PATHWAYS FOR DIVERSITY IN THE OUTDOORS: ALUM MEMORIES FROM THE PINES FELLOWSHIP

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A Short Love Letter to PINES

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LIST OF ABBREVIATIONS

BFT	Black Feminist Theory
CMW	Collective Memory Work
CTN	Connection to Nature
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and other identities not encompassed within the acronym
PINES	Pathways into Natural Environments and Science
TLC	Triangle Land Conservancy

ABSTRACT

PATHWAYS FOR DIVERSITY IN THE OUTDOORS: ALUM MEMORIES FROM THE PINES FELLOWSHIP

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Employees in the outdoor field are disproportionately white and male (OIA, 2023) with racialized staff, women, and nonbinary people having higher rates of employment attrition (Taylor, 2014). Outdoor "pathway programs" represent one solution to address the lack of diversity as they provide resume building experiences for youth to explore their passions and gain marketable skills (Dockry et al., 2022). These programs can address retention concerns by forming a supportive community while simultaneously facilitating deeper connections with nature (Gillard et al., 2014), though few studies have examined their efficacy. To address this gap, this study explored alum experiences from the Pathways into Natural Environments and Science (PINES) Fellowship, specifically related to creation of community and connection to nature. To explore alums' memories of program experiences, we used a Collective Memory Work methodology (Johnson, 2018) grounded in Black Feminist Theory (Collins, 2000). Data generation occurred through written participant narratives of their memories from the program, followed by a focus group where we collectively analyzed each narrative. Framed in theories around belongingness (Goodman, 2017), communitas (Turner, 2010), and thriving (Love, 2019), results include 1) a discussion of the power of community building as central to the success of

the program; 2) participation in an outdoor community as validation of a new “outdoorsy” identity; and 3) “the ripple effect” of bringing new friends into future outdoor endeavors. We end with recommendations for educators and practitioners working toward creating inclusive outdoor spaces through pathways programs.

Keywords: Collective Memory Work, community building, connection to nature, pathways programs, Black feminist theory

CHAPTER ONE: INTRODUCTION

The State of Diversity in Environmental Organizations Report (Taylor, 2014) looked at a wide swath of environmental organizations throughout the United States and found that both minority ethnic groups and gender diverse people are drastically underrepresented in environmental career paths. The report states that ethnic and racial minorities make up less than 16% of the staff and board members of the environmental organizations reviewed. This contrasts with the 42% of the US Population who are ethnic minorities or people of multi-racial backgrounds (U.S. Census Bureau, 2020). When looking at gender diversity, the report notes that gender disparities have improved when purely looking at the gender binary split as 60% of new hires have been women. However, 70% of the positions of power are still held by men. The report did not include statistics on people who fall outside of the gender binary, but did note that overall, the LGBTQ+ community is drastically underrepresented on staff, boards, and participants in outdoor organizations. To compound the problematic nature of limited information on gender diversity in the outdoor career field, the 60% of women new hires were primarily white women, pointing to the need of an intersectional approach for any solutions to improve diversity.

In a more recent report on outdoor recreation in general, the Outdoor Industry Association found that over 70% of people who participated in outdoor recreation in 2022 were white, and that people who identify as Black continue to be the lowest represented demographic in the study (Outdoor Industry Association, 2023). This report again primarily focused on statistics around the gender binary, but noted that when compared to other adult groups, people within the LGBTQ+ community participate in outdoor recreation at a higher rate. These numbers

show a positive trend for diversity in outdoor recreation, however, neither recreation nor professional fields in the outdoors reflect the diversity in gender or racial backgrounds that are found in the American people (Outdoor Industry Association, 2023; Taylor, 2014). This shows that there is a disparity in access to the benefits of being in nature as well as pursuing outdoor career paths.

Benefits and Barriers

It is well documented that there are physical, emotional, and mental health benefits to spending time outside (Mutz & Müller, 2016; Steeves et al., 2023; Twohig-Bennett & Jones, 2018). Beyond health, even further benefits can be found when participating in outdoor activities early on in life. Spending time outdoors as a youth with an intentional curriculum can promote pro-environmental attitudes and behaviors (DeVille et al., 2021), have an influence on future career choice (Garst et al., 2015; Hiller & Kitsantas, 2014), and increase connection to nature (Garner, 2012). Connection to nature (CTN) is the relationship that humans form with natural spaces and environmental features (Garner, 2012). Chang et al. (2024) was able to show that a lower CTN was associated with lower benefits received when participating in outdoor activities and Hughes et al. (2019) found that CTN is a dynamic relationship throughout an individual's lifetime with teenagers and early adults often feeling the lowest connection to nature during this timeframe. This means that for young adults and teenagers to have the best chances of receiving the benefits of spending time in nature, it is important to establish a strong CTN during these critical years; however, if the person does not feel safe or supported, that connection will be difficult to create.

The Need for Community

When trying to address the lack of diversity in the outdoors, it is important to recognize the barriers that are keeping people from entering and benefiting from these spaces (Fehnker et al., 2022). The feeling of safety and comfort in the outdoors is one of the greater barriers for both racially and gender diverse people to participate in outdoor activities (Gillard et al., 2014; Goodman, 2022; Powell, 2021). For people to feel safe and comfortable recreating, let alone entering the career field, outdoor organizations need to actively take steps to begin engaging with and fostering community. This could include inviting the community's voice into the conversation by completing an organizational evaluation that can identify areas of need or barriers before taking the step of building safe spaces for all to receive the benefits of nature (Craig, 2011; Goodman, 2022). For youth, one of the best ways to envision themselves within a career and feel motivated to pursue it is through representation (Martin & Fisher-Ari, 2021). The ability to see supported and happy staff who represent their own identities helps contribute to a sense of belonging and community so that they then feel welcomed within the field (Garst et al., 2015).

The concern of diversity through both lack of access to recreational sites as well as demographics within the career field is beginning to be recognized by environmental organizations (Taylor, 2014). While these same organizations have stated that there should be more diversity initiatives implemented in the outdoor career world, few have provided concrete examples of progress in the Taylor (2014) report. Before any programs are built, there first needs to be an establishment of trust and building of community, so that the members the organization is trying to reach feel welcome, safe, and supported by the people they already have relationships with (Craig, 2011; Howard et al., 2016). To address staffing concerns, the Taylor (2014) report

also notes that hiring practices are often not inclusive to all communities and asserts that outdoor organizations are not effectively utilizing established pathways such as internships and other programs creating a "ruptured pipeline" for talent in the outdoor career field. One potential solution is the creation of “Pathways Programs” to create a stronger and more diverse pool of applicants to limit this talent loss and better engage future career applicants (Bianco et al., 2011; Exec. Order No. 13562, 2010; Taylor, 2014). These types of programs allow for community building, connections to nature, experiential learning opportunities within the field, and exploration of youth’s passions.

Career Pathways Programs for Diversity

“The Federal Government benefits from a diverse workforce that includes students and recent graduates, who infuse the workplace with their enthusiasm, talents, and unique perspectives” (Exec. Order No. 13562, 2010). Executive Order No. 13562 (2010) recognizes that hiring processes create barriers for students and recent graduates to enter careers in the federal government, and that the government would benefit from removing these barriers to create a more diverse workforce. The Executive Order established the recruiting and hiring processes to be adapted to include clear pathways and training for marginalized youth, through the Internship Program, Recent Graduates Program, and the Presidential Management Fellows Program, which became collectively known as the “Pathways Programs.” The U.S. National Park Service utilizes these Pathways Programs to introduce high school students up to graduate students to career options within the National Parks (US National Parks Service, 2022). Through real-time exposure to career options, young people are better able to decide what paths they would like to pursue in their education and in their career goals. For example, the National Parks Service currently has pathways program opportunities on the government job site, USA Jobs. An

example that was recently posted includes Training Park Guides for students to be able to gain skills and experience in guiding interpretive programs at nationally significant sites and be paid for their work, while connecting with nature (US National Parks Service, 2022). Since the creation of the federal Pathways Programs, other organizations have begun their own programs modeled from the career training and recruiting established in 2010. Programs through the YMCA, Three Rivers Park District, and Triangle Land Conservancy all focus on supporting systemically disenfranchised youth by providing experiential learning opportunities that allow youth and early career professionals to explore the career options that they have available to them (Three Rivers Park District, n.d.; Triangle Land Conservancy, 2022; YMCA, 2024). These organizations have recognized that reciprocally engaging with diverse youth also has a benefit for the organization by providing space to incorporate new voices into their current work, which fosters future stakeholders to continue to support their missions (Bianco et al., 2011; Triangle Land Conservancy, 2022).

There is little research on these types of programs, with only one directly looking at the three-part Pathways Program established by the federal government. This study reviewed the efficacy of diverse employment coming from the student trainee and internship programs provided by the USDA Forest Service (Dockry et al., 2022). The researchers found that the programs were effective at bringing in diverse employees into the field at the internship level; however, the retention rate of those who were then hired as full-time employees was lacking. The researchers highlight that these programs show success at the beginning, however, there is a need for creating healthier and more welcoming work environments to improve retention practices for the internship programs to make a difference in diversity within the career fields. Dockry et al. (2022) suggest that further research on these programs is needed to determine what factors

contribute to staff retention for diverse employees. I believe that the groundwork to create a difference for diverse staff retention begins during the pathways program with the organization building community and a sense of belonging and intentionally creating space for the inclusion of voice to give autonomy and account for the needs of participants. Depending on the organization, the goals vary on whether the program is meant to set up participants for jobs within their own organization or within the greater field. This intentional work has the potential to create a more supportive environment, especially when the organizations can keep participants within their own workforce or their community of partners. To date, there have been scant studies completed on pathways programs outside of the federal government or within the broader outdoor career field. Therefore, the purpose of this study was to explore the experiences of pathways program alums from the PINES Fellowship, specifically as it relates to their knowledge of outdoor career paths, connection to nature, and creation of community.

The PINES Fellowship

Similar to the Pathways Programs utilized by the National Parks System, the Pathways into Natural Environments and Science (PINES) Fellowship was launched in 2022 by Diquan Edmonds at the Triangle Land Conservancy greatly in response and recognition of the lack of diversity in outdoor career paths (Triangle Land Conservancy, 2022). The program is located in the Triangle of North Carolina and is in partnership with Knightdale High School where 88% of the student body represent marginalized populations (National Center for Education Statistics, 2022). Each spring semester, the program hosts a diverse group of ten students who represent multiple and intersecting identities at the Bailey and Sarah Williamson Nature Preserve in Raleigh, North Carolina. The goals of the program are to:

> 1) Provide high school students with information and resources for future opportunities in Natural Environments and Science-based careers; 2) Introduce students to mentors in the field of conservation; 3) Foster future environmental stakeholders by providing space to incorporate fresh; new voices into the outdoor narrative; 4) Build community while connecting students to nature. (Triangle Land Conservancy, 2022)

As part of these goals, the organization intends to remove as many barriers as possible to diverse student participation by compensating the student fellows $1500 for the less than 100 hours committed throughout the semester and providing additional funding for professional development and outdoor gear necessities. The students meet at the nature preserve at least once per week, where a different outdoor career path or guest speaker is presented to expose the students to as many pathways as possible. The students are also given opportunities to build skills through authentic outdoor experiences that they can add to their resumes or college applications. As part of fulfilling the third and fourth goals of the program, the students are given the opportunity to participate as leaders in their final year where they actively participate in the planning of the program's schedule and career paths that are highlighted each week. They are also given the opportunity to work with other staff members and share their perspective on current conservation issues that are impacting their communities. This simultaneously centers their voices within the conservation narrative and empowers the students by recognizing them as valuable members of the community who have knowledge, opinions, and impact on concerns within the field.

While there are many pathways and similar programs in existence, very little research has been done on these types of programs for outdoor career paths, especially ones that support marginalized communities. While this study focuses on one program, it has larger implications

for the greater knowledge base of the surrounding literature, specifically for how these programs work and how to improve them in the future. Aligning with the goals of the PINES Fellowship, this study directly creates space to include voices of marginalized youth in the literature and the greater outdoor narrative. While some research looks at creating a more diverse way of being outdoors (Orozco et al., 2024; Schmidt, 2022), this study and program in particular focus on working towards more diverse people in traditional outdoor career pathways. As this study was conducted at the end of the third cohort of students in the program, this provided invaluable knowledge for both the leaders of the program and the future participants to better understand how to best achieve the goals of the program. As suggested by Dockry et al. (2022), examining an early-stage pathways program's efficacy of getting youth into the intended field and supporting them throughout their career path can have larger implications across disciplines.

To date, there have not been any studies on the efficacy of the PINES Fellowship in particular. Therefore, the purpose of this study was to explore the experiences of pathways program alums from the PINES Fellowship, specifically as it relates to their knowledge of outdoor career paths, connection to nature, and creation of community. This study aimed to answer the following research questions. (1) What are the experiences of PINES student participants around connection to nature? (2) What are the experiences of the PINES student participants around creation of community? (3) What knowledge of career paths in the outdoors do students have after completion of the PINES Fellowship? Utilizing Collective Memory Work (Haug, 2008; Johnson et al., 2018) the research design was grounded in Black Feminist Theory (Collins, 2015) specifically the ideas of intersectionality (Crenshaw, 1991), experience as a criterion of meaning (Collins, 2000), and the ethic of care and its impact on community (Collins, 2000; Ruiz Guerrero, 2019). Black Feminist Theory encourages the research process to be

relational, disrupting traditional research power structures, and encouraging participant community building. This design concentrates on a collaborative approach to research to decenter power and allow for intersectional identities and narratives to take up space. In the following chapters, I will begin with a review of the literature followed by an exploration of the study's design, Collective Memory Work. This is then followed by the results of the study and discussion with future recommendations from the co-researcher team provided for research and practitioners.

CHAPTER TWO: LITERATURE REVIEW

In this literature review I begin by making a case for the need of a shift in the outdoor narrative away from the white and male dominated story and imagery that pervades our society's psyche. Then I review what is currently known about the impact of fostering community in the outdoors with youth groups in programs such as the PINES Fellowship. This is explored alongside how connection to nature can strengthen a supportive environment for future career paths to be envisioned by diverse individuals. Finally, I discuss how this shift in the narrative can influence diverse future employees and why it must coincide with the inclusion of youth's voices of all identities as they are the future stakeholders and caretakers of our environments.

The Need for a Shift in the Outdoor Narrative

In outdoor recreation and the professional field alike, there is a dominant narrative that pervades American society about what "nature" is and what it means to be "outdoorsy." Today, nature often refers to green spaces beyond the urban environment where people can escape the hustle of work and the ever-present draw of technology (Chawla, 2015; Hughes et al., 2019; Salazar et al., 2022). This is not a new idea as the definition has evolved within the confines of the society and history which it was established. The ideal of "nature" and "wilderness" as pristine and untouched green space was introduced during the romanticism movement in the United States in the 1800's (Roberts, 2011), during a time of genocide and forced removal of Indigenous people from their homes and places they held most sacred so that the land could become national parks and other recreational areas for white people to access on their own terms (Goodman, 2022; Mowatt, 2020). This abhorrent and devastating history has created and perpetuated the colonialist practice of "conquering" the landscape, which in turn has normalized

mindsets such as “bagging” peaks and “dominating” rock faces in outdoor recreation today (Orozco et al., 2024). While everyone’s experiences are different and unique, the images conjured when thinking of an “outdoorsy” person often culminates in the “lone white man” and follows tropes of “rugged individualism,” “roughing it” in the woods through primitive camping (Cachelin et al., 2011; Orozco et al., 2024), or reaching the “sublime” by hiking into wilderness areas “untouched” by humans (Roberts, 2011). These images are exemplified and reproduced through the reflection of societal biases when artificial intelligence tools are given prompts such as “photo realistic outdoor recreation leader” and it only produces images of fit, able bodied, white men wearing branded outdoor gear (North et al., 2024).

This narrative perpetuates a history of violence and forced separation from the landscape, both physically and mentally. Broadening the definition of nature to be more inclusive of the entire human experience would be to the benefit of everyone, including white people, as it would better encompass the myriad of ways that people can and do connect with nature (Cachelin et al., 2011; Orozco et al., 2024). To recognize the limitations of language, the often horrific history of conserved land in the United States, and the complexity of what can be a spiritual, emotional, and even physical experience for many when connecting to nature, researchers have begun to grapple with this need for a redefining of the term. Schmidt (2022) uses “~~nature~~” throughout their research to place the term “under erasure” to recognize that the current definition in dominant culture is not enough. This exemplifies the need for expansion of definition to include a larger swath of lived experience than what is upheld by the dominant narrative and current structural hierarchy. This approach of redefinition in research is for the reader, researcher, and participant to remain open to the varied definitions that come forth throughout the research process (Schmidt et al., 2022; Schroeder, 2005). Holding space for multiple realities and

definitions to exist creates a more holistic example that allows differences to coexist (Lorde, 1987), and better allows for individuals of all backgrounds to receive the benefits of spending time in nature.

Benefits of a New Outdoor Narrative

Spending time in nature has many benefits across ages and demographics (Mutz & Müller, 2016; Steeves et al., 2023; Twohig-Bennett & Jones, 2018). Studies have shown that when an individual has a connection to nature there are numerous physical (Steeves et al., 2023), mental (Chang et al., 2024; Mutz & Müller, 2016), and emotional (Chawla, 2015) benefits to spending time outside. Several studies found explicit benefits for youth when exposed to the outdoors in a meaningful way at an early age, specifically benefits include an increase in emotional wellbeing and resilience as well as academic performance (Chawla, 2015; Hiller & Kitsantas, 2014). With the growing pool of evidence surrounding youth benefits, it is becoming clearer that intentionally designed outdoor programs that prioritize inclusion of diverse voices and narratives are needed to best support future generations. Spending time in nature at an early age can help increase one's connection with nature (Garner, 2012; Hughes et al., 2019), can help form a sense of community (Howard et al., 2016), and foster environmental stakeholders while setting up future career pathways and opportunities (Hiller & Kitsantas, 2014; Howard et al., 2016).

Because of the lack of diversity of both outdoor careers and general outdoor recreation the narrative continues to be reinforced and acts as a barrier for people outside of the "outdoorsy-white-man" image (Orozco et al., 2024; Outdoor Industry Association, 2023; Taylor, 2014). The literature has long explored reasons for why the disparity exists and historically the main features identified were primarily physical, such as time, cost, and distance from natural sites (Xiao et al.,

2022). While these barriers are true and do exist, more recent research has shifted to exploring the systemic and social barriers that contribute to this divide. This has meant looking at the negative impacts of generational trauma from historical and current systemic racism (Goodman, 2022; Lee & Scott, 2017), the lack of social connection and community in outdoor environments (Goodman, 2022; Schwartz & Corkery, 2011), and the current outdoor narrative and it's direct impact on outdoor participation (Orozco et al., 2024; Schmidt, 2022). One solution identified is increasing representation and affinity groups to create spaces for people of color and members of the LGBTQ+ community to feel supported in these environments that have often been spaces of feeling "othered" (Gillard et al., 2014; Powell, 2021; Roberts & Henderson, 1997). Increasing the diversity of participation in the outdoors and expanding the definition of what it means to connect with nature would benefit all. The current narrative has directly had a negative impact both on the diversity of outdoor participants as well as the outdoor career field.

The Outdoor Narrative's Impact on Outdoor Careers

In recent history, outdoor career paths, especially those that are higher paying and associated with higher education, have heavily skewed towards white and male demographics (Taylor, 2014). Environmental science degree programs at the undergraduate level are one of the most disparate in racial demographics, with gender diversity faring better, but primarily for white women. This is similarly reflected in the workforce in environmental organizations, however, higher power positions are still primarily made up of white men (Taylor, 2014; Taylor et al., 2019). When looking at outdoor recreation instead, the demographics rates also closely align, especially for Black people, while white people continue to be overrepresented. Members of the Latinx community and LGBTQI+ community have seen an uptick in participation in recent years, but these communities are still woefully underrepresented in comparison to population

statistics of the people of the United States (U.S. Census Bureau, 2020), with Black communities consistently having the lowest representation of any of the groups reviewed (Outdoor Industry Association, 2023).

While there are some positive trends within participation, these groups still do not reflect the diversity of the American people, especially when focusing on paid positions within outdoor organizations (Taylor, 2014; U.S. Census Bureau, 2020). Until this division of access and power within the outdoor career field is addressed, there will not be a shift in the narrative to include more diverse voices. To take this a step further, without the representation of diverse identities and the building of connection and community, young people will not be able to see themselves in these roles in their future. This work needs to be recognized by the current administrators of outdoor organizations, specifically by taking responsibility for incorporating fresh voices and intentionally bringing in better representation of marginalized communities within positions of power in outdoor career paths. This will pave the trail for programs to establish and begin addressing hiring and retention concerns for diverse communities in outdoor careers. One way to do this is through Pathways Programs by creating a supportive community that develops professional skills within the outdoor career field.

Pathways Programs

Pathways Programs were introduced in the 2010s, after the federal government established their own recruiting and training programs with the same name for many of their branches (Exec. Order No. 13562, 2010). The intention of these programs are to provide experiential learning opportunities within the field and allow youth to explore the opportunities that they have to pursue in their futures (Three Rivers Park District, n.d.). The National Parks Service (NPS) utilizes the pathways program conduit to engage with diverse young career

professionals through the Internship Program, the Recent Graduates Program, and the Presidential Management Fellows established by the Executive Order No. 13562 (Exec. Order No. 13562, 2010; US National Parks Service, 2022). For example, as of September 2024, NPS had a "Student Trainee (Park Guide)" position hosted at Yosemite National Park at a GS4 level position with the pay range being $21.10-$27.42 per hour. To qualify, applicants were required to be actively enrolled in an educational institution, have two years beyond high school, and their permanent address must be within 50 miles of Merced, CA (USAJOBS, 2024).

