. Also Hispaniola and Central and South America.	Limited distribution
287	<u>Mouriri domingensis</u>	Murta	Tree	Local in moist forests. Scattered in West Indies.	Limited distribution
288	<u>Ossaea domingensis</u>	Camasey	Shrub	One collection in Central Cordillera. Also Hispaniola.	Limited distribution
289	<u>Ossaea scabrosa</u>	Camasey	Shrub	Very local in upper wet Central Cordillera. Also Jamaica to Cuba.	Limited distribution
290	<u>Rhexia cubensis</u>	Camasey marino West-Indian Meadow-beauty	Herb	Very local in siliceous sand marshes near Dorado and Tortuguero. Also Florida and Cuba.	Limited distribution
291	<u>Tetrazygia angustifolia</u>	Genizo	Tree	Moist seasonal forest south of Isabela and eastern Puerto Rico. Also the Lesser Antilles.	Habitat destruction and limited distribution
	MIMOSACEAE				
292	<u>Calliandra haematostoma</u>	Caliandra Red ameslia	Tree	Guayanilla area. Through Greater Antilles.	Habitat destruction
293	<u>Entada polyphylla</u>	Tamarindillo	Woody vine	River banks of Fajardo and Vega Baja. Also South America.	Limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
294	MYRSINACEAE <u>Stylogyne lateriflora</u>		Shrub	Luquillo Mountains. Collected only once. Rare in Lesser Antilles.	Limited distribution
295	MYRTACEAE <u>Calypttranthes thomasi</u>		Tree	Monte Ventana, Vieques. Also Signal Hill, St. Thomas. Not well known.	Limited distribution
296	<u>Calypttranthes zuzygium</u>	Myrtle-of-the-river	Tree	Cambalache Forest, Barceloneta. Through Greater Antilles and South Florida.	Limited distribution
297	NAIDACEAE <u>Naias marina</u>	Yerba de zanja	Herb	An aquatic plant in Puerto Rico confined to Lake Tortuguero. Elsewhere widespread, but local.	Limited distribution
298	NYCTAGINACEAE <u>Guapira discolor</u>	Palo de corcho	Tree	Dry forests of Montalva, Ensenada; Mona and Desecheo. Through Greater Antilles and Bahamas.	Limited distribution
299	<u>Pisonia helleri</u>		Woody vine	Moist limestone thickets. Through West Indies.	Habitat destruction
300	OLACACEAE <u>Schoepfia schreberi</u>		Tree	Woodlands of Vieques. Also Lesser Antilles, Central and South America.	Habitat destruction
301	ORCHIDACEAE <u>Basiphyllaea angustifolia</u>		Herb	Monte del Estado. Also Cuba.	Limited distribution
302	<u>Bletia patula</u> var. <u>alba</u>	Bletia	Herb	Open moist slopes near Lares. Also Hispaniola, Cuba, and Florida.	Limited distribution
303	<u>Brachionidium parvum</u>		Herb	Wet banks and slopes - Upper Luquillo and Guavate forests. Also Lesser Antilles.	Limited distribution
304	<u>Brassavola cucullata</u>		Epiphyte	Reported in Puerto Rico. Lesser Antilles to South America.	Unknown

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
305	ORCHIDACEAE (Con.) <u>Brassavola nodosa</u>		Epiphyte	Reported in Puerto Rico, may be an escape. Also Central and South America.	Unknown
306	<u>Bulbophyllum pachyrrhachis</u>		Epiphyte	Western mountains. Greater Antilles and Trinidad to Central America.	Habitat destruction
307	<u>Campylocentrum monteverdii</u>		Epiphyte	Central Cordillera. Also Cuba.	Limited distribution
308	<u>Campylocentrum pachyrrizum</u>		Epiphyte	Western mountains and limestone hills. Florida and West Indies.	Habitat destruction
309	<u>Cochleanthes flabelliformis</u>		Epiphyte	Moist mountain forests.	Collecting
310	<u>Coelia triptera</u>		Herb	Rocky, mountain areas of western Puerto Rico. Greater Antilles and Central America.	Limited distribution
311	<u>Cyrtopodium punctatum</u>	Pifnuela Cow horn orchid	Epiphyte	Northern slopes. Also Greater Antilles, Trinidad, and South America.	Collecting and harvesting
312	<u>Epidendrum bifidum</u>		Epiphyte	Eastern Puerto Rico. Also Lesser Antilles and Hispaniola. Common in Lesser Antilles.	Collecting and limited distribution
313	<u>Epidendrum cochleatum</u> var. <u>album</u>	Cañuela	Epiphyte	Maricao Mountains. Rare in West Indies.	Limited distribution
314	<u>Epidendrum furcatum</u>		Epiphyte	Central Cordillera. Through Greater Antilles.	Limited distribution
315	<u>Epidendrum oncioides</u> var. <u>gravidum</u>		Epiphyte	Western Puerto Rico. Also South America.	Limited distribution
316	<u>Epidendrum ottonis</u>		Epiphyte	Rare on palm trunks of Utuado area. Through Greater Antilles and South America.	Limited distribution
317	<u>Epidendrum pallidiflorum</u>		Epiphyte	Rare in upper Luquillo Mountains. Also in Lesser Antilles.	Limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
318	ORCHIDACEAE (Con.) <u>Epidendrum patens</u>		Epiphyte	Upper Luquillo and Carite mountains. Also in Trinidad. Poorly known.	Limited distribution
319	<u>Epidendrum sintenisii</u>		Epiphyte	Western mountains. Also rare in Cuba and Jamaica.	Limited distribution
320	<u>Eurystyles ananassocomos</u>		Epiphyte	On trunks of mountain palms. Through Greater Antilles.	Limited distribution
321	<u>Habenaria distans</u>		Herb	Grassy areas of Monte Mesa, Mayagüez. Through Greater Antilles to Florida and Guatemala.	Limited distribution
322	<u>Habenaria dussii</u>		Herb	Mossy forests of Luquillo Mountains. Also Guadeloupe.	Limited distribution
323	<u>Jacquinilla teretifolia</u>		Epiphyte	Rare on upper Toro Negro Mountain. Through West Indies, Central and South America.	Very limited distribution
324	<u>Koellensteinia graminea</u>		Epiphyte	Forests near Utuado. Also South America.	Very limited distribution
325	<u>Liparis eggersii</u>		Herb	Monte Mesa, Mayagüez. Also St. Thomas. Not well known.	Limited distribution
326	<u>Liparis vexillifera</u>		Herb	Rare in Central Cordillera and western mountains. Also West Indies, Central and South America.	Limited distribution
327	<u>Lycaste barringtoniae</u>		Epiphyte	Rare in western mountains. Uncommon through Greater Antilles.	Limited distribution
328	<u>Maxillaria confertum</u>		Epiphyte	Forests near Utuado. Also Cuba and the Lesser Antilles.	Limited distribution
329	<u>Pleurothallis foliata</u>		Epiphyte	Upper Luquillo Mountains. Through West Indies to Central and South America. Not common anywhere.	Very limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
330	ORCHIDACEAE (Con.) <u>Xylobium palmifolium</u>		Epiphyte	Upper Maricao Mountain. Through Greater Antilles. Only one collection.	Unknown
331	OCHNACEAE <u>Ouratea striata</u>		Tree	Very local on wet mountain peaks and ridges. Through Greater Antilles.	Limited distribution
332	OILEACEAE <u>Linociera axilliflora</u>	Hueso	Tree	Local in Guánica ridge forests. Also Cuba.	Limited distribution
333	<u>Linociera ligustrina</u>	Hueso	Tree	Moist limestone hills of northwestern Puerto Rico. Through Greater Antilles.	Limited distribution
334	OPHIOGLOSSACEAE (Ferns) <u>Botrychium jenmani</u>		Herb	Wet, open serpentine mountain slopes. Through Greater Antilles.	Limited distribution
335	OSMUNDACEAE (Fern) <u>Osmunda cinnamomea</u>	Cinnamon fern	Herb	Margins of swamps - Lake Tortuguero.	Limited distribution
336	PAPILIONACEAE (Fabaceae) <u>Centrosema plumieri</u>	Callinita	Herbaceous vine	Only one collection - thickets near Bayamón. Also tropical America.	Limited distribution
337	<u>Crotalaria maritima</u>		Herb	Siliceous sands of north coast. Also in southeastern United States.	Limited distribution
338	<u>Desmodium affine</u>		Herb	Mountains west of Cayey - Open areas. Greater Antilles and South America.	Limited distribution
339	<u>Desmodium cubense</u>		Shrub	Open slopes of Coamo area. Also Hispaniola and Cuba.	Habitat destruction
340	<u>Dioclea reflexa</u>	Bejuco de mato	Woody vine	Moist coastal forests. Very local and rare. Rare in West Indies.	Limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
341	PAPILIONACEAE (Fabaceae) (Con.) <u>Eriosema crinatum</u>		Herbaceous vine	One collection in siliceous sands of Tortuguero. Weedy open areas. Also Cuba, Central and South America.	Limited distribution
342	<u>Mucuna sloanea</u>	Ojo de buey Horse-eye bean	Woody vine	Rare in coastal wet forests. Pan tropical.	Collecting
343	<u>Mucuna urens</u>	Tortera Ox-eye bean	Woody vine	Western coastal forests. Rare and local in West Indies.	Collecting
344	<u>Sophora tomentosa</u>	Necklace pod	Shrub	Southwestern coastal plain and Vieques. Also wide tropical range.	Limited distribution
345	PASSIFLORACEAE <u>Passiflora anadenia</u>		Slender vine	Guánica Forest. Also Hispaniola.	Limited distribution
346	<u>Passiflora bilobata</u>		Slender vine	Local in coastal forests west of Ponce. Also Hispaniola.	Habitat destruction and limited distribution
347	<u>Passiflora murucuja</u>		Slender vine	Local in coastal forests of Quebradillas. Also Hispaniola.	Habitat destruction and limited distribution
348	PIPERACEAE <u>Piper dilatatum</u>	Higuillo	Shrub	Rio Abajo Forest. Also Lesser Antilles. Central and South America.	Limited distribution
349	<u>Piper swartzianum</u>	Higuillo	Shrub	Moist Central Cordillera. Also Hispaniola.	Habitat destruction
350	<u>Peperomia myrtifolia</u>	Peperomia	Herb	Rocks on Monte Ventana, Vieques. Also St. Croix and Virgen Gorda.	Limited distribution
351	POLYGONACEAE <u>Coccoloba pallida</u>	Uvillo	Tree	Coastal forest near Quebradillas. Through Greater Antilles.	Habitat destruction

