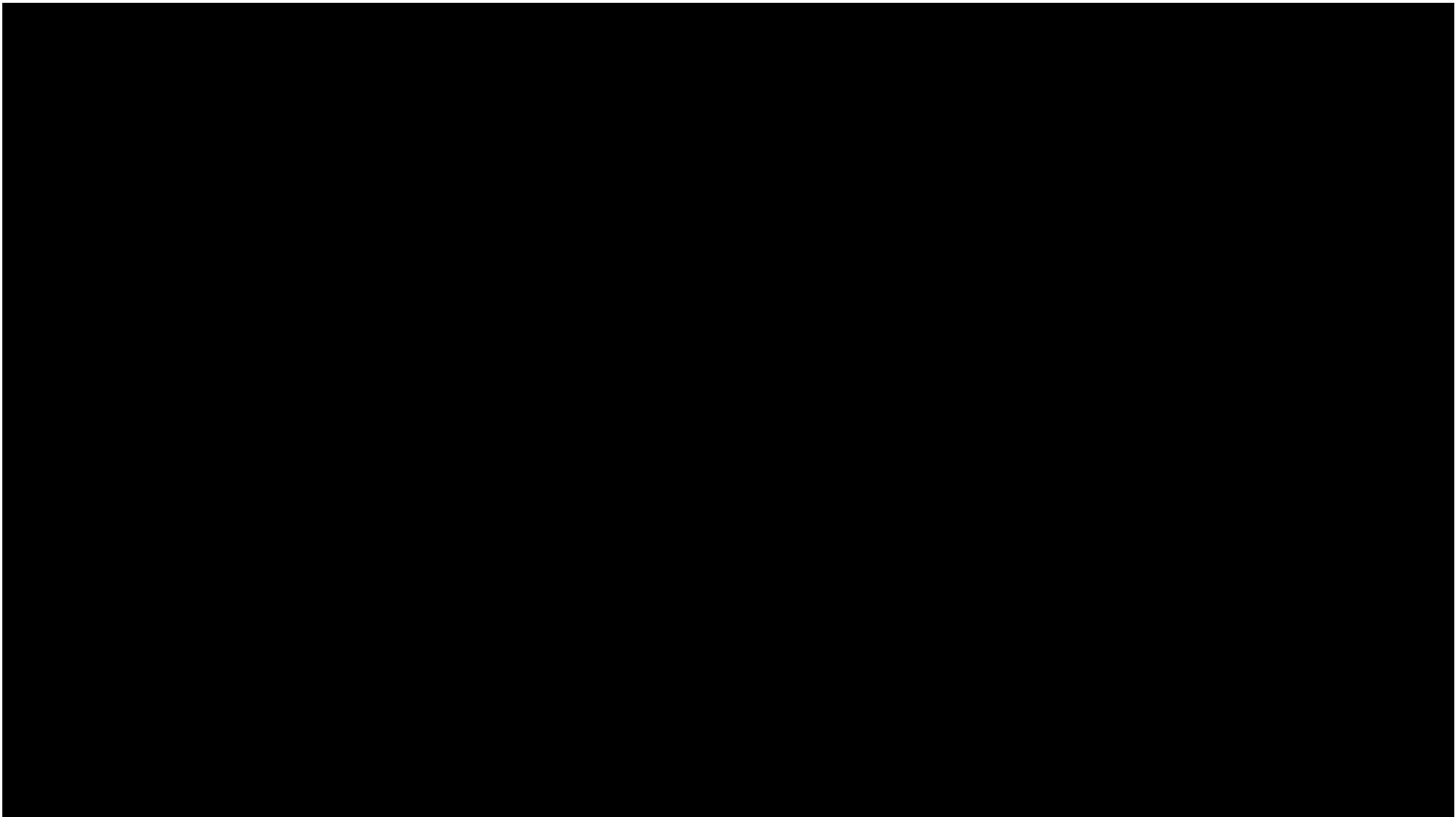




# Cuba

... the most beautiful land that eyes ever beheld.  
Christopher Columbus, 1492





*Reptilia* 155 species (83 % endemism)



