

# FORESTS **FOR** MONARCHS

## LA CRUZ HABITAT PROTECTION PROJECT

Rebeca Quiñonez-Piñón

Executive Director

[forests4monarchs@gmail.com](mailto:forests4monarchs@gmail.com)

[www.ForestsForMonarchs.org](http://www.ForestsForMonarchs.org)



Picture by José Andrés Arredondo, 2015



## MISSION

To protect the migratory monarch butterfly and other endemic species by reforesting the land within the Monarch Butterfly Biosphere Reserve in Michoacán, Mexico.

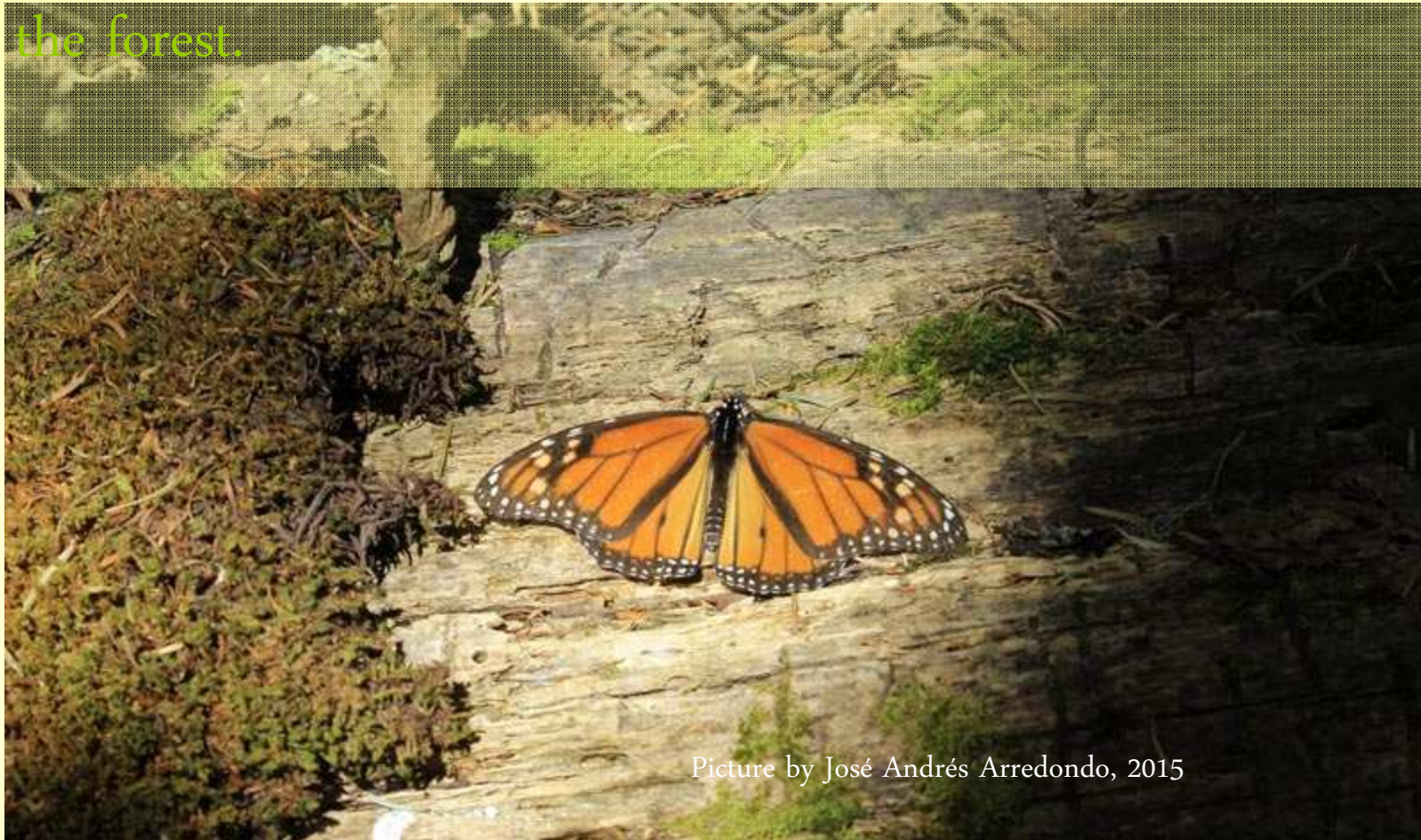


Picture by José Andrés Arredondo, 2015



## MISSION

To promote sustainable forest management among the local landowners for their economic benefit and the conservation of the forest.