Positions like the one listed above have the potential to directly support and include the surrounding community of the parks. However, it must also be noted that the institutions and organizations that host these programs directly benefit from these programs. This is through curating their workforce with well-trained students and simultaneously checking their diversity initiative boxes. Outdoor careers, along with others, have long used various strategies to train and supply the fields with new employees through internships, residency programs, specialized certifications, and other programs. If the organization's approach to training young professionals is purely meant to supply the workforce and "check boxes" such as racial or gender diversity, this one-sided approach is not going to create a supportive environment for the new employees to succeed. Pathways Programs offer the opportunity for a more reciprocal approach as opposed to the traditional competitive and isolating nature of internships or residency programs. By focusing on building community within a cohort of students, and a network of professionals that the students can take with them to any organization, this both strengthens the potential for high quality employees to enter the field and for positive work experiences to increase retention throughout each stage.

This toolbelt of workforce development is important to have available and easily accessible early on to be able to expose students to different opportunities and allow them to explore their own interests and passions (Dockry et al., 2022). They also allow mission driven organizations to both foster future stakeholders and identify potential full-time staff members who could be hired soon after the end of the program (Bianco et al., 2011; Dockry et al., 2022; Three Rivers Park District, n.d.). Pathways Programs are unique in that it is easier to align with specific needs for specific groups, such as the goals of affinity groups in nature. They can start much earlier than internships and they have the potential to directly address the "ruptured pipeline" described in Taylor's 2014 report on diversity in environmental organizations.

This being said there is only one other research paper on Pathways Programs at the time of this study that looked into the efficacy of the program (Dockry et al., 2022). The study found that while the program was successful at bringing in a diverse pool of applicants at entry level positions, it did not seem to have an effect at higher paid positions and it found poor rates of staff retention once the members were hired (Dockry et al., 2022). This could point to the critique that some of these programs might be leaning more towards checking a box for diversity, rather than investing the time and energy into building a community that can provide support through every step of their career path. There are other contributing factors that could account for this and without further research into specific Pathways Programs, we would not know how best to address the current disparities in diversity within outdoor career fields. The intention of this research study on the PINES Fellowship was to help address these gaps in the literature and find potential solutions for these challenges.

The PINES Fellowship

The Pathways into Natural Environments and Science (PINES) Fellowship was established in 2022 by Diquan Edmonds at Triangle Land Conservancy (TLC). This program was built to create pathways of opportunities in the outdoor career field for systemically disenfranchised students in the Triangle region of North Carolina, with the goal of diversifying the future workforce within outdoor career fields. The program runs every spring semester with cohorts of ten students meeting on a weekly basis where they,

> …will learn about career opportunities in conservation, build relationships with TLC staff and board members, and learn about conservation through experiences surrounding TLC's four benefits of land conservation: safeguarding clean water, protecting natural habitats, supporting local farms and food, and connecting people with nature. (Triangle Land Conservancy, 2022)

The program was built to intentionally recognize and work to overcome the barriers for student participation (such as time, transportation from parents, and the potential need to work an afterschool job) by providing transportation as needed, necessary gear such as hiking boots, financial support for college applications or certification fees, and each student receives a $1500 stipend paid throughout the semester. There is also intentional language on the PINES webpage about community building and support as well as stating that students only need to have an "interest" in the program to apply. There is no prior experience in the outdoors that is necessary. The goals of the program are defined as:

> 1) Provide high school students with information and resources for future opportunities in Natural Environments and Science-based careers, 2) Introduce students to mentors in the field of conservation, 3) Foster future environmental stakeholders by providing space to

incorporate fresh, new voices into the outdoor narrative, 4) Build community while connecting students to nature. (Triangle Land Conservancy, 2022)

In the framework of the PINES Fellowship, outdoor career paths are defined in a very broad context. One reason is to account for the growth and potential of future careers, but another is to recognize that connecting with the outdoors and the term "nature" means different things for different people and cultures. For PINES, outdoor career paths broadly have a connection to a person's definition of nature and may have a STEM (science, technology, engineering, math) association to the career. These career pathways explicitly interact with and have benefits for natural and outdoor spaces (Triangle Land Conservancy, 2022). Past examples have included highlighting options such as conservation, ethnobotany, food justice, and local agriculture as well as tying in careers that students were interested in but had not yet considered the connections the career had to the environment such as microbiology and textiles.

TLC recognizes the need for improving diversity within the outdoor career field by explicitly creating space for fresh voices within the outdoor narrative, as outlined in the third goal of the program. The program website states, "There will also be an opportunity for TLC to learn from PINES participants, by soliciting input on important issues affecting our communities" (Triangle Land Conservancy, 2022). This intentional holding of space is important for and directly aligns with the fourth goal, "build community while connecting students to nature." Including the students within the organization's work and providing them with the opportunity to have influence and decision-making power is acknowledging them as valuable members of the community and provides the framework to directly create space for a narrative shift in the outdoor world. Getting the students to this point and providing the support to feel

empowered in outdoor spaces, first needs to happen through fostering community and connecting the students to nature.

Fostering Community through Connection to Nature

Pathways programs for outdoor career fields must focus on fostering community to create a safe and welcoming environment for all participants, especially those who are racially and gender diverse. As priorities of the organization's missions and recognition of the benefits of spending time outdoors, the organizations should also facilitate connecting to nature to foster pro-environmental behaviors. Fostering community through connection to nature are simultaneous initiatives as connection to nature cannot occur without feeling safe and supported within the environment first, and community in nature can help directly connect individuals to its significance in their lives.

Connection to Nature

Many studies explore the need for individual's connection to nature (CTN), with several different tools and scales developed to measure CTN (Carr & Hughes, 2023; Fehnker et al., 2022; Hughes et al., 2019). An increase in CTN has a parallel increase in pro-environmental behaviors (DeVille et al., 2021), an understanding of the need for conservation initiatives (Carr & Hughes, 2023), and for more sustainably minded actions within the outdoor context, but as well as within the community context (Zelenski et al., 2015). Decreasing CTN, especially in younger generations, is a concern due to the ever growing fast paced world of technological distractions, especially as CTN has a direct correlation in the benefits received from spending time in nature (Chang et al., 2024). But programs and curricula that incorporate simple activities such as reading, watching, or talking about nature show positive impacts on pro-environmental attitudes and even individual's mental health (Carr & Hughes, 2023; Chang et al., 2024; Chawla,

2015; Hughes et al., 2019). Because of this, outdoor organizations and leaders have the responsibility to make connection to nature a part of their missions, as it is often in their best interest due to the potential benefits of visitors and members becoming stakeholders and advocates in the future for environmental concerns (Carr & Hughes, 2023; Zylstra et al., 2014).

Connection to nature (or connectedness with nature) is defined as an understanding of one's relationship and relatedness to nature (Zylstra et al., 2014), the "personality trait" that influences our relationship with nature (Barbiero et al., 2023), and a person's identity within natural spaces (Salazar et al., 2022). The North American Association of Environmental Educators (NAAEE) has a practical guide for measuring CTN (Salazar et al., 2022) and other researchers have developed tools and scales to measure connectedness with nature (CWN) alike (Carr & Hughes, 2023; Garner, 2012; Hughes et al., 2019). The limitations of these tools are that they often end with coding to themes (Knight et al., 2025) which can inadvertently remove unique or novel information from the data generated, but more importantly, it can erase the larger context of the experience and the individual voices from the research narrative. The history and hierarchy of academia has meant that the voices of many have been erased throughout literature or reduced to a singular theme, therefore these tools were not utilized in the research design. Connecting to nature is often found and facilitated within one's community (Finney, 2014), which can act as a simultaneous benefit for spending time in nature.

Community Building

The need for community is innately human. Feeling connected to people and place, whether it be present, past, or future, builds a sense of belonging that positively impacts the psyche (Bennett, 2014; Reisner et al., 2015). Feeling connected and supported by community is especially important for youth as they begin to build and come into their identities (Craig, 2011;

Reisner et al., 2015). While some organizations have recognized fostering community as being a priority when setting their goals with outdoor youth programs (Three Rivers Park District, n.d.; Triangle Land Conservancy, 2022), little research has been completed on the impact of community building on one's sense of belonging in the natural environment. The research that predominantly exists focuses on outdoor affinity groups, greatly in the undergraduate programming realm. These studies have found that programs that focus on community building help with the difficult transition to the rigor of undergraduate curricula, through building a supportive cohort who can rely on one another and creating a sense of loyalty to person and place (DeVille et al., 2021; Goodman, 2022; Howard et al., 2016).

When considering career pathways, community is an important aspect of encouraging and supporting youth throughout their career aspirations (Garst et al., 2015; Holland-Smith, 2022). This is especially important to recognize when working with youth from marginalized communities as the outdoor career field is predominantly white (Taylor, 2014). Holland-Smith (2022) demonstrated the impact of how social positionality and early formative experiences continue to impact individual's career trajectories. They conclude that there needs to be a disruption in the current individualistic system to ensure that those who do not fall into the upper echelon of the social hierarchy have the confidence and opportunities to 1) enter the field and 2) be supported along the way. A stronger sense of connection and community has also been shown to increase emotional and mental resilience in youth (Johnson et al., 2014). This aspect is important for programs to consider as community can continue to support students throughout their career and potentially help them face barriers created by less supportive organizations or administrators. In alignment with this conclusion, the PINES program is intentionally kept small, with only 5-10 students in each cohort. This is meant to help build community and intentional

relationships to best support each individual along their career path of choice (Triangle Land Conservancy, 2022). Research has shown that spending time outdoors as youth with intentional curriculum can be beneficial to health (DeVille et al., 2021) have an influence on career choice (Garst et al., 2015) and increase connection with nature (Garner, 2012). To gain these benefits, youth need to have access to outdoor programs that support the creation of community.

In outdoor education curricula, place-based education combines a sense of community with connecting to nature to explicitly foster a care for the environment and the issues that directly impact a student's surrounding community (DeVille et al., 2021; Linden, 2016). The lack of community within natural spaces and sense of belonging has been listed as one of the greater barriers for racially and gender diverse people to access and connect with nature (Goodman, 2022; Schwartz & Corkery, 2011; Xiao et al., 2022). Organizations that set out to serve the community should prioritize this type of facilitation and connection building as it has the potential to benefit both sides of the equation. Individuals who connect strongly with and feel supported by their community have a sense of safety and belonging that can help facilitate further positive action, while the lack of community can have the inverse reaction with an equally negative impact for both the individual and the mission of the community organization (Craig, 2011; Howard et al., 2016; Reisner et al., 2015). TLC and specifically the PINES Fellowship acknowledge this concern and work to uplift the positive interactions of community building and connection to nature by creating space for the youth's voices to have an impact on important conservation concerns that are directly occurring within their own community.

Holding Space for Fresh Voices Utilizing BFT

The PINES Fellowship intentionally recruits students from Knightdale High School who are racially and gender diverse in comparison to the traditional outdoor narrative. These students

have intersecting racial, gender, and socioeconomic identities that affect the power, or lack thereof, they hold within the greater systems in our society. This directly impacts their access to, and opportunities afforded to them in the outdoors. Because of this and the relational aspect of the program and the research itself, I chose Black Feminist Theory (BFT) to guide the research process. There are three key aspects of BFT that directly align with the goals of the program and collective memory work. These are intersectionality (Crenshaw, 1991), experience as a criterion of meaning (Collins, 2000), and the ethic of care and its impact on community (Collins, 2000; Ruiz Guerrero, 2019). These three components come together through the necessity of care and support from the community, addressing the intersecting oppressions that each student may face, and acknowledges lived experiences as legitimate data, which validates the students' experiences and voices within the program as becoming a part of the outdoor narrative. In alignment with the methodology, Collective Memory Work, BFT encourages the disruption of traditional power structures within research and supports collective and collaborative approaches. In this section, I will provide a brief review of the history of Black Feminist Theory and its importance to this study. I will describe the four major tenants, which created the guiding theory behind the research design as well as the research process itself. Building on the tenants, I will describe how the ideas of 1) Intersectionality, 2) Experience as Knowing, and 3) Care and Community directly applied to this study and the PINES Fellowship and how they allow for a more specific and inclusive approach to encompass racial, gender, and socioeconomic identities.

Brief History of Black Feminist Theory

Black Feminist Theory (BFT) was created by and built specifically for Black women and is meant to explore the understanding of how Black women interact with and operate under the societal oppressions that are imposed upon them (Boone, 2020; Collins, 2000). With this

foundation, BFT has also contributed to the recognition and removal of systemic and institutional barriers and oppressions for many systemically disadvantaged identities (Boone, 2020; hooks, 1994; Ruiz Guerrero, 2019). As a theoretical lens, BFT can be employed to inform research design to question and challenge the oppressions that are associated with individual identities such as race, gender, and class (Ruiz Guerrero, 2019). When utilizing BFT, it can help elucidate how these identities interact and compound on top of one another to create a fuller story of the study participants' lived experiences (Collins, 2000; Ruiz Guerrero, 2019). This overlapping effect of oppressions has long been discussed, but the term "intersectionality" was specifically coined in 1989 by Kimberle Crenshaw (Cho et al., 2013; Crenshaw, 1991).

Black Feminism emerged in critical response to feminist movements historically leaving out and ignoring the needs of Black women, which instead greatly focused on the concerns of middle-class white women (Boone, 2020; Collins, 2000; hooks, 1994). While Black Feminism emerged in the academic sphere in the mid to late 1960s, BFT authors and theorists such as Patricia Hill Collins (2000), Audre Lorde (1984), bell hooks (1994), and Kimberlé Crenshaw (1991), have made it clear that many Black women have been engaging with this work long before these terms have become part of the academic lexicon. Because of these incredible women and their work, some of the most significant impacts of BFT have been through centering the ideology of liberation for all oppressed peoples and the explicit dismantling of systems of oppression that have become institutionalized (Ruiz Guerrero, 2019; The Combahee River Collective, 1995). In research, this is seen through explicit consciousness of power dynamics and when it is applied critically, it gives space for multiple realities to exist and to be re-interpreted (Lorde, 1987; Ruiz Guerrero, 2019). This re-interpretation is critical to both the research process

and to BFT as it emphasizes the importance of re-evaluating what has been considered "normal" as dictated by the dominant culture (Oesterreich, 2007; Ruiz Guerrero, 2019).

Defining Elements for this Study

Black Feminist Theory is rooted in the knowledge that is innate to the oppressed and centers on identifying and subsequently valuing this form of collective knowing (Ruiz Guerrero, 2019). This critical evaluation and knowledge production is meant to ultimately create change for the benefit of the community, no matter how uncomfortable the conversation may be for the dominant group (Collins, 2015; Ruiz Guerrero, 2019). Black Feminist Theorists implore that silence does nothing to create change, nor does it protect the individual or the group (hooks, 1994; Lorde, 2007). But through critical exchanges and collaborative work with the community that challenge our current and historical systems of power, change is possible that would benefit the entire ecosystem (Ruiz Guerrero, 2019). Collins (2000) lists four defining tenants of Black Feminist Thought: understanding lived experience as a criterion of meaning, dialogue and narrative is critical understanding and knowledge, the ethic of caring, and the ethic of personal accountability. In the following sections I will address how several of these tenants have evolved and their importance to this study and the PINES Fellowship, including the idea of intersectionality, lived experience as knowledge, and the importance of community.

Intersectionality

Within Black Feminist tenants lies an understanding that the "othering" of Black women is more than just because they are a woman *or* because they are Black (Haywood, 2022). The overlapping impact of both identities, let alone other identities, contributes to this lived experience and therefore criterion of meaning. The term intersectionality was widely adopted after Crenshaw's (1991) introduction of the all-encompassing term in 1989 (Cho et al., 2013;

Oesterreich, 2007). The idea, however, has long been acknowledged and understood by oppressed communities throughout history, with other reference terms such as “interlocking oppressions”, “simultaneous oppressions”, “double jeopardy”, “triple jeopardy” or any number of other descriptive terms (Crenshaw, 1991; Oesterreich, 2007; Ruiz Guerrero, 2019; The Combahee River Collective, 1995). The term’s popularity is greatly because it describes the overlapping interactions of multiple oppressions as if one is standing at an intersection, with more targeted identities equating to more roads overlapping the intersection, thus increasing the chances of being impacted by structures of oppression (Cho et al., 2013; Crenshaw, 1991). For this study and the PINES Fellowship’s goals, these explicitly include social identities such as race, gender, and socio-economic status that interact within the political, economic, and social systems that define our culture (Crenshaw, 1991).

Within the PINES Fellowship, intersectionality is considered when identifying candidates for the ten available positions each cohort year (Triangle Land Conservancy, 2022). The review process is meant to identify candidates who would receive the most positive impact from participating in the program based on which identities have systematically been removed from the conservation narrative in recent history. These include racial discriminations, women and genders that fall outside of the binary, and socio-economic statuses that have historically had limited access to what society has considered optimal natural spaces. To combat the history of positioning the youth as needing to be “saved” by the predominantly white-led organization, the students are directly involved in curriculum development and encouraged to implement other operations of knowing within the group dynamic. This has looked different for each cohort, but the second- and third-year cohorts had “student leaders” who were voted on by the group. The upcoming cohort has decided to update this hierarchical system and instead ask each student if

they would like to communally decide on where to take on more responsibility within the group, based on their skills and interests. This continues to be a learning environment that is consistently updated; however, these updates are youth led with the voices of those who have historically been left out leading the decisions that directly impact their lives. This form of dialogue and understanding that a person's experience is a valid form of critical knowledge is essential to the following ideal, experience as knowing.

Experience as Knowing

Black Feminist Theory exposes and brings light to the structural and systemic inequities within everyday life by creating space for lived experiences to be acknowledged and captured within mainstream consciousness (Collins, 2000; Ruiz Guerrero, 2019). While lived experience has not historically been recognized as a criterion of meaning in academia, BFT centers on this acknowledgement and validation (Collins, 2000). In research, the use of dialogue to explore and understand lived experiences is a logical source for data generation and aligns with the need for understanding intersectionality within BFT (Boone, 2020; Collins, 2000; Haywood, 2022). Dialogue helps create meaning by sharing emotion and opens space for connections between others involved. In the design of this study, this epistemology is centered through the methods chosen. Sharing individual stories in collective spaces follows this ideal, with written narrative and communal discussion during focus group as the vehicle for data generation. These methods continue to foster one of the central goals of the PINES Fellowship and a key element to BFT, the building of community.

Care and Community

In Black Feminist Theory, the ethic of caring contributes to the idea of fostering and creating community (Collins, 2000; Ruiz Guerrero, 2019). As previously explored, community

building within nature is a positive feedback loop of connecting and supporting the needs of individuals. Building community is a central goal of the PINES Fellowship as it is in recognition and response to the needs of youth to feel supported and safe within environments that they may not have been introduced to, or may not feel as proficient within (Craig, 2011; Triangle Land Conservancy, 2022). This community and network are also what students are able to take with them after participating in the fellowship. Setting up this community of care is intentionally meant to keep alum engaged, to support them in the program and in their next steps. hooks (1994) describes community and collaboration as a catalyst for positive change within our society. With this insight, she implores that love is what has the power to transform, and a community that upholds love and care will be able to make this positive change on individuals and our world. Love and care are central to the ideals of Black Feminist Theory and culminate beautifully in depicting the need for safe and supportive community. As such, these ideals will guide the design of this study, specifically during the focus group with sharing power through guiding questions coming from all members of the group. This is further explored within Chapter Three.

Conclusion

The literature has shown that there is a need for a shift in the outdoor narrative, specifically to include more voices. The current narrative has perpetuated hiring practices to overly favor white people, and specifically men, in the outdoor workforce in comparison to the demographics of the American people (U.S. Census Bureau, 2020; Taylor, 2014). This is having a direct impact on access to and connection with nature for racially and gender diverse people in the United States (Goodman, 2022; Outdoor Industry Association, 2023; Taylor, 2014). Connecting with nature has been shown to have many benefits including reduction of emotional

and mental stress (Steeves et al., 2023), and specifically for youth it has been shown to have benefits for academic performance (Hiller & Kitsantas, 2014), increase in pro-environmental behavior (DeVille et al., 2021), as well as overall mental wellbeing (Chawla, 2015). Beyond gaining the benefits of spending time in nature, there is a greater divide for paid positions when looking at target identities versus the dominant white male professional within outdoor career pathways, especially in higher power positions (Taylor, 2014). While strategies have been introduced to try and bridge this gap, such as internships, apprenticeships, and pathways programs, very little research has been completed to see the efficacy of the programs, especially when considering the intersectionality of individual identities and each person's lived experiences. Because of this, I chose Black Feminist Theory to ground this study focusing on the ideals of intersectionality (Crenshaw, 1991), experience as a criterion of meaning (Collins, 2000), and the ethic of care and its impact on community (Collins, 2000; Ruiz Guerrero, 2019). This approach helps highlight and recognize the systemic and structural barriers keeping diverse individuals from the field. But the solution can't stop at identifying the barriers, it must then also go on to create a supportive environment that can include the youth's voices, to provide what they need along the way into their career path of choosing. Pathways programs have the potential to bridge this gap, especially as they are more easily oriented to support a larger group and therefore create a supportive community, however, this has not been directly discussed nor reviewed by the literature.