*Crocodylus rhombifer*

**CR**

*Fresh water fish - 57 species (23 endemic)*

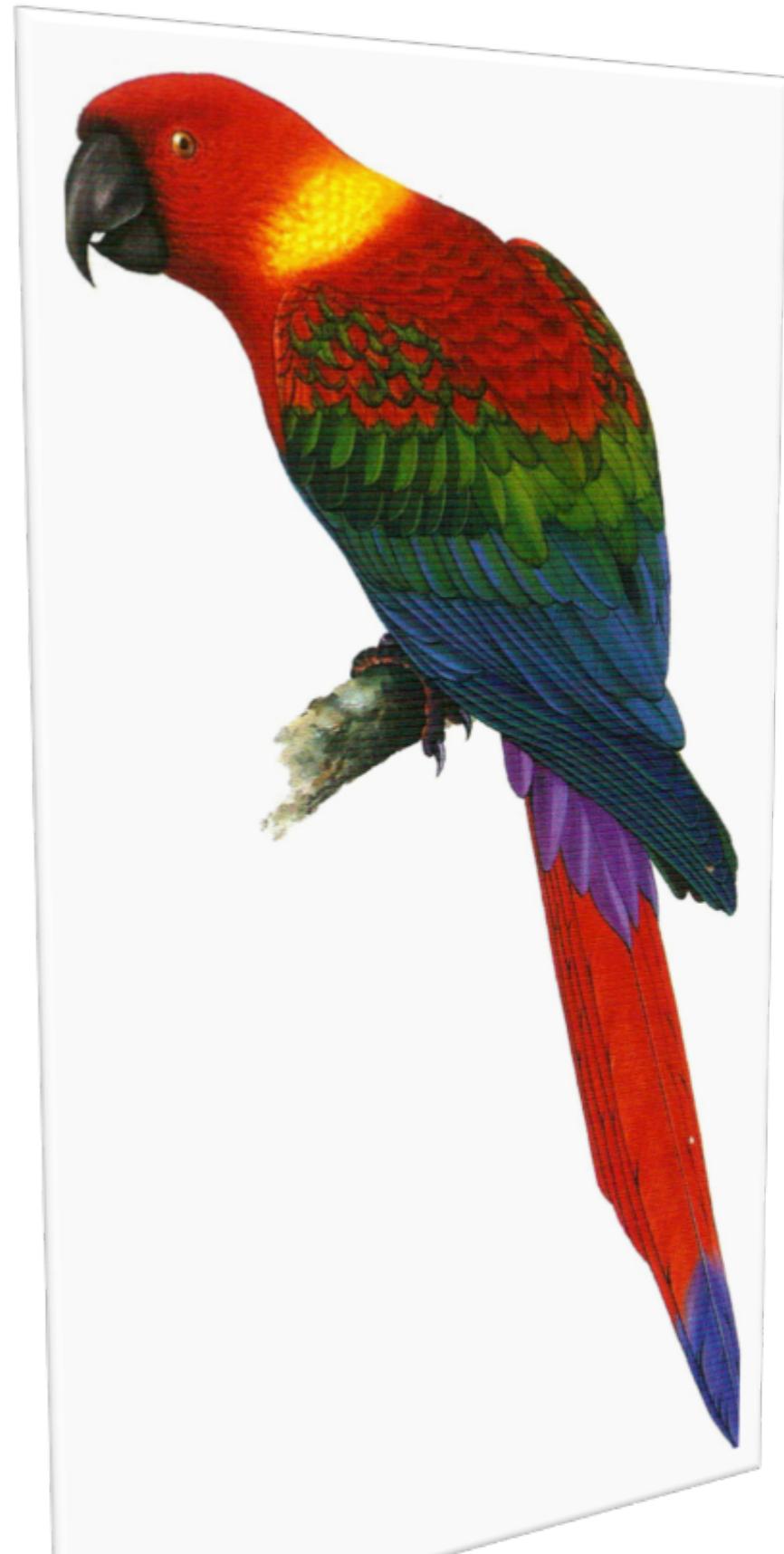


*Quintana atrizona*

Barred topminnow

Endemic to “Pine Island”

