More than 34,000 Trees Planted During MBF’s Summer Reforestation Period

As we were printing our previous newsletter, everything was ready to begin planting 25,000 seedlings in the San Juan Micro Basin. Our results exceeded our expectations and we surpassed our own goal, planting more than 34,000 trees! Our partnership with ECOLIFE and Alternare created a great team which accounts for our success. Nine groups from two indigenous communities from the Monarch Butterfly Reserve (Francisco Serrato and Crescencio Morales) participated in our project.

Participating communities showed a great commitment to protect and restore the ecosystem and their willingness to continue working towards reforesting eroded sites in the near future. Communities were compensated for their reforestation work, both in kind and financially. We supported their efforts to organize meetings to decide how to invest their earnings and we are happy to report that many of the goods purchased benefited the entire community. Some examples of in kind payments included hoses to bring water to their school, building materials to improve buildings or their tree nurseries. The images of our reforestation season speak for themselves:

Along with the reforestation project, we also completed the experimental plot that will help us determine what factors contribute to reforestation success. The plot is being monitored to determine transplant shock and the correlation between the organic amendment and tree survival rates. We have already found evidence that the trees produced in the community-managed nurseries are adapted to local environmental conditions and show less transplant shock than their commercially produced counterparts. We will continue collecting data along with survival rates in other reforested sites to compare and establish correlations and be able to determine the importance of soil management and site selection in the reforestation process.
Bravo to Cresencio Morales, Francisco Serrato and all the participating communities!

“El Rincón” - Cresencio Morales receives a plaque for their contribution to reforestation

“El Rincón” with Alternare and MBF staff

“El Rincón” holding the sign for the experimental plot

Pablo in a Community Meeting

Delivering Funds to “El Rincón”

Soil Sampling

Soil sample extraction

Soil samples

Forest Tree Production Workshop Ejido Cerro Prieto

How to Improve Tree Planting Workshop Cresencio Morales Indigenous Community

MBF’s partnerships have consolidated into groups of individuals working as a team and fully committed to restore the forests and protect the monarchs

Alternare Helps Campesinos Improve Tree Planting Techniques

Funding provided to MBF by Healthy Planet helped us continue supporting Alternare’s ongoing activities. With funding provided by other organizations, Alternare’s accomplishments during the June-October were amazing! Eight workshops on forest tree production techniques and six on ways to improve tree planting were carried out. A total of 70 individuals (56 women, 14 men) participated in the former and 189 (70 women and 119 men) in the latter.

The most exciting part is that these workshops, along with several more carried out in individual communities in collaboration with ECOLIFE and the Monarch Butterfly Biosphere Reserve, contributed to our summer reforestation efforts. A total of 34,585 trees (32,464 pines, 921 oaks and 1,200 oyamels) were planted!

Eight tree nurseries were established and communities are realizing from first-hand experience that they can produce trees successfully in their own small tree nurseries. Underscoring the advantage of having the nurseries is the fact that the trees from these nurseries have an 85% survival rate when planted versus 25-40% when trees come from outside nurseries.

Communities and schools participated in tree production and reforestation activities, including children. It was wonderful to see everyone working together and using the funds they received for their trees to benefit their schools and/or communities.
Eco-tourism Workshops

Summer kept Eneida Montesinos busily preparing for her upcoming series of workshops for this fall. She will probably be conducting one while you are reading this newsletter! With funding provided by Healthy Planet, Eneida was able to purchase materials for the workshops (pens, markers, paper, etc) and design and print educational posters and documents including the training manuals for participants.

With all her materials ready and the venues prepared, Eneida will be conducting 6 workshops during Nov 11-30 with an estimated 200 participants. The workshops are focused on training individuals as tour guides but also include habitat assessment and species monitoring. To help cover all the topics, Eneida enlisted trainers from WWF and the Monarch Butterfly Reserve.

Participation in MBF’s workshops is steadily increasing and many communities are asking to be trained as tour guides. Communities are no longer passively waiting for us to offer alternatives but are seeking them! Surveys among tourists indicate a positive perception of the guides and satisfaction with their visit to the monarch sites.