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
352	POLYGONACEAE (Con.) <u>Coccoloba tenuifolia</u>	Uvillo	Tree	Coastal forest near Quebradillas. Also the Bahamas.	Habitat destruction
353	POLYPODIACEAE <u>Adiantopsis paupercola</u>		Herb	On rocks, Río Maricao. Also Cuba and Jamaica.	Limited distribution
354	<u>Adiantum macrophyllum</u>	Maiden-hair fern	Herb	Mountain ravines. Local in tropical America.	Collecting
355	<u>Adiantum rigidulum</u>		Herb	Listed from Yauco. Also Virgin Islands and Jamaica (?)	Limited distribution
356	<u>Adiantum villosum</u>		Herb	Moist ravines of eastern Puerto Rico. Tropical America.	Limited distribution
357	<u>Adiantum wilsoni</u>		Herb	Local in very wet ravines. Local in tropical America.	Limited distribution
358	<u>Dennstaedtia cicataria</u>		Shrub	Moist forests - Caguas. Also Cuba, Jamaica, Central and South America.	Limited distribution
359	<u>Dennstaedtia globulifera</u>		Shrub	Moist thickets near Quebradillas. Greater Antilles and South America.	Limited distribution
360	<u>Diplazium expansum</u>		Herb	Mountain forests near Adjuntas. Also Jamaica, Cuba, and South America.	Limited distribution
361	<u>Grammitis myosouroides</u>		Epiphyte	Wet forests by Río de Maricao. Also Jamaica.	Limited distribution
362	<u>Hecistopteris pumila</u>		Epiphyte	On rotting logs and stumps of western mountains. Tropical America.	Limited distribution
363	<u>Lindsaea portoricensis</u>		Herb	Thickets in wet siliceous sand, Tortuguero. Through tropical America.	Limited distribution

ENDANGERED NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
364	POLYPODIACEAE (Con.) <u>Lindsaea stricta</u>		Herb	Open areas in mossy forest, Luquillo. Local in West Indies, Central and South America.	Limited distribution
365	<u>Polypodium sectifrons</u>		Epiphyte	Moist-to-wet mountain forests. Scattered in West Indies, common in Costa Rica.	Limited distribution
366	<u>Polystichum polystichiforme</u>		Herb.	Forested slopes - Monte La Torrecilla. Greater Antilles.	Limited distribution
367	<u>Psilogramme hispidula</u>		Herb	Rocky summits El Yunque area. South America.	Limited distribution
368	<u>Pteris deflexa</u>		Herb	Summit of Monte La Torrecilla and near Utuado. Hispaniola and South America.	Limited distribution
369	<u>Pthlypteris serrata</u>		Herb	Swamp near Utuado. Local in tropical America.	Limited distribution
370	RHAMNACEAE <u>Hybosperma spinosum</u>		Shrub	Rocky crests of hills, Guánica. Also Hispaniola.	Limited distribution
371	<u>Reynosia guama</u>	Guamá	Tree	Coastal forests of Guánica. Also Virgin Islands.	Limited distribution
372	<u>Rhamnus sphacosperma</u>	West Indian buckthorn	Tree	Very local on mountain peaks. Through Greater Antilles.	Limited distribution
373	<u>Zizyphus taylori</u>		Tree	Dry forest, Mona. Also Bahamas.	Limited distribution
374	<u>Zizyphus rignonii</u>		Tree	Coastal forests, Fajardo area. Also Virgin Islands.	Limited distribution
375	RUBIACEAE <u>Catesbaea melanocarpa</u>		Shrub	Dry forests, Montalva, Ensenada. to Guánica. Also Lesser Antilles.	Limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
376	RUBIACEAE (Con.) <u>Chione seminervis</u>		Tree	Local in dwarf forest of Cerro de Punta area. Also Hispaniola.	Limited distribution
377	<u>Exostema ellipticum</u>	Plateado	Tree	Upper Central Cordillera forests. Also Cuba.	Limited distribution
378	<u>Exostema sanctae-luciae</u>		Tree	Very local in forests of upper serpentine mountains. Rare in West Indies.	Limited distribution
379	<u>Metracarpus hirtus</u>		Herb	Local in wet open swampy areas.	Habitat destruction
380	<u>Psychotria involucrata</u>	Cachimbo verde	Shrub	Thicket near Bayamón. West Indies to South America.	Limited distribution
381	<u>Psychotria nutans</u>	Cachimbo de mona	Tree	Sink holes in plateau, Mona. Also Hispaniola.	Limited distribution
382	<u>Sabicea cinera</u>		Shrub	Coastal moist forests, Dorado. Also French Guiana and Guiana.	Limited distribution
383	RUTACEAE <u>Amyris balsamifera</u>	Teilla	Tree	Woodlands near Cuánica. Also tropical America.	Limited distribution
384	SAPINDACEAE <u>Serjania diversifolia</u>		Woody vine	One collection in forests near Utuado. Also Bahamas, Cuba, and Hispaniola.	Limited distribution
385	SAPOTACEAE <u>Pouteria hotteana</u>		Tree	Local on Monte del Estado. Also Haiti.	Limited distribution
386	SCHIZAEACEAE <u>Anemia hirsuta</u>		Herb	Upper rocky banks, Coamo area. Tropical America.	Limited distribution
387	<u>Schizaea pennula</u>	Curlygrass Fern	Herb	Wet to moist thickets (siliceous sand areas). Lesser Antilles, Central and South America.	Habitat destruction and limited distribution.

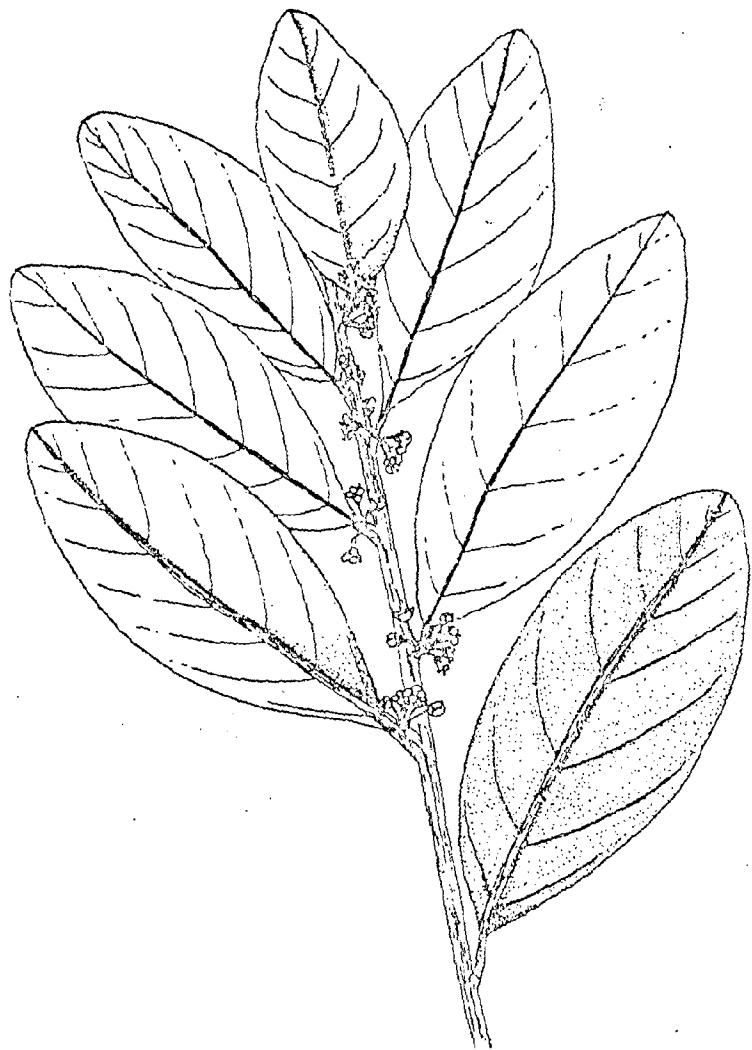
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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
388	SCROPHULARIACEAE <u>Buchnera elongata</u>	Espiga de San Antonio	Herb	Wet siliceous sand of north coast. Greater Antilles and Florida.	Habitat destruction and limited distribution
389	SIMAROUBACEAE <u>Castela erecta</u>		Tree	Coastal thickets of southwestern Puerto Rico. Also Lesser Antilles to Venezuela.	Habitat destruction and limited distribution
390	<u>Picrasma excelsa</u>	Bitterwood	Tree	Moist woodland, Coamo Springs area. Through Greater Antilles.	Habitat destruction and limited distribution
391	SOLANACEAE <u>Cestrum alternifolium</u>		Shrub	Reported from Luquillo Mountains. Lesser Antilles to South America.	Limited distribution
392	<u>Lycium americanum</u>		Shrub	Rocky soil, Monito, and very local in West Indies.	Limited distribution
393	<u>Saracha antillana</u>		Shrub	Woodland, Caguas. Through Greater Antilles.	Limited distribution (?)
394	<u>Solanum antillarum</u>		Tree	Moist mountain ravines, very local. Greater Antilles.	Poor reproduction and limited distribution
395	<u>Solanum polygamum</u>	Cakalaka-berry	Tree	One collection in Puerto Rico. Coastal forests by Salinas. Also Virgin Islands.	Limited distribution
396	<u>Solanum pterocaulon</u>		Shrub	Moist forests, Caguas. Also Mexico and South America.	Limited distribution
397	THEACEAE <u>Cleyera albopunctata</u>	Teta prieta	Tree	Summits of Luquillo Mountains. Also Cuba and Hispaniola.	Limited distribution
398	TURNERACEAE <u>Piriqueta ovata</u>		Herb	Along coast of southwestern Puerto Rico. Also Dutch Islands and Hispaniola.	Limited distribution