*Birds- 371 species (of 558 Caribbean species)*



*Ara tricolor*  
**EXTINCT**

*Mellisuga helenae*

Hummingbird

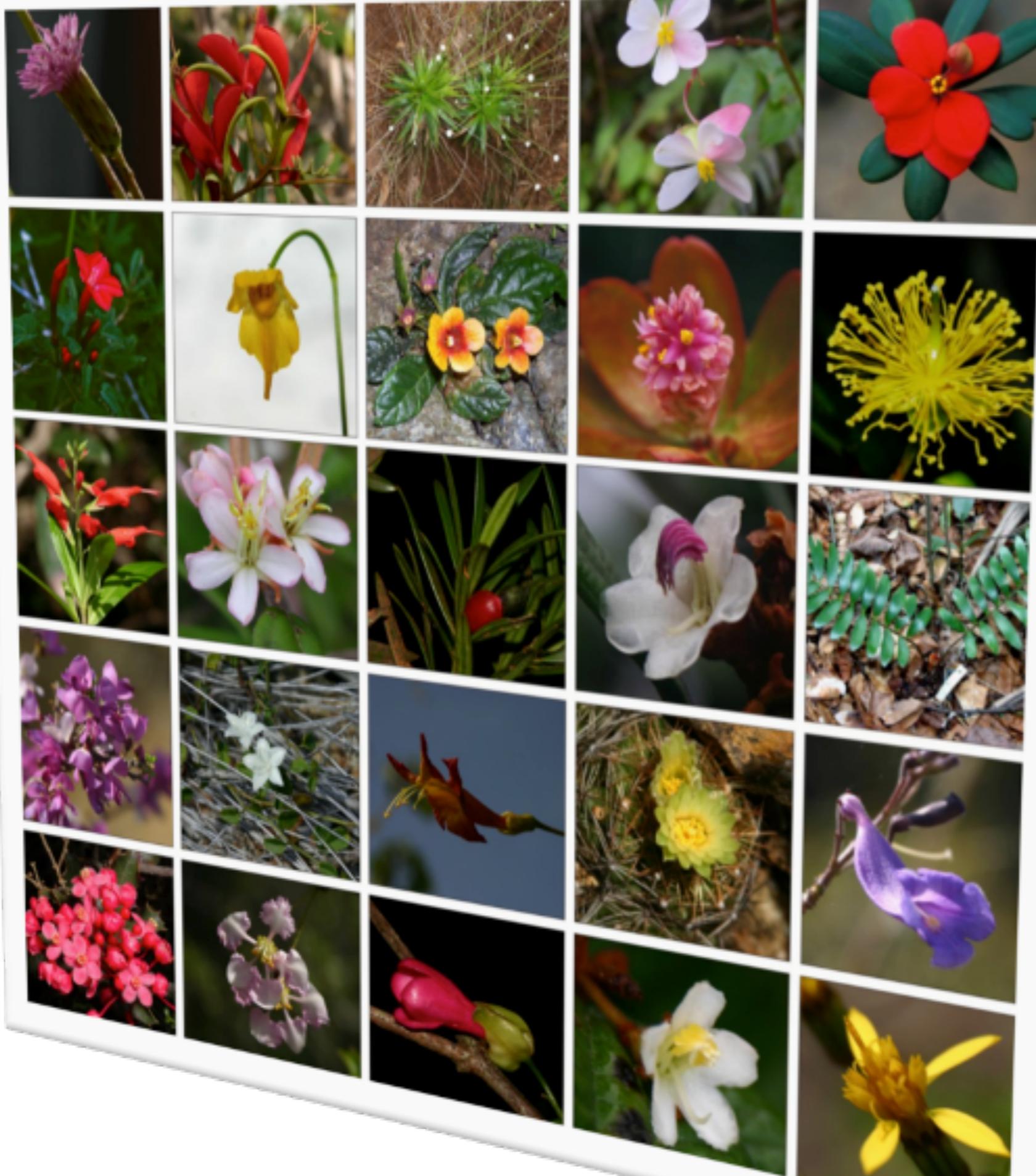
**CR**



*Amphibia* 62 species (95 % endemism)



*Eleutherodactylus iberia*  
~10 mm CR



Island	Plant richness	Endemism richness	Surface (km <sup>2</sup> )
Borneo	20 000 – 25 000	6 000 – 7 500	743 330
New Guinea	15 000 – 20 000	10 500 – 16 000	885 780
Madagascar	8 000 – 10 000	5 000 – 8 000	587 041
Cuba	<b>7 500</b>	<b>3 229</b>	<b>105 007</b>

**Cuba occupies the fourth place in the list of islands with higher plant diversity and endemism**

Island	Plant richness/surface	Endemism richness/surface	Surface (km <sup>2</sup> )
Cuba	0,07	0,03	105 007
Borneo	0,03	0,01	743 330
New Guinea	0,02	0,01	885 780
Madagascar	0,02	0,01	587 041

