

Delrich Girl Scout Leader Workshop and Wildlife Photography 101

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2018 Leadership in Science Inquiry BIO 635 F

### **Abstract**

Spending time in green spaces and parks has been proven to be an important part of personal and community health, however, minority and impoverished communities spend less time in nature than other communities. It is important to help people establish a connection with nature and feel comfortable outdoors, as positive nature interactions make people more likely to prioritize conservation issues. I am working with the Girl Scouts Delrich Service Unit from Kensington, PA to develop a workshop for their leaders to learn more about urban nature and conservation. The four module workshop will cover animal and plant identification, visiting a park, and sustainability and environmental stewardship. Leaders that have attended the workshop should be able to take their troops to a park and work on scout badges.

**Keywords:** Conservation, Sustainability, Adults, Species Identification, Urban, Girl Scouts, Workshop, education, Photography

## **Introduction**

Spending time in nature has been shown to be good for mental, physical, and emotional well-being (Gomez, 2015). Fun and meaningful nature experiences, especially in young people, create a personal connection with the environment that not only enrich individual lives, but also instill a sense of responsibility and stewardship towards those environments (Davies and Webber, 2004; Gomez, 2015; Louv, 2008; Mikels-Carrasco, 2010; Miller, 2005). Although Girl Scouts value outdoor education as shown by the outdoor focused badges, the volunteer leaders who facilitate those badges often don't feel comfortable with the material or have any personal background with outdoor topics (E. Iwer, personal communication, January 2018; F. Tessier, personal communication, April 2018). The badges are all written at the national level to be applicable anywhere and therefore don't have the local resources or information that make them more impactful. The goal is to equip the Delrich Girl Scout leaders with the skills and tools necessary to foster meaningful and fun local nature interactions. As such, I am creating a workshop for the Delrich Girl Scouts Service Unit in Northeastern Philadelphia leaders to teach them the basics of urban conservation and to prepare them to get their troops more involved in outdoor activities.

### **Foundations of Urban Conservation Education**

Conservation starts with nature appreciation (Davies and Webber, 2004; Mikels-Carrasco, 2010). In urban areas, many people -- especially people living in underserved communities -- lack any direct, personal contact with nature in their daily lives (Louv, 2008; Miller, 2005). While many urban spaces have green areas like parks and community gardens, people are often not aware of them nor recognize them as an opportunity to explore nature. Sometimes these spaces are not easily accessible, either because of their location, transportation, or even community perceptions, by all members of a community, including even local public schools. Many organizations address some of these issues by creating and providing free educational and conservation programming, some of which could benefit groups like the Girl Scouts.

### **Challenges Facing Urban Conservation Education**

With technology being so ubiquitous now, it is easy to blame for the decrease in human-nature interactions. “Nature deficit disorder,” is the idea that lacking experiences in nature leads to unhealthy mental growth and development in children, adults, and communities (Louv, 2008). This leads to an extinction of experience, in which people are no longer able to understand local ecology, and are therefore more likely to dismiss conservation and environmental stewardship as issues that do not relate to them or their communities (Miller, 2005). Every community feels some attachment to their local environment, whatever that environment includes. This “sense of place” must be a part of any initiative that seeks to encourage community engagement in conservation (Kudryavstev, Stedman, and Krasny, 2012). Finding a way to give true ownership and responsibility for a space to a community is the first step in instilling conservation ideals.

Another challenge facing underserved urban communities is the culturally and socially ingrained idea that certain experiences are “not meant for us” (Dawson, 2014). Even when free and supposedly “accessible” programs exist that could benefit these communities, there can be a social barrier to their participation that is often discounted or misunderstood by the organizations or individuals providing the programs. Spending time in green spaces and urban parks has proven to be healthy for people and the communities that they live in (Baur, Gomez, & Tynon, 2013; Gomez, 2015). Getting communities outside and into green spaces can strengthen community bonds and help mitigate the social barriers that otherwise keeps community members out.