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News from the Board

More Research by MBF’s Board Members Published

The inquiring minds of MBF’s energetic board members are continuously thinking, trying to understand and document the status of the monarch butterflies and their habitats to design science-based conservation strategies. This past year, they’ve published papers that analyze diverse topics, including the links between migration and disease in monarch butterflies, why a declining forest cover threatens long-term survival of the monarchs’ migratory phenomenon, why prohibiting logging and promoting old-growth oyamel forests is important, and the effectiveness of current conservation measures. Here is a summary of their papers:

Monarch migration, seasonal habitat use and parasite transmission in eastern N. America

Understanding the interaction between migration and infectious disease is fundamental to conservation efforts for many species. However, the logistical challenges involved in collecting samples across the geographic scope of a species’ range, from breeding to overwintering sites, can be enormous. For a study of parasite transmission in monarch butterflies, researchers enlisted the help of hundreds of citizen scientists from across the U.S. and Canada.

Researchers found that parasite infections build up during the summer breeding season, likely due to the fact that parasites accumulate on host plants—milkweeds—in patches used by monarchs. Monarch population density increases from early to late in the breeding season, and monarchs from locations that had higher caterpillar densities also had a higher prevalence of infection. This relationship between monarch density and parasite infections suggests that higher host densities increase opportunities for parasite transmission.

For more information about MonarchHealth, see www.monarchparasites.org; for more information about the MLMP see www.mlmp.org

Decline of m. butterflies overwintering in Mexico: is the migratory phenomenon at risk?

During the 2009–2010 overwintering season and following a 15-year downward trend, the total area in Mexico occupied by the eastern North American population of overwintering monarch butterflies reached an all-time low. Despite an increase, it remained low in 2010–2011. Three factors appear to have contributed to reduce monarch abundance: degradation of the forest in the overwintering areas; the loss of breeding habitat in the United States due to the expansion of GM herbicide-resistant crops, with consequent loss of milkweed host plants, as well as continued land development; and severe weather. This decline calls into question the long-term survival of the monarchs’ migratory phenomenon.
Overwintering Clusters of the Monarch Butterfly Coincide With the Least Hazardous Vertical Temperatures in the Oyamel Forest

During winter, monarch butterflies form dense colonies in oyamel fir forests on high mountains in central Mexico, where the forest canopy serves both as a blanket, moderating temperature, and an umbrella, shielding the butterflies from rain. This research investigated the vertical dimension of the butterflies’ use of the oyamel forest. This research team set up temperature recorders at eight heights, from ground level up to 22 m, along two vertical transects in the forest. One transect was in a densely forested area and the other in a thinned area. Intermediate heights in the densely-forested area forest, from 10 to 15m above ground, remained the warmest during the cold night and early morning. The results illustrate how the monarch butterfly is behaviorally adapted to the three-dimensional complexity of microclimate in the oyamel forest. A denser forest provides better protection for the overwintering survival of monarch butterflies than a thinned forest.

A Spatially Explicit Estimate of Avoided Forest Loss

With the potential expansion of forest conservation programs spurred by climate-change agreements, there is a need to measure the extent to which such programs achieve their intended results. We assessed the effect of a conservation initiative that combined designation of protected areas with payments for environmental services to conserve over wintering habitat for the monarch butterfly in Mexico. We measured avoided forest loss (avoided disturbance and deforestation) by comparing forest cover on protected and unprotected lands that were similar in terms of accessibility, governance, and forest type. Whereas conventional estimates of avoided forest loss suggest that conservation initiatives did not protect forest cover, we found evidence that the conservation measures are preserving forest cover. We found that the conservation measures protected between 200 ha and 710 ha (3-16%) of forest that is high-quality habitat for monarch butterflies, but had a smaller effect on total forest cover, preserving between 0 ha and 200 ha (0-2.5%) of forest with canopy cover >70%.