Picture by José Andrés Arredondo, 2015



# COMPONENTS OF *FORESTS FOR MONARCHS*



Environmental Education

Forest Restoration



Sustainable Wood Harvest

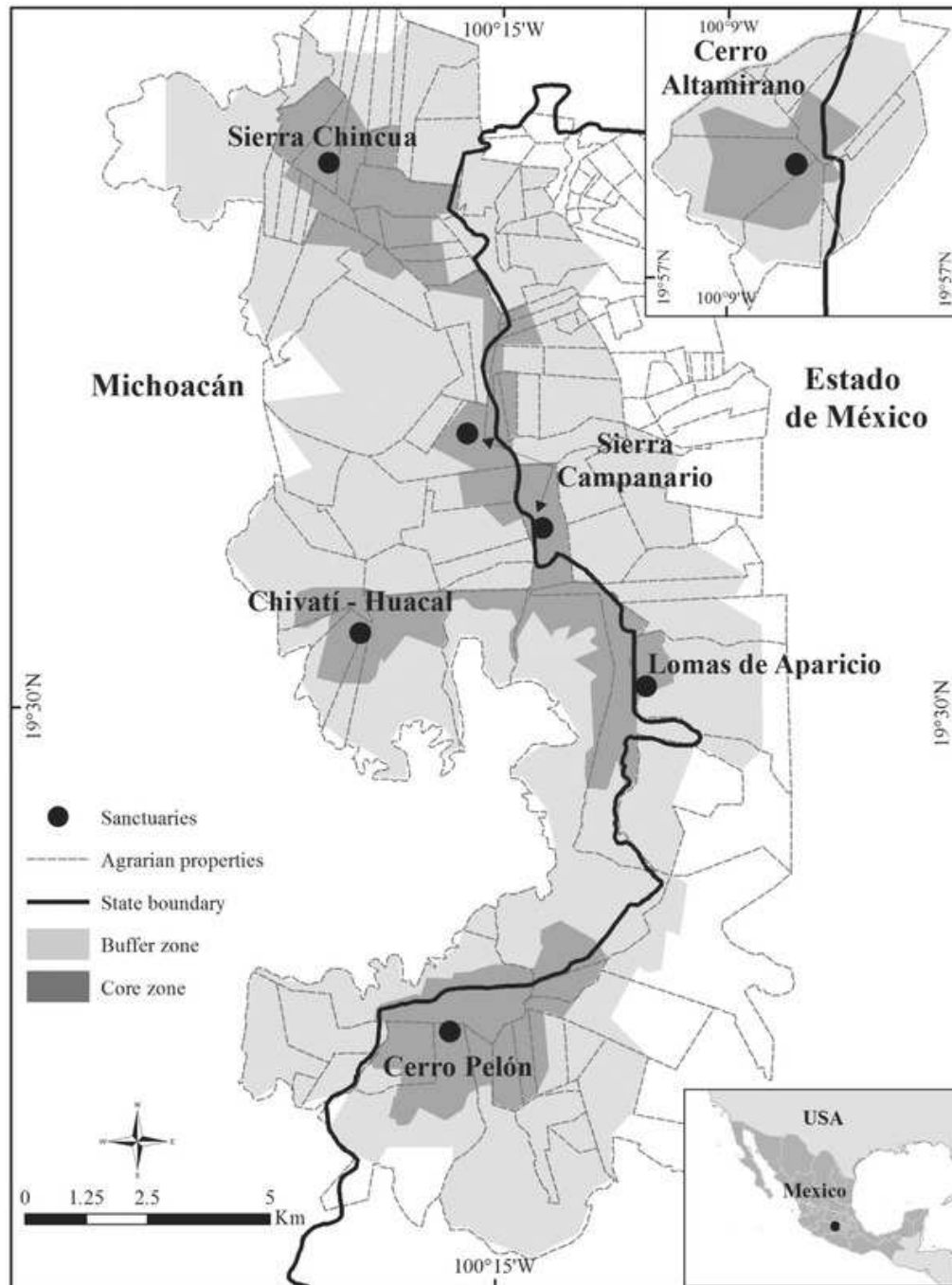




Source of figure:

