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Exploring Lifelong Influence of Participating in the Junior Audubon Club During Childhood

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Exploring Lifelong Influence of Participating in the Junior Audubon Club During Childhood

by

Amy Weidensaul

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Abstract

There is limited research looking at the role that specific programs play in the formation of environmental identity, or lifelong influences of specific environmental programs. This study looks to address this gap by exploring the salient and memorable experiences of past Junior Audubon Club members who participated in the program as children, and how they describe the influences of the program on their environmental identities. Based on this study, there were specific components of the Junior Audubon Club that proved most influential and lasting for the participants, including active learning in nature, supportive adults who shared similar interest and passions, and establishment of a sense of community through social acceptance and group identity. This study suggests that childhood participation in programs can be particularly successful, and have a lasting impact, when a sense of community is created with peer acceptance, supportive adults, repeated experiences in nature and active learning. Findings from this study document the long-term impacts that participation in such a program as a child can have throughout an individual's lifetime, and the results of this study can be applied to the development of potentially more impactful environmental education programs. The electronic version of this dissertation is accessible in the open access OhioLINK ETD Center (http://etd.ohiolink.edu).

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Chapter I: Introduction

According to the Belgrade Charter, adopted in 1976 by UNESCO-UNEP (United Nations Educational, Scientific and Cultural Organization-United Nations Environment Programme), the goal of environmental education is "to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones." The goals for environmental education can vary, but they often include awareness, knowledge, and action. The simple historical model of behavioral change, which remains pervasive in the field today, suggests that if we increase environmental knowledge and attitudes, an increase in pro-environmental behaviors will follow (Stapp, 1969). Researchers have proven, however, that effecting behavioral change is not that straightforward, and is in fact a highly intricate process (Heimlich & Ardoin, 2008; Monroe, 2003). Because behavioral change is so complex, difficult to measure, and expensive to assess, the field of environmental education has struggled to show its effect on environmental behaviors (Kollmuss & Agyeman, 2002; Saylan & Blumstein, 2011; Zint, 2013).

In addition, there are a limited number of studies that have documented the long-term impact of youth environmental programs on adulthood. The broad goals of environmental education are to inspire lifelong environmental commitment and action. However, longitudinal studies are time consuming and costly, thus there are few of these studies within environmental education research. We need a greater understanding of the lifelong impact of participating in environmental programs during childhood. Retrospective studies with environmentalists and environmental educators suggest that childhood experiences in nature are linked to adult environmental attitudes and behaviors (Chawla, 2007; Clayton & Myers, 2009; Hart, 1997;

Kaplan & Kaplan, 1989; Thomashow, 2002; Wells & Lekies, 2006). These studies provide some support for impact of environmental education, but do not document the lasting impacts of specific programs.

Because human behavior is such a critical part of solving environmental problems, we must explore what motivates and sustains certain behaviors, and how those principles can be applied to education programs. One way to explore what motivates behaviors is by exploring environmental identity. Research in psychology shows that an individual's identity influences their environmental decisions and actions (Crompton & Kasser, 2009). Identity, or how participants view themselves, may be very important in understanding an individual's relationship with the environment. This suggests a new way to explore the impact of environmental education on participants. For the purposes of my research, environmental identity is defined as how people view themselves in relation to the natural world. If nature (the physical world) is a strong component in how they define themselves, that individual will be more invested in taking action to protect it (Clayton & Myers, 2009). Learning more about how people view the environment as relating to their own sense of self may help in understanding the impact of environmental education programs.

This dissertation expands on prior research to better understand the long-term impact of a specific environmental education program, Junior Audubon Club. This study contributes to a relatively limited body of research that examines the linkages between childhood experiences in education programs and adult behaviors. My research explores the role that Junior Audubon Club played in the formation of environmental identity for 19 participants. There are few studies that examine the role of specific educational experiences in developing environmental identity and actions in adulthood (Liddicoat & Krasny, 2014; Williams & Chawla, 2015).

