**Overwintering Population in Sierra Chincua**

According to the CONANP-WWF (National Commission of Natural Protected Areas-World Wildlife Fund) report, the 2016-2017 overwintering colony in Sierra Chincua was divided into two fragments: a small 0.17 ha area located in federal property and another 0.42 ha in El Calabozo ejido. Both fragments were located just 1.6 km (5,250 ft.) from each other.

The colony in the federal property was the only one open to the public in Chincua. On February 18, MBF Board member, Isabel Ramírez and her students visited this site and they observed that the forest was considerably thinned out. The exposed roots of the trees that fell due to the March 2016 storm were everywhere, as well as the remains of the fallen trees that were extracted. However, since the winter was particularly mild, there were flowers everywhere, which seems to have grabbed the attention of tourists as much as the butterflies.

Isabel and her students were able to get close to a fragment of a monarch colony close to the Llano del Coala. There, they observed a remarkable recovery in the colony size compared to previous years. The only sound was the wind blowing and the fluttering of butterfly wings as they flew around. The storm did not cause a lot of damage on the north face of this mountain. The trees where the colony was established were very young and the understory was sparse. A young forest between colonies was dominant, with very few old-growth trees and a lot of trees from recent natural regeneration. Experiencing this reminded everyone that there is still a lot to do so that the monarch butterfly remains a flagship species for conservation.

**Evaluation in Chincua**

On 30 March 2017, MBF Board member Pablo Jaramillo went to the illegally logged area in Arroyo Hondo in Sierra Chincua to evaluate the survival rate of trees that were planted in June 2016. In collaboration with Arnulfo Blanco from the Michoacana University, six undergraduate students and Luis Dávila (from the Reserve), 10 permanent monitoring plots (100 m² each) were established and each planted seedling was marked to determine whether it was dead or alive. The final data will be available soon, but early field estimates of the survival rate of the reforested trees is about 75-80%. This is excellent considering that many people participated in the planting process (approximately 60 people per day) over three working days last summer. The permanent plots that were set up will be monitored periodically over the next five years to determine if the reforestation of this area was carried out successfully or if trees allowed to grow by natural regeneration will outperform the reforested seedlings.
Alternare Update

Alternare and their team started 2017 facilitating thirty-nine workshops on diverse topics ranging from sustainable agricultural techniques such as organic farming, to recycling water and managing it sustainably. The workshops were held in ejidos and indigenous communities that own land in the Monarch Butterfly Biosphere Reserve. A total of 339 women and 140 men participated building five family fuel-efficient stoves, seven dry latrines, two community cisterns, two family cisterns, and two recycling bins for schools.

Since 68% of the San Juan Zitácuaro River watershed spreads out over the Reserve, Alternare is working to improve water management and distribution among the communities. Currently, only 20% of the population has water in their household, the rest resort to placing hoses to extract water from the watershed. To solve this issue, Alternare has implemented five rural water distribution systems among four communities through the construction of cisterns, drafting community agreements and regulations for water use. As a campesino told us, “We used to place pipes to get water and used to argue over who was getting more water than the others but now with the agreements in place everything is more equal and fair.”

Monarch Network Presents Documentation Center

On February 8, the Non-Governmental Organizations (NGOs) that constitute the Red Monarca (Monarch Network) presented the documentation center (DC) to the press. As part of this network, MBF provided funding and information to set up a data base that contains more than 180 articles, research papers, and information from academics, government and non-governmental organizations that have worked in the monarch butterfly area. Additionally, Eligio Garcia from the Monarch Fund, shared his data from 30 years of research that are now available to everyone. The DC is at: www.redmonarca.org and is made available by the Monarch Network to anyone that is interested in the monarch butterfly and the political, social, and economic situation of the region.

Field Guide Workshops

On December 14 of last year, MBF Consultant Ek del Val de Gortari, along with herpetologist, Jonatan Torres were in El Rosario, to carry out the second workshop for tourist guides. Ek and Jonatan invited 30 people from the community involved in the sanctuary and those responsible for the horses that take tourists. They both explained that the purpose of the field guides is to learn about the immense biodiversity in the Monarch Butterfly Biosphere Reserve and share it with visitors.

