Proposal to Saguaro National Park Invasive Species Research Fund

**Recruitment and retention of volunteers for highly challenging work in invasive species removal**

(Your name and email address)

(Your high school and date of graduation)

Purpose

The purpose of this proposal is to address an important issue for Saguaro National Park managers: how to recruit and retain volunteers who are willing to work in the field independently, but safely under harsh conditions such as heat and rocky slopes, to remove invasive plants such as buffelgrass?

Saguaro National Park desperately needs volunteers who are willing to work independently to pull invasive plants. However, they are unable to retain many volunteers who initially express interest, likely because the work is very physically demanding. Potential volunteers must be both very dedicated to the task and comfortable working in the desert environment, which can be hot even in winter, with many prickly plants, dangerous animals such as rattlesnakes, and steep slopes.

Yet the park *does* have a small cadre of experienced volunteers who are extremely dedicated to invasive plant removal and able to safely accomplish a huge amount of work. The park would love to “grow” this volunteer group by doing more targeted recruitment of volunteers who are pre-adapted to this type of work, and then to retain these volunteers. The goal of this project is to provide the park with advice on how to do this by using social science methods.

Specifically, I would 1) do in-the-field interviews (with permission) of current volunteers to find out what motivates them, what challenges they face, how they personally overcome them, and what advice they have for finding other volunteers who share their passion and commitment. Then I would 2) search the scientific literature to apply these motivation types more broadly to the question of how organizations successfully connect to the right type of volunteer. Finally, I would 3) apply these recruitment strategies to the local Tucson community to provide specific target audiences for Saguaro National Park managers.

Background

There is a growing body of social science literature on how to recruit and retain volunteers with specific interests and skills, including in ecological restoration work. Alamenciak and Murphy (2024) addressed the many motivations and barriers volunteers have in participating in ecological restoration projects. They found five core motivations for success: 1) having a positive environmental impact, 2) acquiring and sharing knowledge, 3) caring for the environment, 4) social interactions and community, and 5) human health and well-being. This literature has also examined both intrinsic and extrinsic types of motivation and emphasize the importance of aligning recruitment messages with these motivations.

Research shows that although one key to successful recruitment in ecological restoration is to attract passionate individuals who see themselves as protectors of nature, an important second step is to identify individuals who already enjoy physical work in nature (Bible and Clark-De Renza 2023). One way to accomplish this is by leveraging existing outdoor communities who already enjoy hiking, climbing, and other recreational activities.

For volunteer retention, several studies focus on understanding the barriers to this type of volunteerism. These include (as Saguaro National Park managers have observed) the physical demands of the work itself. But another potential barrier for invasive species removal is volunteer burnout: a feeling that the work is simply not progressing, or a failure of personal recognition (Alamenciak and Murphy 2024). Volunteers often seek, but do not always find, clarity in their role within the broader mission (Hunter 2010). It is easy to look at a large area of invasive plants and feel that one person’s role cannot make a difference. Volunteers want to see the Big Picture impact of their work. They want to have a clear understanding of a project’s goals and outcomes.

Beyond targeting the right types of volunteers, these studies also emphasize the importance of providing opportunities for skill development (such as workshops or training in restoration techniques) to appeal to volunteers with both existing outdoor skills and personal growth ambitions (Alameniciak and Murphy 2024).

Methods

This study will consist of field work with volunteers, a review of the existing literature, and an in-depth study of issues and opportunities in Saguaro National Park and Tucson, Arizona.

1. With permission (and permits if needed) I will meet with successful volunteers at Saguaro National Park. I will go out into the field with them and pull buffelgrass so that I can better understand their motivations and barriers.
2. I will do a comprehensive review of the literature on volunteer recruitment and retention, with a focus on both the opportunities and challenges of outdoor environmental volunteer work. This review and volunteer interviews will be summarized in an outline of the specific challenges and opportunities facing Saguaro National Park invasive species volunteerism.
3. I will use the review to identify recruitment techniques for targeting groups in Tucson that have a high likelihood of retention as volunteers in invasive plant treatments; and I will then provide an outline of suggested methods (such as training ideas and volunteer awards) that might increase the success of volunteer retention.
4. Finally, I will publish a review article on my work that will summarize specific suggestions for Saguaro National Park staff to increase success in recruitment and retention of invasive plant volunteers.

Products

My final product will be a report that follows a scientific literature format (Abstract, Introduction, Methods, Results, and Management Implications) for Saguaro National Park managers. I plan on presenting my results in a powerpoint presentation to Saguaro National Park and other venues suggested by park staff.

Literature Cited

Alamenciak, T. and S.D. Murphy. 2024. Motivations for volunteers to participate in ecological restoration: a systematic map. Restoration Ecology. <https://doi.org/10.1111/rec.14155>.

Bible, J. and S. Clarke-De Renza. 2023. Environmental volunteers endorse diverse motivations: using a mixed-methods study to assess initial and sustained motivation to engage in public participation in science research. Citizen Science Theory and Practice 8:52. <https://doi.org/10.5334/cstp.506>.

# Hunter, A.T. 2010. Why volunteer for the environment?: an exploration of environmental volunteer motivation, satisfaction and retention. MS thesis, University of Victoria. [Why volunteer for the environment?: an exploration of environmental volunteer motivation, satisfaction and retention. (uvic.ca)](https://dspace.library.uvic.ca/items/44176397-d11c-4a98-a035-63f85c091928).