### **Wildlife Identification and Conservation Education**

One of the foundational building blocks of understanding ecology and biodiversity is species identification (Randler, 2008). Sadly, children are typically better able to identify non-local, exotic species than local animals found within their local nature (Ballouard, Brischoux, and Bonnet, 2011; Genovart, Tavecchia, Ensañat, and Laiolo, 2012), another example of the human-nature disconnect (Miller, 2005). Communities working within their local

ecosystems to learn about and conserve urban wildlife has proven to be a successful urban conservation strategy, as it builds a relationship with the local ecosystem (Davies and Webber, 2004; Mikels-Carrasco, 2010). Being able to identify species around them invites people to get involved with that ecosystem and makes being in that habitat fun and interesting (Balmford, Clegg, Coulson, and Taylor, 2002; Randler. 2008)

### **Bringing it all together**

The main themes that I would like to focus on is the importance of helping the leaders, and through them the scouts, develop a stronger connection with urban nature. To accomplish this, I am collaborating with the Delrich Service Unit head, Fran Tessier, to create a workshop that will focus on promoting time in green spaces (ie. parks, pocket parks, trails, community gardens, and more) and teaching species identification skills (Balmford, 2002; Baur, Gomez, & Tynon, 2013; Louv, 2008; Randler, 2008). Species identification can be key to building an understanding of ecology and putting it in context of local biodiversity and systems (Balmford, 2002; Randler, 2008). Additionally, people care about their own neighborhoods and when those neighborhoods include green spaces, conservation can become an important issue for them (Baur, Gomez, & Tynon 2013). As such, it is important to guide the Girl Scout leaders in such a way that they can feel comfortable taking their scouts out into local green spaces and working within them. This workshop is not designed to make the leaders experts in environmental or conservation issues, but will give them foundational information to be able and comfortable teaching themselves and others more about our local urban parks.

## **Project Details**

### **The Workshop**

This workshop is the result of my research on urban conservation and education and how it relates to urban youth, communities, and poverty. A major failing in urban conservation is the lack of connection and complicated relationship between impoverished communities and their green spaces. As such, I am attempting to bridge the gap between the community and the environment by providing experiential learning opportunities to a group of Girl Scout troop

leaders that can then be passed on to their troops. My cousin, Ellen Iwer, is a Girl Scout troop co-leader in Kensington, a neighborhood in Northeast Philadelphia. Kensington has a reputation for being poor and crime-ridden; however, in the last decade, it is starting to see recovery from the 1950s deindustrialization, which caused high unemployment rates, significant economic decline, and population decreases that lead to abandoned housing (O'Connell, 2015). It is most well known for high percentages of Irish Catholics, but the 2010 US Census found that the area is extremely diverse, with population demographics that included 38.9% Hispanic, 37.4% white, 14.8% black, 6.2% Asian, and 2.7% all other races ("American FactFinder," 2010). Kensington, like much of Philadelphia, faces challenges of gentrification displacing long-term, multi-generational families with young professionals (Burnley, 2015; O'Connell, 2015). This challenges the sense of place and place attachment formed by individuals within the community and can cause friction in Kensington (Burnley, 2015; Kudryavstev, Stedman, and Krasny, 2012).

Additionally, while there has been an increase in environmental awareness in the region, impoverished minority groups may feel excluded from local science and nature institutions, further alienating them from environmental education (Burnley, 2015; Dawson, 2014; O'Connell, 2015). By reaching out to a local Girl Scout service unit, I am attempting to utilize small scale outreach to build a foundation for environmental outreach within the community itself. Iwer and I were discussing the importance of being outside in nature when she lamented that she was not comfortable taking her troop out to do any of their nature badges because she felt out of her depth when discussing anything nature related (E. Iwer, personal communication, January 2018). While her troop does have a nature center do a presentation once a year, they do not feel prepared to expand upon those lessons after the nature center group is gone.