**... Cuba is the island with the highest number of plant species per area!**



*Euphorbia helenae*  
**CRITICALLY ENDANGERED**

# Diversity

**Cuba supports the highest plant diversity of West Indies flora**

Island	Plant richness
<b>Cuba</b>	<b>7 500</b>
Hispaniola	5 430
Puerto Rico	3 243
Jamaica	3 175

*Purdiaeae velutina*

**CRITICALLY ENDANGERED**



## Endemism

More than 3 000 sp. of plant (>50%) are restricted to Cuba

# Diverse ecosystems



serpentine thickets,  
tropical rainforests &  
tropical dry forests





*Pereskia zinniiflora*  
**CRITICALLY ENDANGERED**

Ancient lineage

Cuban flora contains many old species, like  
leafy cacti ...

# Ancient lineage ... woody cacti

*Dendrocereus nudiflorus*  
**CRITICALLY ENDANGERED**



# Ancient lineage



*Dracaena cubensis*  
... with relative species in  
Canarias Island



*Pinguicula lignicola*  
**CRITICALLY ENDANGERED**

Rare lineage  
like epiphyte carnivorous plant



*Buxus revoluta*  
**CRITICALLY ENDANGERED**

# Evolution Lab

More than 30 species of *Buxus* are  
endemics to Cuba...

# Lineage radiation

... 25 of the 30 species of palm genus *Copernicia* are also endemic to Cuba.

*Copernicia fallaensis*  
**CRITICALLY ENDANGERED**



# Vulnerability

The Cuban Flora it is considered one of the most **vulnerable floras in the world!**



*Rondeletia leonis*  
**CRITICALLY ENDANGERED**

# Vulnerability

46 % of Cuban plant species is included in one of the IUCN threatened categories...

... unfortunately **25** Cuban plant species are extinct!!

**20 % are Data Deficient...**





Many of Cuban plant are local endemic with small and fragmented populations consequently they are very susceptible to disturbance like...

