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Experience

Public Health Experience Creating a Nature Space for Undergraduate Students

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Introduction

Our group of individuals came together from various backgrounds including architecture, urban planning, biology, and medicine. We all came together with the same goal, to improve the welfare of the environment and the people that live therein. We formed a nonprofit to promote walkability, nature in urban spaces and activism in our community. A few of us were familiar with the SCIF (Sustainable Campus Initiative Fund) Grant on campus at the University of Utah and wanted to take advantage of the funding available to realize our goals. There was an already existing native plant garden on campus, and we wanted to expand on that idea. We ran across the Friends of Monarchs Utah and thought it would be a great idea to add a monarch waystation on campus. These habitats provide a place for the butterflies to rest, feed, and even lay eggs as they undertake one of the largest insect migrations in North America.[1] Sadly, since the 1980s, the numbers of migrating butterflies have fallen by over 90% in the west.[2] Given our interest in promoting wellness through greenspaces, we joined forces with the goal of creating a monarch waystation on our campus.

The effect of having nature integrated into our living spaces has generous effects on the health of humans. This type of integration of nature into the built environment is termed 'biophilic design' and we aimed to promote as much real nature as we could in our surroundings on campus. Because we focused on restoring habitat for Monarch Butterflies, we chose milkweed as our signature species, selecting five varieties native to Utah—showy, narrowleaf, swamp, horsetail, and butterfly. We also planted other native flowering species that bloom at staggered times and in a range of hues, creating vivid color throughout the year. This would benefit both native pollinators and students and faculty. Results from a comprehensive review of the benefits of biophilic design found that having nature integrated into our living spaces has ample benefits on mental and physical health, including reducing stress levels, and even improving cognition.[3]

Project

The first major step towards starting the project was finding funding and getting the project approved. It quickly became apparent that we would need approval from a variety of interconnected departments at the University. We would meet with someone from the landscaping department and hammer out a tentative plan, then take said plan to the real estate office to have them point out things they needed and a new plan was created. All the while, we had to work to create a solid proposal for the office of sustainability to fund and promote our project. In total, it took 9 months from conception to the final approval of our project.

Despite the bureaucratic hurdles, the enthusiasm from faculty and community members kept us motivated. The project was financed entirely by a $3,000 SCIF grant; following a nine-month planning phase (late summer 2023 through spring 2024) devoted to site assessments, design revisions, permitting, and plant procurement, we completed the planting itself in a single workday, with the grant covering all materials and installation expenses. (Figure 1).

As the planting day approached, our focus shifted to two main areas- finding together volunteers and purchasing and cataloguing the plants. In a fortunate turn of events, Friends of Monarchs Utah had recently received a large donation of milkweed plants, which we supplemented with 60 additional plants from community donors. This allowed us to allocate funding to other aspects of the project.

On planting day, 11 volunteers ranging from current students, former students, and community members show up to help. Altogether, we planted 125 plants (Pictures 1-4). The work was demanding, requiring frequent breaks, but seeing the waystation come to life made it all worth it. The work was overseen by a representative from Friends of Monarchs Utah who had overseen several other waystation installations throughout Utah.

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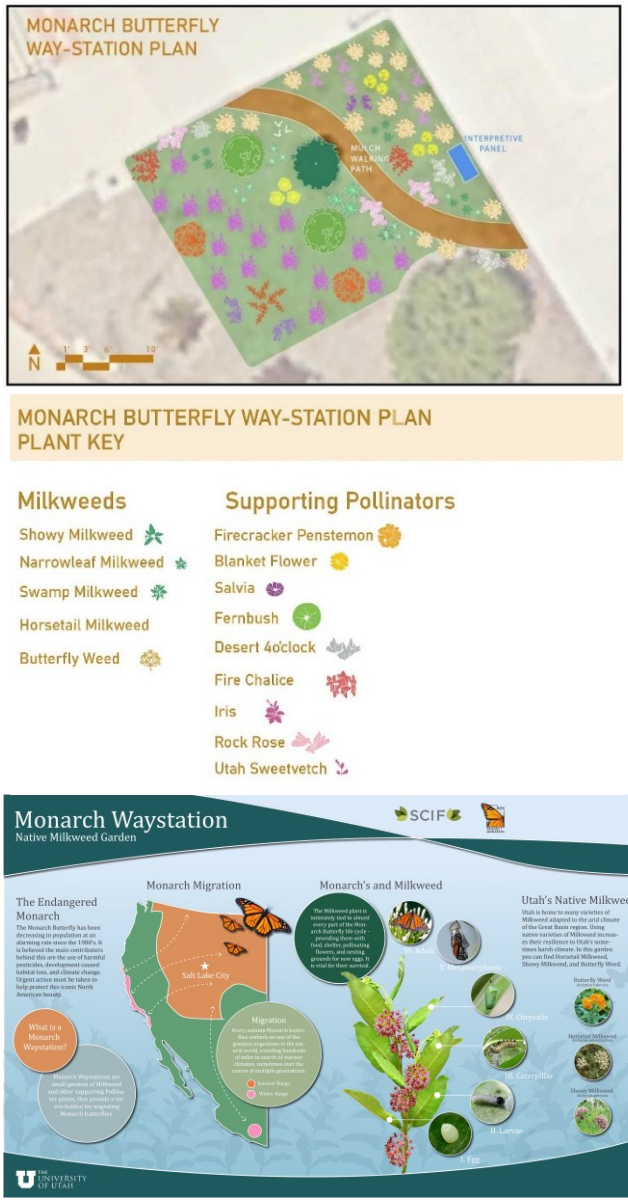
The rest of the year was spent watering, weeding, and providing further care for the plants. Monthly during the non-winter season, a weeding day is held where volunteers come to assist in upkeep and maintenance. Watering is automatically done daily by sprinkler. A walking path was installed, making the space accessible for students and staff. Almost immediately, students began using it as a quiet reprieve between classes, pausing to observe the flowers and hoping to spot a monarch butterfly.