This retrospective study explores the program experiences of Junior Audubon Club participants, 40 to 70 years after the fact, in order to understand what was meaningful and memorable in their participation in this program, and whether they think those experiences impacted their environmental behavior and identity. These findings will be valuable to the environmental education field by identifying program elements that were lasting and significant in terms of shaping participants' environmental actions, attitudes and identity. These results can be applied to future environmental education programs.

Junior Audubon Clubs – a program for children, launched in 1910 in U.S. by the National Audubon Society as a way to stem the rampant destruction of native birds—ran for more than 60 years. More than 10 million children eventually enrolled in thousands of clubs from New York to Alaska (and still more in clubs as far overseas as Japan). Children learned about birds and their protection, and club members participated in activities ranging from building nest boxes to advocating for policies to protect species, and from restoring habitat on their school grounds to watching and counting birds. During 1921 alone, Junior Audubon Club members built and installed more than 175,000 bird nest boxes across the country. In addition to bird boxes, children created gardens and habitat areas on their school grounds; they wrote and sang songs about birds; and put on plays about nature for their parents and other community members (*Bird-Lore*, 1922).

The goals of the Junior Audubon Clubs were simple, but important: (1) To introduce children to the wonders of the outdoors, and the fun of exploring their backyards, schoolyards, neighborhoods and nearby country sides to discover the plants and animals living there. (2) To encourage children to be observant and to enable them to experience the joy of discovery in the natural objects they can see, hear, feel, taste or smell. (3) To show children the interdependence

between plants, animals (including themselves), and soil, water and climate. (4) To help children understand the tremendous importance of plants, animals, soil and water to every living thing, including man. (5) To impress on children how man's interference with nature, whether through carelessness or ignorance, had already cost precious natural resources. (6) To help children understand how we can use and yet conserve our resources, while showing them what they can do to help (Miller, 1953).

The activities that club members participated in correlate to the findings of significant life experience, environmental identity and social practice theory. I built on these research findings (Chawla, 1998; Clayton, 2003; Kempton & Holland, 2003; Williams & Chawla, 2015) to explore the perceived influence of having participated in the Junior Audubon Club and the role it played in their development of their environmental identity. Environmental identity includes a belief that the environment is an important part of who we are and how we act.

Having a stronger understanding of the programmatic elements that influence the formation of environmental identity will inform educators on how to better design programs that may have a lasting impact on participants. Research shows that having a strong environmental identity with personal connections to nature translates into action—greater pro-environmental behavior, attitudes and values (Clayton & Myers, 2009).

In order to explore program participants' experiences and influences of the program, I developed an environmental identity framework, which integrates social practice theory and significant life experiences research. For this research, I explored Holland's (2003) research with social practice theory, which concentrated on an approach to identity that focuses on action with the acknowledgement of the influence of social and cultural forces. Using Junior Audubon Club participants as a case study, this study explores the process of environmental identity formation

during childhood to see if it complements social practice theory, with a focus on the knowledge and emotional bonds formed through direct experiences with nature, positive adult role models, and participation in shared learning and action.

Having a stronger understanding of the programmatic elements that influence the formation of environmental identity will inform educators on how to better design programs that may have a lasting impact on participants. Research shows that having a strong environmental identity with personal connections to nature translates into action—greater pro-environmental behavior, attitudes and values (Clayton & Myers, 2009).

The activities that club members recalled as meaningful and impactful correlate to the findings of significant life experience, environmental identity and social practice theory. I built on these research findings (Chawla, 1998; Kempton & Holland, 2003; Williams & Chawla, 2015) to explore the perceived influence of having participated in the Junior Audubon Club. I explored how education experiences play a role in an individual's development of their environmental identity. This is because a sense of connection to the natural environment, based on history and emotional attachment, affects the ways in which individuals act toward the environment (Clayton, 2003). Environmental identity includes a belief that the environment is an important part of who we are and how we act. Building on Williams and Chawla's work (2015), I believe the application of social practice theory's approach to environmental identity, in conjunction with key findings of significant life experience research, provides a theoretical framework for future studies.