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
399	TURNERACEAE (Con.) <u>Piriqueta viscosa</u>		Herb	Thickets of Tortuguero and Culebra. Also St. Thomas, Cuba, and South America.	Habitat destruction and limited distribution
400	URTICACEAE <u>Urera caracasana</u>	Ortiga colorada Nettle	Tree	Drainage areas in Luquillo Mountains. Also Lesser Antilles, Central and South America.	Limited distribution
401	<u>Pouzolzia occidentalis</u>		Shrub	Forests of Coamo Area and Vieques. Also Central and South America.	Habitat destruction
402	<u>Pilea richardi</u>		Herb	One collection near Lares. Also one collection in St. Thomas. Not well known.	Limited distribution
403	<u>Pilea sanctae-crucis</u>		Herb	One collection in Luquillo Mountains. Also Virgin Islands. Not well known.	Limited distribution
404	VERBENACEAE <u>Lantana reticulata</u>	Cariaquillo	Shrub	Moist rocky slopes north of Salinas. West Indies and Mexico.	Habitat destruction and limited distribution
405	<u>Lantana trifolia</u>	Cariaquillo	Shrub	Dry south coast. Tropical America and Africa.	Habitat destruction
406	VITACEAE <u>Cissus intermedia</u>		Herbaceous vine	Recorded from Peñuelas and Manatí. Also Bahamas, Cuba, and Hispaniola.	Habitat destruction
407	<u>Cissus obovata</u>		Herbaceous vine	Recorded from Puerto Rico. Also the Virgin Islands.	Habitat destruction
408	ZANNICHELLIACEAE <u>Potamogeton ehydrus</u>	Lino de agua	Herb	Aquatic plant reported to be in Puerto Rico. None seen recently.	Unknown
409	ZINGIBERACEAE <u>Costus cylindricus</u>	Caña amarga	Shrub	Damp mountain banks. Scattered in West Indies and South America.	Limited distribution



RARE NONENDEMIC
PLANT SPECIES

Ilex guianensis; Maconcona
Number 415--Rare Nonendemic Plant Species
of Puerto Rico

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
410	ALISMACEAE <u>Helianthium tenellum</u>		Herb	An aquatic plant. Elsewhere widespread.	Limited distribution
411	<u>Sagittaria intermedia</u>		Herb	A marsh plant of the Greater Antilles.	Habitat destruction
412	AMYGDALACEAE <u>Prunus occidentalis</u>	Almendrillo Cherrylaurel	Tree	Moist mountain forests. Through West Indies and in Guatemala.	Limited distribution and habitat destruction
413	ANNONACEAE <u>Guatteria caribaea</u>	Haya blanca	Tree	Eastern moist forests. Also Lesser Antilles.	Limited distribution
414	<u>Oxandra laurifolia</u>	Haya Lancewood	Tree	Rare in mountains. Through West Indies.	Habitat destruction and lumbering
415	AQUIFOLIACEAE <u>Ilex guianensis</u>	Maconcona	Tree	Moist coastal forests - north and western areas. Also Hispaniola, Trinidad, and Central and South America.	Habitat destruction
416	BIGNONIACEAE <u>Enallagma latifolia</u>	Higuerillo Black calabash	Tree	Coastal wet areas. Through tropical America.	Habitat destruction
417	BORAGINACEAE <u>Tournefortia filiflora</u>	Nigua	Tree	Moist forests of north coast. Also Lesser Antilles.	Habitat destruction
418	BROMELIACEAE <u>Catopsis sessiliflora</u>		Epiphyte	Scattered in middle Luquillo Mountains. Through West Indies, Central and South America.	Local distribution
419	CACTACEAE <u>Pereskia aculeata</u>	Gooseberry	Woody vine	Cultivated for its fruit. Moist open forests. Through tropical America.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
420	CUNONIACEAE <u>Weinmannia pinnata</u>	Oreganillo Bastard brazillito	Tree	Mountain peaks. Through West Indies, Central and South America.	Limited distribution
421	CUSCUTACEAE <u>Cuscuta glandulosa</u>	Bejuco de Mona Dodder	Epiphyte	Moist areas of eastern regions; a parasite on low plants. Scarce, but widespread elsewhere.	Limited distribution
422	CYATHEACEAE <u>Cyathea tenera</u>	Helecho arbóreo Tree fern	Tree	Mountain forests - local. Through Greater Antilles.	Limited distribution
423	<u>Hemitelia wilsoni</u>	Helecho arbóreo Tree fern	Tree	Wet-to-moist mountain forests and banks. Local in Greater Antilles.	Limited distribution
424	CYPERACEAE <u>Bulbostylis pauciflora</u>		Sedge	Open-to-dry wooded areas of Guánica, Vieques, and Tortuguero. Also in St. Croix.	Limited distribution
425	<u>Cladium restioides</u>		Sedge	Open areas of Luquillo Mountains. West Indies mountain forests.	Limited distribution
426	<u>Cyperus digitatus</u>		Sedge	Open, wet areas of southwest coast. Of wide distribution in tropics to subtropics.	Limited distribution
427	<u>Eleocharis rostellata</u>		Sedge	Local about Tortuguero swamp. United States, Mexico, and Cuba.	Limited distribution
428	<u>Rhynchospora alba</u>		Sedge	Grassy areas in upper Luquillo Mountains. A widespread temperate species.	Very limited distribution
429	<u>Rhynchospora elongata</u>		Sedge	Grassy areas in upper Luquillo Mountains. Also Cuba and Jamaica.	Very limited distribution
430	<u>Rhynchospora marisculus</u>		Sedge	Rare in upper Luquillo Mountains. Through American tropics.	Limited distribution
431	<u>Rhynchospora plumosa</u>		Sedge	Wet, grassy areas - Luquillo Mountains, Dorado, and Tortuguero. Florida and Greater Antilles.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
432	CYPERACEAE (Con.) <u>Rhynchospora tenuis</u>		Sedge	Wet, open areas of El Yunque, Tortuguero, and Dorado. Widespread elsewhere.	Limited distribution
433	<u>Scleria ciliata</u>	Fringed razorsedge	Sedge	Tortuguero and wet grassy areas with serpentine soils. Southern United States and Greater Antilles.	Limited distribution
434	<u>Scleria secans</u>	Cortadora de altura Razorgrass	Sedge	Wooded areas of Caguas and Tortuguero. West Indies, Central and South America.	Limited distribution
435	<u>Scleria triglomerata</u>	Cortadora Whip razorsedge	Sedge	Open serpentine soils and wet sand at Tortuguero Eastern United States.	Limited distribution
436	<u>Scleria verticillata</u>	Cortadora Whorled razorsedge	Sedge	Wet, grassy areas of Lake Tortuguero. Eastern United States, Mexico, and West Indies.	Limited distribution
437	DILLENIACEAE <u>Dolioscarpus calinoides</u>	Bejuco de agua	Woody vine	Wet mountain forests. Also Guadeloupe and Trinidad.	Limited distribution
438	EBENACEAE <u>Diospyros ebenaster</u>	Guayabota, Zapote negro	Tree	Only two locations in moist forests of northern districts.	Limited distribution
439	EBRETIACEAE <u>Bourreria virgata</u>	Roble de guayo	Tree	Dry forests of southwestern Puerto Rico. Also Hispaniola.	Limited distribution
440	ELAEOCARPACEAE <u>Sloanea amygdalana</u>	Motillo	Tree	Timber wood of mountain forests in central and western Puerto Rico. Also Hispaniola and Guadeloupe.	Lumbering and limited distribution
441	ERYTHROXYLACEAE <u>Erythroxylon rufum</u>	False cocaine	Tree	Moist forests of north coast. Also Cuba, Central and South America.	Habitat destruction
442	EUPHORBIACEAE <u>Andrachne cuneifolia</u>		Tree	Very local in dry thickets of southwestern Puerto Rico. Also Cuba.	Habitat destruction