<http://www.fs.fed.us/monarch/images/map.jpg>



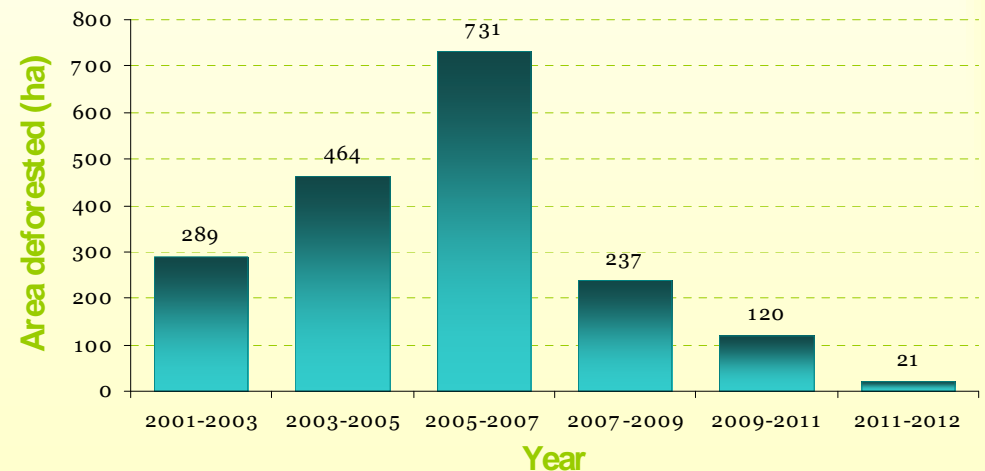


## MBBR history:

- 1980: First Decree as Wildlife and Refuge area. Logging was allowed most of the year.
- 1986: Five isolated areas were delimited. Special MBBR, delimiting the core zone (4,991 ha), and the buffer zone (11,619 ha)
- 2000: The actual MBBR: Buffer zone area is 42,707 ha, and core zone area is 13,552

# Solving an environmental problem

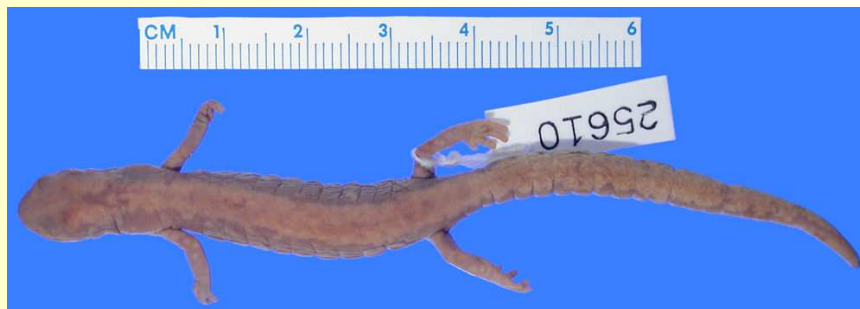
- High rates of annual deforestation within the MBBR
- Create unsuitable habitat for monarch hibernation and reproduction
- Cause habitat loss of endemic species
- Hydrology is disrupted
- Loss of Sequestered CO<sub>2</sub>
- Increased soil erosion



