



Introduction:

IDEAS For Us (IDEAS) is an Orlando-based 501(c)(3) non-profit organization and an accredited NGO of the United Nations. Our mission is to develop ideas, fund action, and scale solutions that solve the world’s most pressing environmental and social challenges. Since 2008, IDEAS has been guided by a vision to contribute to a future where humanity thrives in harmony with nature and in peace with one another. Through this organization, thousands of volunteers have taken action in over 30 countries around the world and continue to evolve by specializing in helping cities advance sustainability at the local level through environmental projects, community action programs, and eco-enterprises.

POLLINATOR GARDEN



Problem:

North American Monarch Butterfly populations have declined in recent years due to habitat loss, pesticide use, and GMO soy and corn crops. These crops have been altered to withstand direct spraying of herbicides, devastating native milkweed populations with it. This has been a multi decade decline. In the 1990’s Eastern Monarchs blanketed 21 hectares of forest in their over winter habitat, in 2014 that number fell to 1 hectare. Currently the estimated count of forest habitat covered is now 6 hectares as of Winter 2019. The reason these populations are increasing is due to efforts to plant native milkweed and consumers switching to organic corn and soy products. Although their population

seems to be rising this doesn’t remove the threat of their extinction and education efforts must continue to restore their population size.

Solution:

IDEAS plans to combat this wildlife devastation by planting an educational butterfly garden in the UCF Arboretum Park. The types of milkweed to be planted will ONLY be Native Florida Milkweed. A sign will be erected at the beginning of the section of garden informing visitors about the butterfly garden and explaining the importance of planting native milkweed species. Information will also be put about the decline of monarch populations and how restorative efforts continue to benefit the Monarch. Native species to be planted include White and Pink Swamp Milkweed, and

Butterfly Weed. Visitors will be encouraged to take seeds bursting out of seed pods to plant at home. Biological names of the species will be given on the sign for visitors if they would like to know more information. Links will be provided in the bottom right corner for IDEAS UCF Facebook, Instagram, and Knights-Connect. An IDEAS logo will be located on the bottom left corner to advertise what group put together the butterfly garden.

Goal 1: Increase biodiversity and ecological health to the UCF Campus by planting several pollinator garden plots near the Arboretum.

- ★ **Goal 1A:** Plant Native Milkweed and rebuild different butterfly populations. The adult Monarch drinks the nectar of the Milkweed plant and then lays eggs on its leaves. Monarchs can smell milkweed flowers from miles away and will be attracted to our garden.
- ★ **Goal 1B:** Attract local bees to our Milkweed plots. These plants will not only attract butterflies but bees as well. The Arboretum Park is the University greenspace and has multiple bee hives located in this area. These honeybee populations would only benefit from an IDEAS Milkweed garden.
- ★ **Goal 1C:** Plant Coral Honeysuckle bush at the entrance of the butterfly garden to attract more butterflies. Butterflies and hummingbirds love the nectar in the flower of this native Floridian plant. This will give caterpillars a place to chrysalis after living off the Milkweed host plant for several days after hatching.
- ★ **Goal 1D:** Plant Southern Magnolia trees at the end of the designated garden plot. It will also serve as another spot in the milkweed garden for monarch caterpillars to chrysalis. The Magnolia tree flowers are loved by bees and the pinecone provides food for squirrels, rabbits, and birds alike.

Goal 2: Give students the opportunity to contribute to and observe habitat restoration on campus greenspace.

- ★ **Goal 2A:** The UCF Arboretum will further contribute to restorative environmental efforts. According to research; after a sharp decline in population in recent years, habitat restoration projects across the Eastern United States have directly increased the Monarch population. To continue this effort to return the population to what it once was, projects such as this one are vital.
- ★ **Goal 2B:** Students will be educated on the life cycle of Monarchs at this IDEAS garden. Witnessing Monarch eggs on the milkweed, the eggs hatching into caterpillars, and then the molting process into a chrysalis that will transform into a beautiful monarch butterfly. A critical aspect in this project is spreading the awareness of this subject to students so they continue the effort to plant native milkweed at their own leisure.
- ★ **Goal 2C:** Education on why non-native milkweed poses a threat to Monarch populations needs to be spread to visitors. Especially ones eager to plant milkweed after visiting our garden. This information will be included on the sign erected at the front of the garden. Due to increasing demand for milkweed in recent years, the supply of non-native milkweed at garden centers has increased as well. Tropical

milkweed is a common non-native alternative sold due to easy propagation and rapid growth rates in Florida. This type of milkweed is native to Mexico and can result in the spread of parasites due to its inability to die back over winter in Florida. Native milkweeds die back over winter taking the *Ophryocystis elektroscirrha* parasite with it, providing fresh parasite free leaves in summer for Monarchs. Tropical milkweed continues to grow in the winter, resulting in increased parasite contamination to the monarchs. Research shows that the inability of tropical milkweed to die back over winter in Florida also confuses monarchs to think they have already arrived at their overwintering spot in Mexico. Colder temperatures in Florida may result in the death of Monarchs that stay here overwinter from the growth of Tropical milkweed.

Goal 3: Expand IDEAS UCF Gardening Program

- ★ **Goal 3A:** This garden will further expand the presence of IDEAS For Us on campus. Currently only one garden is managed by IDEAS, and over the next semester we are adopting a road on campus next to the Arboretum. Over the next year we need to create more gardens throughout campus as we grow in number as a club/non-profit at the University of Central Florida.
- ★ **Goal 3B:** Give IDEAS members more gardening event opportunities. Swarm rides are popular in Downtown Orlando as volunteers ride bikes from garden to garden through Fleet Farming. As UCF advances into the next decade, digitally we are innovating more. We now have accessibility to electric scooters; traditionally many students have some sort of efficient way to get from place to place on this large campus. This concept could be used at swarms on UCF and keep this butterfly garden looking nicely and bursting with life.
- ★ **Goal 3C:** Ensure environmental productivity at UCF. While advancing digitally at UCF is expected, we must advance in an ecological, smart way with it. This garden would build the habitat of many different beautiful and threatened creatures. IDEAS wants to create a protected oasis for pollinators on campus.

Project Outcomes:

Build a conversation on the conservation of Monarch Butterflies. Provide habitat for Monarchs. Create a beautiful garden for students. Contribute to keeping the UCF Arboretum Park as a permanent greenspace throughout the school's future.

Budget Breakdown

Item description	Unit cost in USD	Quantity	Total Cost in USD
The Tree Center Magnolia Tree Sapling	\$80	2	\$160
Coral Honeysuckle Plant 3 Gallon Pot	\$20	4	\$80
Butterfly Weed Seed Pack	\$5	3	\$15
White Swamp Milkweed Seed Pack	\$5	3	\$15
Pink Swamp Milkweed Seed Pack	\$5	3	\$15
Educational Signs	\$100	2	\$200
Earthmark Rectangle Metal Raised Garden Bed	\$75	6	\$450
Soil Bags	\$5	13	\$65
Native Leaf Mulch (Collected)	\$0	-	\$0
Total:			\$1000

Works Cited:

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Wheeler, Justin. "Tropical Milkweed—a No-Grow." The Xerces Society, 19 April 2018. Accessed 25 February 2020.

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