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
443	MUPHORBLACEAE (Con.) <u>Dittha myricoides</u>	Jaboncillo	Tree	Eastern mountains. Also Hispaniola and Cuba.	Limited distribution
444	<u>Drypetes lateriflora</u>	Palo blanco Guiana plum	Tree	Moist northern limestone hills. Greater Antilles, Bahamas, Florida, and Central America.	Habitat destruction
445	<u>Sapium jamaicense</u>	Tabaiba Milk wood	Tree	Very local in mountain forests. Through Greater Antilles and Central America.	Limited distribution
446	FLACOURTIACEAE <u>Taetia procera</u>	Talantrón	Tree	Wet montane forests. Luquillo and Utuado. Through West Indies.	Limited distribution
447	GENTIANACEAE <u>Leiphaimos parasitica</u>		Herb	Moist limestone hills in northern districts. Also Florida, Greater Antilles, and Central America.	Limited distribution
448	CLEICHENIACEAE <u>Gleichenia furcata</u>		Slender vine	Mountain summits - Cerro de Punta. Also Lesser Antilles.	Limited distribution
449	GRAMINEAE <u>Andropogon saccharoides</u>	Silver bluestem	Grass	Moist open areas of western Puerto Rico. Widespread in the tropics.	Habitat destruction
450	<u>Arthrostylidium multispicatum</u>		Grass	Local in Central Cordillera and western mountains. Also Hispaniola and Cuba.	Limited distribution
451	<u>Ichmanthes axillaris</u> (Nees)		Grass	Moist upper mountains of Puerto Rico. Also Lesser Antilles to South America.	Limited distribution
452	<u>Leptocoryphium lanatum</u>	Ianilla	Grass	Open serpentine soils. West Indies to South America.	Limited distribution
453	<u>Muhlenbergia cappilaris</u>	Hairawn muhly	Grass	Wet grasslands of the northern coast. Also Cuba, Bahamas, and United States.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
454	GRAMINEAE (Con.) <u>Panicum portoricense</u>	Witchgrass	Grass	Wet siliceous sand. Also southeastern United States.	Limited distribution
455	<u>Panicum stenodes</u>		Grass	Open areas around San Juan. Of wide tropical distribution.	Habitat destruction
456	<u>Panicum tenerum</u>		Grass	In wet siliceous sands. West to Florida.	Limited distribution
457	<u>Pharus parvifolius</u>	Creeping leafstalkgrass	Grass	Woodlands south of Arecibo. Throughout West Indies.	Limited distribution
458	<u>Setaria magna</u>	Giant bristlegrass	Grass	Wet coastal swamps - Tortuguero to Humacao Widespread in tropics.	Limited distribution
459	<u>Sorghastrum parviflorum</u>		Grass	Found in open areas of siliceous sand. Widespread in tropics.	Habitat destruction
460	HERNANDIACEAE <u>Hernandia sonora</u>	Mago	Tree	Rare in moist forests. Widespread in tropics.	Limited distribution
461	LAURACEAE <u>Beilschmiedia pendula</u>	Aguacate cimarrón	Tree	Moist forests - scattered. Through West Indies.	Limited distribution
462	<u>Licaria triandra</u>	Palo misanteco Gulf licaria	Tree	Rare in moist forests. Through West Indies.	Limited distribution
463	<u>Nectandra krugii</u>	Laurel canelón	Tree	Scattered in eastern mountains and Central Cordillera. Also Lesser Antilles.	Limited distribution
464	<u>Persea urbaniana</u>	Aguacatillo	Tree	Rare in upper mountains. Also in Jamaica and Lesser Antilles.	Limited distribution
465	<u>Phoebe montana</u>	Avispillo	Tree	Scattered in moist mountain forests. Through Greater Antilles.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
466	LENTIBULARIACEAE <u>Utricularia gibba</u>	Bladderwort	Herb	Wet savannas and ponds at Tortuguero. Widespread elsewhere.	Habitat destruction and limited distribution
467	<u>Utricularia subulata</u>	Bladderwort	Herb	Wet savannas and ponds at Tortuguero and Luquillo Mountains. Widespread elsewhere.	Habitat destruction and limited distribution
468	<u>Utricularia pusilla</u>	Bladderwort	Herb	Wet savannas and ponds at Tortuguero and Luquillo Mountains. Widespread elsewhere.	Habitat destruction and limited distribution
469	<u>Utricularia juncea</u>	Bladderwort	Herb	Wet savannas and ponds at Tortuguero and Luquillo Mountains. Widespread elsewhere.	Habitat destruction and limited distribution
470	LOGANIACEAE <u>Polypremum procumbens</u>		Herb	Weedy siliceous sands - Tortuguero. Widespread elsewhere.	Limited distribution
471	NALPIGHIACEAE <u>Tetrapteris inaequalis</u>	Bejuco de paralejo	Woody vine	Coastal thickets. Also Lesser Antilles.	Habitat destruction
472	MARATTIACEAE <u>Marattia sp.</u>		Herb	Drainage areas of Cerro de Punta area.	Limited distribution
473	MELASTOMACEAE <u>Tetrazygia crotonifolia</u>		Shrub	Open cliffs and hillsides at middle elevations (north slopes) of western Puerto Rico. Also Hispaniola.	Limited distribution
474	MENISPERMACEAE <u>Hyperbaena domingensis</u>		Woody vine	Moist districts, very local. Through tropical America.	Habitat destruction
475	MORACEAE <u>Pseudolmedia spuria</u>	Negra lora	Tree	Moist forests. Through Greater Antilles, Central and South America.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
476	MYRICACEAE <u>Myrica cerifera</u>	Wax myrtle	Tree	Scattered in moist districts. Also United States, Greater Antilles, and Central America.	Habitat destruction
477	MYRTACEAE <u>Eugenia sessiliflora</u>		Tree	Moist slopes of Coamo and Cabo San Juan, Fajardo. Also Lesser Antilles.	Limited distribution
478	<u>Eugenia sintenisi</u>	Murta	Tree	Upper Central Cordillera and western mountains. Also Lesser Antilles.	Limited distribution
479	<u>Psidium amplexicaule</u>	Guayaba de monte Mountain guava	Tree	Moist limestone hills. Also Lesser Antilles.	Limited distribution
480	NYCTAGINACEAE <u>Guapira obtusata</u>	Corcho prieto	Tree	Moist forests of western Puerto Rico. Also Cuba, Jamaica, and Bahamas.	Habitat destruction
481	NYMphaeACEAE <u>Nymphaea amola</u>	Lirio de agua Water lily	Herb	Ponds, streams, and canals. Also tropical America.	Habitat destruction
482	<u>Nymphaea amazonum</u>	Lirio de agua Water lily	Herb	Lagoons and canals, northern districts. Also tropical America.	Habitat destruction
483	<u>Nymphaea jamesoniana</u>	Lirio de agua Water lily	Herb	Ditches near Hatillo and Añasco, Greater Antilles, and Ecuador.	Habitat destruction
484	<u>Nymphaea odorata</u>	Lirio de agua Water lily	Herb	Ditches, Algarrobo, Vega Baja; and tropical America.	Habitat destruction
485	<u>Nymphaea pulchella</u>	Lirio de agua Water-lily	Herb	Lagoons and ponds. Also tropical America.	Habitat destruction
486	<u>Nymphaea rudgeana</u>	Lirio de agua Water lily	Herb	Ponds. Also tropical America.	Habitat destruction
487	OLEACEAE <u>Forestiera eggersiana</u>	Ink bush	Tree	Very scattered in thickets of north coast and dry slopes of south coast. Also Lesser Antilles.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
488	OLEACEAE (Con.) <u>Forestiera rhamnifolia</u>	Ink bush	Tree	Forest on Mona. Through West Indies.	Limited distribution
489	OPHIOGLOSSACEAE (Fern) <u>Ophioglossum palmatum</u>	Hand fern	Epiphyte	Wet forests on trees or rotting logs. Tropical America.	Poor reproduction
490	ORCHIDACEAE <u>Campylocentrum pygmaeum</u>		Epiphyte	Upper mountain forests and Lesser Antilles.	Limited distribution
491	<u>Govenia utriculata</u>		Herb	Rare in deep leafmold of limestone forests. Through Greater Antilles to Florida, Central and South America. Not common anywhere.	Limited distribution
492	<u>Habenaria eustachya</u>		Herb	Rare in upper western mountains. Through Greater Antilles, Florida, and Guatemala.	Limited distribution
493	<u>Lepanthes sanguinea</u>		Epiphyte	Upper Luquillo and Carite mountains. Also Jamaica.	Limited distribution
494	PAPILIONACEAE (Fabaceae) <u>Canavalia rusiosperma</u>	Mato colorado	Woody vine	Mountain forests of western Puerto Rico. Also Bahamas, Cuba, Hispaniola, St. Thomas and Mexico (?).	Limited distribution
495	<u>Parosela dominicensis</u>		Shrub	Dry coastal slopes of southern Puerto Rico. Through Greater Antilles, St. Johns and South America.	Limited distribution
496	<u>Phaseolus trichocarpus</u>	Habichuela cimarrona	Herbaceous vine	Marshes of northern and western Puerto Rico. Through Greater Antilles and South America.	Habitat destruction
497	PASSIFLORACEAE <u>Passiflora serrato-digitata</u>	Tagua-tagua	Woody vine	River banks in lower montane forests. Also the Windward Islands to South America.	Limited distribution
498	PIPERACEAE <u>Peperomia maculosa</u>		Herb	Mossy rocks and cliffs in mountain forests. Through Greater Antilles, Central & South America	Habitat destruction

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

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NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
499	PIPERACEAE (Con.) <u>Piper tuberculatum</u>	Higuillo	Tree	Moist limestone hills. Through Greater Antilles, Central and South America.	Limited distribution
500	POLYGALACEAE <u>Polygala hectandra</u>		Herb	Very local in dry southwestern thickets. Also Anegada and Hispaniola.	Limited distribution.
501	POLYPODIACEAE <u>Polypodium decumanum</u>		Epiphyte	Local in wet coastal forests. Hispaniola, Trinidad, Central and South America.	Habitat destruction
502	<u>Polystichum triangulum</u>		Herb	Wet limestone hills - Florida area. Greater Antilles.	Limited distribution
503	RUBIACEAE <u>Phialanthus myrtilloides</u>	Aquilón prieto	Shrub	Thickets of upper serpentine mountains. Also Cuba, Jamaica, and Bahamas.	Limited distribution
504	<u>Rondeletia pilosa</u>	Cordobancillo peludo	Tree	Moist slopes of eastern Puerto Rico. Also Lesser Antilles.	Habitat destruction
505	<u>Scolosanthus densiflorus</u>		Shrub	Dry thickets of upper serpentine mountains. Also Hispaniola and Cuba.	Limited distribution
506	SCHIZAEACEAE <u>Schizaea poeppigianum</u>		Herb	Deep humus - western mountains. Also Cuba, Central and South America.	Limited distribution
507	SOLANACEAE <u>Brunfelsia americana</u>	Aguacero	Tree	Moist slopes - Coamo and east coast. Also Lesser Antilles.	Habitat destruction
508	<u>Solanum guanicense</u>		Shrub	Marshes of southwestern Puerto Rico. Through Greater Antilles and Costa Rica.	Limited distribution and habitat destruction
509	STERCULIACEAE <u>Walteria calicicola</u>		Shrub	Dry hillsides of southwestern Puerto Rico. Also Hispaniola and Jamaica.	Limited distribution