Data source: Vidal et. al., 2014



SCIENTIFIC NAME	COMMON NAME	IUCN CATEGORY	IUCN CRITERIA	SEMARNAT CATEGORY <sup>1</sup>
<b>Invertebrates</b>				
<i>Danaus plexippus</i>	Monarch butterfly	Its annual migration is considered threatened		Subject to special protection
<b>Amphibians</b>				
<i>Ambystoma ordinarium</i>	Michoacan Stream Salamander	Endangered	B1ab(iii)+2a b(iii)	Subject to special protection *
<i>Pseudoeurycea robertsi</i>	Tlaconete de Roberts	Critically Endangered	B1ab(iii)	Threatened*
<i>Pseudoeurycea bellii</i>	Bell's False Brook Salamander	Vulnerable	A2ace	Threatened*
<b>Mammals</b>				
<i>Nelsonia neotomodon</i>	Diminutive Woodrat	Near Threatened		Subject to special protection*



# Forest Restoration

- Germination of seeds
- Direct seeding to copper-treated styro-blocks





# Forest Restoration



Careful packing and transportation of  
native tree seedlings







We deliver trees to planting sites at the optimal planting time, and provide other logistical support





# Education is Reforestation



The conservation of our forests is in the hands of our future generations.

*Forests for Monarchs :*

- Teaches local landowners to sustainable harvest restored forests on former agricultural land.
- Promotes environmental education among the local children and their families, and
- Encourages the participation of higher education students at our reforested sites and our partner Nursery,



Children of the region value the important connection between the Pine-Oyamel mixed forest and the iconic monarch butterflies.







“Environmental protection should be taught as a practical class, and not only in the classroom”

Eva González





## Technical assistance



To teach the local participants to maintain healthy trees in a healthy land.





The rate of development of trees is encouraging to local participants –up to 50 feet in height in 10 years

Local people set the example for their neighbors – Increasing the quality and value of land.