CHAPTER THREE: METHODOLOGY & METHODS

The purpose of this study was to explore the experiences of pathways program alums from the PINES Fellowship, specifically as it relates to their knowledge of outdoor career paths, connection to nature, and creation of community. This study aimed to answer the following research questions. (1) What are the experiences of PINES student participants around connection to nature? (2) What are the experiences of the PINES student participants around creation of community? (3) What knowledge of career paths in the outdoors do students have after completion of the PINES Fellowship? The design of this study was guided by Collective Memory Work and grounded in Black Feminist Theory. The data generated was from short narratives written by participants, starting with a central prompt, allowing the narrative to develop through the sharing of stories. Collective Memory Work redistributes power in the research process away from top-down (research studies participants) toward collaborative (co-research knowledge generation) (Johnson et al., 2018) and aligns with a central goal of the fellowship, which is to continue to foster community, even after students have graduated from the program (Triangle Land Conservancy, 2022).

Collective Memory Work

Collective Memory Work (CMW) was originally developed in the 1980's by Frigga Haug. This methodology is grounded in Critical Feminist Theory and through repeated researcher reflexivity and a critical approach to hierarchies within the research process, researchers are able to recenter power and provide participant inclusion within the research design (Coes et al., 2018; Haug, 2008). This is done by creating a team of co-researchers who collectively share, explore, and analyze their own memories around a shared experience

(Johnson et al., 2018). CMW at its core is the collective examination of individual memories to explore and situate the experiences within context, culture, and social identities of the group (Johnson et al., 2018). Other studies show that this methodology can give agency and choice back to the participants, when research has historically been hierarchical and extractive (Clark, 2009; De Schauwer et al., 2018). CMW explicitly recognizes the exploitative nature of research and creates space for the participants to become collaborators with the researcher and requires the researcher to examine and reflect on their positionality (Johnson et al., 2014). This reflection is "recursive" in nature in that the researcher and co-researcher alike engage in a process of deconstruction and reconstruction of shared experiences and are asked to revisit the theoretical framework to ensure that the product of the study is meaningful to the participants and the community (Johnson et al., 2018).

This methodology works to flip power structures and puts an emphasis on relationships within the research process (Johnson et al., 2018). These aspects align with the goals of the PINES Fellowship around creating authentic connections with both nature and each other by building community. To align with the structure of CMW and the goals of the program, this study's design was grounded in Black Feminist Theory. This theory builds upon the tenants of CMW and is rooted in deconstructing power hierarchies by using an intersectional analysis to examine relationships between individual and the structural and symbolic features of oppression (Alinia, 2015; Collins, 2015). This emphasis on power and relationships makes it align well with CMW and creates a cohesive reasoning for this research process with this specific program.

Studies within the CMW methodology are part of the larger make up of participant action research where participant and researcher collaboratively examine issues around social justice, many directly focusing on meaning making of identity and the cultural experiences that influence

them (Coes et al., 2018; Johnson et al., 2014). CMW is based in social-constructivism and examines the individual's experience as well as the experiences of the group through a collaborative process of discourse analysis and examination of language (Johnson et al., 2018). As an example of a youth based CMW study, Johnson et al. (2014) created a team of nine collaborative participants who self-identified as part of the LGBTQ+ community. They were then asked to write a narrative on one positive and one negative memory that impacted their development of gender or sexual identity. The framework described in the Johnson et al. (2014) study helped guide the design of this study as it defined several points for reflexivity amongst the researchers as well as the participants, and created an excellent example for working with youth in this methodology. Specifically, the study noted that when working with youth from marginalized communities it is important to partner collaboratively within the research process to both empower the individual and represent voices of those who are regularly left out of scholarship.

Participants

The participants of this study were graduates of the Pathways into Natural Environments and Science (PINES) Fellowship run by the nonprofit conservation organization Triangle Land Conservancy (TLC). PINES is an early-stage career pathways program in partnership with Knightdale High School that had run at the TLC Williamson Nature Preserve in Raleigh, NC for three consecutive years at the time of this study. There were five co-researchers who participated in the narratives and focus group. This group size is supported by the optimal number of focus group participants in CMW (Haug, 1992; Johnson et al., 2018).

PINES was launched in 2022 by Diquan Edmonds at Triangle Land Conservancy in response to the observation and his own experiences of the outdoor career field being

predominantly white and norm-coded (straight, cisgendered, able bodied.) Recognizing the larger system of barriers and limitations of opportunities provided to youth of marginalized communities, the PINES Fellowship explicitly tries to reach and build community with students of intersectional identities such as students of color, gender diversity, and low socioeconomic status. Through providing career relevant experiences in conservation and the outdoor industry, as well as college prep, the students can apply these experiences for future paths in the outdoor world. The program runs the spring semester of each school year (from February to May) and engages ten sophomores through seniors with weekly meetings at the Bailey and Sarah Williamson Nature Preserve owned and managed by the environmental nonprofit Triangle Land Conservancy. The goals of the program are to:

> Provide high school students with information and resources for future opportunities in Natural Environments and Science-based careers; 2) Introduce students to mentors in the field of conservation; 3) Foster future environmental stakeholders by providing space to incorporate fresh, new voices into the outdoor narrative; 4) Build community while connecting students to nature. (Triangle Land Conservancy, 2022).

To meet the goals and address potential barriers for participation, the student fellows are compensated $1500 for the semester and additional funding for professional development and outdoor gear is provided.

Program Access

As the lead education staff member at Triangle Land Conservancy, I have direct access to the program and have built trust and rapport with the students throughout all three years of the fellowship. As the participants are early in their career and college paths, it was important to me that when they chose to participate in this study, it was reciprocal and not extractive. As such, the

research process reflected the structure of the PINES Fellowship, where participants were asked to put their own wellbeing and needs first, even if that meant they could not participate in the activity at hand (or in this case the research study.) Similarly, the incorporation of student voice into the PINES program's curricula was mirrored by the participants becoming collaborators within the research process by being co-researchers or even co-authors within their own study. The data generated and the outcomes of the analysis help program participants and practitioners through creating a better understanding of what experiences facilitated connections to nature and understanding of outdoor careers. Importantly, as the need for better hiring practices and retention policies have been recognized within the field (Dockry et al., 2022; Taylor, 2014), the results examine the importance of community and connection to nature when supporting early professionals throughout their outdoor career. Participation in the study also helped the research participants themselves by continuing to build community amongst the group and between cohorts. Those who were pursuing academic paths were also able to provide this as an added experience to enhance their understanding of research in the outdoor field and utilize it as an addition to their resume or CV as either a co-researcher or co-author.

Researcher Reflexivity

As previously stated, I am directly involved in the program and have weekly interactions with the students while the program is running. I am a white, cis-gendered, woman, who identifies as a member of the LGBTQ+ community. This means that I represent some of the identities found within the PINES cohorts, however, I will never be able to relate to many of the lived experiences of the racially diverse students within the program. To try and provide a wider swath of representation within the research leaders, I have asked my friend and previous leader of the program, Diquan Edmonds, a Black cis-gendered man, to co-facilitate the focus group and

participate as co-researcher. To account for the multiple intersections of identities found within the PINES students, Black Feminist Theory guides the design of this study, with the intention of redistributing power throughout the research process and ensuring that the research benefited all involved. Throughout my learning for this study, I also found that the structure and approach of the PINES Fellowship greatly aligned with the tenants of Black Feminist Theory, making it a natural choice to follow the leadership of Black Feminist thinkers when designing this research process. However, I must recognize that Black Feminist Theory was created *by* Black women *for* Black women. Which leads to the question of should a white woman utilize Black Feminist Theory in research? Leaning on ideas presented by Schmidt et al. (2022), I would answer yes, emphasizing that white women cannot continue to burden Black women with the feminist work that includes all intersections of identity. These reminders also come from Black Feminist authors Lorde (2007) and Cooper (2018) reminding me to ensure that I do not continue the history of centering myself above the needs of other identities, and instead work for the liberation of all.

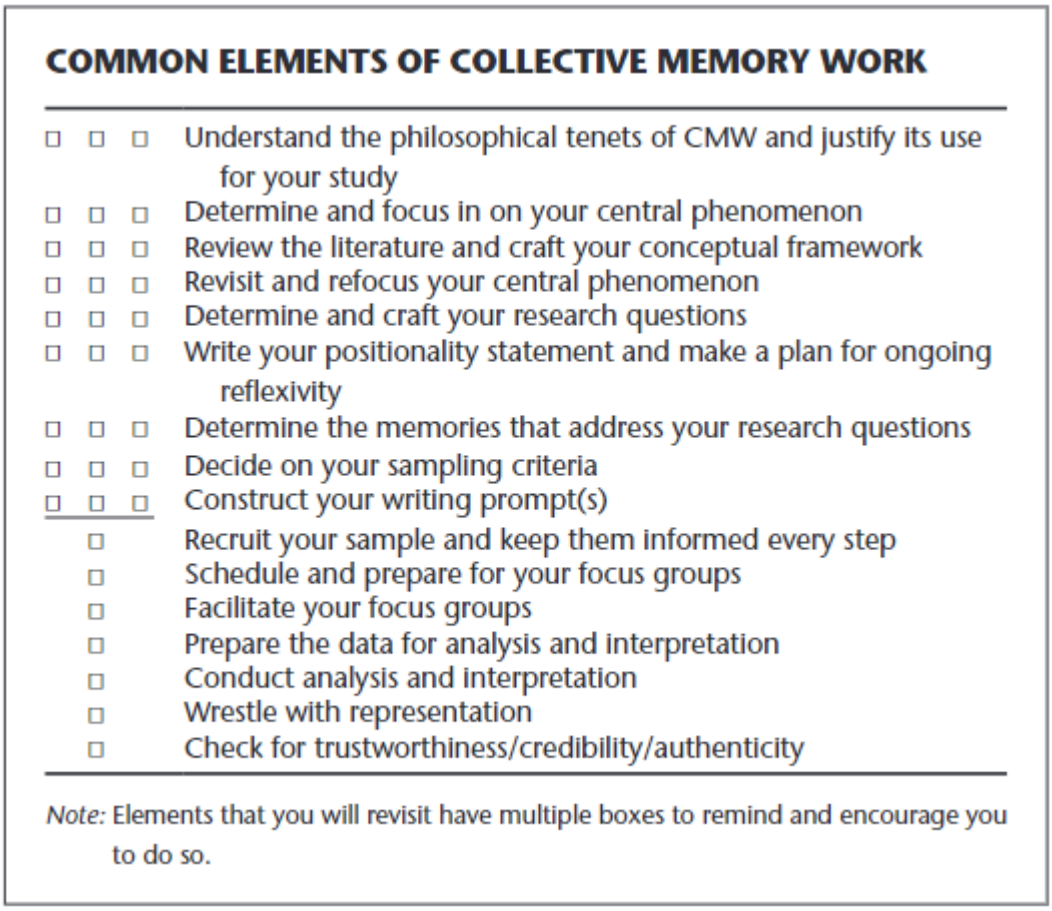
Within the research design itself, the Johnson et al. (2018) outline on CMW created a process that was recursive, with repeated reevaluation and returning to each step to allow for further reflection and recentering of the central phenomenon to ensure that the research was meaningful to the community of study. This included my own reflexivity within the research process as well as the co-researchers. The intention was to mitigate the power dynamic between researcher and participant as well as recognize and refuse the history of extracting narratives from marginalized communities as a white researcher. To ensure institutional protections were met, IRB review and approval were necessary and obtained early before any contact with participants was made.

Methods

Collective Memory Work provided the framework that I utilized within this research design. The traditional path of CMW asks for a research group to collectively decide on a topic and theoretical framework and then create a prompt from there (Haug, 1992). Data is then generated and analyzed with participants reflecting on memory and writing a narrative which can then be analyzed for gaps, trends, and themes within the stories (Haug, 1992; Johnson et al., 2018). While this structure can give a more balanced approach to voice and power within the research process, it is more difficult to implement with time constraints and can place a larger burden on study participants (Johnson & Oakes, 2018). Because of these constraints Johnson (2018) proposes a more streamlined approach that has the lead-researcher take charge of the recursive nature of developing the research design, questions, and narrative prompt. After this stage, the co-researchers work together to generate and analyze the data through a one-day focus group of narrative analysis. There are critiques of this streamlined process, claiming that this can be limiting to the true nature of participatory research since the researcher is unilaterally guiding the first half of the design (Hamm, 2021). For this study, however, I believe that the co-researchers were well primed to jump into the sharing of voice and power in the second stage of the study, while simultaneously addressing the time constraints of a master's thesis, as this structure of power sharing and inclusion of individual voice is reflected in the PINES Fellowship. Below, in Johnson's CMW design checklist (see Figure 1), the streamlined framework is written out and the steps with multiple check boxes provide repeated opportunities to revisit and reflect early in the research design.

Figure 1

Johnson's (2018) Revised CMW Process



COMMON ELEMENTS OF COLLECTIVE MEMORY WORK

- ☐ ☐ ☐ Understand the philosophical tenets of CMW and justify its use for your study
- ☐ ☐ ☐ Determine and focus in on your central phenomenon
- ☐ ☐ ☐ Review the literature and craft your conceptual framework
- ☐ ☐ ☐ Revisit and refocus your central phenomenon
- ☐ ☐ ☐ Determine and craft your research questions
- ☐ ☐ ☐ Write your positionality statement and make a plan for ongoing reflexivity
- ☐ ☐ ☐ Determine the memories that address your research questions
- ☐ ☐ ☐ Decide on your sampling criteria
- ☐ ☐ ☐ Construct your writing prompt(s)
- ☐ Recruit your sample and keep them informed every step
- ☐ Schedule and prepare for your focus groups
- ☐ Facilitate your focus groups
- ☐ Prepare the data for analysis and interpretation
- ☐ Conduct analysis and interpretation
- ☐ Wrestle with representation
- ☐ Check for trustworthiness/credibility/authenticity

Note: Elements that you will revisit have multiple boxes to remind and encourage you to do so.

Due to the time constraints of a graduate thesis as well as the time value for college students and early professionals, I used Johnson's (2018) process to provide the framework for the study design. For the written narratives, I asked the co-researchers to write a response to a central prompt to encourage the sharing of memories that relate to connection to nature, community building within the program, and their understanding of outdoor career path opportunities available to them. As outlined by Johnson et al. (2018), we then followed these narratives with a one-day focus group of all co-researchers collectively engaging in reflection and meaning making of each memory.

Narrative Writing

The initial data generated came from email narratives, where co-researchers shared a response to a common prompt that was then sent to the lead-researcher. While written narratives are employed in many methodologies, studies that utilize narrative as method find that it can be empowering to the participants and is meant to be framed as research *for* the participants rather than *on* the participants (Kralik et al., 2000; Lynch et al., 2020). CMW is well aligned with this mentality, as it incorporates narratives in a collective and collaborative process to intentionally include participants within the research process and give back agency. In a study utilizing narrative inquiry through letter writing as method, the researchers took professionals in the academic field across time spans and asked newer staff to write on their experience entering the field (Alfrey et al., 2017). Multiple papers came from this study, but they focused greatly on the interactions and construction of habitus and field within academia (Alfrey et al., 2017; Enright et al., 2017). The Kralik et al. (2000) study shows the practice of written narratives embraces the recursive practice of understanding memory and meaning making by exploring relationships of self, experience, and others, and that the process explicitly creates space to "link elements of their past, present and hopes for the future" (p. 912).

With the research participants of this study being youth early in their career path, it is important to employ a method that is inclusive and leaves participants with continued hope for their future. In written narratives as method, email is shown to be more accessible for younger people (Harris, 2002), as it feels more informal and therefore inviting, which can inspire spontaneity in the narratives shared (Kralik et al., 2000). While I had hesitancy to add another written assignment to their extensive task lists as early college students and career professionals, I tried to support them as best as I could by reminding them that I would anonymize the

narratives, they did not need to be grammatically perfect, and they could even use a "talk-to-text" feature on their phone if they preferred. Writing narratives gave participants time to consider responses and rewrite if necessary (Lynch et al., 2020) and left out the barriers of interviews such as perception of dress and body language on the part of the participant. This created a safer space for co-researchers to initially share their stories prior to the perceptions of the group (Kralik et al., 2000).

For participant recruitment, I contacted all eleven graduated participants of the PINES Fellowship to give them the opportunity to participate in the research with four student alums and one facilitator alum agreeing to participate as co-researchers for a total of five co-researchers. After gaining consent from each participant, I asked the five co-researchers to write an email in response to the prompt:

> Please share three memories from your time in the PINES Fellowship. Please have one describe the impact of the program on your connection to nature, one on the impact of the program on your desire to enter an outdoor career path, and one memory of your experience of community in the PINES Fellowship.

The length and depth of inquiry was up to the co-researchers, and they were allowed to attach photos but were not required to. None of the co-researchers opted to share photos along with their narratives. After each email exchange, I responded with gratitude for sharing their stories and shared what they could expect for next steps to ensure they felt informed and included within the research process.

Focus Group

The second phase of the research design was the focus group with the co-researchers. We met after everyone had shared their narratives to discuss, analyze, and make meaning of the

memories shared. The focus group was co-facilitated by myself and Diquan Edmonds to provide broader representation of the identities represented within the group of co-researchers. Prior to facilitating the focus group, Diquan and I completed a practice run of the questions and facilitation style with peers to ensure that we were both prepared and intentionally entering the process with care. We facilitated the focus group with care and community at the center of the interactions. This facilitation style was informed by Black Feminist Theory, and intended to center the power of relationships and decenter the power of hierarchical structures within the group (Collins, 2015). This was initiated through collaborative establishment of community guidelines with the group, specifically focusing on communication and ensuring that all voices were given space to be heard as equally as possible. While the group members already knew one another from participating in the program, they were given the opportunity to have their information and identity anonymized at all stages of the research process, but all were happy to share the context of their identity. The focus group facilitation process used is described in the following sections.

Data Generation and Analysis

The emailed narratives were the first phase of data generation. These were written in third person, anonymized, compiled, and shared with the focus group prior to the meeting. I then asked the co-researcher team to read these compiled narratives prior to the focus group. The second phase of data generation and analysis came from the co-researcher focus group. During the focus group, Diquan Edmonds and myself co-facilitated a three hour meeting where the co-researchers were asked to participate in a form of discourse analysis as described by Johnson et al. (2014) where the conversation was guided by reflection and opinions on each story, descriptions of trends and patterns between the emails, and finally identification of major themes

related to connection with nature, building community within the group, and exposure to outdoor career pathways. Prior to analyzing similarities and differences between the narratives, we first reviewed each individual narrative through the structural framework utilized in a similar study working with both LGBTQ+ and Black activists (Coes et al., 2018).

Coes et al. (2018) suggests the following framework to facilitate the focus group during CMW: 1) as a group, review each individual text one-by-one and identify a major theme, 2) identify what the person in the story was doing (utilizing verbs) and how it was being done (utilizing adjectives), 3) repeat for the remaining narratives, 4) follow with guiding questions to analyze differences and similarities. This structure allowed for all members of the focus group to equally participate in data generation as well as the analysis (Coes et al., 2018). During the focus group, Diquan and I co-facilitated by administering the guiding questions and keeping the conversation on track. During the conversations, audio was recorded, and captions were transcribed via Zoom to be reviewed for later analysis.

Following this initial structure of analyzing each individual narrative, guiding questions were used to further explore the similarities and differences between the narratives. To share power within this phase of the focus group, the co-researchers were given examples of the questions ahead of time and were asked to provide one to two questions of their own to help guide the group. As supported by the literature (Coes et al., 2018; Johnson et al., 2018), a few examples of questions that Diquan and I asked include:

- Were there any similarities or themes across the narratives?
- What was unique about individual narratives that stood out to you?
- Do you feel that there are any themes missing from these narratives? Which ones?
- How did PINES alum describe their connection to nature?

- How did PINES alum describe impact on their future career paths?
- How did PINES alum describe community within their cohort(s)?
- Do PINES alum describe a change in/with an identity because of participating in the PINES Fellowship?

After the participatory analysis of text and conversations, Diquan and I shifted the focus group's conversation to discussing the optimal way to present the analysis. I provided a list of examples for them to show what this "product" could look like, so they were able to start thinking about and provide their own ideas. The options were informed by Creative Analytic Practice (CAP) products (Parry & Johnson, 2007) and included written, video, or visual representations. The final product that the co-researchers decided to create is described below under "Data Representation."

Researcher Responsibility

Collective Memory Work allows for a unique research design and shared power structure that is uncommon within the research field. I would like to establish and describe the responsibilities that were expected of the lead researcher, co-facilitator, and the co-researchers.

Role of Lead Researcher

As the lead researcher, my role was to design, implement, and take responsibility for the framework of this study. To align with CMW and remain grounded in BFT, this included creating a safe and welcoming environment for the co-researchers to participate and centering care and community building within the group. Because the group was already familiar with one another the community of the cohort was a collective commitment, but the mental and emotional wellbeing was my responsibility through ensuring group norms were set and maintained, as well as guiding conversation during difficult topics. During the focus group itself, I worked with the

group first to establish communication and group norms and shared the power of co-facilitation with Diquan Edmonds to guide the discussions and analysis of each narrative.