Statement of Purpose

Using a combination of archived historical materials, participant surveys, participant interviews, and follow-up questions after the interviews, I analyzed the multiple datasets to

document the meaningful, memorable components of 19 participants involved in the Junior Audubon Club program between 1931 and 1968, and the possible long-term influences of those experiences on their self-reported environmental identities. I employed a mixed-methods approach, using quantitative and qualitative data together to gain a more complete understanding of my research findings. The purpose of my research is to explore these questions:

- What do people recall years later from their experiences in the Junior Audubon Club program, and why are those components of the program particularly memorable?
- To what degree, if at all, do participants attribute their Junior Audubon Club experience to their self-proclaimed lifelong environmental identity and behaviors?
- To what degree do the recalled meaning and memorable experiences of participants correspond to the key elements of social practice theory, environmental identity and significant life experiences?

The intention of my research is not merely to collect memories, but to explore patterns in order to inform the design of current and future education program to make them memorable with long-term impacts. Results of this study will benefit those who develop and offer environmental learning programs. It will also contribute to a limited amount of research that explores the long-term significance of a specific environmental program on individuals. My hope is that my findings will help programs improve and encourage future researchers to continue investigating the long-term impacts of youth experiences in environmental programs.

Chapter II: Review of Literature

In order to answer my research questions, I explored the body of literature involving environmental identity, significant life experience, and social practice theory, which is broad and expansive. To focus my review, I concentrated on aspects of the field that I believe could be applied to environmental education.

This chapter contains five sections. First, in order to frame my research for the reader, I discuss environmental education, the lens through which I explore environmental identity. The subsequent sections explore the findings in significant life experience, environmental identity and social practice theory research and how I apply them to my research. The final section investigates the intersection of these three bodies of literature and the development of my research framework.

Environmental Education

The environmental problems we face are sweeping and complex, and include such immense issues as climate change, biodiversity loss, and poor air and water quality. Although we have made some progress in addressing them, a public that lacks an understanding of the environment is ill-equipped to successfully tackle these challenges. An even greater concern is a citizenry that lacks the motivation and concern to engage in taking action. Because human behavior is such a critical part of solving environmental problems, we must explore what motivates and sustains certain behaviors, and how those principles can be applied to education programs.

Hungerford et al. (1980) wrote that the goal of environmental education is "to aid citizens in becoming environmentally knowledgeable and, above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or maintaining a

dynamic equilibrium between quality of life and quality of the environment" (Hungerford, Peyton, & Wilke, 1980, p. 44). Although there are several definitions and potential outcomes for environmental education, they all have strong similarities regarding increasing knowledge with the goal of inspiring action. The literature in environmental education shows that program outcomes have focused primarily on environmental knowledge, awareness, attitudes, skills, and pro-environmental behavior (Heimlich, 2010; Leeming, Dwyer, Porter, & Cobern, 1993; Rickinson, 2001; Stern, Powell, & Hill, 2014; Zint, 2012). Behavioral change is a commonly stated goal of many environmental education programs, and this is especially true of conservation organizations (Heimlich, 2010). However, a meta-analysis of 700 environmental programs in the U.S. revealed that while 543 programs addressed knowledge, just 124 addressed attitudes, and only 42 addressed behavior (Pomerantz, 1991). Zint (2012) conducted a systematic review of evaluations of environmental education programs published in peer-reviewed journals from 1970-2010. She focused on behavioral outcomes because research on that aspect of environmental education was not well studied (Dwyer, Leeming, Cobern, Porter, & Jackson, 1993; Lucas, 1980). She found that 46% of program outcomes were knowledge-based; 34% involved changes in values and attitudes; 10% in skills and just 10% in behavior. Only ten articles between 1975 and 2010 reported evaluation results based on the behavioral outcomes of environmental education programs (Zint, 2012).

As stated above, the goal of most environmental education is to influence participants' environmental behaviors, knowledge, and attitudes. But how do we truly assess whether or not environmental education is accomplishing these goals and having long-term impacts? Assessing the influence of a program on participants' long-term behaviors can be very difficult. Human behavior is complex and multifaceted, and changes depending on the individual and the

situation. Research shows that several significant factors influence why and how some people act while others don't, and many of these factors are related to individual motivations as well as to the social and environmental context. However, researchers examining barriers to pro-environmental behaviors have found a gap between people's knowledge and attitudes and their environmental behaviors (Kollmuss & Agyeman, 2002). Although many studies have explored this gap there still is not a clear answer to why there is a disconnect between environmental knowledge and behaviors. However, we know that focusing only on measuring knowledge, attitudes, or behavior does not paint the entire picture.