RARE NONENDEMIC PLANT SPECIES OF PUERTO RICO

NO.	SCIENTIFIC NAME	COMMON NAME	HABIT	DISTRIBUTION	CAUSE
510	THEACEAE <u>Ternstroemia peduncularis</u>		Tree	Coastal forests of eastern Puerto Rico. Also Lesser Antilles.	Habitat destruction
511	VERBENACEAE <u>Cornutia pyramidata</u>		Tree	Scattered in moist forests. West Indies and Central America.	Habitat destruction
512	<u>Lippia stoechadifolia</u>	Poleo	Shrub	Margins of swamps and lakes. Widespread elsewhere.	Used in medicine and limited distribution
513	ZINGIBERACEAE <u>Costus macrostrobilus</u>	Cana de India Costus	Shrub	Mountain slopes. Also Trinidad.	Limited distribution
514	ZYGOPHYLLACEAE <u>Guaiacum officinale</u>	Guayacán Common lignumvitae	Tree	Good wood. Dry south coast. Through West Indies, Central and South America.	Lumbering
515	<u>Guaiacum sanctum</u>	Guayacán blanco Holywood lignumvitae	Tree	Dry forests, southwestern Puerto Rico. Good wood, nearly exterminated. Greater Antilles, Yucatán, and Florida.	Lumbering



Stahlia monosperma, Cóbana negra
Number 175--Endangered Nonendemic Plant
Species of Puerto Rico.

CAUSES OF ENDANGERMENT

A. DESTRUCTION OR DISTURBANCE OF HABITATS

1. Upland/Montane Habitat (above 1000-foot elevation)

Remoteness, relative inaccessibility, and government ownership have tended to result in less intense land use pressure on upper montane areas. However, many of these habitats have been heavily logged, cleared for pasture or housing, or otherwise disturbed. The higher peaks and ridges are especially vulnerable. For example, in the past two years, highway and communications tower construction have destroyed large areas of elfin and upper montane woodland in Carite State Forest and Cerro de Punta. Activities of this type can be expected to increase, aggravating the problem.

2. Moist Limestone Hills (below 1000-foot elevation, noncoastal)

Very little natural forest of this type remains in Puerto Rico due to intensive agricultural land usage. Presently, urban development is increasing in this zone. The remaining natural forest is found primarily in the limestone karst topography of northwestern Puerto Rico.

3. Coastal Habitats

Coastal habitats, other than mangrove, have been practically obliterated in Puerto Rico. These include fresh-water swamps and a variety of forest types. Rapid urban, recreation and tourist developments threaten the few remaining small patches of such habitats. Aside from land use pressure, the remaining swamps are also vulnerable to changes in their delicate water balance. Mangroves, while still numbering several thousand acres, have been reduced by over 75 percent since the arrival of the Spaniards to Puerto Rico, and could thus qualify as an endangered habitat.

4. Island

Most of the islands surrounding Puerto Rico have been heavily disturbed by intensive agricultural use and military operations. These pressures, combined with the prospects of industrial and urban developments, will create an increasingly severe stress on the flora of our offshore islands.

Causes of Endangerment (Con.)

B. EXTREMELY LIMITED NATURAL RANGE AND OTHER ENVIRONMENTAL STRESSES

Limited natural range in an uninhabited region is not a strong cause for alarm, except for the potential threat of natural catastrophes. However, on an island as heavily populated as Puerto Rico, there are few localities safe from possible human intrusion. Plants in this category are subject to a swift demise possibly resulting from a single poorly placed develop-

ment. Stresses from herbicides, air pollution, and water contamination, which, in a broad sense are forms of habitat disturbance, are increasingly becoming threats to the balances of various plant communities. These factors, although they come from outside the plant community being analyzed, must receive increasing attention since they have a significant impact on the survival of certain plant species in the community and the nature of the community as a whole.

C. PLANT COLLECTING OR HARVESTING

While the controlled collecting or harvesting of plants can be compatible with their continued prosperity, overcollecting can cause severe damage to a species and even its extinction. Unfortunately, there is a tendency to collect all the plants of the desired species out of a single area, destroying the seeding stock, rather than harvesting a few plants from a series of localities. While the former procedure is less time consuming and more economical, in the short run it could have a disastrous impact on a highly desired plant species.

Exostema ellipticum

No. 377

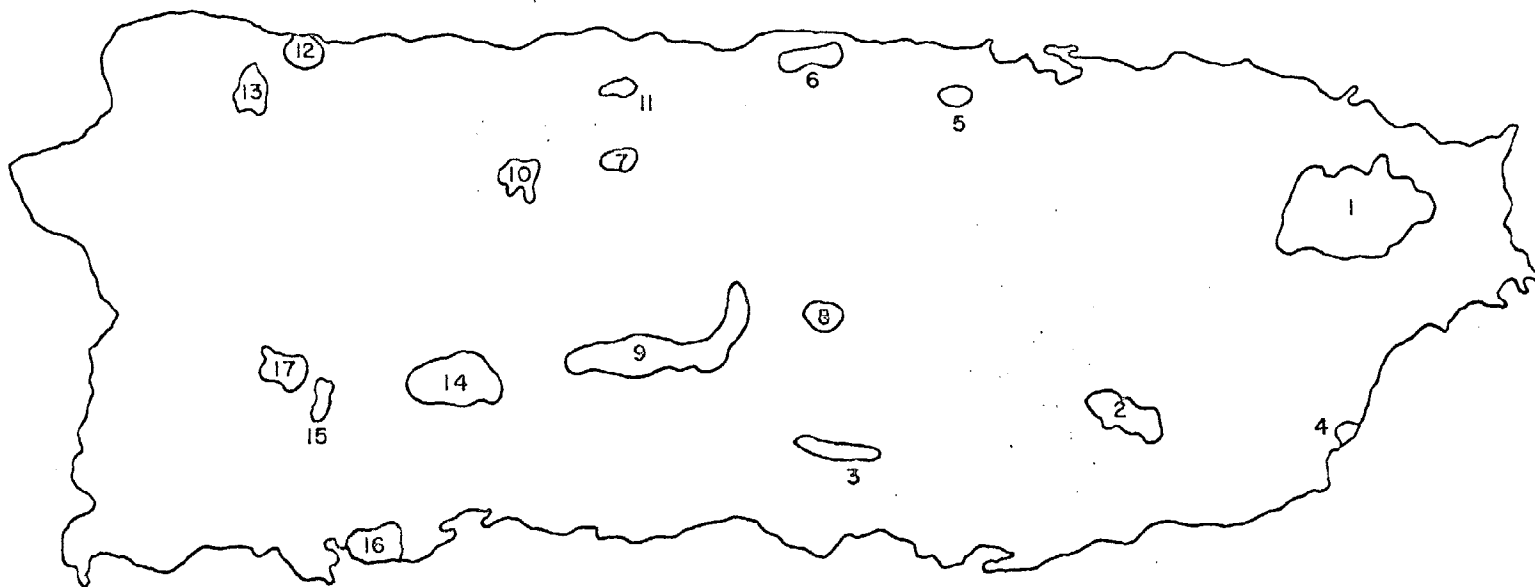


Plateado

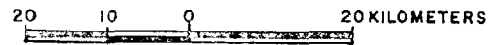
AREAS OF RARE AND ENDANGERED PLANT SPECIES

<u>Area</u>	<u>Percent of Total Species</u>
1. Luquillo Mountains	19
2. Monte del Estado	17
3. Toro Negro Mountains	14
4. Lake Tortuguero	13
5. Guajataca Forest	9
6. Río Abajo Forest	9
7. Guánica Forest	8.7
8. Quebradillas	8
9. Sierra de Cayey	7
10. Guilarte Forest	6.1
11. Biafara (near Arecibo)	5.9
12. Campanillas, Toa Baja	5.8
13. Coamo - Cuyón River	5.8
14. Monte La Torrecilla	4.1
15. Susúa Forest	3.9
16. Playa de Guayanés (Punta Guayanés)	2.1
17. Cambalache Forest	2