The tour guides were very receptive and liked the field guides. When they received them, they looked for the species they knew and recognized. They were interested in the amphibian and reptile guides since there are a lot of myths and beliefs around these organisms and they were surprised to discover that most snakes in the Reserve are not poisonous and that the fake scorpion (Barisia imbricata) is also harmless. Jonatan talked with the personnel, answering all their questions, and pointing out the characteristic features of each group of species. The tour guides noted some of the species that were not in the guides and suggested they be added. Their recommendations will be considered in the next edition.

Furthermore, the guides found the field guides very useful since tourists often ask about the biodiversity in the region. They were also interested in having the field guides translated into English for the foreign tourists that visit the Reserve. That is on MBF’s agenda! We are convinced that the only way to conserve the forest is to learn about it and for people to know more, we need to communicate the importance of the forest through projects like this one.
Biology and Conservation Workshops

During the 2016-2017 overwintering season, Eneida Montesinos, along with Eco Monarca and World Wildlife Fund (WWF) México held workshops on the biology and conservation of overwintering monarchs and their habitat in México. A total of 189 men and 105 women employed as tour guides participated in the workshops. Topics included monarch biology, migration and overwintering as well as conservation issues. Participants engaged in different games, activities and role-playing and made monarch handicrafts, migration maps and presentations. The tour guides received a booklet with information of the topics covered in the workshops to be able to use them as a reference during the tours.

Additionally, 485 students from six local elementary and high schools participated in the Third Monarch Butterfly Environmental Education Festival. The festival included conferences and workshops about the monarch butterfly and the environment as well as cultural activities organized by several local educational institutions. Eneida, Eco Monarca and their colleague Tomás Bautista organized some of the conferences and activities. MBF is happy to support Eneida, Eco Monarca and WWF in this effort to involve and train tour guides and children in the wonderful and magical world of the monarchs!

Research Corner

This year MBF will support doctoral student Claudia Guerrero Vizcaíno in her research to describe, both ecologically and genetically, multiple populations of oyamels (Abies religiosa) in the Monarch Butterfly Biosphere Reserve (MBBR).

Claudia will analyze the ecological and genetic features in the recovery of Abies religiosa in forest gaps where wood was extracted under various management conditions inside the MBBR. Her methodology includes identifying sampling sites with clearings caused by extraction in the oyamel forests as well as natural regeneration and/or reforestation sites. She will also collect soil samples to determine nutrient availability and record the various species of plants in the understory, to learn what factors facilitate or inhibit the regeneration of oyamels. In addition, she will carry out genetic analyses by collecting oyamel needles to learn about their genetic diversity, flow, and structure.

The maintenance of genetic diversity is key to conservation programs since it promotes adaptation and the evolution of populations and species. MBF is very pleased to support Claudia’s work. Her project will be one of the first studies on genetic and population ecology of Abies religiosa in the MBBR, as well as one of the first to compare the recovery of populations under natural recovery programs and reforestations as a component of public policy. We are sure that the results of her research will provide new guidelines to improve conservation public policies and management in the MBBR.
Monarch Butterfly Fund

MBF Participates in Fourth Annual Monarch Symposium

MBF Board members, Karen Oberhauser, Pablo Jaramillo and Alfonso Alonso, participated in the 4th Research and Conservation of the Monarch Butterfly Symposium on March 2-3 in Toluca, México. More than 300 people attended the opening and 250 participated in the closing ceremony. Participants included members of the ejidos of the states of Michoacán and México, as well as representatives of the federal, state, and municipal governments of the states of Michoacán and México. Representatives of the USA and Canadian governments, as well as many non-governmental organizations, and academics from México and the USA also participated.

The quality of the more than 30 presentations was impressive. Karen kicked off the symposium with the keynote presentation, summarizing ongoing monarch conservation work in the United States. She responded to important questions from a very inquisitive audience, who were interested in topics ranging from the impacts of growing non-native milkweeds to what the United States is doing to create more habitat for monarchs. Pablo discussed how the March 2016 snowstorm affected the structure of the forest and resulted in 31-38% monarch mortality. Alfonso presented the conclusions of the meeting, summarizing how the information presented will help all three North American countries engage in effective conservation practices. Some of the most interesting results included several presentations by the CONANP (Comisión Nacional de Áreas Naturales Protegidas - National Commission of Natural Protected Areas) on the monarch migratory routes in northern México, a digital analysis to estimate monarch densities in the overwintering sites, and the use of overwintering monitoring data to make decisions for conservation.