The workshop is for the troop leaders within the Delrich service unit. It will be hosted on a Saturday in mid-late July at St. Michael's Lutheran Church in Kensington and will be approximately four hours. Given the time of year and the time commitment for the workshop, Fran and I have estimated that there will be approximately 20 attendees, although the number could exceed thirty. There are several pocket parks within walking distance of the church that will be utilized during the workshop. The park chosen will depend on the number of attendees and if there are any mobility or accessibility concerns, which is yet to be determined.

## **The Modules**

The two main goals of the workshop are to get the troop leaders excited about taking their troops outdoors and familiarizing them with various education tools and local resources for them to utilize while working with the groups. There are four modules included in the workshop: animal ID, plant ID, a park visit, and urban sustainability. Each module will be about 45 minutes, with time for questions and breaks between, plus travel time for walking to and from the local park. The modules are designed so that the leaders can both learn about and experience activities related to each topic. The activities will utilize resources so that the leaders can gain a familiarity with them before using them to teach their scouts. A guide to free and local resources will be provided with each module so that the leaders are able to get more information as needed. The goal is to familiarize the leaders with these topics so that they have a starting point with their troops. They will not be experts by the time the workshop is over.

The first module is animal ID, which will focus on how to make observations. Making observations and being able to take good notes are two ways to build the skills for species identification (Randler, 2008). In this module, the leaders will make a sketchbook, make observations about the space we are working in, being sure to focus on the senses (IE. sight, smell, sound, and touch, but no taste), learn how to make a field sketch of an animal or bug, and use ID books or online resources such as iNaturalist to identify their species. This modules will also include a short discussion on animals that live in urban areas and their adaptations to living alongside humans.

The second module is a visit to a local park. While at the park, leaders will be encouraged to interact with the park and take notes in their sketchbooks. They can identify any problems that the park has (ie trash, broken signs, etc) and plan ways to help fix the issues they find. Leaders will also be encouraged to test out their animal ID skills and will be required to do at least one bark rubbing and one leaf rubbing from the same tree in their notebook. They also need to collect a leaf or plant on our way back to the church.

The third module is plant ID. Similarly to animal ID, this module will help hone the skills of observation and identification. Using dichotomous keys provided by me (I am currently

searching for free dichotomous keys or determining if I should make my own that will cover trees in the area), the bark and leaves will be identified by the leaders. This will also segway into the basics of plant ecology. The leaders will learn the art of pressing plants.

The final module is sustainability and environmental stewardship. It will cover the basics of what can be done at home to decrease their carbon footprint, with special emphasis on plastics, such as the “refuse the straw” campaign and plastic bag bans. We will discuss ways to change communities and how to contact and open a dialogue with their legislators. I will be providing links that can tell them who their local, state, and federal legislators are. To wrap up the final module, we will be planting something small that can grow in a window for them to take home and discussing urban gardening.

### **Workshop Analysis**

The workshop attendees will be given an evaluation to fill out at the end of the workshop before they leave (Appendix A). The evaluation will consist of five statements to be rated “strongly disagree,” “disagree,” “neutral,” “agree,” and “strongly agree,” where the responses will be coded 1 through 5 respectively. There are also two open ended questions and space for additional comments or questions. The open ended questions will be evaluated based on coded themes chosen after the responses have been analyzed for similar themes. This qualitative analysis should give me an idea of the strengths and weaknesses of the workshop and whether or not, overall, it was successful. This survey will also serve as a benchmark for potential future workshops that I run.

### **Reflection and Conclusion**

I am hopeful that I am providing a much needed resource to a group that has asked for it, as opposed to imposing my thoughts on a community where they may not be helpful or wanted. I understand that I am coming into this workshop in a position of both privilege and power. As a middle class, college educated, white woman, there are many advantages that I intrinsically have over a community of people that are minorities and impoverished. I have both the education and experience that marks me as an expert on nature, which gives me power over how the workshop



will play out. As always when I teach, I need to be cognisant that my experiences are not universal and make sure that I make the learning environment comfortable for the leaders. I hope that the evaluations will speak to this in one way or another. I also hope that the evaluations will capture if I have helped the leaders be more comfortable in teaching natural history. For me, the most important part of leadership is encouraging personal development and growth in the people you are leading.