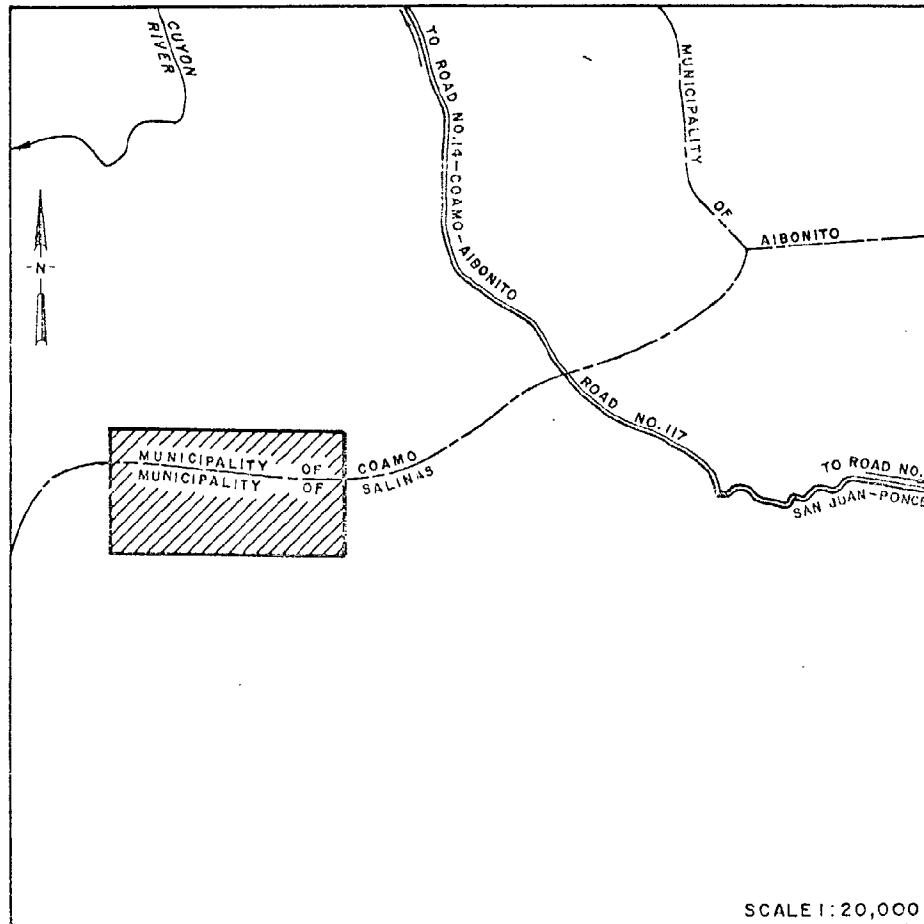
MAP OF PUERTO RICO SHOWING AREAS WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR



- | | |
|---------------------------------------|-----------------------|
| 1. Luquillo Mountains | 10. Río Abajo Forest |
| 2. Sierra de Cayey | 11. Cambalache Forest |
| 3. Coamo and east | 12. Quebradillas |
| 4. Playa de Guayanés (Punta Guayanés) | 13. Guajataca Forest |
| 5. Campanillas, Toa Baja | 14. Guilarte Forest |
| 6. Lake Tortuguero | 15. Susúa Forest |
| 7. Biáfara (near Arecibo) | 16. Guánica Forest |
| 8. Monte La Torrecilla | 17. Monte del Estado |
| 9. Toro Negro Mountains | |

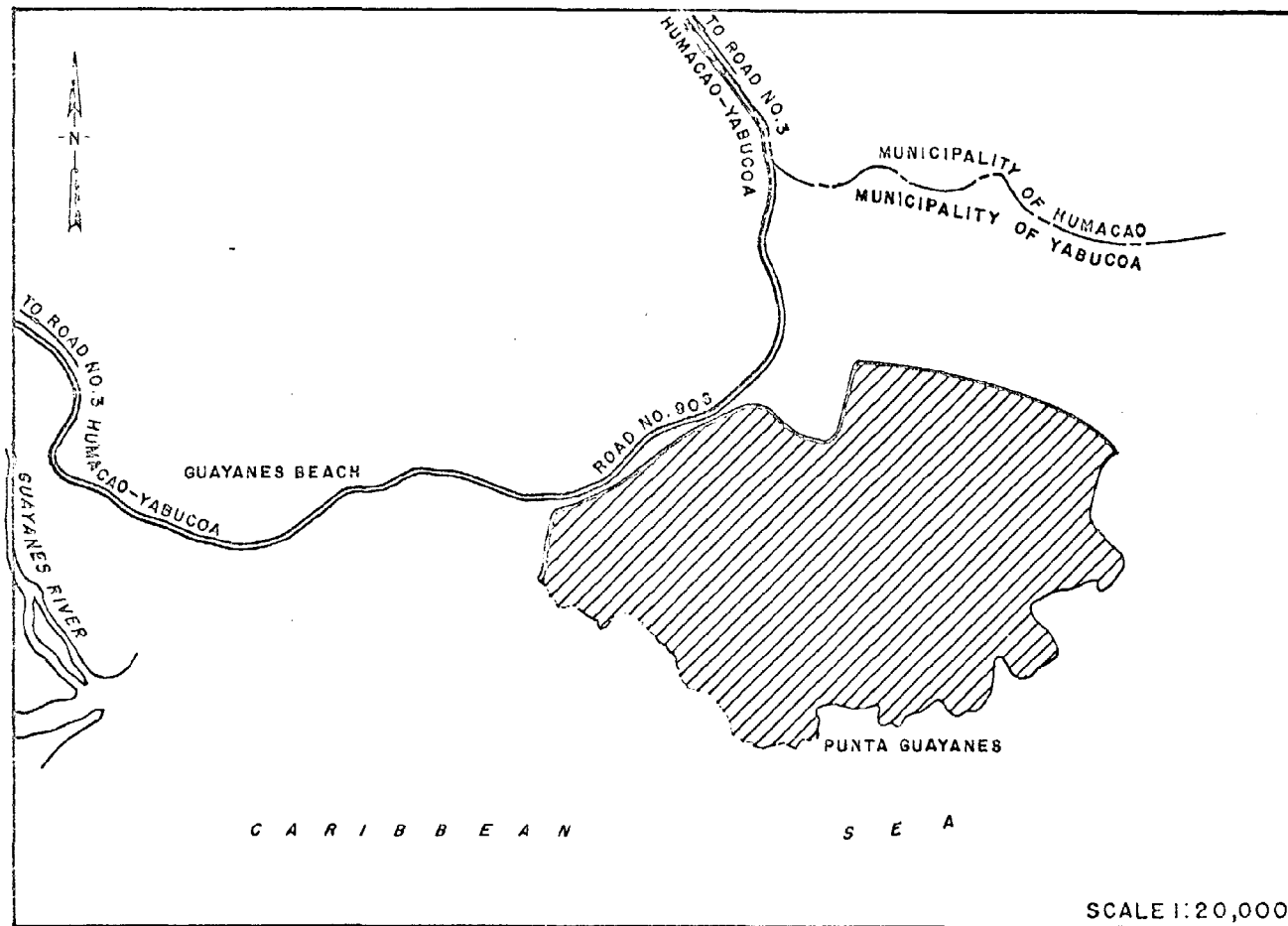


MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



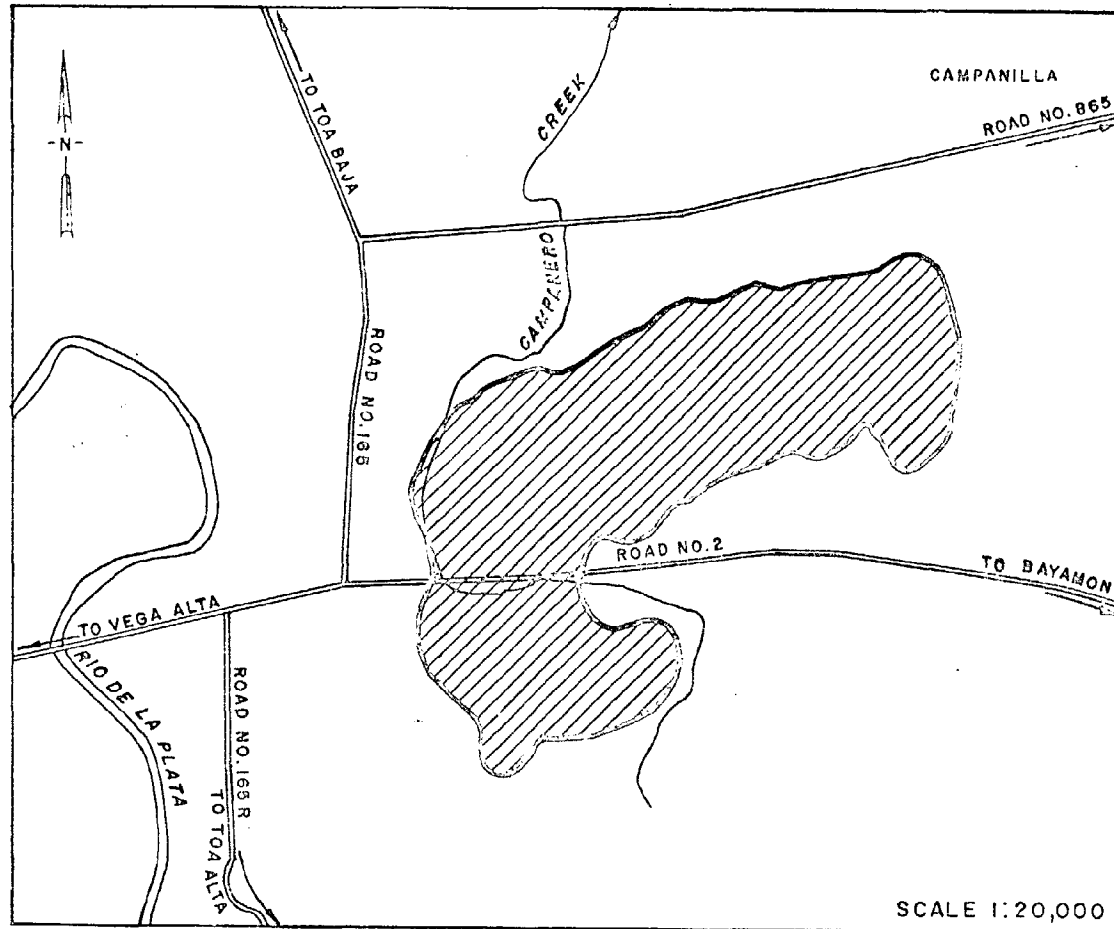
Area No. 3. COAMO AREA (Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