# Agriculture

Tobacco plantation, Sancti Spíritus, 2006



# Civil constructions

*Dendrocereus nudiflorus*  
**CRITICALLY ENDANGERED**



Varadero, Península de Hicacos, Matanzas. 2008

# Intentional fire

Floristic reserve «La Coca», La Habana, 2011



# Mining

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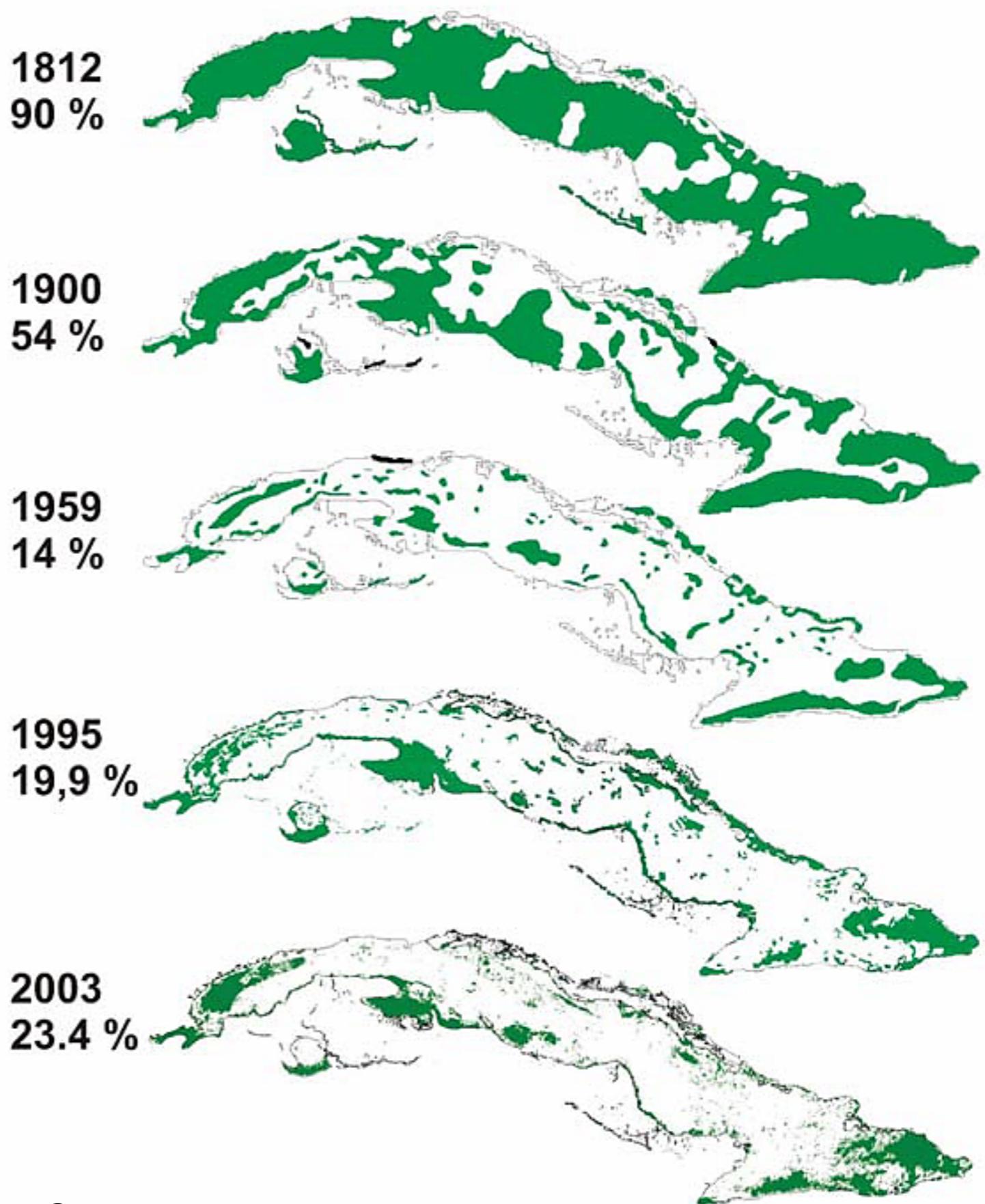
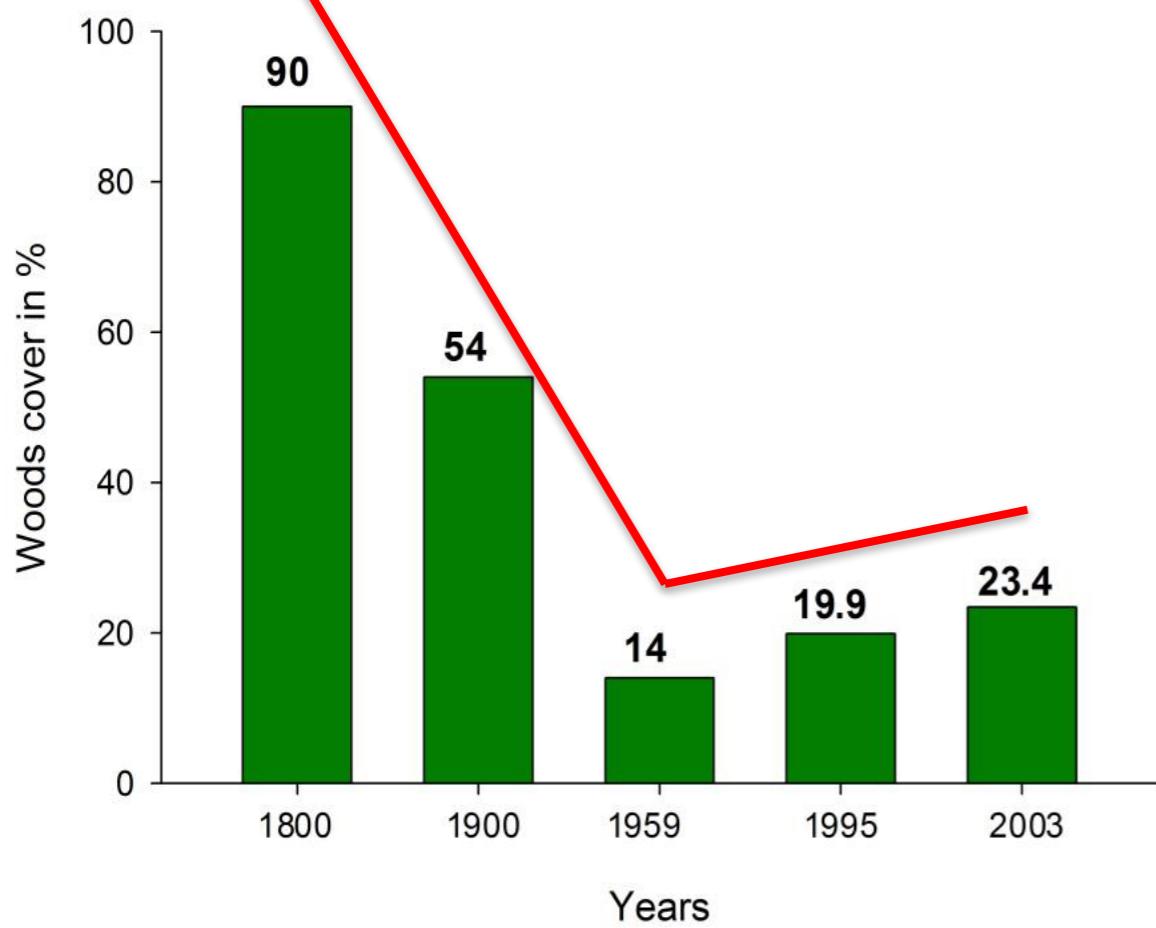