My master plan is to provide free and accessible conservation education to people living in urban areas. The leaders that I will be training will hopefully be able to encourage excitement and a love of the natural world in their scouts. According to Iwer, this service unit has a desire to do more environmental conservation work, but is unsure of how to go about doing that (E. Iwer, personal communication, January 2018). I hope to empower them to interact in their local ecosystems and encourage them to be better environmental stewards within their community and beyond.

I personally enjoy using species identification to help bridge the disconnect between people and nature as I always found the diversity of plants and animals near my home in North Philly to be fascinating as a child. I hope that a similar sense of excitement and ownership starts to develop during this workshop and encourages the leaders to explore more of nature and science with their troops.

### **Next Steps**

I hope to refine this workshop and be able to offer it free of charge to other organizations and schools around the Philadelphia area. A personal goal of mine is to use this to help expand the impacts of WTH Wildlife, a free and fun online educational resource about wildlife that I started as part of my first IAP. Ideally, I will expand upon the offered modules and tweak them for a variety of audiences. If all goes well, I will bring something like this to the Philadelphia Science Festival, a citywide celebration of science, technology, and learning, next spring as one of their featured workshops.

### **Action**

Due to communication issues and time constraints, the workshop was unable to proceed as planned. As an alternative, WTH Wildlife hosted a two hour Wildlife Photography 101 hike at John Heinz National Wildlife Refuge. We chose John Heinz NWR because of its accessibility via public transit, and its trail accessibility so that anyone could attend. Ramon Torres, a fellow educator and photographer, and I planned and ran the photography hike. Our goal was similar to the girl scout workshop: we wanted to teach people skills that would encourage them to confidently engage with and explore urban nature spaces. We hoped that workshop participants would form stronger connections with urban wildlife, and that we could encourage conservation-minded behaviors.

We promoted the Wildlife Photography 101 Hike online through the [WTH Wildlife Facebook page](#) and by word of mouth. One attendee also promoted the event through Meetup.com, which garnered further interest. Thirteen attendees joined us for the workshop and hike, ranging in age from 8-64 years, and representing a variety of knowledge and skills in both wildlife identification and photography. Ramon Torres lead the group through a short introduction to photography and I led the hike portion. We stopped and spoke about several different species, primarily birds, and coached people with the photography skills and identification. During the hike, we were able to identify and photograph 18 species, including several waterfowl and other birds, insects, and a deer wading in the shallows. We discussed the importance of the wildlife refuge and the role it plays in the local ecosystem.

Event attendees were given an exit survey to complete and return before the end of the hike (*Appendix B*). The surveys were exceedingly positive, with attendees offering encouraging suggestions for improvements, the most common of which were to extend the length of the hike and lead more similar events in the future, and thanking the educators for their time and knowledge (*Appendix C*). To follow up on the success of this event, Ramon and I are designing more similar in-person programs for WTH Wildlife. We are excited to move forward as a team and to expand the future reach and impact of WTH Wildlife.

## References

- "American FactFinder" (2010). United States Census Bureau. Retrieved from:  
<https://factfinder.census.gov/>
- Ballouard, J-M., Brischoux, F., & Bonnet, X. (2011). Children prioritize virtual exotic biodiversity over local biodiversity. *PLoS ONE*, 6(8), e23152.  
 doi:10.1371/journal.pone.0023152
- Balmford, A., Clegg, L., Coulson, T., & Taylor, J.(2002). Why conservationists should heed Pokémon. *Science* , 295(5564), 2367.
- Baur, J. W. R., Gomez, E., & Tynon, J. F. (2013). Urban nature parks and neighborhood social health in Portland, Oregon. *Journal of Park and Recreation Administration*, 31(4), 23-44.
- Burnley, M. (2015). "Insane Surge in Philadelphia Gentrification". Metro Corp. Retrieved from:  
<https://www.phillymag.com/>
- Clayton, S. & Myers, G. (2009). Attitudes, values, and perceptions. In *Conservation psychology: Understanding and promoting human care for nature* (pp. 15-33). Hoboken, NJ: Wiley-Blackwell.
- Davies, R. & Webber, L. (2004). Enjoying our backyard buddies - Social research informing the practice of mainstream community education for the conservation of urban wildlife. *Australian Journal of Environmental Education*, 20, 77-87. doi:  
 10.1017/S0814062600002329
- Dawson, E. (2014). "Not designed for us": How science museums and science centers socially exclude low-income, minority ethnic groups. *Science Education*, 98(6), 981-1008. doi:  
 10.1002/sce.21133
- Genovart, M., Tavecchia, G., Enseñat, J. J., & Laiolo, P. (2012). Holding a mirror to the society: Children recognize exotic species much more than local ones. *Biological Conservation*, 159, 484-489. doi:10.1016/j.biocon.2012.10.028
- Gomez, E. (2015). Urban Parks and Psychological Sense of Community. *Journal of Leisure Research*, 47(3), 388-398.