The lead role also meant maintaining continuous communication to include the co-researchers within the research process as much as possible. At each stage and every communication, the co-researchers were also offered agency through the ability to ask questions or provide feedback, as well as update or modify their commitment to the study and informed consent. I ultimately was responsible for the production of the final written research product. After writing the first draft of the final product, I asked for feedback from the co-researcher team to ensure their stories and voices were accurately represented to then acknowledge and incorporate their contributions into the academic and outdoor narrative. I also held a personal responsibility to utilize the data generated from this study impactfully by sharing with Triangle Land Conservancy, PINES Fellowship staff, and other pathways programs to improve future programs and participant experiences. With this in mind, I sent an abbreviated report of the findings to partners involved with the program, and began to create a list of connections in hope of building a larger network of support to connect to programs with similar goals.

Role of Co-Facilitator

Diquan Edmonds was the Co-Facilitator for the focus group. As stated before, we shared the responsibility of conducting the conversation with the pre-determined guided questions in alignment with the group agreements set at the beginning of the focus group. He also helped in the creation of a safe and welcoming environment through modeling a healthy research community by giving space for each voice to be heard and valued. Diquan was the PINES Fellowship manager, and I was associate during the time that the co-researchers would have participated within the program. He is still a member of the conservation community as a

Program Director at the Conservation Corps of North Carolina, and he enjoys staying connected to the PINES alum to be able to best support them in the next steps of their careers. To honor his time and commitment to this study, the work he has put into the program, and his direct assistance with edits, he will be listed as a co-author on any published materials. Additionally, Diquan simultaneously participated as a co-researcher by writing narratives in response to the central prompts provided and participating within data generation and analysis of the focus group.

Role of Co-Researchers

The role and responsibilities of the co-researcher was to write a short response to the three-part narrative prompt that was shared with the research group prior to the focus group. They then were asked to read all narratives prior to the focus group and were given the opportunity to provide one to two questions of their own to help guide the discussion. During the focus group, co-researchers were asked to help facilitate a healthy research community by giving space to all voices to be heard, but to also share their own thoughts and opinions freely. Their responsibilities first and foremost were to themselves, and they were empowered to contribute what they were capable of but also assess their own needs. As the co-researchers were early in their career and college education, they were encouraged to first take into account their own time and well-being, before the responsibilities of this study. Immediately after the focus group, the co-researchers were asked to collaboratively decide on how the analysis should be represented to be available and accessible to those who could utilize it. They were also asked to verify the final product to ensure that their voices and ideas were accurately represented. After these responsibilities, there was the potential for further assistance in the research that was optional

and would give the opportunity to become a co-author on published materials that came from this study.

Data Representation

The final phase of analysis post focus group was based on the data generated in the first two phases of research, the group analysis, and observations made by the researchers during each phase. Each step was reciprocal and reflexive in that it returned to the central questions, was collaborative, and had group vetting at each stage, even the final product. This step is exemplified in multiple collective memory work studies and is integral to the collaborative methodology (Coes et al., 2018; Johnson et al., 2014; Lynch et al., 2020) and importantly, provides multiple formats of data analysis that is not limited by one reporting method (Coes et al., 2018). Due to Collective Memory Work's unique nature of simultaneous data generation and analysis, it can be difficult to represent the results and discussion in alignment with traditional academic writings. Leaning on data representation techniques from a similar CMW study by Knight et al. (2025), I will offer a "landscape-level" overview via "Tributaries" and a more in-depth view via "Rhizomes." This approach better reflects the body of knowledge created and shared amongst the co-researchers as it allows for the authenticity of meandering and spontaneous dialogue amongst friends to be reflected within the research analysis. While this written depiction is necessary for the fulfillment of this thesis, the co-researcher team collectively decided that the final product of this study should be a video essay representing their stories and voices. The process and depictions of the two-part videos are described below.

Video Product-Creative Analytic Practice

At the end of the focus group, the co-researchers were given the opportunity to discuss what the final product of this research should be. The final result was collectively decided upon

and was informed by Creative Analytic Practice (CAP) as described by Parry & Johnson (2007). CAP allows for the complexity of individual experience to be contextualized within research without following the formulaic process of traditional academia that distills and limits the individual for the benefit of generalizability (Parry & Johnson, 2007). CAP embraces the inclusion of emotion and the representation of experience to be accessible beyond the academic arena. When we discussed with the team how the final product should be represented, the goals were 1) to ensure that it accurately represents the individual voices and stories contributed and 2) was ultimately accessible to most audiences. This could have been a written, video, or visual representation, but the focus would remain on stories in the participant's own words.

CAP sets the explicit goal of inviting the reader to critically analyze the research and the product, while setting goals of reaching audiences beyond the academic sphere (Parry & Johnson, 2007). This requires the researchers to question who their audience ultimately is and who this work is being done for. As such, the researcher is also directly recognized as a member of the process and not an objective observer removed, which is important for this study as I am an active member within the PINES community. I care deeply for each of these students, current and past, and that is a lens that I bring to this work. CAP at its core critically approaches the social and political context of the lived experiences of the participants, but it ultimately has the hope of creating positive change through visibility (Parry & Johnson, 2007). CAP receives criticism for the "crisis of legitimation" as it challenges the requirement of objectivity on the part of the researcher (Parry & Johnson, 2007). Objectivity is not an expectation that I had for this study, but even so, to address this Parry and Johnson (2007) outline five steps to "judge CAP." 1) The research product must contribute to a deeper understanding and be embedded in a human perspective. This perspective then informs how the product is constructed. 2) The product must

be engaging enough to encourage the audience to form their own interpretation. 3) The researcher must have reflexivity at the forefront and clearly state their role in the research. 4) The impact of the product on the audience emotionally and intellectually. 5) The product needs to embody the sense of lived experience. To follow this framework and provide structure for the conversation about data representation after the focus group, I asked guiding questions of who they wanted the work to be for, who they wanted their audience to be, and what impact they hoped to create with the product. This framing gave the co-researchers choice and autonomy over representation but still set the "product" up to fit into the five guidelines set by Pary and Johnson (2007).

After this discussion, I provided a list of examples for them to show what this "product" could look like, so they were able to start thinking about and provide their own ideas. The options were informed by previous examples of Creative Analytic Practice (CAP) products (Parry & Johnson, 2007) and included written, video, or visual representations. With the goals of accessibility and representation in mind, the co-researchers decided they would like to create a 2-part video. One of the videos will be shorter (three to five minutes long) and will capture the stories of experiences during the program to utilize as a promotional video for recruiting new students and sharing with program stakeholders (staff, parents, guest speakers, donors, etc.) The second video will be a longer video (fifteen to twenty minutes) in the style of "a day in the life" of the co-researchers, exploring both stories that they shared during the study as well as moments from their current lives that they wish to connect to the narrative. Both videos are going to be completed on a longer timeline than the constraints of this thesis and will be filmed during summer and winter breaks when the co-researchers have less on their academic plates. The recruitment video will be posted after October 31st, 2025 (the start of the next recruitment period)

and the “Day in the Life” video after January 31st, 2026 (the start of the next cohort of PINES students) linked at www.triangleland.org/pines. When they are published, please consider the following guiding questions to help examine on a deeper level:

- What experiences are being represented within the videos?
- Are authentic student participant experiences centered within the narrative of the videos?
- Who are the videos for? And do they represent and positively impact the intended communities?

I invite you, the reader, to critically analyze and judge for yourself the quality of this work, to find hope along with the co-researchers and myself for positive change in the outdoor narrative and ultimately, improve the experience and retention of racially and gender diverse staff in outdoor career fields.

CHAPTER FOUR: MANUSCRIPT

Per the Western Carolina University Experiential and Outdoor Education Handbook, I have chosen to complete the manuscript thesis format option. This option requires Chapters One, Two and Three plus a full-length journal manuscript formatted to the requirements of a specific journal. The following chapter contains my complete manuscript, which I have chosen to submit to the Journal of Adventure Education and Outdoor Learning. This journal requires authors to submit a manuscript that is approximately 9,000 words and written in APA format. Please note that the journal requests images are placed within the document where referenced. Additionally note that I set out to answer three research questions with this study. For the purposes of the manuscript, I have chosen to focus on my first two questions on the creation of community and connection to nature. I have provided an overview of the remaining question in Appendix B, through a short report provided for the organization, Triangle Land Conservancy, on the co-researcher's understanding of outdoor career pathways, as well as successes and opportunities for growth in the future that the co-researchers suggested throughout the research process.

Pathways for Diversity in the Outdoors: Alum Memories from the PINES Fellowship

Abstract

Employees in the outdoor field are disproportionately white and male (OIA, 2023) with racialized staff, women, and nonbinary people having higher rates of employment attrition (Taylor, 2014). Outdoor "pathway programs" represent one solution to address the lack of diversity as they provide resume building experiences for youth to explore their passions and gain marketable skills (Dockry et al., 2022). These programs can address retention concerns by forming a supportive community while simultaneously facilitating deeper connections with nature (Gillard et al., 2014), though few studies have examined their efficacy. To address this gap, this study explored alum experiences from the Pathways into Natural Environments and Science (PINES) Fellowship, specifically related to creation of community and connection to nature. To explore alums' memories of program experiences, we used a Collective Memory Work methodology (Johnson, 2018) grounded in Black Feminist Theory (Collins, 2000). Data generation occurred through written participant narratives of their memories from the program, followed by a focus group where we collectively analyzed each narrative. Framed in theories around belongingness (Goodman, 2017), communitas (Turner, 2010), and thriving (Love, 2019), results include 1) a discussion of the power of community building as central to the success of the program; 2) participation in an outdoor community as validation of a new "outdoorsy" identity; and 3) "the ripple effect" of bringing new friends into future outdoor endeavors. We end with recommendations for educators and practitioners working toward creating inclusive outdoor spaces through pathways programs.

Keywords: Collective Memory Work, community building, connection to nature, pathways programs, Black feminist theory

Introduction

In recent history, outdoor career paths, especially those that are higher paying and associated with higher education, have heavily skewed towards white[1] and male demographics (Taylor, 2014). When examining the academic pathways that feed into these careers, environmental science degree programs are one of the most disparate in racial demographics. Gender diversity in these degree programs fare slightly better, however it is primarily for white, cisgender women. These racial and gender splits are similarly reflected in the workforce in environmental organizations with higher power positions still primarily being made up of white men (Taylor, 2014; Taylor et al., 2019). When looking at outdoor recreation instead, the demographic rates also closely align, while white people continue to be overrepresented. Members of the Latinx community and LGBTQI+ community have seen an uptick in participation in recent years, but these communities are still woefully underrepresented in comparison to population statistics of the people of the United States (U.S. Census Bureau, 2020), with Black communities consistently having the lowest representation of any of the groups reviewed (Outdoor Industry Association, 2023).

When trying to address the lack of diversity in outdoor careers, it is important to recognize the barriers that are keeping people from entering and benefiting from these spaces (Fehnker et al., 2022). The feeling of safety and comfort in the outdoors is often listed as one of the greater barriers for both racially and gender diverse people to participate in outdoor activities (Gillard et al., 2014; Goodman, 2022; Powell, 2021). Environmental organizations are beginning to recognize the need to address this concern, but few have provided concrete examples of

[1] I have chosen to capitalize "Black" and lowercase "white" in this document. This is to acknowledge the fight for recognition in language, a fight that started with W.E.B. DuBois (Tharps, 2014). This is meant to explicitly disrupt a history of white-supremacist culture of capitalizing on Black labor and advancing white with a capital "W" to further utilize language to enforce violent hierarchies and societal structures.

progress (Taylor, 2014). When considering staffing comfort and resilience, the State of Diversity in Environmental Organizations Report (Taylor, 2014) reviewed hiring practices and found that outdoor organizations are often not inclusive to all communities. They assert that outdoor organizations are not effectively utilizing established pathways such as internships and other programs creating a "ruptured pipeline" for talent in the outdoor career field. One potential solution is the creation of “Pathways Programs,” to create a stronger and more diverse pool of applicants to limit this talent loss and better facilitate community to provide support throughout an individual’s career (Bianco et al., 2011; Exec. Order No. 13562, 2010; Taylor, 2014). These types of programs can allow for community building, connection to nature, experiential learning opportunities within the field, and exploration of youth’s identities.

While there are many pathways and similar programs in existence, little research has been done on these types of programs for outdoor career paths, especially ones that support marginalized communities. To date, there have not been any studies on the efficacy of the PINES Fellowship in particular. To address this gap, the purpose of this study was to explore the experiences of pathways program alum from the PINES Fellowship, specifically as it related to their connection to nature and creation of community. This study aimed to answer the following research questions. (1) What are the experiences of PINES student participants around connection to nature? (2) What are the experiences of the PINES student participants around creation of community? To explore alums’ memories of program experiences, we used a Collective Memory Work methodology (Johnson, 2018) grounded in Black Feminist Theory (Collins, 2000).

Literature Review

Pathways programs have the potential to become spaces for community building and simultaneously foster connections to nature. With diversity initiatives being defunded (PMF Program, 2025), language being removed (Youdelman, 2025; Yourish et al., 2025), and even Black, Indigenous and women veterans being removed from the Arlington Cemetery website's historical database (Drenon, 2025), this means there is an even greater need for community action and spaces to support youth of intersecting identities as they enter these career fields.

Pathways Programs

Pathways programs were established when the federal government released Executive Order No. 13562 (2010), which recognized that hiring practices were creating barriers for students and recent graduates to enter career fields within their branches. To combat this, the executive order established a new system of clear pathways for training young professionals. Federal organizations such as the National Parks System, utilize the three-part "Pathways Programs" to create steppingstones to entry level positions for youth to gain experience in a more inclusive manner (Exec. Order No. 13562, 2010; US National Parks Service, 2022). This executive order was recently amended by Executive Order No 14217, "Commencing the Reduction of the Federal Bureaucracy," which terminated the Presidential Management Fellows program (one third of the federal pathways programs) (Exec. Order No. 14217, 2025; PMF Program, 2025). This action most directly impacts young and early professionals.

Luckily, other non-government organizations have begun their own programs modeled from the career training and recruiting established in 2010. Programs through the YMCA, Three Rivers Park District, and Triangle Land Conservancy all focus on supporting systemically disenfranchised youth by providing experiential learning opportunities that allow youth to

explore the career options they have available to them (Three Rivers Park District, n.d.; Triangle Land Conservancy, 2022; YMCA, 2024). These organizations have recognized that reciprocally engaging with diverse youth also benefits the organization by providing space to incorporate new voices into their current work, which fosters future stakeholders to continue to support their missions (Bianco et al., 2011; Triangle Land Conservancy, 2022).

Fostering Community through Connection to Nature

Pathways programs for outdoor career fields must focus on fostering community to create a safe and welcoming environment for all participants, especially those who are racially and gender diverse (Gillard et al., 2014; Goodman, 2017). As a priority of outdoor organizations' missions and recognition of the benefits of spending time outdoors, the organizations that run these pathways programs should also facilitate connecting to nature to foster pro-environmental behaviors (DeVille et al., 2021). Fostering community through connection to nature are simultaneous initiatives as connection to nature cannot occur without feeling safe and supported within the environment first, and community in nature can help directly connect individuals to nature's significance in their lives. Below I discuss the significance and need for simultaneous connection to nature and collective community building.

Connection to Nature

Connection to nature (CTN), or connectedness with nature, is defined as an understanding of one's relationship and relatedness to nature (Zylstra et al., 2014), the "personality trait" that influences our relationship with nature (Barbiero et al., 2023), and a person's identity within natural spaces (Salazar et al., 2022). An increase in CTN has a parallel increase in pro-environmental behaviors (DeVille et al., 2021), an understanding of the need for conservation initiatives (Carr & Hughes, 2023), and for more sustainably minded actions within

the outdoor context, as well as within the community context (Zelenski et al., 2015). Decreasing CTN, especially in younger generations, is a concern due to the ever growing fast paced world of technological distractions, especially as CTN has a direct correlation in the benefits received from spending time in nature (Chang et al., 2024). However, programs and curricula that incorporate simple activities such as reading, watching, or talking about nature show positive impacts on pro-environmental attitudes and even individual's mental health (Carr & Hughes, 2023; Chang et al., 2024; Chawla, 2015; Hughes et al., 2019). Connecting to nature is often found and facilitated within one's community, which can function as a simultaneous benefit for spending time in nature. Conversely, without a supportive community, this impactful connection to each other and nature is not likely to occur.

Community Building

The need for community is innately human. Feeling connected to people and place, whether it be present, past, or future, builds a sense of belonging that positively impacts the psyche (Bell & Molinaro, 2024; Bennett, 2014). Feeling connected and supported by community is especially important for youth as they begin to build and come into their identities (Craig, 2011; Reisner et al., 2015). While some organizations have recognized fostering community as a priority when setting their goals with outdoor youth programs (Three Rivers Park District, n.d.; Triangle Land Conservancy, 2022), little research on these programs has been completed on the impact of community building on one's sense of belonging in the natural environment. The research that predominantly exists focuses on outdoor affinity groups, primarily in the undergraduate programming realm. These studies have found that programs that focus on community building help with the difficult transition to the rigor of undergraduate curricula,

through building a supportive cohort who can rely on one another and creating a sense of loyalty to person and place (DeVille et al., 2021; Goodman, 2022; Howard et al., 2016).

In outdoor education curricula, place-based education combines a sense of community with connecting to nature to explicitly foster a care for the environment and the issues that directly impact a student's surrounding community (DeVille et al., 2021; Linden, 2016). The lack of community within natural spaces and sense of belonging has been listed as a long-standing barrier for racially and gender diverse people to access and connect with nature (Goodman, 2022; Schwartz & Corkery, 2011; Xiao et al., 2022). Organizations that set out to serve the community should prioritize this facilitation and connection building as it has the potential to reciprocally benefit both parties involved. Individuals who connect strongly with and feel supported by their community have a sense of safety and belonging that can help facilitate further positive action, while the lack of community can have the inverse reaction with an equally negative impact for both the individual and the mission of the community organization (Craig, 2011; Howard et al., 2016; Reisner et al., 2015). Triangle Land Conservancy and specifically their pathways program, the PINES Fellowship, acknowledge this concern and work to uplift the positive interactions of community building and connection to nature. They do this by creating space for the youth's voices to have an impact on important conservation concerns that directly occur within their own community.

The PINES Fellowship

The Pathways into Natural Environments and Science (PINES) Fellowship was launched in 2022 by Diquan Edmonds at the Triangle Land Conservancy greatly in response and recognition of the lack of diversity in outdoor career paths (Triangle Land Conservancy, 2022). The program is in the Triangle of North Carolina and is in partnership with Knightdale High

School where 88% of the student body represents marginalized populations (National Center for Education Statistics, 2022). The fellowship intentionally recruits students who are racially and gender diverse in comparison to the traditional outdoor narrative. The goals of the program are to,

> 1) Provide high school students with information and resources for future opportunities in Natural Environments and Science-based careers; 2) Introduce students to mentors in the field of conservation; 3) Foster future environmental stakeholders by providing space to incorporate fresh; new voices into the outdoor narrative; 4) Build community while connecting students to nature. (Triangle Land Conservancy, 2022)

As part of these goals, the organization intends to remove as many barriers as possible to diverse student participation by compensating the student fellows $1500 for the semester and providing additional funding for professional development, outdoor gear necessities, and transportation. The students meet at least once per week, where a different outdoor career path or guest speaker is presented to expose the students to as many "pathways" as possible. In alignment with these goals and practices, Black feminist theory provided a logical framework for this study.

Black Feminist Theory

The PINES Fellowship works with students that have intersecting racial, gender, and socioeconomic identities that affect the power, or lack thereof, they hold within the greater systems in our society. This directly impacts their access to, and opportunities afforded to them in the outdoors. Because of this and the relational aspect of the program and the research itself, we chose Black Feminist Theory (BFT) to guide the research process. BFT is rooted in the knowledge that is innate to the oppressed and centers on identifying and subsequently valuing this form of collective knowing (Ruiz Guerrero, 2019). This critical evaluation and knowledge

production is meant to ultimately create change for the benefit of the community, no matter how uncomfortable the conversation may be for the dominant group (Collins, 2015; Ruiz Guerrero, 2019). Black Feminist Theorists implore that silence does nothing to create change, nor does it protect the individual or the group (hooks, 1994; Lorde, 2007). But through critical exchanges and collaborative work with the community that challenge our current and historical systems of power, change is possible that would benefit the entire ecosystem (Ruiz Guerrero, 2019).

There are three key aspects of BFT that directly align with the goals of the program and collective memory work. These are intersectionality (Crenshaw, 1991), experience as a criterion of meaning (Collins, 2000), and the ethic of care and its impact on community (Collins, 2000; Ruiz Guerrero, 2019). These three components come together through the necessity of care and support from the community, addressing the intersecting oppressions that each student may face, and acknowledges lived experiences as legitimate data, which validates the students' experiences and voices within the program as becoming a part of the outdoor narrative. In Black Feminist Theory, the ethic of caring directly contributes to the idea of fostering and creating community (Collins, 2000; Ruiz Guerrero, 2019). As previously explored, community building within nature is a positive feedback loop of connecting and supporting the needs of individuals.