**Somorrostro, Mayabeque, habitat of endemic cactus  
*Leptocereus scopulophyllus* Critically endangered species**

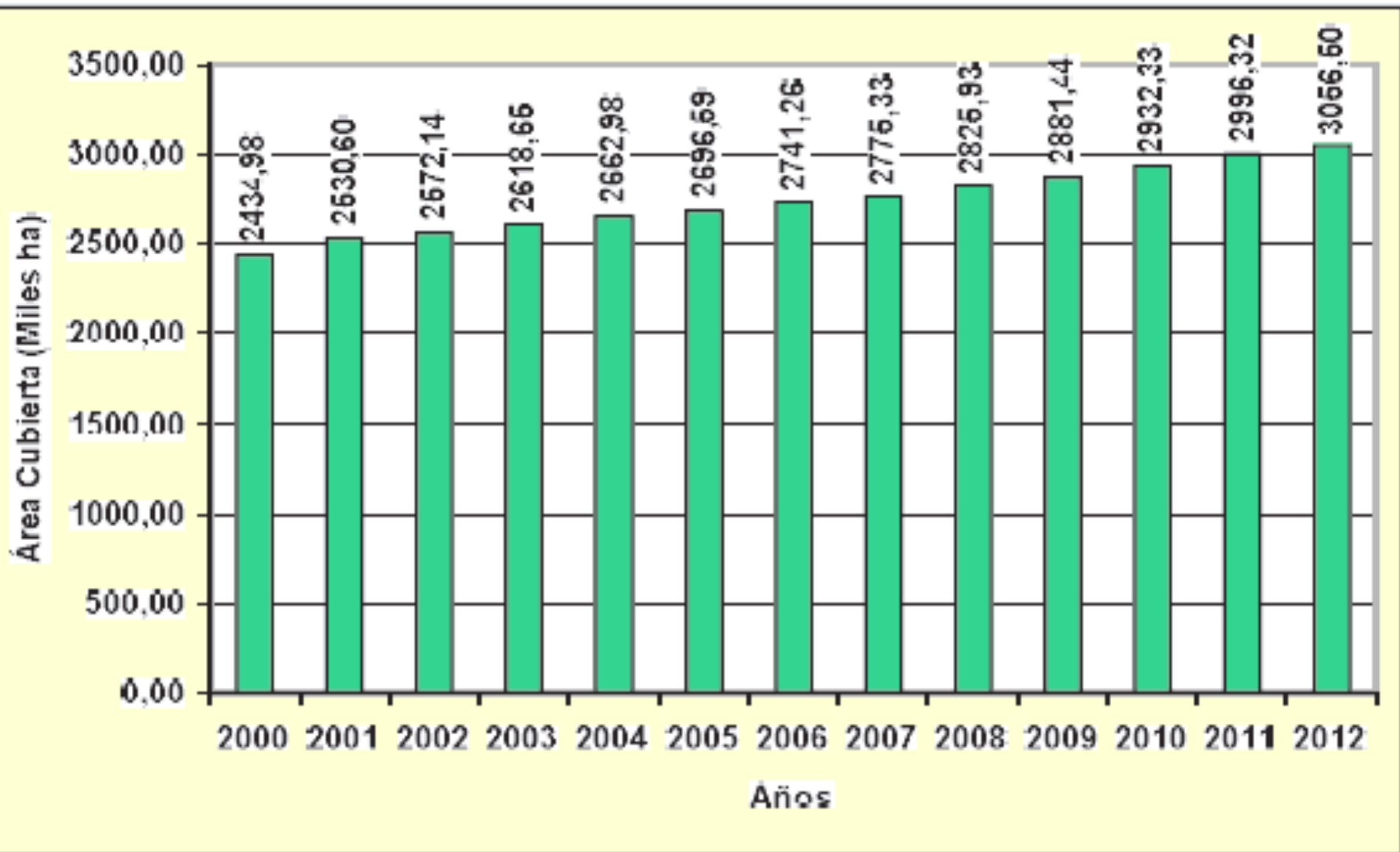


Exotic invasive  
Species ...  
... so far 337 taxa  
are recorded

*Dichrostachys cinerea*  
**The most invasive exotic plant in  
Cuba**



**Woods cover in Cuba from 1812 to 2003**



**At the end of 2012 the Woods cover in Cuba rise the 28.66 % of the land surface...**



**±30% of the Woods cover in Cuba are  
forestry plantations**