- Harnik, P., Martin, A., and Treat, M. (2016) 2016 City park facts. Retrieved from The Trust for Public Land Website:  
[https://www.tpl.org/sites/default/files/2016%20City%20Park%20Facts\\_0.pdf](https://www.tpl.org/sites/default/files/2016%20City%20Park%20Facts_0.pdf)
- Kudryavstev, A., Stedman, R.C., & Krasny, M.E. (2012). Sense of place in environmental education. *Environmental Education Research*, 18(2), 229-250.
- Leech, B. L. (2002). Asking Questions: Techniques for Semistructured Interviews. *Political Science & Politics APSC*, 35(04), 665-668. doi:10.1017/s1049096502001129
- Louv, R. (2008). *Last child in the woods: Saving our children from Nature-Deficit Disorder*. New York: Algonquin Books.
- Mikels-Carrasco, J. (2010). Nature in our own backyards: Urban ecology and children. *Children, Youth and Environments*, 20 (2), 190-199.  
<http://www.jstor.org/stable/10.7721/chilyoutenvi.20.2.0190>
- Miller, J. (2005). Biodiversity conservation and the extinction of experience. *Trends in Ecology & Evolution*, 20(8), 430-434.
- Miller, J. (2005). Restoration, reconciliation, and reconnecting with nature nearby. *Biological Conservation*, 127, 356-361.
- O'Connell, C. (2015). "Kensington: A Lot Of Heart Has Gone Into Revitalizing A Community". Philadelphia Neighborhoods.
- Randler, C. (2008). Teaching species identification - a prerequisite for learning biodiversity and understanding ecology. *Eurasia Journal of Mathematics, Science & Technology Education*, 4(3), 223-231.
- United States Census Bureau. (2014). *American community survey*. Retrieved from <https://www.census.gov/programs-surveys/acs/>

## Appendix A

### Workshop Evaluation

Date of Workshop \_\_\_\_\_

Workshop Topic \_\_\_\_\_

1. The workshop was useful for me as a GSA leader

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

2. The workshop helped me better understand urban conservation

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

3. I now feel better qualified as a GSA leader to lead outdoor environmental activities

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

4. I now feel comfortable with finding resources for nature activities

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

5. I have taken my group outdoors in the past year

Never      1-2 times      3-4 times      5-6 times      7+ times

6. What were the strengths of the workshop?

7. What could have been improved about the workshop?

8. Additional comments

**Appendix B****WTH Wildlife**

Wildlife Photography 101

What's one thing you enjoyed about this program?

What's one thing that could be improved?

Are there any other comments you would like to share?

What is your age? \_\_\_\_\_ What is your ZIP code? \_\_\_\_\_

How did you find out about this event? (Circle One)

WTH Wildlife Facebook Page

Facebook Ad

Word of Mouth

Other (Please Specify): \_\_\_\_\_

Thank you for joining us! Follow us on social media!

Facebook: WTHWildlife

Instagram: @wth\_wildlife

Twitter: @wthwildlife

## **Appendix C**

See attached for survey results.