Building community is a central goal of the PINES Fellowship as it is in recognition and response to the needs of youth to feel supported and safe within outdoor environments (Craig, 2011; Triangle Land Conservancy, 2022). This community and network are also what students can take with them after participating in the fellowship. hooks (1994) describes community and collaboration as a catalyst for positive change within our society. With this insight, she implores that love is what has the power to transform, and a community that upholds love and care will be able to make this positive change on individuals and our world. Love and care are central to the

ideals of Black Feminist Theory and culminate beautifully in depicting the need for safe and supportive communities. In alignment with the methodology, Collective Memory Work, BFT encourages the disruption of traditional power structures within research and supports participant community building.

Methodology and Methods

The design of this study was guided by Collective Memory Work (CMW) (Johnson et al., 2018) and grounded in Black Feminist Theory (BFT) (Collins, 2015). The data generated were from short narratives written by participants, starting with a central prompt, followed by collective analysis of memory. In alignment with BFT, CMW redistributes power in the research process away from top-down (research studies participants) toward collaborative (co-research knowledge generation) (Johnson et al., 2018) and aligns with a central goal of the fellowship, which is to continue to foster community, even after students have graduated from the program (Triangle Land Conservancy, 2022).

Collective Memory Work

CMW was developed in the 1980's by Frigga Haug. This methodology is grounded in Critical Feminist Theory and through repeated researcher reflexivity and a critical approach to hierarchies within the research process, researchers can recenter power and provide participant inclusion within the research design (Coes et al., 2018; Haug, 2008). This is done by creating a team of co-researchers who collectively share, explore, and analyze their own memories around a shared experience (Johnson et al., 2018). CMW explicitly recognizes the exploitative nature of research and creates space for the participants to become collaborators and requires the researcher to examine and reflect on their positionality (Johnson et al., 2014, Knight et al., 2025). Moving beyond Critical Feminist Theory, BFT builds upon the tenants of CMW and is rooted in

deconstructing power hierarchies by using an intersectional analysis to examine relationships between individual and the structural and symbolic features of oppression (Alinia, 2015; Collins, 2015). This emphasis on power and relationships makes it align well with CMW and creates cohesive reasoning for this research process with this specific program.

Studies within the CMW methodology are part of the larger make up of participant action research where participant and researcher collaboratively examine issues around social justice (Coes et al., 2018; Johnson et al., 2014). CMW is based in social-constructivism and examines the individual's experience as well as the experiences of the group through a collaborative process of discourse analysis and examination of language (Johnson et al., 2018). As an example of a youth based CMW study, Johnson et al. (2014) created a team of nine collaborative participants who self-identified as part of the LGBTQ+ community. The framework described in the Johnson et al. (2014) study helped guide the design of this study as it defined several points for reflexivity amongst the researchers as well as the participants and created an excellent example for working with youth in this methodology. Specifically, the study noted that when working with youth from marginalized communities it is important to partner collaboratively within the research process to both empower the individual and represent voices of those who are regularly left out of scholarship.

Participants

The participants of this study were graduates of the PINES Fellowship, a program run by the nonprofit conservation organization Triangle Land Conservancy. PINES is an early-stage career pathways program that had finished three consecutive years at the time of this study and was entering its fourth cohort. There were four co-researchers, and two co-facilitators who participated in the narratives and focus group, all above the age of eighteen. This group size is

supported by the optimal number of focus group participants in CMW (Haug, 1992; Johnson et al., 2018).

Program Access

As the lead education staff member at Triangle Land Conservancy, I have direct access to the program and have built trust and rapport with the students throughout all three years of the fellowship. As the participants were early in their career and college paths, it was important to me that when they chose to participate in this study, it was reciprocal and not extractive. As such, the research process reflected the structure of the PINES Fellowship, where participants were asked to put their own wellbeing and needs first, even if that meant they could not participate in the activity at hand (or in this case the research study.) Similarly, the incorporation of student voice into the PINES program's curricula was mirrored by the participants becoming collaborators within the research process by being co-researchers within their own study. The data generated and the outcomes of the analysis helped program participants and practitioners through creating a better understanding of what experiences facilitated connections to each other and to nature. Participation in the study also helped the co-researchers themselves by continuing to build community amongst the group and between cohorts. Those who were pursuing academic paths were also able to provide this as an added experience to enhance their understanding of research and utilize it as an addition to their resume or CV as a co-researcher.

Researcher Reflexivity

As previously stated, I am directly involved in the program and have weekly interactions with the students while the program is running. I am a white, cis-gender, woman, who identifies as a member of the LGBTQ+ community. This means that I represent some of the identities found within the PINES cohorts, however, I will never be able to relate to many of the lived

experiences of the racially diverse students within the program. To try and provide a wider swath of representation within the research leaders, I asked my friend and previous leader of the program, Diquan Edmonds, a Black cis-gender man, to co-facilitate the focus group and participate as co-researcher. To account for the multiple intersections of identities found within the PINES students, Black Feminist Theory guided the design of this study, with the intention of redistributing power throughout the research process and ensuring that the research benefited all involved. Throughout my learning for this study, I also found that the structure and approach of the PINES Fellowship greatly aligned with the tenants of Black Feminist Theory, making it a natural choice to follow the leadership of Black Feminist thinkers when designing this research process.

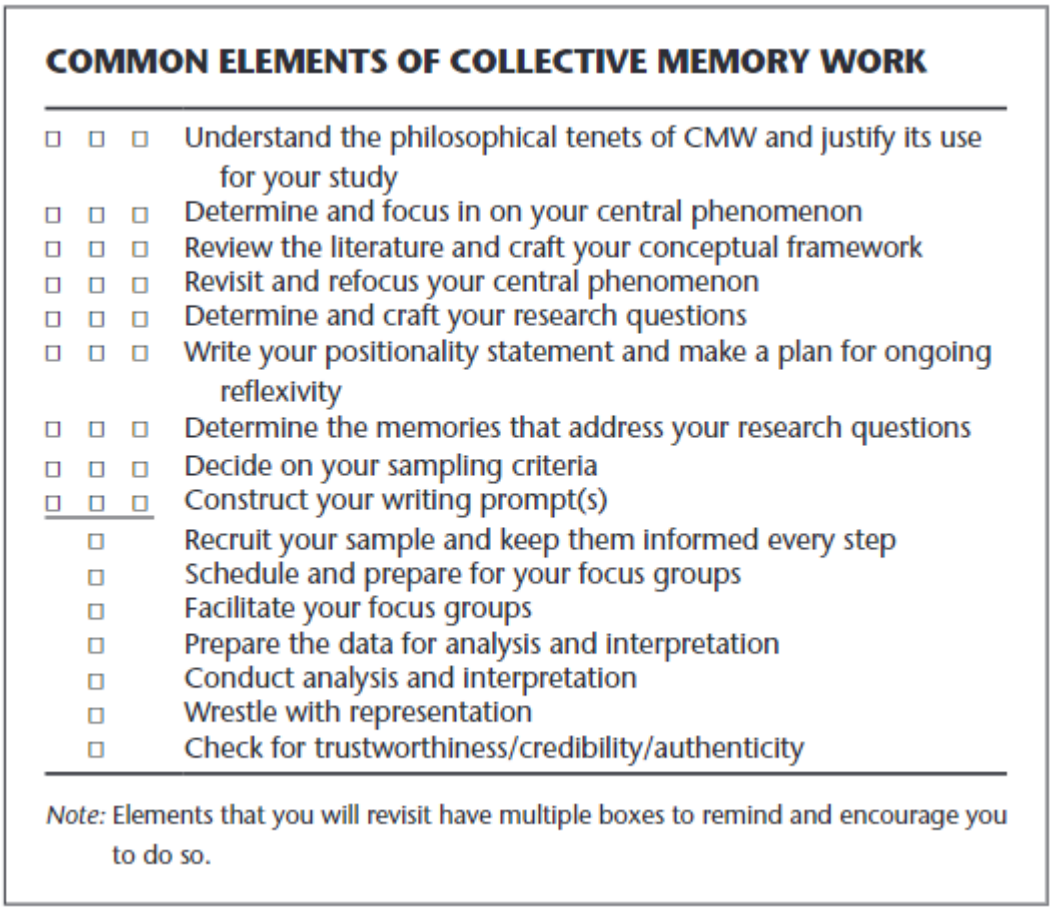
However, I must recognize that Black Feminist Theory was created *by* Black women *for* Black women. Which leads to the question of should a white woman utilize Black Feminist Theory in research? Leaning on ideas presented by Schmidt et al. (2022), I would answer yes, and I continue mindfully and without centering my white voice. These reminders also come from Black Feminist authors Lorde (2007) and Cooper (2018) reminding me to ensure that I do not continue the history of centering myself above the needs of other identities and instead work for the liberation of all. I describe in the methods section below how BFT was integrated into the study design, but some of the ways included centering care within the focus group, creating space for each voice to be heard and valued, as well as sharing power through co-researcher contribution of guided discussion questions. To ensure institutional protections were met, IRB review and approval were necessary and obtained early before any contact with participants was made.

Methods

Collective Memory Work provided the framework that I utilized within this research design. The traditional path of CMW asks for a research group to collectively decide on a topic and theoretical framework and then create a prompt from there (Haug, 1992). Data is then generated and analyzed with participants reflecting on memory and writing a narrative which can then be analyzed for gaps, trends, and themes within the stories (Haug, 1992; Johnson et al., 2018). While this structure can give a more balanced approach to voice and power within the research process, it is more difficult to implement with time constraints and can place a larger burden on study participants (Johnson & Oakes, 2018). Because of these constraints Johnson (2018) proposes a more streamlined approach that has the lead-researcher take charge of the recursive nature of developing the research design, questions, and narrative prompt. After this stage, the co-researchers work together to generate and analyze the data through a one-day focus group of narrative analysis. There are critiques of this streamlined process, claiming that this can be limiting to the true nature of participatory research since the lead-researcher is unilaterally guiding the first half of the design (Hamm, 2021). For this study, however, I believe that the co-researchers were well primed to jump into the sharing of voice and power in the second stage of the study, while simultaneously addressing the time constraints of the study, as this structure of power sharing and inclusion of individual voice is reflected in the PINES Fellowship. Below, in Johnson's CMW design checklist (see Figure 1), the streamlined framework is written out and the steps with multiple check boxes provide repeated opportunities to revisit and reflect early in the research design.

Figure 1

Johnson's (2018) Revised CMW Process



COMMON ELEMENTS OF COLLECTIVE MEMORY WORK

- ☐ ☐ ☐ Understand the philosophical tenets of CMW and justify its use for your study
- ☐ ☐ ☐ Determine and focus in on your central phenomenon
- ☐ ☐ ☐ Review the literature and craft your conceptual framework
- ☐ ☐ ☐ Revisit and refocus your central phenomenon
- ☐ ☐ ☐ Determine and craft your research questions
- ☐ ☐ ☐ Write your positionality statement and make a plan for ongoing reflexivity
- ☐ ☐ ☐ Determine the memories that address your research questions
- ☐ ☐ ☐ Decide on your sampling criteria
- ☐ ☐ ☐ Construct your writing prompt(s)
- ☐ Recruit your sample and keep them informed every step
- ☐ Schedule and prepare for your focus groups
- ☐ Facilitate your focus groups
- ☐ Prepare the data for analysis and interpretation
- ☐ Conduct analysis and interpretation
- ☐ Wrestle with representation
- ☐ Check for trustworthiness/credibility/authenticity

Note: Elements that you will revisit have multiple boxes to remind and encourage you to do so.

Due to the time constraints of the study as well as the time value for college students and early professionals, I used Johnson's (2018) process to provide the framework for the study design. For the written narratives, I asked the co-researchers to write a response to a central prompt to encourage the sharing of memories that relate to connection to nature, community building within the program, and their understanding of outdoor career path opportunities available to them. As outlined by Johnson et al. (2018), we then followed these narratives with a one-day focus group of all co-researchers collectively engaging in reflection and meaning making of each memory.

Narrative Writing

The initial data generated came from email narratives, where co-researchers shared a response to a common prompt. While written narratives are employed in many methodologies, studies that utilize narrative as method find that it can be empowering to the participants and is meant to be framed as research *for* the participants rather than *on* the participants (Kralik et al., 2000; Lynch et al., 2020). CMW is well aligned with this mentality, as it incorporates narratives in a collective and collaborative process to intentionally include participants within the research process and give back agency. Written narratives also have the benefit of giving participants time to consider responses and rewrite if necessary (Lynch et al., 2020) and leaves out the barriers of interviews such as perception of dress and body language on the part of the participant. This approach created a safer space for co-researchers to initially share their stories prior to the perceptions of the group (Kralik et al., 2000).

For participant recruitment, I contacted all eleven graduated participants of the PINES Fellowship to give them the opportunity to participate in the research and four student alums and one facilitator alum agreed to participate as co-researchers for a total of five co-researchers plus myself. I asked the co-researchers to write an email in response to the prompt:

> Please share three memories from your time in the PINES Fellowship. Please have one describe the impact of the program on your connection to nature, one on the impact of the program on your desire to enter an outdoor career path, and one memory of your experience of community in the PINES Fellowship.

The length and depth of inquiry was up to the co-researchers. After each email exchange, I responded with gratitude for sharing their stories and shared what they could expect for next steps to ensure they felt informed and included within the research process.

Focus Group

The second phase of the research design was the focus group with the co-researcher team. We met after everyone had shared their narratives to discuss, analyze, and make meaning of the memories shared. The focus group was co-facilitated by Diquan Edmonds and me to provide broader representation of the identities represented within the group of co-researchers. Prior to facilitating the focus group, Diquan and I completed a practice run of the questions and facilitation style with peers to ensure that we were both prepared and intentionally entering the process with care. Our facilitation style was informed by Black Feminist Theory and intended to center the power of relationships and decenter the power of hierarchical structures within the group (Collins, 2015). This was initiated through collaborative establishment of community guidelines with the group, specifically focusing on communication and ensuring that all voices were given space to be heard (hooks, 1994). While the group members already knew one another from participating in the program, they were given the opportunity to have their information and identity anonymized at all stages of the research process, but all were happy to share the context of their identity (see Co-Researcher Biographies). The focus group facilitation process used is described in the following section.

Data Analysis

Data generation and analysis are intertwined in the CMW process. The emailed narratives were the first phase of data generation/analysis. These were written (generation) in third person, anonymized, compiled, and shared with the focus group (analysis) prior to the meeting for their review. The second phase of data generation and analysis came from the co-researcher focus group. During the focus group, Diquan Edmonds and myself co-facilitated a three hour meeting where the co-researchers were asked to participate in a form of discourse analysis as described

by Johnson et al. (2014) where the conversation was guided by reflection and opinions on each story, descriptions of trends and patterns between the narratives, and finally identification of major themes related to connection with nature, building community within the group, and exposure to outdoor career pathways. Prior to analyzing similarities and differences between the narratives, we first reviewed each individual narrative through the structural framework utilized in a similar study working with both LGBTQ+ and Black activists (Coes et al., 2018).

Coes et al. (2018) suggests the following framework to facilitate the focus group during CMW: 1) as a group, review each individual text one-by-one and identify a major theme, 2) identify what the person in the story was doing (utilizing verbs) and how it was being done (utilizing adjectives), 3) repeat for the remaining narratives, 4) follow with guiding questions to analyze differences and similarities. This structure allowed for all members of the focus group to equally participate in data generation as well as the analysis (Coes et al., 2018). During the focus group, Diquan and I co-facilitated by administering the guiding questions and keeping the conversation on track. During the conversations, audio was recorded, and captions were transcribed via Zoom.

Following this initial structure of analyzing each individual narrative, guiding questions were used to further explore the similarities and differences between the narratives. To share power within this phase of the focus group, the co-researchers were given examples of the questions ahead of time and were asked to provide one to two questions of their own to help guide the group. As supported by the literature (Coes et al., 2018; Johnson et al., 2018), a few examples of questions that Diquan and I asked included:

- Were there any similarities or themes across the narratives?
- What was unique about individual narratives that stood out to you?

- Do you feel that there are any themes missing from these narratives? Which ones?
- How did PINES alum describe their connection to nature?
- How did PINES alum describe community within their cohort(s)?
- Do PINES alums describe a change in/with an identity because of participating in the PINES Fellowship?

Researcher Responsibility

Collective Memory Work allows for a unique research design and shared power structure that is uncommon within the research field. I would like to establish and describe the responsibilities that were expected of the lead researcher, co-facilitator, and the co-researchers.

Role of Lead Researcher

As the lead researcher, my role was to design, implement, and take responsibility for the framework of this study. To align with CMW and remain grounded in BFT, this included creating a safe and welcoming environment for the co-researchers to participate while centering care and community building within the group. Because the group was already familiar with one another the community of the cohort was a collective commitment, but the mental and emotional wellbeing was my responsibility through ensuring group norms were set and maintained, as well as guiding conversation during difficult topics. During the focus group itself, I worked with the group first to establish communication and group norms and shared the power of co-facilitation with Diquan Edmonds to guide the discussions and analysis of each narrative.

The lead role also meant maintaining continuous communication to include the co-researchers within the research process as much as possible. At each stage and every communication, the co-researchers were also offered agency through the ability to ask questions or provide feedback, as well as update or modify their commitment to the study and informed

consent. After writing the first draft of the final product, I asked for feedback from the co-researcher team to ensure their stories and voices were accurately represented to then acknowledge and incorporate their contributions into the academic and outdoor narrative. As a team, we also held a responsibility to impactfully utilize the data generated from this study by sharing with Triangle Land Conservancy, PINES Fellowship staff, and other pathways programs to improve future programs and participant experiences. With this in mind, I sent an abbreviated report of the findings to partners involved with the program, and began to create a list of connections in hope of building a larger network of support to connect to programs with similar goals.

Role of Co-Facilitator

Diquan Edmonds was the Co-Facilitator for the focus group. As stated before, we shared the responsibility of conducting the conversation with the pre-determined guided questions in alignment with the group agreements set at the beginning of the focus group. He also helped in the creation of a safe and welcoming environment through modeling a healthy research community by giving space for each voice to be heard and valued. Diquan was the PINES Fellowship manager during the time that the co-researchers would have participated within the program. He is still a member of the conservation community as a Program Director at the Conservation Corps of North Carolina, and he enjoys staying connected to the PINES alum to be able to best support them in the next steps of their careers. Additionally, Diquan simultaneously participated as a co-researcher by writing narratives in response to the central prompts provided and participating within data generation and analysis of the focus group.

Role of Co-Researchers

The role and responsibilities of the co-researcher was to write a short response to the three-part narrative prompt that was shared with the research group prior to the focus group. They then were asked to read all narratives prior to the focus group and were given the opportunity to provide one to two questions of their own to help guide the discussion. During the focus group, co-researchers were asked to help facilitate a healthy research community by giving space for all voices to be heard, but to also share their own thoughts and opinions freely. Their responsibilities first and foremost were to themselves, and they were empowered to contribute what they were capable of but also assess their own needs. As the co-researchers were early in their career and college education, they were encouraged to first consider their own time and well-being, before the responsibilities of this study. Immediately after the focus group, the co-researchers were asked to collaboratively decide on how the analysis should be represented to be available and accessible to those who could utilize it. They were also asked to verify the final product to ensure that their voices and ideas were accurately represented.

Co-Researcher Biographies

In Table 1 you will find a brief summation of the co-researcher biographies and identities they wished to share. Please review Appendix A for their full biographies where they share in their own words the identities they felt were important to share for this study, why they joined PINES, and why they participated in this research study.

Table 1

Co-Researcher Biographies

Name	Pronouns	Race/Ethnicity	Years with PINES	Other Identities
Daniel Vargas	He/him/his	Brown/Latino	2	Co-Researcher, Engineering College Student, National Guardsmen, Student Leader
Hanna Camptella	She/her/hers	white/Caucasian	3	Co-Researcher, Natural Resources College Student, Student Leader, PINES Intern, First Generation College Student
Ava Lipsey	She/her/hers	African American	2	Co-Researcher, Microbiology College Student, Student Leader
Tadrion Davis	He/him/his	African American/Black	2	Co-Researcher, Bioengineering College Student, Gay, Student Leader
Diquan Edmonds	He/him/his	Black	3	Co-Facilitator, Co-Researcher, Cisgender, Founder of Program
Kayla Ebert	She/her/hers	white	3	Lead Researcher, Co-Facilitator, Bisexual, Cisgender, Program Manager

Results and Discussion

Due to Collective Memory Work's unique nature of simultaneous data generation and analysis, it can be difficult to represent the results and discussion in alignment with traditional academic writings. Leaning on data representation techniques from a similar CMW study by Knight et al. (2025), I will offer a "landscape-level" overview via "Tributaries" and a more in-depth view via "Rhizomes." This approach better reflects the body of knowledge created and shared amongst the co-researchers as it allows for the authenticity of meandering and spontaneous dialogue amongst friends to be reflected within the research analysis.

Tributaries

After reviewing the transcript of our discussion and the combined document of all co-researcher's narratives, I have pulled several of the overarching ideas, or "Tributaries," that

represent some of the key takeaways during the focus group. My intent is for these "Tributaries" to stand in as a more wholistic representation of the discussion and narratives by allowing for the meandering and overlapping nature of fluid discussion to shine and to limit the potential for any flattening of the dialogue into myopic themes. The three Tributaries are the importance of community building, connection to nature, and sharing nature with others.

Community Building

Table 2 lists the ideas and concepts that repeatedly came up in the discussion and the narratives on the overarching idea of community building. Much of the discussion centered on connections between cohorts and the importance of these relationships to the success of the program.