The symposium was organized by the CONANP, the governments of the states of Michoacán and México and by the Telcel WWF-México Alliance. Special recognition was given to Lincoln Brower (MBF Board member) and to Eduardo Rendón (WWF-México) for their contributions to the conservation of the monarch butterfly overwintering areas.

Spring Migration

The monarchs are on their way and they'll be spreading their wings flying north to repopulate the northern breeding areas by summer. They arrived in Texas from México about four to seven days later than normal according to MBF Board member Chip Taylor of Monarch Watch, and they should move swiftly north with the warm temperatures. Cold fronts will slow them down as will rain, but warm winds from the south will help propel them northward as well. Future weather forecasts look favorable according to Chip and all MBF Board members are hopeful for an increase in the monarch population this year. We will all be watching the movement of monarchs this season. Citizen Scientists in the Monarch Larva Monitoring Project (MLMP) will help generate important insights on how monarch breeding success is faring monitoring local milkweed patches, a harbinger of hopeful population trends.

Do you want to support our community projects in México? Another donation option is to give through GlobalGiving. Thanks to your generosity we are still part of this global community that helps raise funds for meaningful causes. MBF currently ranks 1,633 out of 22,795 organizations!


GlobalGiving is an online fundraising platform that gives social entrepreneurs and nonprofits from anywhere in the world a chance to raise the money they need to improve their communities. Since 2002, GlobalGiving has raised $257 million dollars from 585,323 people like you who have supported 16,661 projects in 165 countries.
MBF Supporters

Over 200 individuals, schools and organizations donated funds to MBF in 2016 allowing us to continue making a difference for monarchs. Every single contribution counts and we are deeply grateful. Just as monarchs depend on milkweed, flowers with nectar, and trees we depend on our generous donors. We want to give a special thanks to those who have contributed $100 or more in 2016.

**Oyamel ($50,000+)**
Provision roosting sites and protection to overwintering monarchs
Anonymous

**Milkweed ($20,000+)**
The only plants that monarch larvae can eat
None

**Frostweed ($10,000+)**
Crucial to migrating monarchs as they move south through Texas
Gerald Axelbaum and Ellen Shapiro

**Aster ($5,000+)**
Late season composites that are often the last blooms left in northern prairies
None

**Blazing Star ($1,000+)**
An important nectar source during the fall migration
Battelle Always Giving
Gretchen Bell
Butterfly Wonderland Foundation
Larry Crooks
Journey North Symbolic Migration Schools
Jon and Metta Belisle
Nobility Project
Norman and Janet Pease

**Coneflower ($500+)**
Mid-summer blooms feed breeding monarchs
Anonymous
Lincoln Brower**
Randy Dietrich, Broadview Produce Company
Chris Burnside
College School Association
Cottonwood Foundation
Fifth Grade Class – The College School, St. Louis MO
Matthew Horsfield**
Kathryn Macbride*
Nahant Marsh Education Center
Steven and Carissa Jones Family Fund
Karen Oberhauser***
Willow Ridge Garden Center

**Goldenrod ($100+)**
Important nectar sources for late summer breeding monarchs and early migrants
Anonymous
Anonymous
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Bradley Beach Environmental Club
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**MBF Mission:** To foster the conservation of North American monarch butterflies and their migration through habitat restoration, research, monitoring, education and support for sustainable community development in and near the monarch overwintering areas in México.

**MBF Vision:** Healthy ecosystems and sustainable communities that preserve North American monarch butterflies and their spectacular migration in perpetuity.

**Thank you for considering a gift to MBF**

*MBF is a 501(c)(3) tax exempt organization and all donations are tax deductible to the full extent of the law*

Donations to MBF support reforestation, research that is directly related to monarch and monarch habitat conservation, and sustainable economic development activities in México. Please consider donating today through our secure on-line site:

www.monarchbutterflyfund.org

or by sending a check to the following address:

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c/o Karen Oberhauser  
2078 Skillman Ave. W.  
Roseville MN 55113

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$50: Buys 500 seedlings for a community/school-run tree nursery.

$100: Plants 100 new trees in the monarchs’ threatened forest areas, which includes seed collection, raising the young seedlings, and the distribution and planting of the seedlings. Our goal is to plant high quality seedlings in a community-led process to help restore critical overwinter habitats for monarch butterflies.

$750: Pays for one month of professional staff services of trained personnel who ensure that relevant expertise is available to community and private landowners working to restore their property to viable monarch locations.

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