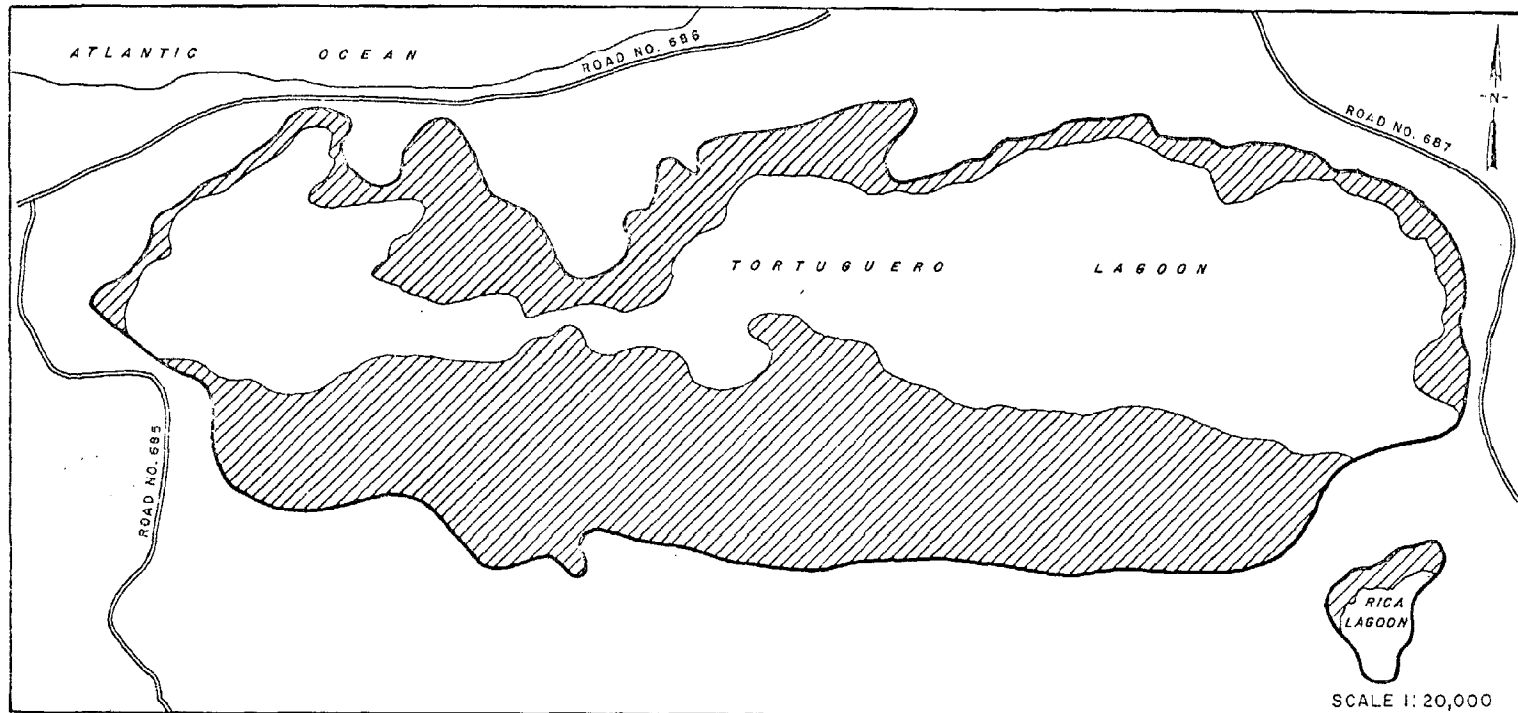
Area No. 4. PLAYA DE GUAYANES (Punta Guayanés) -(Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



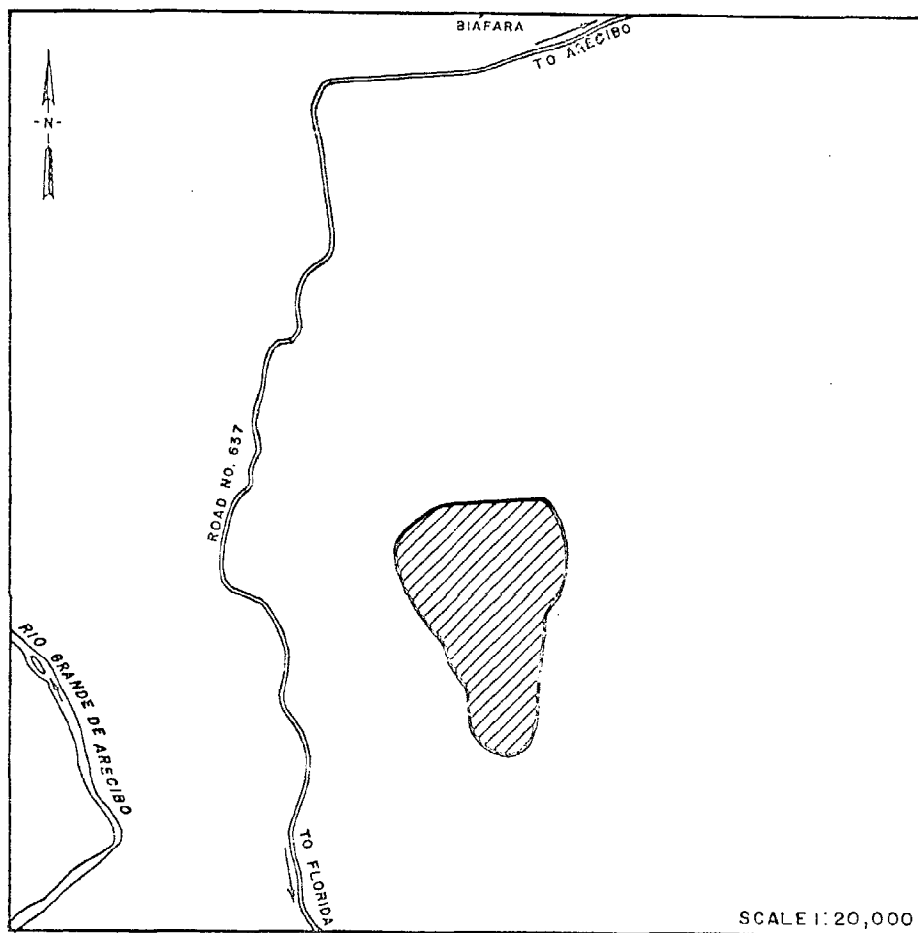
Area No. 5. CAMPANILLAS AREA, TOA BAJA (Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT
SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



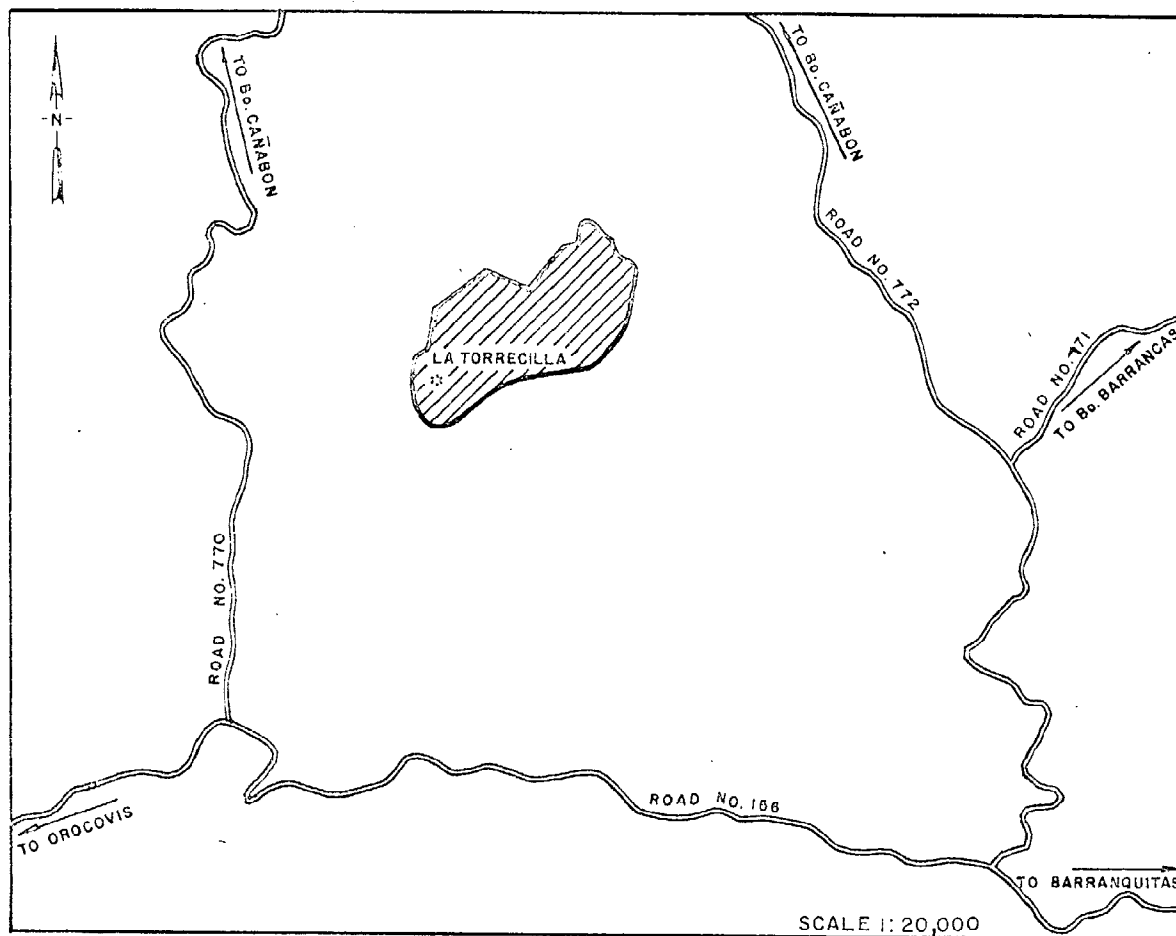
Area No. 6. LAKE TORTUGUERO AREA (Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