Table 2

Community Building Concepts

Bonding between cohorts	Representation
"Open door policy" for communication	Identity and acceptance
Leadership opportunities	Ease of connection while in nature
Confidence to try new things	Increased enjoyment due to community
"it truly was a safe space"	"Integral" to program

In our discussion, it became clear that the community built during the program was central to the enjoyment of the activities, the comfort of trying new things, and then feeling the confidence to take this knowledge beyond the program. Ava shared that a specific "get to know you" activity where new students were paired with returning students for a scavenger hunt was especially impactful for her feeling connected to the group early on. Later in the conversation she

shared how she felt accepted by the group which contributed to her feeling comfortable and confident in outdoor spaces, which can often be one of the greatest barriers for racially and gender diverse individuals to have access to and feel connected to nature (Goodman, 2022; Schwartz & Corkery, 2011). The alum shared that the community created amongst the group was a large portion of their enjoyment of the program and that they were able to build deeper connections amongst the cohort members, with the annual camping trip often being the activity that they cited most. Tadrion shared a specific memory of the annual camping trip and its impact on his feelings of connection with the group.

> *TD: One memory of my experience of community is the camping trip. During this trip I and other PINES students went camping together with TLC PINES staff. We had multiple guest speakers show us basic survival tips, specifically, in foraging, navigation, and fire starting. Then we had a chance to explore the camp site and help each other start fires, and fish. We told scary stories, drank hot chocolate, and slept together, in the cold. This was my favorite trip because I was able to connect with my fellow PINES fellows on a sibling level. It really felt like I was a part of the PINES family.*

From the program facilitator perspective, Diquan shared his fear that the camping trip could go either way for getting the students engaged outdoors, but even with suboptimal conditions, the group stayed connected and had an excellent experience.

> *DE: One of my favorite memories with the PINES program was camping with the second cohort. The weather was unpredictable, and it got pretty cold. A lot of our participants had never camped before, so I was nervous that this cold experience would sour their view of camping and the outdoors. After the camping trip when we got feedback from the students, they all shared that it was a fun and impactful experience, and that they wanted*

to camp again. It was great to see the hard work of planning the camping trip pay off - and even though conditions weren't ideal, it was still an enjoyable experience for the students and I believe that was largely due to the strong community that the students and staff formed with each other.

In this tributary we explored the flow of conversation around the co-researcher's experience of community building during the PINES Fellowship. Aspects of this larger idea are further explored in the rhizomes, but for now the following tributary shares how comfort and safety provided by the community contributed to the co-researchers forming a deeper connection to nature.

Connection to Nature

Table 3 lists the ideas and concepts that repeatedly came up during the discussion and narratives that illustrate the alums' connection to nature. These examples focus both on their connection during the program and their continued connection to nature after the program.

Table 3

Connection to Nature Concepts

Validation of "outdoorsy" identity	New positive perception of outdoor work
New appreciation of beauty	Pro-environmental behaviors
Nature as "self-care"	"Reconnection" with nature due to program
Increase time outside	

With most co-researchers being early in their undergraduate careers, there was a larger conversation around the stresses and responsibilities of transitioning to a full-time student, with nature being a resource that they purposefully access for a reprieve from the stress of their daily

academic requirements. The idea of mental health in nature intersects with multiple points in the conversation and is further explored as a rhizome below. The remaining ideas aligned with the alums spending more time outdoors due to the program, specifically with a sense of a newfound identity of confidence in the outdoors. This confidence manifested in multiple ways with the co-researchers excited to share their new skills with others and even wanting to give back to the environment through activities such as picking up trash.

> *HC: The PINES Program has helped me find more ways to be involved and hands-on in my connection to nature, especially when we as a program made an impact on spaces for the community to enjoy. Overall, my involvement in the PINES Program has made me have a more proactive role in my connection with nature, in a variety of capacities. [PINES] inspires me to connect in new ways from planning my own day trips to natural spaces I have never been to before, to bringing trash bags with me on my casual outing to pick up litter, to even planning a winter trip to the mountains!*

Several of the co-researchers expressed appreciation for the program's exposure to new activities and environments. Ava's narrative explicitly shared how participating in the PINES Fellowship differed from her normal day to day experiences and how these experiences have shown her the importance for everyone to have equal access to nature.

> *AL: I would have never been able to experience this if TLC PINES hadn't allowed me to apply to their program and expand my love for nature. This trip to Robertson Mill Pond has completely opened my eyes to how important it is to experience nature. I experienced so much curiosity whenever we came together during our PINES fellowship Mondays, unlike when I was in school or scrolling through my phone. This curiosity opened my mind to many questions about our environment and nature that hadn't been there before I*

found a green space like this one. I feel the connection between me and nature is so much stronger now than ever since I joined the PINES Fellowship, as I now know of its importance within the lives of people, animals, and myself.

This tributary gave a glimpse at the conversations around the co-researcher's connection to nature and shows how the conversation expanded beyond their own connection and community, to wanting to find ways to share nature with others.

Sharing Nature with Others

Table 4 lists the ideas and concepts that repeatedly came up during the discussion and narratives surrounding the overarching idea sharing nature with others. This greatly centered around the alums' discussions on their own connection to nature because of the program and how it has impacted their confidence in the outdoors. This confidence has then inspired the co-researchers to bring friends and family members along on outdoor adventures and excursions to share their newfound joy and connection.

Table 4

Sharing Nature with Others Concepts

"I can share my knowledge"	Equity and inclusion in nature
Comfort and confidence	Leadership in outdoor spaces
"I know how to strut my stuff"	Sharing skills/expertise
Creating opportunities for others	The Ripple Effect

Part of the discussion began with the recognition that not everyone has equal and equitable access to experiences like those in the PINES Fellowship. Hanna shared through her

narrative that she would like to make a similar pathways program of her own in the future because she believes so deeply in this work.

> *HC: When my senior year in the PINES program was coming to a close it just hit me one day like a truck. I want to do something like this, I want to tell kids that there are careers other than being a vet or a doctor or a lawyer or an astronaut, that they can do one of the most important jobs of all, (not that any of the aforementioned jobs are less important) they can help improve and learn more about the environment! I'm still not exactly sure what kind of program I want to create but I want to do something like a pathways program but also integrating mental health/therapeutic practices.*

The conversation continued to focus on how several of the co-researchers have taken opportunities to bring friends and family outside for activities that they would not have felt comfortable or confident in doing before the program. This idea is reflected in an excerpt from Daniel's narrative.

> *DV: The Pines fellowship's impact on my connection to nature was its prolonged effects on my interaction with nature parks, particularly my socialization with others. Before the program, I often connected with people mainly in an inside environment, such as inside other people's houses or my own or in parking lots. Instead, I will frequently spend time with friends and significant others in parks and the outdoors. This increased time I spent outdoors made me more comfortable in these environments, and I appreciated the beauty of the outdoors. With my increased time spent outside in parks, I felt more comfortable that the time spent outdoors would also be enjoyable to others. Because of the enjoyment I thought others would experience, it led me to get some of my other friendships and relationships to spend time outside.*

These three tributaries, community building, connection to nature, and sharing nature with others, represent the overarching ideas explored in the conversation. These concepts flowed from the connections between community support and comfort in nature and how this has inspired the co-researchers to share their knowledge and love for nature beyond their inner circles. However, thoughts and dialogue are rarely this linear. The following "rhizomes" take a deeper look at several of the ideas explored within and intersecting between the tributaries.

Rhizomes

The data generated through Collective Memory Work can be difficult to represent in a linear fashion. While the tributaries above follow a connected path expanding from the insular community of the program to the ecological level beyond, the rhizomes represent a more authentic depiction of the directionality of the discussion. Leaning on Knight et al. (2025) and their representation of Deleuze and Guattari's (1987) portrayal of knowledge through rhizome theory, a greater metaphor of connectivity through multiple points of access, overlapping connections and nodes, and a non-hierarchical and centerless network of knowledge is able to coexist within the analysis. Several of the ideas presented within the tributaries are depicted within the rhizomes as there were often moments where the conversation would abruptly change and turn but then come back to a topic within a different context. The following rhizomes provide a finer grain view of the discussion and narratives, with reflection on Black feminist theories, specifically critical pedagogies of bell hooks (1994) and Bettina Love (2019), as well as outdoor orientation theories of communitas (Breunig et al., 2010; Turner, 2010), belongingness (Baumeister & Leary, 1995; Bell & Molinaro, 2024), and thriving (Love, 2019; Rude et al., 2017).

Validation of New "Outdoorsy" Identity

The idea of identity came up in multiple ways throughout the conversation, including ideas around being a leader, an environmentalist, and "outdoorsy." These moments flowed in and around all three of the tributaries, reflecting on individuals' connections to nature, their want to take others on their outdoor journey, and the self-confidence and assuredness it takes to continue to build community.

> *DV: I think the way I'm interpreting the question is, "Did I feel that [the PINES Fellowship] changed my self-perception?" And I think it made me think more of myself as an "outdoors person."*

As discussed in the literature review, the dominant outdoor narrative has largely told people who do not fit into the white, male, able bodied archetype, that they do not belong in the outdoors, so how could they consider themselves "outdoorsy." While people of all demographics still find meaningful connections with nature despite this narrative, it can still cause harm and limit people's feelings of comfort and safety in outdoor spaces (Gillard et al., 2014; Powell, 2021). For the fellows to see themselves as "outdoorsy," they need to feel that they are supported, safe, and importantly, that they *belong* within the outdoor narrative (Orozco et al., 2024). Ways this can occur is fostering confidence through skill acquisition (Linden, 2016), representation in the field (Goodman, 2017), and connection to place (Bennett, 2014). The PINES Fellowship supported these aspects by building skills through experiential learning opportunities in the field, bringing in guest speakers who represented their identities, and connecting the students to their ecological homes through stewardship projects that also engaged the larger community. These aspects created an environment for the deeper bonds and connections of belongingness to cultivate within the group (Bell & Molinaro, 2024; Goodman, 2017). Belongingness is described as the

innately human drive to build meaningful and lasting relationships that contribute positively to one's life (Baumeister & Leary, 1995). Bettina Love (2019) reminds us though, that the structural hierarchies within our society impact Black students so that beyond belonging, people must also feel that they matter. "Our impact on this country, whether it is recognized or not, is where mattering rests; it is where thriving rests." (p. 7). Recognizing one's impact and the ability to create change contributes to the self-actualization of an identity, but affirmative support and connections to the community are a simultaneous need (Porter et al., 2020).

> *AL: I want to add on to that. I also felt like I became more proud. I felt like an environmentalist. I'm proud of that about me from PINES. I feel like I'm more knowledgeable and I feel like I can share that knowledge with other people and that can make them more conscious about the environment. And I'm just, I feel like I'm more proud.*

In this rhizome we explored some of the many ways the co-researchers began to feel like they belonged in the outdoors and embraced the "outdoorsy" identity. In the next rhizome we will explore one of the benefits that they have gained through this deeper connection to nature.

Mental Health in Nature

Mental health and wellbeing came up in the narratives and the discussion as reflection on the impact of the program after graduating. Several of the students brought up the difficulty of entering a full-time degree program and shared that taking time in nature is something they purposefully do to calm down or help process information after an exceptionally difficult academic day. Being able to take these life skills with them after the program contributes to the potential of "thriving" (Rude et al., 2017) in their new academic setting because of their participation in the PINES Fellowship.

TD: …I felt like, yes, of course, nature is beautiful. But like Hanna said, I found therapeutic properties and healing properties within nature, and I've been able to use that, especially as a broke college student to just go outside and touch some grass…

The ability to regulate their learning, know what they need as individuals to take care of their well-being, while simultaneously feeling energized to contribute to their community are all defining aspects of thriving in an academic setting (Rude et al., 2017). While Tadrion and Ava still expressed concerns with overwhelming classes, they were able to hear and validate one another's feelings.

TD: Yeah, I think so. I feel like if I feel overwhelmed with classes or like homework or something, I just take a walk. It always calms me down. I know we have two nature parks near my school, so I'll sometimes go there and it's just very therapeutic.

In response Ava shared:

AL: Me too. I try to stay outside as long as I can before going into my dorm because it just feels very closed off. We have hammocks, so I try to study outside because it just feels really good.

hooks (1994) describes the importance of vulnerability from each member of the community that is then followed with authentic acknowledgement, specifically "to hear each other… to listen to one another, is an exercise in recognition" (p. 41). The community that the co-researchers built during and after the program is something that they can carry with them to support their future endeavors and specifically help them feel holistically supported to actually thrive beyond the academic sphere. Love (2019) discusses what thriving means for Black bodies, with Ella Baker's activism as the centerpiece, "…Baker's philosophy of community is how dark folx move from surviving to thriving, so that we matter to one another and the world" (p. 68). Thriving means

much more than mental health, but with a connected community that can provide holistic support for an individual throughout the hardships faced in daily life, the feelings of belonging, mattering, and hopefully even thriving can be achieved.

Creating Space for All

Along with the discussions about sharing nature and outdoor experiences with others, there was also recognition that not everyone has equal access to the same experiences in outdoor spaces. As previously explored, the lack of a feeling of safety and comfort in outdoor spaces is often listed as a persistent barrier for marginalized communities to access traditionally white dominated outdoor spaces (Goodman, 2022; Powell, 2021). Additionally hooks (1994) shares that marginalized students do not feel safe in the traditional hierarchy of educational spaces, stating that, "it is the absence of a feeling of safety that often promotes prolonged silence or lack of student engagement" (p. 39). She continues that when an educational space is able to create a truly safe environment "… everyone feels a responsibility to contribute to a central goal of transformative pedagogy" (p. 39).

> *TD: Yes, I strongly agree with Hanna when she talked about [how] most groups just say, "oh, this is a safe space." But what ends up happening is cliques and smaller groups start forming. But I feel like with this group, it was truly a safe space. If you needed to talk to somebody you could, if you needed a ride somewhere, nobody's going to be like "Oh, well," or tell you no just because you're not in their group or whatever. I feel like we really connect well. When we're at school, I always look forward to the PINES meetings and walking in nature and coming back so I really do feel like it was a safe space, and I feel like the adults and older people made that a thing. So, I really do appreciate that.*

Tadrion shares how creating this safe space impacted his experience within the program and how that helped foster community. Communities are spaces for collective action and positive change (hooks, 1994) and each individual is able to contribute, no matter their skills or experiences. When these spaces can be built to truly support everyone in the community, then all should feel welcome and invited to fully participate. Love (2019) again describes through Ella Baker's activism, the importance of making every individual feel that they matter so that they can thrive, as a community. "[Baker] wanted people to understand just how strong and brilliant they were both individually and collectively" (p. 66).

> *HC: The PINES Program has shown me how important it is to connect others in my life to outdoor spaces and to help them foster their own relationship because not everyone has been exposed to the same resources in their background. The PINES Program has helped me find more ways to be involved and hands-on in my connection to nature, when we as a program made an impact on spaces for the community to enjoy.*

This collective action in community deeply resonates with the Black feminist tenant of *liberation for all* and specifically recognizes how each member of the community can contribute to this collective goal (hooks, 1994; Love, 2019). Love (2019) shares the necessity of this process and how Baker's work "…focused on a layered agenda for justice that utilized everyone's skill sets to emphasize self-worth and collective liberation" (p. 68). While the co-researchers want to share the outdoors with those they care about, they also recognize the need for equal opportunities for all to access nature. As a previous program facilitator, Diquan shares his hope and continued motivation with the co-researcher team for creating progress in equal access for all members of our community to gain the benefits of nature.

DE: Facilitating the PINES program further cemented my belief in ensuring that avenues are available for all members of our community to pursue outdoor activities and career paths. Even if participants of the program did not want to pursue an outdoor career, I wanted to make sure that they knew they had the option to. This is something that I have taken with me in my new role.

In this rhizome, we explored how the co-researchers hope to expand their impact to include social and environmental justice by creating equal access for all in nature. In the next rhizome we see the co-researchers' confidence embodied through beginning to fully perform their "outdoorsy" identity and creating real impact by bringing others into nature.

The Ripple Effect

As the PINES Fellows grew more comfortable in their identities, they were able to make impacts on community members outside of the program. Like a pebble skipped on a pond, the students were leaping to circles beyond the program to connect people with nature, creating the expanding and overlapping impact of the "ripple effect." The discussion started with ideas around student leaders being able to feel ownership and confidence when sharing activities they had already participated in with new cohort members. The discussion quickly expanded beyond this with co-researchers sharing how the program has inspired them to take other friends and family members on outdoor activities with them. When we discussed the camping trip, it became clear that the members who had been able to act as student leaders were proud of the fact that they were able to share their knowledge and experience with the new students.

DE: It seems like a big emphasis is on helping the new cohort. As someone who has already been through the program helps build community and shared experiences… so maybe shared experiences is a big theme and then helping others along as well.

Being able to embody this autonomy and take on the ownership over the space contributed to their sense of community (Breunig et al., 2010) but also exemplified the creation of communitas, a shared experience of liminality during the overnight camping trip (Turner, 2010). As Diquan shared in one of his earlier narratives, the campout can be an event that goes either way for the student's connection to nature, but due to the strong connections built between the cohort members and the supportive environment upheld by all the students, the overnight trip is one of the most prevailing memories of bonding for many of the students.

> *AL: For me personally, our group of PINES people, they made me feel very accepted. They kind of brought me out of my shell… and I feel like we had really good chemistry. I feel like we made things work and we were really respectful to each other too, and we all shared common themes of loving nature. So, I think that brought us together and [The PINES Fellowship] brought us together for those reasons.*

This common love of nature and support that Ava felt from the group is also reflected in hooks' (1994) understanding that community is a catalyst for positive change, specifically when love is centered and everyone is contributing to a shared goal, "…I think that a feeling of community creates a sense that there is shared commitment and a common good that binds us" (p. 40).

During the overnight camping trip, the student leaders were able to take on the role of guide or "teacher" during this experience. hooks (1994) shares that with a holistic model of learning, teachers also "grow and are empowered by the process" (p. 21). This empowerment can be seen by the co-researchers feeling confident and emboldened by their experiences during the PINES Fellowship to then share their knowledge and experience with other members of their own communities, effectively creating a ripple effect of their impact.

HC: Yes, everybody had a mention of getting outdoors more, but the people who mentioned their comfortability level changing completely, they also mentioned getting other people in their lives to go outside and how a positive impact on the environment for one person can influence them to get a lot of people in their circle to also be outside. And this is also how our impact of the PINES program on young teenagers can affect their family, their friends, their circle in general.

One of the goals of the program and this study is to create space for the voices of the PINES Fellows to be incorporated into the outdoor narrative. I would argue that through their community centered actions, the co-researchers are already taking this into their own hands and expanding their impact beyond anything the program or research leaders would have considered, with those they care most deeply about feeling the first currents of their change in action.

Conclusion

As part of the closing discussion, we explored opportunities for growth in the program and moments of success that the co-researchers wanted to highlight. In alignment with CMW and the goals of centering the PINES Fellows' voices in the outdoor narrative, we have decided to end this study with moments of success and moments for potential growth in the PINES Fellowship from the perspective of the co-researchers. This is meant for the benefit of the program as well as providing insight for practitioners in similar fields who would like to create a pathways program.

Growth Opportunities

Several of the co-researchers felt that while the program was a great experience when they were active participants, they also felt a disconnect from the community when they first graduated. Recognizing that the program has only run for three years, they specifically suggest

several ways to continue to engage with alum after the program and hope to see that area continue to grow and expand. The primary suggestion was to create better opportunities for the graduates to stay connected with the community through a mentorship program for alums to act as mentors to current students in the fellowship. As more time passes, they also hope to be invited to be guest speakers to share their experiences either entering higher education programs or starting their chosen career paths. Finally, they also hope to see improvements with future opportunities by creating more "steppingstones" along the pathway through internships and entry level positions at Triangle Land Conservancy (or with trusted partners in similar fields.) Other than suggestions for improving alum engagement efforts, there was no negative feedback about the program itself. While I believe that the co-researchers were primed to provide candid feedback due to the model of open communication and opportunities to provide feedback in the structure of the PINES Fellowship, I cannot deny that the results were overwhelmingly positive. Due to our connections with the co-researchers, it is possible that the co-researchers would have shared more critical feedback if Diquan and I were not the research leaders for this study.

Program Successes

Moments of success that were highlighted by the co-researchers focused on cohort makeup, aspects of the curriculum, and mentorship provided by program leadership. When discussing the cohort members, the co-researchers mentioned that the small group size of ten students was important especially when trying new activities. The "balanced" mix of introverts and extroverts was also highlighted as having a positive impact on the student's experience during the program. When discussing the curriculum, passionate guest speakers that could also provide identity representation inspired several of the co-researchers to explore their own interests for career opportunities. The experiential learning opportunities that provided a deeper

connection to their own communities were also more impactful and the most memorable (citing the field trips to Black owned, local farms as their favorites.) Finally, program leadership was highlighted for creating a "safe space" through an "open door policy" of communication, which made the participants feel supported when coming to the leaders with any need. It was also noted that the leaders should continue acting as mentors who support students and create space for student voices to be incorporated within the curriculum through the student leader opportunity.