Figure 1. Map of the Waystation (Top) with Key (Bottom Left) and our Interpretive Panel (Bottom Right).



While we did not conduct a formal survey, anecdotal observations suggest that the waystation has already had a positive impact. During peak class hours, students were frequently seen pausing along the walking path, resting on nearby benches, or observing the plants. Faculty and staff also commented on the calming presence of the garden. These consistent patterns of engagement point to the space's value as a restorative microenvironment. Future student groups may consider formal surveys or usage tracking to further quantify these benefits.

Figure 2. Pictures 1 and 2: Volunteers on Planting Day.

Looking ahead, the next year will be particularly exciting as the plants reach full maturity, further enriching the space. Some plants may need to be replaced, and we are in discussions to expand the waystation and install an educational panel about monarch conservation and the health benefits of green spaces. We have additional funding from the SCIF grant that covers replacement plants and other funding costs as the project continues. The Bloom Collective, along with the landscaping department, will monitor and continue plant care and maintenance in the future. This also includes any potential expansion of the area, subject to further approval from the school. No ethics approval was needed, as the project did not involve human or animal subjects.

Reflections

This project was an invaluable experience in collaboration, grant writing, and project management. It reinforced how small-scale conservation efforts can have meaningful public health benefits. The waystation serves as both a habitat for an endangered species and a wellness-promoting space for students. We are especially grateful to SCIF for supporting our vision, as well as the various University of Utah departments, Friends of Monarchs Utah, and community members who contributed their expertise, volunteer time, and generous plant donations.

Figure 3. Pictures 3 and 4: Blooming Blanket Flower (left) and Firecracker Penstemon (right) in bloom.

Before its creation, the area was an unused, mulch-covered hill, frequently trampled by students rushing to class. Now, people walk more slowly, taking in the blooming flowers and pausing for a moment of peace. This transformation shows the potential of integrating nature into urban spaces, not only just for ecological reasons, but for the well-being of the community as a whole.

The lengthy approval process often left us wondering if we would ever reach the finish line, and moments of discouragement were common. Yet those setbacks forged our tenacity. Long meetings, repeated revisions, and hard-won compromises taught us the perseverance required for work of this scale. Ultimately, we proved to ourselves that we can deliver on a project of this magnitude. It has become our flagship, an achievement we'll reference for years to come as the first entry in a growing list of successes. We hope this initiative inspires similar projects that demonstrate how urban environments can be designed to benefit both people and nature.

Summary – Accelerating Translation

Public Health Experience Creating a Nature Space for Undergraduate Students

Monarch butterfly populations in the western United States have declined by more than 90% since the 1980s, while college students are facing increasing levels of stress and disconnection from nature. Our project set out to address both issues by transforming an unused hillside on the University of Utah campus into a monarch butterfly waystation and student greenspace. With support from a $3,000 Sustainable Campus Initiative Fund grant, our student team from different disciplines, architecture, city planning, biology, and medicine, collaborated with university departments and the nonprofit Friends of Monarchs Utah to design, fund, and implement the project. After nine months of planning and approvals, we organized a volunteer planting day, installing 125 native plants including five species of Utah milkweed along with other flowering species that provide food and shelter for pollinators year-round. The site was completed with an accessible walking path and is maintained through automated watering and monthly volunteer weeding days. Since its creation, students and faculty have been observed using the area as a place of rest and reflection, often pausing to enjoy the flowers or search for monarchs. While we did not conduct formal surveys, consistent engagement suggests that the space functions as both a pollinator habitat and a restorative environment that supports mental well-being. This project demonstrates how small-scale, student-led conservation can connect ecological sustainability with public health.

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