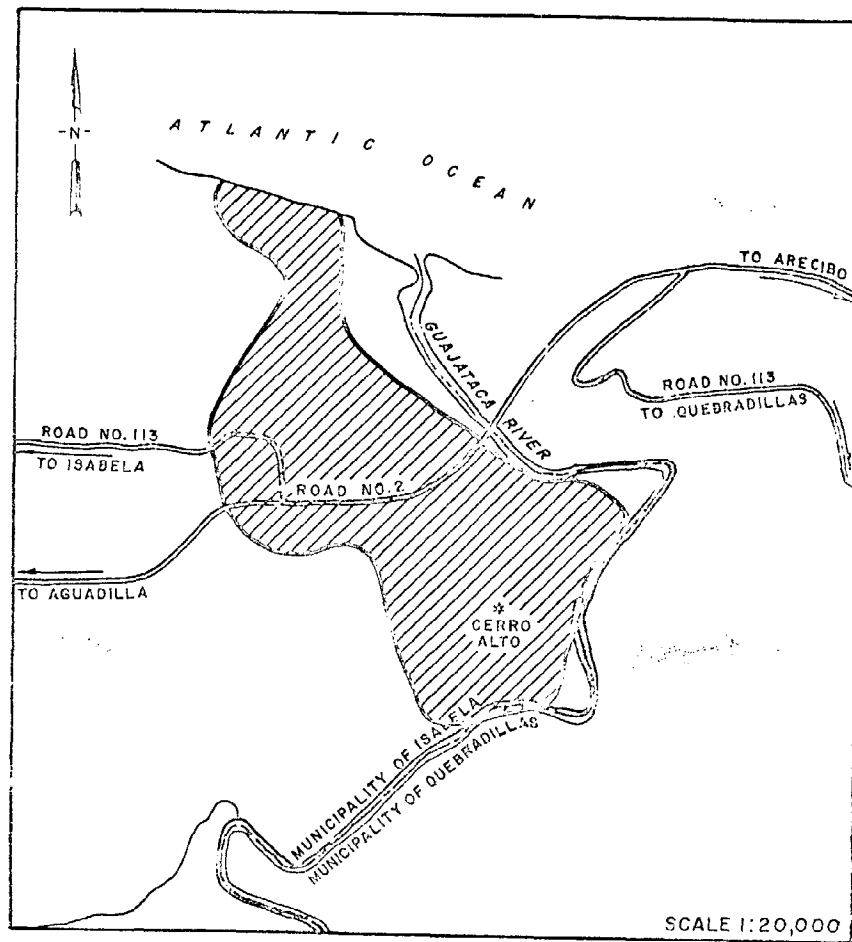
Area. No. 7. BIAFARA AREA (Near Arcibo) - (Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT
SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



Area No. 8. MONTE LA TORRECILLA (Refer to map on p. 70)

MAP SHOWING THE SITE LOCALITY WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR (OUTSIDE OF STATE AND FEDERAL FORESTS)



Area No. 12. QUEBRADILLAS AREA (Refer to map on p. 70)

AREAS WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR IN PUERTO RICO

Area Number	Area Where Rare and Endangered Plants Occur	Species Number in List
1	Luquillo Mountains	7, 14, 21, 30, 40, 45, 47, 51, 54, 60, 61, 62, 66, 70, 72, 76, 83, 84, 103, 106, 108, 113, 115, 116, 117, 118, 119, 121, 122, 126, 127, 134, 135, 136, 143, 145, 154, 157, 166, 174, 207, 213, 214, 230, 240, 251, 258, 259, 260, 261, 263, 266, 280, 294, 303, 309, 317, 318, 322, 329, 331, 354, 364, 367, 372, 391, 394, 397, 400, 403, 409, 412, 413, 414, 418, 420, 422, 423, 425, 428, 429, 431, 432, 437, 443, 460, 461, 463, 464, 465, 467, 468, 469, 489, 490, 493, 497, 510
2	Sierra de Cayey	40, 45, 48, 51, 54, 55, 70, 83, 103, 110, 127, 133, 136, 137, 143, 166, 258, 280, 303, 318, 320, 331, 365, 413, 418, 425, 434, 437, 443, 462, 463, 474, 478, 490, 493
3	Coamo and east	1, 19, 27, 31, 59, 91, 94, 95, 105, 111, 163, 179, 271, 279, 338, 339, 346, 386, 390, 401, 404, 419, 462, 474, 475, 477, 478, 507
4	Playa de Guayanés	93, 250, 291, 312, 477, 500, 501, 504, 507, 510
5	Campanillas, Toa Baja	38, 54, 78, 85, 87, 89, 91, 96, 97, 107, 131, 144, 159, 169, 176, 229, 311, 340, 380, 413, 415, 417, 460, 461, 462, 474, 475, 491

AREAS WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR IN PUERTO RICO

Area Number	Area Where Rare and Endangered Plants Occur	Species Number in List
11	Cambalache Forest	54, 87, 89, 91, 131, 229, 415, 462, 479, 480
12	Quebradillas	54, 78, 79, 85, 89, 91, 107, 109, 128, 131, 144, 150, 168, 176, 223, 225, 229, 247, 265, 279, 298, 332, 333, 340, 347, 351, 352, 359, 413, 415, 417, 419, 441, 462, 474, 479, 480, 487, 488, 494
13	Guajataca Forest	29, 36, 54, 56, 77, 78, 85, 87, 89, 95, 96, 97, 107, 129, 130, 131, 144, 151, 156, 168, 194, 265, 279, 298, 309, 311, 340, 354, 413, 415, 417, 440, 441, 462, 473, 474, 475, 476, 478, 479, 480, 491, 494, 499, 502, 511, 512
14	Guilarte Forest	2, 5, 23, 28, 37, 45, 48, 51, 57, 70, 101, 130, 137, 153, 190, 254, 258, 288, 289, 308, 309, 394, 413, 414, 420, 422, 463, 478, 489, 492, 498
15	Susúa Forest	35, 42, 79, 91, 92, 104, 140, 165, 197, 242, 298, 332, 399, 441, 442, 480, 503, 505
16	Guánica Forest	9, 12, 18, 53, 58, 67, 68, 79, 81, 91, 98, 99, 100, 102, 124, 125, 132, 139, 141, 146, 191, 198, 201, 224, 227, 228, 237, 255, 272, 332, 345, 370, 371, 375, 383, 389, 405, 424, 439, 442, 487, 495, 509, 514, 515

AREAS WHERE RARE AND ENDANGERED PLANT SPECIES OCCUR IN PUERTO RICO

Area Number	Area Where Rare and Endangered Plants Occur	Species Number in List
17	Monte del Estado	4, 8, 15, 21, 23, 24, 25, 35, 36, 39, 41, 42, 45, 48, 51, 63, 64, 65, 80, 81, 92, 95, 104, 106, 118, 127, 129, 130, 131, 140, 142, 151, 162, 168, 189, 190, 230, 234, 238, 242, 243, 274, 256, 258, 265, 279, 285, 298, 301, 309, 310, 315, 319, 340, 321, 325, 326, 327, 330, 334, 349, 353, 361, 362, 372, 378, 385, 413, 422, 423, 433, 435, 438, 440, 441, 464, 475, 476, 480, 489, 491, 492, 494, 498, 499, 500, 503, 505, 506

RECOMMENDATIONS FOR A PLAN OF ACTION

It is recommended that the Department of Natural Resources implement the following plan of action, or one similar to it:

I. REDUCTION OF CAUSES OF ENDANGERMENT

The Department of Natural Resources should pursue a program for reducing the causes of endangerment of the rare and endangered species as shown in the report, with emphasis as follows:

A. HABITAT PRESERVATION AND MANAGEMENT

The key to protection of these species is the preservation and management of their habitat against destruction or development for other land uses. State forests known to support endangered species should have specific plans drawn up for the management of such species. Steps should also be taken to protect endangered forms lying outside the state forests through the creation of sanctuaries or natural areas with strictly enforced regulations and suitable protective buffer zones to minimize the threat of outside development, watershed deterioration, or pollutants on the site. New sanctuary areas should be considered for:

1. Forests of the Central Mountains and limestone hills
2. Lake Tortuguero and adjacent swamplands and areas of siliceous sand
3. Dry forest habitat in the southwest

Recommendations, etc. (Con.)

4. Off-shore islands such as Mona, Culebra, and Vieques
5. Other specific areas with unique plants (see map)

B. PLANT COLLECTING

In places where the taking of plants for ornamental or other uses has created such a pressure on the species as to make it rare or endangered, harvesting of that form should be regulated against; and measures to protect remaining specimens should be taken. Conspicuous examples of plants that need such protection are all the orchids and the Melon cactus (Cactus intortus), which is not yet on this list, but may soon be as a result of over collecting.

C. LUMBERING

The lumbering of species that have become rare or endangered should be curtailed. A plan to replant such trees should be considered.

D. RESEEDING

The Department of Natural Resources should consider developing a nursery program for the propagation and subsequent outplanting of endangered species. This might be done in conjunction with the Botanical Garden of the University of Puerto Rico.

Recommendations, etc. (Con.)

II. INFORMATION AND EDUCATION

The Department of Natural Resources should formulate and pursue an information and education program directed toward other government agencies, the schools and the general public of the facts and needs for preservation of the rare and endangered plant species of Puerto Rico.

III. MONITORING AND RESEARCH

Organized surveying and monitoring by the Department of Natural Resources should be initiated to keep track of the status of endangered species. Then, research--to some degree by the Department of Natural Resources and to a great extent by the universities--should be undertaken to provide data on factors controlling duplication and abundance, propagation techniques, etc. The data collected should be given wide dissemination.

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