**... Cuba preserves unexplored places...**

**Turquino Peak, Sierra Maestra (1 972 m)**

# National System of Protected Areas

211 Protected Areas  
Represent the 22 % of the national territory



# Cuban magnolias



*Magnolia cubensis* subsp. *acunae*

# ***Magnolia cubensis* Urb. subsp. *cubensis***

= *M. cubensis* subsp. *turquinensis* Imch.

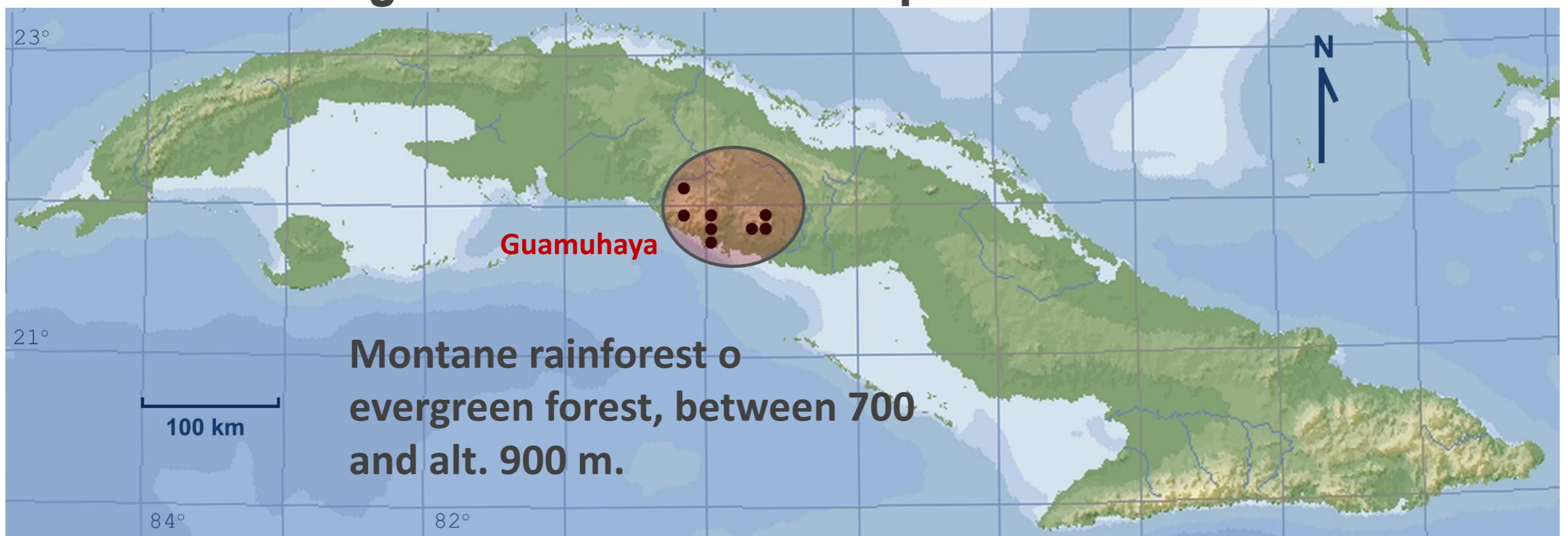


# ***Magnolia cubensis* subsp. *acunae* Imch.**





## *Magnolia cubensis* subsp. *cubensis*



## *Magnolia cubensis* subsp. *acunae*

# ***M. cristalensis* Bisse**

= *M. cristalensis* subsp. *baracoana* Imch.