Site in El Rosario in 2000,  
two years after planting

The same site in 2009





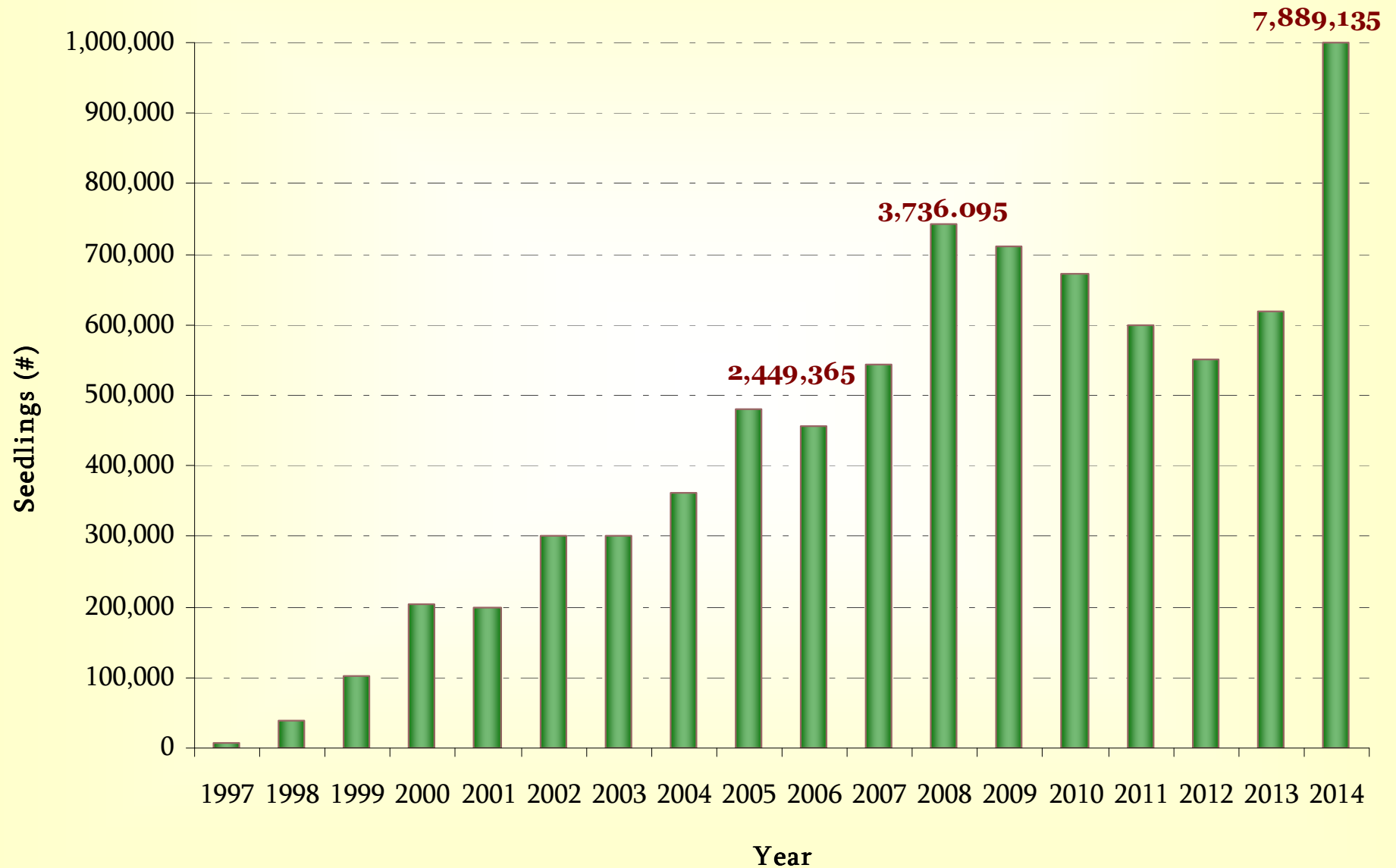


The participation of higher education students at our reforested sites and our partner Nursery is one of our priorities.





# Almost 8 million native seedlings planted



*Working to ensure the long-term survival of the*

# THE MONARCH BUTTERFLY

[ABOUT OUR WORK](#)

Forests for Monarchs is dedicated to **protecting the monarch butterfly** and other endemic species by reforesting the land surrounding the Monarch Butterfly Biosphere Reserve, and to **promote sustainable forest management** among the local landowners for their economic benefit and forest conservation.

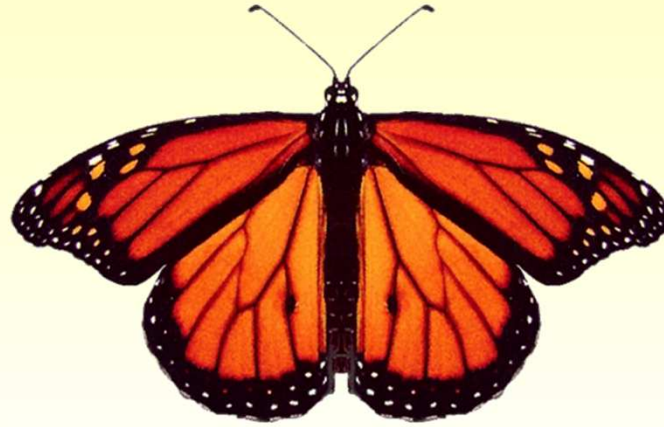
FOREST  
RESTORATION

MONARCH  
PROTECTION

SUSTAINABLE  
WOOD HARVEST

ENVIRONMENTAL  
EDUCATION



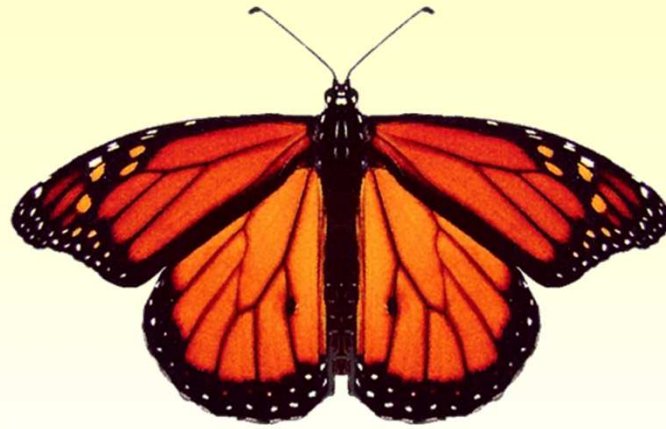


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