Reforestation and Natural Regeneration Project in the San Juan Micro Basin:
Monarch Butterfly Biosphere Reserve
Summer 2014


Grant category: Forest Conservation and Scientific Research

Summary of the proposal:

Environmental degradation in the Monarch Butterfly Biosphere Reserve (MBBR) represents a major threat to the ecosystem that millions of Monarch butterflies inhabit when they migrate to Mexico each year. Large scale extraction of timber and non-timber forest products seems to have slowed down in the last few years but small scale extraction appears to continue. Human pressure on forest resources in the Reserve remains stable, and based on our previous reforestation experiences, we are proposing to reforest 32 hectares of previously farmed land in the Buffer zone of the Reserve. Planting trees in these areas reduces human pressure on the old-growth forests commonly found in the Core zone of the Reserve. Finding areas to reforest in the MBBR is critical because most of the arable land is cultivated and serves as a source of income for local communities. Encouraging local communities to engage in the reforestation process and involving them in research projects makes them active participants and responsible for the recovery of the natural ecosystem where they live.

In addition to the reforestation portion of this project, we are proposing to address another issue that we feel is extremely important for forest recovery. This issue is related with natural regeneration of the forest, especially in areas of the MBBR where *Abies religiosa* is the dominant tree species. When reforested, this tree species has very low survival rates and during the last few years, we have seen that naturally occurring saplings appear to have higher survival rates and to be growing more steadily. Because our experience is anecdotal, we will follow up this portion of the project by monitoring regenerating saplings in selected sites of two indigenous communities (San Juan Zitácuaro and Carpinteros).

For the reforestation portion of this project we will plant 10 hectares of pine seedlings with the organic amendment Bokashi and 10 hectares without Bokashi as a control. All planting activities will be done using the same methodology from previous years and the communities that participated in the planting activities will guard the reforested trees. As seen in previous years, guarding the reforested seedlings increases their survival rates because they are protected from cattle and from people that might damage these seedlings. The communities that will participate in this portion of the project are: Francisco Serrato, Crescencio Morales and Donaciano Ojeda, all within the MBBR. Previous reforestation activities including the organic amendment Bokashi will be based on the submitted article:

A budget was submitted with this proposal and includes all expenses necessary for this work. The total amount requested was $22,368.62 USD.