Isabel Ramírez Named Mexico Pollinator Advocate for 2011

During the 11th Annual North American Pollinator Protection Campaign (NAPPC) International Conference week held October 25-27 at the Smithsonian Institution in Washington D.C., our own Maria Isabel Ramírez received an award naming her the Mexico Pollinator Advocate for 2011.

The pollinator scientists and stakeholders that attended the meeting recognized her work helping communities reforest and providing them with tools to measure water quality. Deforestation is one of the main factors contributing to poor water quality and Isabel’s work is helping reverse this trend. Not only is she improving the quality of life of the local people but protecting the habitat of our favourite pollinator: the monarch butterfly!

Congratulations Isabel!!

Lincoln Brower Studies the Effects of Drought on Monarchs in Texas

In October 2011, Lincoln Brower travelled to Texas to assess the potential impact of the severe drought on monarchs. MBF will be supporting the lab analysis of the specimens collected including their weight and lipid content, and the results will be compared to samples collected in Mexico in November and March. Further commentary and photos from this trip can be viewed at:

Minnesota in 2012: Monarch Biology and Conservation Meeting

Mark your calendars for June 21-23, 2012 for an international gathering of monarch biologists, land managers, conservationists, citizen scientists, and others interested in monarch biology and conservation. The 2012 Monarch Biology and Conservation Meeting (MBCM) will be hosted by the University of Minnesota’s MonarchLab (directed by MBF board member Karen Oberhauser) at the U of M Landscape Arboretum and sponsored by the Monarch Joint Venture. The MBCM will provide an opportunity to share information on monarch population trends, new findings in monarch biology, and monarch conservation efforts. It will include speaking and poster sessions, field trips, workshops, and plenty of time for informal sharing and networking.

MBF board member Lincoln Brower will give a keynote address titled “A 58-year Journey with the Monarch Butterfly”. The cost of the MBCM, in addition to travel and hotel costs, is $150 or $185 if you attend the banquet and keynote address by Dr. Lincoln Brower. To learn more or to register for the meeting, visit http://www.monarchlab.org/mn2012/Default.aspx, or contact Wendy Macziewski at maczi001@umn.edu.

Based on the feedback we’ve gotten about the meeting, we anticipate strong interest. We are limited to 300 attendees, so we recommend registering early if you plan to attend. Registration will close on March 1, 2012, or when 300 people have registered. Because hotel space is limited, we urge you to find a roommate with whom to share a room at the meeting hotel.

Pollinator Week: The MBCM meeting will also celebrate the beginning of Pollinator Week 2012. Almost six years ago the U.S. Senate unanimously designated the final week in June as “National Pollinator Week". Pollinator Week is an international celebration of the valuable ecosystem services provided by bees, birds, butterflies, bats and beetles. These pollinating animals support terrestrial wildlife, provide healthy watersheds, pollinate many of the plants that humans consume, and more. To learn more about Pollinator Week, visit http://www.pollinator.org/pollinator_week_2011.htm.

MBF on the Healthy Planet Website

As we have reported, Healthy Planet generously donated funds for MBF’s work with local communities and our environmental education workshops. Based in the UK, Healthy Planet was created to “inspire, encourage and support individuals and businesses around the world to make a difference in themselves, their children and the planet.” Through their adopt-a-plot program, Healthy Planet supports conservation efforts around the world. Currently, MBF is featured as a conservation partner on their website. Check us out at:

www.healthyplanet.org/monarchbutterfly

and browse around. If you decide to participate in their program make sure to quote promotional code ‘MBBRcomp’ when you create your profile message to login.

@mbfmonarchs

www.facebook.com/monarchbutterflyfund
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 Mexico.

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

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

www.monarchbutterflyfund.org

or by sending a check to the following address (note the recent address change):

Monarch Butterfly Fund
C/o Karen Oberhauser
2078 Skillman Ave. W.
Roseville MN 55113

All donations will be acknowledged with a letter, and donations over $50 will be acknowledged with a certificate, if requested.

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