Final Thoughts

The greatest sign of success for the PINES Fellowship is if the students grow beyond the original confines of the program's goals. Through the supportive environment created by all members of the PINES community, belongingness (Goodman, 2017) and the cultivation of mattering (Love, 2019), to each other and the outdoor world, were able to thrive. Because of the comfort and safety the students felt as they explored new outdoor experiences together, they were able to connect with nature in new and profound ways. This comfort helped them feel confident in identifying as "outdoorsy," and were nurtured to grow outside of the boundaries of the PINES Fellowship. By fully embodying and performing this newfound identity, the PINES Fellows developed beyond anything Diquan and I could have ever hoped. Seeing the co-researcher's impact of creating an expanding ripple effect throughout their community gives me immense hope for our future, but that does not mean that we can stop working today. Now, more than ever, programs are needed that support youth of intersecting identities, and those that can help, must help. Our collective future cannot be the burden of today's youth, we must do all that we can to set them up to thrive in today's tomorrow.

References

Alinia, M. (2015). On Black Feminist Thought: Thinking oppression and resistance through intersectional paradigm. *Ethnic & Racial Studies*, *38*(13), 2334–2340. https://doi.org/10.1080/01419870.2015.1058492

Barbiero, G., Berto, R., Senes, G., & Fumagalli, N. (2023). Wilderness is the prototype of nature regardless of the individual's connection to nature. An empirical verification of the solastalgia effect. *International Journal of Environmental Research and Public Health*, *20*(14), 6354. https://doi.org/10.3390/ijerph20146354

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Bell, B. J., & Molinaro, A. (2024). Measuring belongingness in outdoor orientation programs. *Journal of Outdoor Recreation and Tourism*, *47*, 100804. https://doi.org/10.1016/j.jort.2024.100804

Bennett, J. (2014). Gifted places: The inalienable nature of belonging in place. *Environment and Planning D: Society and Space*, *32*(4), 658–671. https://doi.org/10.1068/d4913p

Bianco, M., Leech, N. L., & Mitchell, K. (2011). Pathways to teaching: African American male teens explore teaching as a career. *The Journal of Negro Education*, *80*(3), 368–383.

Breunig, M. C., O'Connell, T. S., Todd, S., Anderson, L., & Young, A. (2010). The Impact of Outdoor Pursuits on College Students' Perceived Sense of Community. *Journal of Leisure Research*, *42*(4), 551–572. https://doi.org/10.1080/00222216.2010.11950218

Carr, V., & Hughes, J. (2023). Identifying nature activities that promote adult nature connection using the Evaluating Nature Activities for Connection Tool (ENACT). *Biological Conservation*, *286*, 110287. https://doi.org/10.1016/j.biocon.2023.110287

Chang, C., Lin, B. B., Feng, X., Andersson, E., Gardner, J., & Astell-Burt, T. (2024). A lower connection to nature is related to lower mental health benefits from nature contact. *Scientific Reports*, *14*, 6705. https://doi.org/10.1038/s41598-024-56968-5

Chawla, L. (2015). Benefits of nature contact for children. *Journal of Planning Literature*, *30*(4), 433–452. https://doi.org/10.1177/0885412215595441

Coes, J., Gulley, N. Y., & Johnson, C. W. (2018). How do we sustain activism? LGBTQ and Black people share their positive and negative experiences. In *Collective memory work: A methodology for learning with and from lived experiences* (pp. 85–101). Routledge.

Collins, P. H. (2000). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment.* Routledge.

Collins, P. H. (2015). No guarantees: Symposium on Black feminist thought. *Ethnic & Racial Studies*, *38*(13), 2349–2354. https://doi.org/10.1080/01419870.2015.1058512

Cooper, B. C. (2018). *Eloquent rage: A Black feminist discovers her superpower* (First edition). St. Martin's Press.

Craig, S. L. (2011). Precarious partnerships: Designing a community needs assessment to develop a system of care for gay, lesbian, bisexual, transgender and questioning (GLBTQ) youths. *Journal of Community Practice*, *19*(3), 274–291. https://doi.org/10.1080/10705422.2011.595301

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241–1299. https://doi.org/10.2307/1229039

DeVille, N. V., Tomasso, L. P., Stoddard, O. P., Wilt, G. E., Horton, T. H., Wolf, K. L., Brymer, E., Kahn, P. H., & James, P. (2021). Time spent in nature is associated with increased pro-environmental attitudes and behaviors. *International Journal of Environmental Research and Public Health*, *18*(14), 7498. https://doi.org/10.3390/ijerph18147498

Drenon, B. (2025, March 15). *Arlington Cemetery strips content on black and female veterans from website*. BBC. https://www.bbc.com/news/articles/cz03gjnxe25o

Exec. Order No. 13562, 3 C.F.R (2010). https://obamawhitehouse.archives.gov/the-press-office/2010/12/27/executive-order-13562-recruiting-and-hiring-students-and-recent-graduate

Exec. Order No. 14217. (2025). *Commencing the reduction of the federal bureaucracy*. https://www.whitehouse.gov/presidential-actions/2025/02/commencing-the-reduction-of-the-federal-bureaucracy/

Fehnker, L., Pearson, D., & Howland, P. (2022). Informing future land systems using self-reported pathways and barriers to connections to nature: A case study in Auckland, New Zealand. *Land*, *11*(10), 1758. https://doi.org/10.3390/land11101758

Finney, C. (2014). *Black faces, white spaces: Reimagining the relationship of African Americans to the great outdoors*. The University of North Carolina Press.

Gillard, A., Buzuvis, E. E., & Bialeschki, M. D. (2014). Supporting transgender and gender nonconforming youth at summer camp. *Journal of Park and Recreation Administration*, *32*(3).

Goodman, C. H. (2017). *Landscapes of belonging: Systematically marginalized students and sense of place and belonging in outdoor experiential education* [Master's Thesis, Prescott College in Education].

Goodman, C. H. (2022). Racial capitalism and outdoor adventure education: Challenging inequity and reimagining connection, community, and place. *Journal of Outdoor Recreation, Education, and Leadership*, *14*(1), Article 1. https://doi.org/10.18666/JOREL-2022-V14-I1-11118

Hamm, R. (2021). *The potential of collective memory work as a method of learning: Applications and adaptations*. Sligo: Beltra Books. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-74974-5

Haug, F. (1992). Feminist writing: Working with women's experience. *Feminist Review*, *42*, 16–32. https://doi.org/10.2307/1395126

Haug, F. (2008). Memory work: Australian feminist studies. *Australian Feminist Studies*, *23*(58), 537–541. https://doi.org/10.1080/08164640802433498

hooks, bell. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.

Howard, R. A., O'Connell, T. S., & Lathrop, A. H. (2016). Community development, transitional value, and institutional affinity: Outdoor orientation program impacts. *Journal of Experiential Education*, *39*(1), 45–58. https://doi.org/10.1177/1053825915623049

Hughes, J., Rogerson, M., Barton, J., & Bragg, R. (2019). Age and connection to nature: When is engagement critical? *Frontiers in Ecology and the Environment*, *17*(5), 265–269. https://doi.org/10.1002/fee.2035

Johnson, C. W., Kivel, B. D., & Cousineau, L. S. (2018). The history and methodological tradition(s) of collective memory work. In *Collective memory work: A methodology for learning with and from lived experience* (pp. 3–26). Routledge.

Johnson, C. W., & Oakes, H. (2018). Are you next? Common elements of collective memory work. In *Collective memory work: A methodology for learning with and from lived experience* (pp. 130–148). Routledge.

Johnson, C. W., Singh, A. A., & Gonzalez, M. (2014). "It's complicated": Collective memories of transgender, queer, and questioning youth in high school. *Journal of Homosexuality*, *61*(3), 419–434. https://doi.org/10.1080/00918369.2013.842436

Knight, J., Schultz, C., Stonehouse, P., Johnson, C. W., Howard, J., Williams, Y., Harrington, A., & Warner, E. (2025). How nature-based learning impacts teachers: Discoveries for well-being in and with the project EXPLORE community. *Interdisciplinary Journal of Environmental and Science Education*, *21*(1), e2505. https://doi.org/10.29333/ijese/15813

Kralik, D., Koch, T., & Brady, B. M. (2000). Pen pals: Correspondence as a method for data generation in qualitative research. *Journal of Advanced Nursing*, *31*(4), 909–917. https://doi.org/10.1046/j.1365-2648.2000.01358.x

Linden, S. J. (2016). Connecting to nature, community, and self: A conservation corps approach to re-engaging at-risk youth in science education [M.S.T., Portland State University]. In *ProQuest Dissertations and Theses*. https://www.proquest.com/docview/1823238634/abstract?pq-origsite=summon&sourcetype=Dissertations%20&%20Theses

Lorde, A. (2007). *Sister outsider: Essays and speeches*. Crossing Press.

Lorde, A. (1987). The uses of anger: Women responding to racism. Women and Language: WL, 11(1), 4.

Love, B. L. (2019). *We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom*. Beacon Press.

Lynch, P., Bell, M., Cosgriff, M., & Zink, R. (2020). Practising feminist reflexivity: Collaborative letter writing as method. In *Research methods in outdoor studies* (pp. 175–185). Routledge.

National Center for Education Statistics. (2022). *Search for Public Schools - School Detail for Knightdale High; National Center for Education Statistics.* https://nces.ed.gov/ccd/schoolsearch/school_detail.asp?ID=370472002745

Outdoor Industry Association. (2023). *2023 outdoor participation trends report*. Outdoor Industry Association. https://outdoorindustry.org/resource/2023-outdoor-participation-trends-report/

Parry, D. C., & Johnson, C. W. (2007). Contextualizing leisure research to encompass complexity in lived leisure experience: The need for creative analytic practice. *Leisure Sciences*, *29*(2), 119–130. https://doi.org/10.1080/01490400601160721

PMF Program. (2025). *Termination of the PMF Program*. U.S. Office of Personnel Management. http://www.pmf.gov/news-events/termination-of-the-pmf-program/

Porter, C. J., Green, Q., Daniels, M., & Smola, M. (2020). Black women's socialization and identity development in college: Advancing Black feminist thought. *Journal of Student Affairs Research and Practice*, *57*(3), 253–265. https://doi.org/10.1080/19496591.2019.1683021

Powell, R. A. (2021). Who is responsible for normalizing Black bodies in white spaces? *Journal of Park and Recreation Administration*, *39*(1), 171–174. https://doi.org/10.18666/JPRA-2020-10637

Reisner, S. L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., & Mimiaga, M. J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *56*(3), 274–279. https://doi.org/10.1016/j.jadohealth.2014.10.264

Rude, W. J., Bobilya, A. J., & Bell, B. J. (2017). An Investigation of the Connection Between Outdoor Orientation and Thriving. *Journal of Outdoor Recreation, Education, and Leadership*, *9*(2), Article 2. https://doi.org/10.18666/JOREL-2017-V9-I2-8101

Salazar, G., Kunkle, K., & Monroe, M. C. (2022). *Practitioner guide to assessing connection to nature*. North American Association for Environmental Education.

Schwartz, A., & Corkery, M. R. (2011). Barriers to participation among underrepresented populations in outdoor programs. *Recreational Sports Journal*, *35*(2), 130–144. https://doi.org/10.1123/rsj.35.2.130

Schmidt, A., Outley, C. W., & Schultz, C. (2022). Can (or should) white women do Black feminist theory?: Exploring tensions, contradictions, and intersectionalities while performing justice-focused research. *Leisure/Loisir*. https://doi.org/10.1080/14927713.2022.2141835

Taylor, D. (2014). *The state of diversity in environmental organizations*. Green 2.0. https://diversegreen.org/wp-content/uploads/2021/01/FullReport_Green2.0_FINAL.pdf

Taylor, D. E., Paul, S., & McCoy, E. (2019). Diversity, Equity, and Inclusion and the Salience of Publicly Disclosing Demographic Data in American Environmental Nonprofits. *Sustainability*, *11*(19), 5491. https://doi.org/10.3390/su11195491

Tharps, L. (2014, June 2). *I refuse to remain in the lower case*. My American Meltingpot. https://myamericanmeltingpot.com/2014/06/02/i-refuse-to-remain-in-the-lower-case/

Three Rivers Park District. (n.d.). *Pathways Internship*. Retrieved February 25, 2024, from https://www.threeriversparks.org/page/pathways-internship

Triangle Land Conservancy. (2022). *Pathways into Natural Environments and Science (PINES)*. Pathways into Natural Environments and Science (PINES). https://triangleland.org/pines

Turner, V. W. (2010). Liminality and Communitas. In *Ritual*. Routledge.

Xiao, X., Lee, K. J., & Larson, L. R. (2022). Who visits U.S. national parks (and who doesn't)? A national study of perceived constraints and vacation preferences across diverse populations. *Journal of Leisure Research*, *53*(3), 404–425. https://doi.org/10.1080/00222216.2021.1899776

YMCA. (2024). *YMCA Career Pathways*. Career Pathways. https://www.ymcanorth.org/impact/career_pathways

Youdelman, M. (2025, March 3). *Despite new executive order, language access is still the law!* National Health Law Program. https://healthlaw.org/despite-new-executive-order-language-access-is-still-the-law/

Yourish, K., Daniel, A., Datar, S., White, I., & Gamio, L. (2025, March 7). These words are disappearing in the new Trump administration. *The New York Times*. https://www.nytimes.com/interactive/2025/03/07/us/trump-federal-agencies-websites-words-dei.html

Zelenski, J. M., Dopko, R. L., & Capaldi, C. A. (2015). Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology*, *42*, 24–31. https://doi.org/10.1016/j.jenvp.2015.01.005

Zylstra, M. J., Knight, A. T., Esler, K. J., & Le Grange, L. L. L. (2014). Connectedness as a core conservation concern: An interdisciplinary review of theory and a call for practice. *Springer Science Reviews*, *2*(1), 119–143. https://doi.org/10.1007/s40362-014-0021-3

REFERENCES

Alfrey, L., Enright, E., & Rynne, S. (2017). Letters from early career academics: The physical education and sport pedagogy field of play. *Sport, Education & Society*, *22*(1), 5–21. https://doi.org/10.1080/13573322.2016.1242479

Alinia, M. (2015). On Black Feminist Thought: Thinking oppression and resistance through intersectional paradigm. *Ethnic & Racial Studies*, *38*(13), 2334–2340. https://doi.org/10.1080/01419870.2015.1058492

Barbiero, G., Berto, R., Senes, G., & Fumagalli, N. (2023). Wilderness is the prototype of nature regardless of the individual's connection to nature. An empirical verification of the solastalgia effect. *International Journal of Environmental Research and Public Health*, *20*(14), 6354. https://doi.org/10.3390/ijerph20146354

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Bell, B. J., & Molinaro, A. (2024). Measuring belongingness in outdoor orientation programs. *Journal of Outdoor Recreation and Tourism*, *47*, 100804. https://doi.org/10.1016/j.jort.2024.100804

Bennett, J. (2014). Gifted places: The inalienable nature of belonging in place. *Environment and Planning D: Society and Space*, *32*(4), 658–671. https://doi.org/10.1068/d4913p

Bianco, M., Leech, N. L., & Mitchell, K. (2011). Pathways to teaching: African American male teens explore teaching as a career. *The Journal of Negro Education*, *80*(3), 368–383.

Boone, J. C. (2020). Black teachers' collective wisdom as social justice pedagogy: A Black feminist narrative analysis [Ph.D., Old Dominion University]. In *ProQuest Dissertations and Theses*. https://www.proquest.com/docview/2451133427/abstract/9D4A5471AC6D498CPQ/1

Breunig, M. C., O'Connell, T. S., Todd, S., Anderson, L., & Young, A. (2010). The Impact of Outdoor Pursuits on College Students' Perceived Sense of Community. *Journal of Leisure Research*, *42*(4), 551–572. https://doi.org/10.1080/00222216.2010.11950218

Cachelin, A., Rose, J., Dustin, D., & Shooter, W. (2011). Sustainability in Outdoor Education: Rethinking Root Metaphor. *The Journal of Sustainability Education*. https://www.proquest.com/docview/3083852834/citation/2AC6E7FF23B4C6BPQ/1

Carr, V., & Hughes, J. (2023). Identifying nature activities that promote adult nature connection using the Evaluating Nature Activities for Connection Tool (ENACT). *Biological Conservation*, *286*, 110287. https://doi.org/10.1016/j.biocon.2023.110287

Chang, C., Lin, B. B., Feng, X., Andersson, E., Gardner, J., & Astell-Burt, T. (2024). A lower connection to nature is related to lower mental health benefits from nature contact. *Scientific Reports*, *14*, 6705. https://doi.org/10.1038/s41598-024-56968-5

Chawla, L. (2015). Benefits of nature contact for children. *Journal of Planning Literature*, *30*(4), 433–452. https://doi.org/10.1177/0885412215595441

Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a field of intersectionality studies: Theory, applications, and praxis. *Signs: Journal of Women in Culture & Society*, *38*(4), 785–810. https://doi.org/10.1086/669608

Clark, J. (2009). Acting up and speaking out: Using Theatre of the Oppressed and collective memory work as alternative research methods and empowerment tools in work with girls. *Agenda: Empowering Women for Gender Equity*, *79*, 49–64.

Coes, J., Gulley, N. Y., & Johnson, C. W. (2018). How do we sustain activism? LGBTQ and Black people share their positive and negative experiences. In *Collective memory work: A methodology for learning with and from lived experiences* (pp. 85–101). Routledge.

Collins, P. H. (2000). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment.* Routledge.

Collins, P. H. (2015). No guarantees: Symposium on Black feminist thought. *Ethnic & Racial Studies*, *38*(13), 2349–2354. https://doi.org/10.1080/01419870.2015.1058512

Cooper, B. C. (2018). *Eloquent rage: A Black feminist discovers her superpower* (First edition). St. Martin's Press.

Craig, S. L. (2011). Precarious partnerships: Designing a community needs assessment to develop a system of care for gay, lesbian, bisexual, transgender and questioning (GLBTQ) youths. *Journal of Community Practice*, *19*(3), 274–291. https://doi.org/10.1080/10705422.2011.595301

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241–1299. https://doi.org/10.2307/1229039

De Schauwer, E., Van De Putte, I., & Davies, B. (2018). Collective biography: Using memory work to explore the space-in-between normativity and difference/disability. *Qualitative Inquiry*, *24*(1), 8–19. https://doi.org/10.1177/1077800417728959

DeVille, N. V., Tomasso, L. P., Stoddard, O. P., Wilt, G. E., Horton, T. H., Wolf, K. L., Brymer, E., Kahn, P. H., & James, P. (2021). Time spent in nature is associated with increased pro-environmental attitudes and behaviors. *International Journal of Environmental Research and Public Health*, *18*(14), 7498. https://doi.org/10.3390/ijerph18147498

Dockry, M. J., Sachdeva, S. S., Fisher, C. L., Kenefic, L. S., Locke, D. H., & Westphal, L. M. (2022). Student trainee and paid internship programs have positive results but do little to influence long-term employee diversity in the USDA forest service. *PLOS ONE*, *17*(11), e0277423. https://doi.org/10.1371/journal.pone.0277423

Drenon, B. (2025, March 15). *Arlington Cemetery strips content on black and female veterans from website*. BBC. https://www.bbc.com/news/articles/cz03gjnxe25o

Enright, E., Rynne, S. B., & Alfrey, L. (2017). 'Letters to an early career academic': Learning from the advice of the physical education and sport pedagogy professoriate. *Sport, Education & Society*, *22*(1), 22–39. https://doi.org/10.1080/13573322.2016.1257483

Exec. Order No. 13562. (2010). *Recruiting and hiring students and recent graduates*. https://obamawhitehouse.archives.gov/the-press-office/2010/12/27/executive-order-13562-recruiting-and-hiring-students-and-recent-graduate

Exec. Order No. 14217. (2025). *Commencing the reduction of the federal bureaucracy*. https://www.whitehouse.gov/presidential-actions/2025/02/commencing-the-reduction-of-the-federal-bureaucracy/

Fehnker, L., Pearson, D., & Howland, P. (2022). Informing future land systems using self-reported pathways and barriers to connections to nature: A case study in Auckland, New Zealand. *Land*, *11*(10), 1758. https://doi.org/10.3390/land11101758

Finney, C. (2014). *Black faces, white spaces: Reimagining the relationship of African Americans to the great outdoors*. The University of North Carolina Press.

Garner, M. A. (2012). *Connecting with nature: The effects of organized camp experiences and early-life outdoor experiences on children's environmental consciousness*. East Carolina University.

Garst, B. A., Baughman, S., Whittington, A., & Gagnon, R. J. (2015). Influences of resident camp experiences on career choice: A case study of female alumnae. *Research in Outdoor Education*, *13*(1), 59–82.

Gillard, A., Buzuvis, E. E., & Bialeschki, M. D. (2014). Supporting transgender and gender nonconforming youth at summer camp. *Journal of Park and Recreation Administration*, *32*(3). https://www.proquest.com/docview/1730082722/abstract/63165A0C31EB4867PQ/1

Goodman, C. H. (2022). Racial capitalism and outdoor adventure education: Challenging inequity and reimagining connection, community, and place. *Journal of Outdoor Recreation, Education, and Leadership*, *14*(1), Article 1. https://doi.org/10.18666/JOREL-2022-V14-I1-11118

Hamm, R. (2021). *The potential of collective memory work as a method of learning: Applications and adaptations*. Sligo: Beltra Books. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-74974-5

Harris, J. (2002). The correspondence method as a data-gathering technique in qualitative enquiry. *International Journal of Qualitative Methods*, *1*(4), 1–9. https://doi.org/10.1177/160940690200100401

Haug, F. (1992). Feminist writing: Working with women's experience. *Feminist Review*, *42*, 16–32. https://doi.org/10.2307/1395126

Haug, F. (2008). Memory work: Australian feminist studies. *Australian Feminist Studies*, *23*(58), 537–541. https://doi.org/10.1080/08164640802433498

Haywood, C. M. (2022). A place of personal and cultural resistance: Using Black feminist values, perspectives, and embodied knowledges to (re)examine institutional logics and ethics in digital research [Ph.D., Michigan State University]. In *ProQuest Dissertations and Theses*. https://www.proquest.com/docview/2667765689/abstract/C78A35AE59F346A4PQ/1

Hiller, S. E., & Kitsantas, A. (2014). The effect of a horseshoe crab citizen science program on middle school student science performance and STEM career motivation. *School Science and Mathematics*, *114*(6), 302–311. https://doi.org/10.1111/ssm.12081

Holland-Smith, D. (2022). Habitus and practice: Social reproduction and trajectory in outdoor education and higher education. *Sport, Education & Society*, *27*(9), 1071–1085. https://doi.org/10.1080/13573322.2021.1964460

hooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.