= *M. cristalensis* subsp. *moana* Imch.

= *M. cacuminicola*





Montane rain forest, cloud forest and xeromorphic scrub on serpentine soils, between 700 and 1 100 msm, on acid lateritic soils and karst.

*Magnolia cristalensis*

# *M. virginiana* L.



**It grows in marsh grassland and in the ecotone between grassland and swamp forest.**

# *M. virginiana* subsp. *oviedoae* A. Palmarola, M.S.Romanov & A. V. Bobrov

Willdenowia 38 (2008): 545-549



Willdenowia 38 – 2008

545

Novitiae florae cubensis No. 29

ALEJANDRO PALMAROLA-BEJERANO, MIKHAIL S. ROMANOV & ALEXEY V. F. C. BOBROV

## A new subspecies of *Magnolia virginiana* (*Magnoliaceae*) from western Cuba

### Abstract

Palmarola-Bejerano, A., Romanov, M. S. & Bobrov, A. V. F. C.: A new subspecies of *Magnolia virginiana* (*Magnoliaceae*) from western Cuba [Novitiae florae cubensis 29]. – Willdenowia 38: 545-549. – ISSN 0511-9618; © 2008 BGBM Berlin-Dahlem.  
doi:10.3372/wi.38.38214 (available via <http://dx.doi.org/>)

*Magnolia virginiana* was reported recently from the Majaguillar marshes in western Cuba. This was the first Cuban record of the species, formerly considered an endemic of the USA. The Majaguillar population of *M. virginiana* differs in leaf shape and flower features from those of the North American mainland. It is therefore described as a new subspecies, *M. virginiana* subsp. *oviedoae*.

Additional key words: Antilles, *Magnolia virginiana* subsp. *oviedoae*, taxonomy

The number of *Magnolia* taxa known from Cuba rose from the single first described *Magnolia cubensis* Urb. (León & Alain 1951) to 3 species and 8 subspecies in the latest treatment of Cuban magnolias (Imchanitzkaja 1991): *M. cubensis* with subsp. *cubensis*, subsp. *turquinensis* Imkhan. and subsp. *acunae* Imkhan. (Imchanitzkaja 1974), *M. cristalensis* Bisse with subsp. *cristalensis*, subsp. *moana* Imkhan. and subsp. *baracoana* Imkhan., and *M. cacuminicola* Bisse with subsp. *cacuminicola* and subsp. *bissei* Imkhan. All except *M. cubensis* subsp. *acunae*, endemic to the Guamuñaya massif in C Cuba, are restricted to the mountains of E Cuba. Bisse (1974) had four species instead of the current three, but he later (Bisse 1988) acknowledged that his *M. leonis* "Tujanitskaya" (an error for Imchanitzkaja) was the same as *M. cubensis* subsp. *acunae*.

Oviedo & al. (2008) published the first record of a native *Magnolia* for W Cuba: *M. virginiana* L. They had discovered this species, formerly considered an endemic of the USA (Treseder 1978; Calaway 1994; Meyer 1997), in the Majaguillar marshes in the municipality of Martí, province of Matanzas.



# *Magnolia oblongifolia* (León) Palmarola

= *Talauma ophiticola* Bisse

= *Talauma oblongifolia* (León) Bisse



**Montane rain forest, pine forest,  
xeromorphic shrub on serpentine soils and  
cloud forest, between 100 and 1000 alt.**

# *Magnolia orbiculata* (Britton & P. Wilson) Palmarola



**Semi-deciduous forest and evergreen forest, between 100 and 600 alt. and montane rain forest between 800 and 1100 alt..**

# *Magnolia minor*



**Cloud forest, montane rainforest, rarely pine forest or xeromorphic shrub on serpentine soils, between 300 and 900 alt.**

# Cuban Magnolias

*Magnolia cubensis* subsp. *cubensis*

*M. cubensis* subsp. *acunae*

*M. cristalensis*

*M. virginiana* subsp. *oviedoae*

*M. minor*

*M. orbiculata*

*M. oblongifolia*

*M. cubensis* subsp. *cubensis*