Howard, R. A., O'Connell, T. S., & Lathrop, A. H. (2016). Community development, transitional value, and institutional affinity: Outdoor orientation program impacts. *Journal of Experiential Education*, *39*(1), 45–58. https://doi.org/10.1177/1053825915623049

Hughes, J., Rogerson, M., Barton, J., & Bragg, R. (2019). Age and connection to nature: When is engagement critical? *Frontiers in Ecology and the Environment*, *17*(5), 265–269. https://doi.org/10.1002/fee.2035

Johnson, C. W., Kivel, B. D., & Cousineau, L. S. (2018). The history and methodological tradition(s) of collective memory work. In *Collective memory work: A methodology for learning with and from lived experience* (pp. 3–26). Routledge.

Johnson, C. W., & Oakes, H. (2018). Are you next? Common elements of collective memory work. In *Collective memory work: A methodology for learning with and from lived experience* (pp. 130–148). Routledge.

Johnson, C. W., Singh, A. A., & Gonzalez, M. (2014). "It's complicated": Collective memories of transgender, queer, and questioning youth in high school. *Journal of Homosexuality*, *61*(3), 419–434. https://doi.org/10.1080/00918369.2013.842436

Knight, J., Schultz, C., Stonehouse, P., Johnson, C. W., Howard, J., Williams, Y., Harrington, A., & Warner, E. (2025). How nature-based learning impacts teachers: Discoveries for well-being in and with the project EXPLORE community. *Interdisciplinary Journal of Environmental and Science Education*, *21*(1), e2505. https://doi.org/10.29333/ijese/15813

Kralik, D., Koch, T., & Brady, B. M. (2000). Pen pals: Correspondence as a method for data generation in qualitative research. *Journal of Advanced Nursing*, *31*(4), 909–917. https://doi.org/10.1046/j.1365-2648.2000.01358.x

Lee, K. J., & Scott, D. (2017). *Racial discrimination and African Americans' travel behavior: The utility of habitus and vignette technique*. https://journals.sagepub.com/doi/full/10.1177/0047287516643184?utm_source=summon&utm_medium=discovery-provider

Linden, S. J. (2016). Connecting to nature, community, and self: A conservation corps approach to re-engaging at-risk youth in science education [M.S.T., Portland State University]. In *ProQuest Dissertations and Theses*.

https://www.proquest.com/docview/1823238634/abstract?pq-origsite=summon&sourcetype=Dissertations%20&%20Theses

Lorde, A. (1987). The uses of anger: Women responding to racism. *Women and Language: WL*, *11*(1), 4.

Lorde, A. (2007). *Sister outsider: Essays and speeches*. Crossing Press.

Love, B. L. (2019). *We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom*. Beacon Press.

Lynch, P., Bell, M., Cosgriff, M., & Zink, R. (2020). Practising feminist reflexivity: Collaborative letter writing as method. In *Research methods in outdoor studies* (pp. 175–185). Routledge.

Martin, A. E., & Fisher-Ari, T. R. (2021). "If we don't have diversity, there's no future to see": High-school students' perceptions of race and gender representation in stem. *Science Education*, *105*(6), 1076–1099. https://doi.org/10.1002/sce.21677

Mowatt, R. A. (2020). A People's History of Leisure Studies: The Great Race and the National Parks and U.S. Forests. *Journal of Park and Recreation Administration*, *38*(3), 152–172. https://doi.org/10.18666/JPRA-2019-9674

Mutz, M., & Müller, J. (2016). Mental health benefits of outdoor adventures: Results from two pilot studies. *Journal of Adolescence*, *49*, 105–114. https://doi.org/10.1016/j.adolescence.2016.03.009

National Center for Education Statistics. (2022). *Search for Public Schools - School Detail for Knightdale High; National Center for Education Statistics.* https://nces.ed.gov/ccd/schoolsearch/school_detail.asp?ID=370472002745

North, C., Hills, D., Maher, P., Farkić, J., Zeilmann, V., Waite, S., Takano, T., Prince, H., Pedersen Gurholt, K., Muthomi, N., Njenga, D., Karaka-Clarke, T. H., Houge Mackenzie, S., & French, G. (2024). The impact of artificial intelligence on adventure education and outdoor learning: International perspectives. *Journal of Adventure Education and Outdoor Learning*, *24*(1), 123–140. https://doi.org/10.1080/14729679.2023.2248302

Oesterreich, H. A. (2007). From "crisis" to "activist": The everyday freedom legacy of Black feminisms. *Race, Ethnicity and Education*, *10*(1), 1–20. https://doi.org/10.1080/13613320601100344

Orozco, J. P., Schultz, C. S., & De La Garza, A. (2024). "Parece que están dándote una bienvenida": Testimonios of Chicana/o families sense of belonging through nature. *International Journal of the Sociology of Leisure*, *7*(2), 177–206. https://doi.org/10.1007/s41978-024-00151-7

Outdoor Industry Association. (2023). *2023 outdoor participation trends report*. Outdoor Industry Association. https://outdoorindustry.org/resource/2023-outdoor-participation-trends-report/

Parry, D. C., & Johnson, C. W. (2007). Contextualizing leisure research to encompass complexity in lived leisure experience: The need for creative analytic practice. *Leisure Sciences*, *29*(2), 119–130. https://doi.org/10.1080/01490400601160721

PMF Program. (2025). *Termination of the PMF Program*. U.S. Office of Personnel Management. http://www.pmf.gov/news-events/termination-of-the-pmf-program/

Porter, C. J., Green, Q., Daniels, M., & Smola, M. (2020). Black women's socialization and identity development in college: Advancing Black feminist thought. *Journal of Student*

Affairs Research and Practice, *57*(3), 253–265. https://doi.org/10.1080/19496591.2019.1683021

Powell, R. A. (2021). Who is responsible for normalizing Black bodies in white spaces? *Journal of Park and Recreation Administration*, *39*(1), 171–174. https://doi.org/10.18666/JPRA-2020-10637

Reisner, S. L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., & Mimiaga, M. J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *56*(3), 274–279. https://doi.org/10.1016/j.jadohealth.2014.10.264

Roberts, J. W. (2011). *Beyond learning by doing: Theoretical currents in experiential education*. Taylor & Francis Group.

Roberts, N. S., & Henderson, K. A. (1997). Women of color in the outdoors: Culture and meanings. *Journal of Experiential Education*, *20*(3), 134–142. https://doi.org/10.1177/105382599702000305

Ruiz Guerrero, M. G. (2019). Health and nutrition in early childhood education: A Black feminist analysis of head start [Ph.D., New Mexico State University]. In *ProQuest Dissertations and Theses*.

Salazar, G., Kunkle, K., & Monroe, M. C. (2022). *Practitioner guide to assessing connection to nature*. North American Association for Environmental Education.

Schmidt, A. (2022). *Anti-oppression self-expression: An a/r/tographic understanding of Black and brown youth's conceptualization(s) of "nature"* [Western Carolina University]. https://www.proquest.com/docview/2662868275/abstract/?pq-origsite=summon

Schmidt, A., Outley, C. W., & Schultz, C. (2022). Can (or should) white women do Black feminist theory?: Exploring tensions, contradictions, and intersectionalities while performing justice-focused research. *Leisure/Loisir*. https://doi.org/10.1080/14927713.2022.2141835

Schroeder, H. (2005). The meaning of "nature": Insights from cognitive linguistics. *Proceedings of the 2005 Northeastern Recreation Research Symposium*, 196–202. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fs.usda.gov/ne/newtown_square/publications/technical_reports/pdfs/2006/341%20papers/schroeder341.pdf

Schwartz, A., & Corkery, M. R. (2011). Barriers to participation among underrepresented populations in outdoor programs. *Recreational Sports Journal*, *35*(2), 130–144. https://doi.org/10.1123/rsj.35.2.130

Steeves, J. A., Guillaume, B., Eul, J., Thompson, M., & Oody, J. I. (2023). Outdoors is Medicine®: College faculty and students outdoor time, behaviors, and perceived health benefits. *Medicine & Science in Sports & Exercise*, *55*(9S), 602–602. https://doi.org/10.1249/01.mss.0000985424.19735.cb

Taylor, D. (2014). *The state of diversity in environmental organizations*. Green 2.0. https://diversegreen.org/wp-content/uploads/2021/01/FullReport_Green2.0_FINAL.pdf

Taylor, D. E., Paul, S., & McCoy, E. (2019). Diversity, Equity, and Inclusion and the Salience of Publicly Disclosing Demographic Data in American Environmental Nonprofits. *Sustainability*, *11*(19), 5491. https://doi.org/10.3390/su11195491

Tharps, L. (2014, June 2). *I refuse to remain in the lower case*. My American Meltingpot. https://myamericanmeltingpot.com/2014/06/02/i-refuse-to-remain-in-the-lower-case/

The Combahee River Collective. (1995). A Black feminist statement. In B. Guy-Sheftall (Ed.), *Words of fire: An anthology of African-American feminist thought* (pp. 232–240). New Press : Distributed by W.W. Norton.

Three Rivers Park District. (n.d.). *Pathways Internship*. Retrieved February 25, 2024, from https://www.threeriversparks.org/page/pathways-internship

Triangle Land Conservancy. (2022). *Pathways into Natural Environments and Science (PINES)*. Pathways into Natural Environments and Science (PINES). https://triangleland.org/pines

Turner, V. W. (2010). Liminality and Communitas. In *Ritual*. Routledge.

Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental Research*, *166*, 628–637. https://doi.org/10.1016/j.envres.2018.06.030

US National Parks Service. (2022). *Pathways Programs (U.S. National Park Service).* https://www.nps.gov/aboutus/pathways.htm

USAJOBS. (2024). *Student Trainee (Park Guide).* https://www.usajobs.gov:443/GetJob/ViewDetails/808470700

Xiao, X., Lee, K. J., & Larson, L. R. (2022). Who visits U.S. national parks (and who doesn't)? A national study of perceived constraints and vacation preferences across diverse populations. *Journal of Leisure Research*, *53*(3), 404–425. https://doi.org/10.1080/00222216.2021.1899776

YMCA. (2024). *YMCA Career Pathways*. Career Pathways. https://www.ymcanorth.org/impact/career_pathways

Youdelman, M. (2025, March 3). *Despite new executive order, language access is still the law!* National Health Law Program. https://healthlaw.org/despite-new-executive-order-language-access-is-still-the-law/

Yourish, K., Daniel, A., Datar, S., White, I., & Gamio, L. (2025, March 7). These words are disappearing in the new Trump administration. *The New York Times*. https://www.nytimes.com/interactive/2025/03/07/us/trump-federal-agencies-websites-words-dei.html

Zelenski, J. M., Dopko, R. L., & Capaldi, C. A. (2015). Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology*, *42*, 24–31. https://doi.org/10.1016/j.jenvp.2015.01.005

Zylstra, M. J., Knight, A. T., Esler, K. J., & Le Grange, L. L. L. (2014). Connectedness as a core conservation concern: An interdisciplinary review of theory and a call for practice. *Springer Science Reviews*, *2*(1), 119–143. https://doi.org/10.1007/s40362-014-0021-3

APPENDIX A: CO-RESEARCHER BIOGRAPHIES

Below are further details on the co-researchers' identities. As part of this section, they also shared their reasonings for participating both in the PINES Fellowship as well as this research study. These are shared in their own words.

Daniel Vargas (He/Him/His)

Race/Ethnicity:

Brown/Latino

Any other key identities you would like listed?

Engineering College Student, Male, National Guardsmen/Soldier, Egalitarian & Environmentalist, Rural upbringing, Student Leader

Why did you join PINES in the first place?

I joined Pines for interest in the subject matter, career & education progression, networking opportunities, and financial incentives. The subject matter of forestry, land preserves, and other environmental careers appealed to me because I enjoy the time I spend outdoors. When I was first introduced, PINES told me that they would help high schoolers like me explore environmental fields and help manage land preserves they managed. I was drawn to spending time in land preserves, and as I attended, I grew more interested in environmental fields. Regarding career & education progression, having a paid internship would be a point I could state on my resume, demonstrating my capability to engage professionally with an organization. PINES offered a professional setting and work environment, which I wanted to prove I could operate in. Doing the PINES program would prove to college and future employers that I could work professionally, which drew me to PINES. Finally, I joined the Pines program because they

made it more financially viable to join the program. Offering pay helped cover expenses like travel to and from the worksite, which made my involvement in the program more economically justifiable.

Why did you participate in the study?

I chose to participate in the study because it will provide TLC & its staff with valuable information regarding the program, help me reconnect with TLC & their staff, and continue my connection to nature and the outdoors. PINES Fellowship has a critical mission: in part, to help connect those who may not have had a connection to nature to develop one and take that into future consideration for their careers. The more information TLC has about the program and its efficacy, the more it can help them continue to grow and improve the program. Secondly, I wish to remain in contact with the TLC staff, who do great work. Lastly, it allows me to engage with TLC more and meet my need to interact with those who support the outdoors and nature.

Ava Lipsey (She/Her/Hers)

Race/Ethnicity:

African American

Any other key identities you would like listed:

PINES Student Leader, Microbiology College Student

Why did you join PINES in the first place?

I joined PINES in the first place because I thought it would be an interesting experience for me, and I needed something in my life at that time that would allow me to make more connections with people. I also joined PINES because of my interest in environmental issues and preserving the beauty of nature.

Why did you participate in the study?

I participated in this study because I saw this as a chance to contribute to PINES in my own way, even after I graduated from the program already. There's something about reflecting on the growth of yourself and your peers that makes you feel happy and accomplished but also a little nostalgic. I also wanted another chance to connect with my old mentors and peers, as they were like a family to me.

Tadrion Davis (He/Him/His)

Race/Ethnicity:

African American/Black

Any other key identities you would like listed:

PINES Student Leader, Bioengineering College Student, Gay, Cisgender Male

Why did you join PINES in the first place?

I joined PINES because when I took a field trip to the Bailey and Sarah Williamson Nature Preserve and met all of the PINES staff, the greeted me with open arms and offered a safe place for me to be me while enjoying the environment. I knew from the beginning that this program was not going to be just about learning about the environment, but also about self-discovery and self-care.

Why did you participate in the study?

I participated in this study mostly to support Kayla and her journey to get a higher education, but also I think it is important to spread awareness about the beautiful healing properties of the environment and how it can help children, teens, adults, and elders, no matter what they are going through.

Hanna Camptella (She/Her/Hers)

Race/Ethnicity:

White/Caucasian

Any other key identities you would like listed:

Natural Resources College Student, PINES Student Leader, PINES Intern, First Generation College Student

Why did you join PINES in the first place?

I joined the PINES Program because I was passionate about Nature but didn't know how to direct that passion into a career.

Why did you participate in the study?

I participated in the study because I think it is important to research new and unique programs like PINES because new programs are being created all the time to align with the aims of many diverse fields.

APPENDIX B: ORGANIZATION REPORT

PINES Fellowship Research Report for Triangle Land Conservancy

The purpose of this research was to explore the experiences of pathways program alums from the PINES Fellowship, specifically as it relates to their knowledge of outdoor career paths, connection to nature, and creation of community. This study aimed to answer the following research questions: (1) What are the experiences of PINES student participants around connection to nature? (2) What are the experiences of the PINES student participants around creation of community? (3) What knowledge of career paths in the outdoors do students have after completion of the PINES Fellowship? The design of this study was guided by Collective Memory Work (CMW) and grounded in Black feminist theory (BFT). CMW follows a two-phase research design, starting with the co-researchers (four PINES alums) writing short narratives about memories from the program in response to a central prompt. These then follow with a focus group of all co-researchers collectively analyzing the narratives for similarities, differences, and impacts of the program. For the focus group, Diquan Edmonds and I acted as co-facilitators. The following sections share an overview of the results and implications of the study.

Impact on Interest in Outdoor Career Pathways

When focusing on outdoor career paths as a topic, several of the narratives and much of the conversation during the focus group centered on ideas around discovering new opportunities, increased comfort and confidence in the outdoor career field, inspiration from guest speakers and staff, and finally the financial realities of this field. When sharing her anxiety on what felt like an infinite number of options for careers, Hanna wrote:

HC: When my senior year in the PINES program was ending it just hit me one day, like a truck. I want to do something like this, I want to tell kids that there are careers other than being a vet or a doctor or a lawyer or an astronaut, that they can do one of the most important jobs of all, they can help improve and learn more about the environment!

The co-researchers cited that both the experiences within the program, the guest speakers who visited, and the staff interactions that they had greatly impacted their interest in outdoor careers. Specifically, they noted that it allowed them to visualize themselves in similar career paths. Ava shared a moment of inspiration that she had during Patrick Boleman's guest speaker day:

AL: Patrick's job seemed to be making a huge change within nature itself, and it inspired me about how passionate he was about his job as if he wasn't getting paid for it. This then made me start to think about my future career, and if I would enjoy it as much as Patrick seems to enjoy his job. I realized something at that moment, I loved nature and finding careers that are centered around the environment was something that I wanted for myself.

In a similar vein, financial compensation in the field dominated much of the later conversation. All co-researchers agreed that the outdoor career field is necessary and should have higher funding but found that when they were researching specific career paths, the projected salary gave a few of them pause. Below is an excerpt from Tadrion during the focus group:

TD: PINES really did get me interested in a lot of different careers but the common issue I kept running into was the projected salary or finding ways to live off the salaries and I feel like people that work in the environment should be paid a lot more for what they do because like they're literally saving lives and people.

While the co-researchers were not as sure about the financial compensation of some of the careers they found during the program, they did share that their connections to nature and the

community that they built during the program gave them the confidence they needed to feel like they belong outdoors. Daniel shared during the focus group how the program built up his comfort and confidence in being an "outdoorsy" person, and how he has taken this beyond the goals of the program to start bringing new people into outdoor spaces to build connections with nature.

> *DV: [PINES] made me think of myself as an outdoors person. In terms of my sense and connection to other people I do think that it had impact, particularly my socialization with others. Before the program, I often connected with people mainly in an inside environment… Instead, I will frequently spend time with friends and significant others in parks and the outdoors.*

This idea of connecting more people to nature from communities outside of PINES was represented by all co-researchers throughout the discussion and their narratives. This expanding "ripple effect" is the greatest impact that the program could have hoped for and should be celebrated. Even if the graduated PINES Fellows do not end up pursuing an outdoor career, they know that it is there for them as a resource, to connect with directly, and to connect with others through community. Below Ava summarizes how even if PINES Fellows do not enter the careers the program shared, they know that they always have PINES to support them along the way.

> *AL: PINES made me want to integrate nature into my job itself. But I also feel like a lot of [the other fellows] felt like they always had the option thanks to PINES to go into nature centered careers, even if they necessarily didn't want to because of some reasons like financial or just because they want to pursue a different career. They always had PINES on their backs.*

The PINES Fellowship is creating meaningful impact for the individuals who participate in the program through connecting them to nature, with each other, and a network of professionals that they can take into future careers. Below are successes and growth opportunities suggested by the co-researcher team for the program staff to review.

Program Successes and Growth Opportunities

To see a finer grain view of the data generated and analyzed by the co-researcher team, please review the full manuscript produced from this study. To finish this report, the following table reviews ideas of success and growth opportunities for the program from the perspective of the co-researcher team.

Program Successes	Growth Opportunities
• Smaller group sizes (10) are better to create a comfortable and supportive environment in unknown activities. • Having a balanced mix of introverts and extroverts provided a supportive community, this can also represent a balanced mix of new and returning students. • Passionate guest speakers who represented the student's identities inspired the students to explore their own interests for career opportunities. • Experiential learning opportunities that centered authentic community interactions were some of the most impactful and memorable for participants. • Creating a "safe space" through an "open door policy" of communication was integral for the students to feel supported when coming to the leaders. • Continue providing direct identity representation in the field through program leadership and guest speakers and continue "sharing personal and	• Increase/improve recruiting efforts to students who do not already plan to enter an educational program beyond high school. • As the alum group continues to grow, find ways to engage with them in the next steps of their career after college. • Invite alums back to share their experiences with current PINES Fellows based on their studies or expertise. • As the alum group continues to grow, provide an opportunity for alum to connect with current students as a mentor to further contribute to the community. • Provide new opportunities for "steppingstones" in the pathways program, such as internships within the organization (similar to the PINES Assistant and Summer Stewardship Interns) or positions with trusted partners. • Provide consistent alum engagement events so they stay connected to the

realistic experiences" working in the outdoor field. • Program leaders should continue acting as mentors who support students and create space for student voices to be incorporated within the curriculum to share power.	program and continue to build community.