Research in psychology shows that an individual's identity influences their environmental decisions and actions (Crompton & Kasser, 2009). Identity, or how participants view themselves, may be very important in understanding individual's relationships with the environment. This suggests a new way to explore the impact of environmental education on participants. For the purposes of this study, *environmental identity* will be defined as how people view themselves in relation to the natural environment. If a person's environment is a strong component in how they define themselves, that individual will be more invested in taking action to protect it (Clayton & Myers, 2009). Learning more about how people view the natural environment as relating to their own sense of self may help in understanding the impact of environmental education programs.

Kempton and Holland (2003) called for a greater understanding of participants' identities and how their experiences in environmental education and elsewhere influence their identities, which in turn may help us to better understand the true impact that programs have on participants, especially their behaviors. In addition, knowing more about how environmental

identities are formed, changed, and deepened can help educators adopt best practices in the development and implementation of programs (Payne, 2000).

The body of literature involving environmental identity, significant life experience, and social practice theory is broad and expansive. To focus my review on aspects of the field that most directly bear on my research questions, I identified key tenets in the literature that I believe can be applied to environmental education (Table 1). I reviewed and synthesized literature on current findings on what produces effective and impactful environmental education programs. *Effective* is defined as leading to pro-environmental behavior change, expanded student learning, and environmental stewardship practices, thus not solely leading to knowledge and awareness gained. By examining the literature, I compiled a list of research-based best practices for environmental education. Due to the expansive goals of environmental education (appreciation, knowledge, emotional connection, behavior), these best practices are for education programs that aim to change behavior and not just increase knowledge and awareness. In addition to the literature reviews by Zint (2013), Stern, Powell & Hill (2014) and Dillon et al. (2006), I also reviewed consensus-based best practices in the North American Association of Environmental Education's (NAAEE) Guidelines for Excellence. The reviews identified several best practices that appear to drive positive results in knowledge, awareness, attitudes, intentions, skills, and behavior. These include:

- Duration (longer experiences are better than shorter)
- Experiential, hands-on approaches, nature experiences
- Investigation, issue-based, and project-based approaches
- Reflection and relevance/real world application

- Providing students with a sense of empowerment/ownership via student-driven activities
- Incorporation of social components, such as involvement with communities facing real environmental problems, active group discussion, and active mentors (teachers and educators)

With these effective best practices in mind, I reviewed the literature in social practice theory, environmental identity theory, and significant (environmental) life experiences research to define key tenets of these theories and bodies of literature that could be applied to effective (as defined previously) environmental education programs. I chose these bodies of literature because of how they complemented and build on each other and provided a new theoretical lens to look at environmental education. This is especially true for social practice theory, which is used in other disciplines of education, but has limited application in environmental education. Table 1 demonstrates what I believe are the key tenets in the psychological literature (social practice theory, environmental identity, and significant life experiences research) and how I believe they tie to key findings in the environmental education literature. I also looked for alignment with the key tenets in the literature and the program elements of the Junior Audubon Club. These tenets were used to develop my theoretical framework for this study.

Table 1

Areas of Overlap of Key Tenets and Program Elements

Best Practices in Environmental Education[a]	**Key Tenets of Social Practice Theory, Environmental Identity Theory, and Significant Life Experiences**[b]	**Areas of Overlap**	**Junior Audubon Club Program Elements**
Peer-to-peer learning; community connections (interaction with members from the community)	Social (interaction and involvement with others)	Interaction with others	Club format (peer-to-peer learning) and interaction with local Audubon chapters
Frequent experiences in nature; place-based; unstructured nature play	Place (place attachment, emotional connection, frequent nature experiences)	Nature and place experiences	Field trips, outdoor exploring
Hands-on; experiential; interactive learning experiences; real-world learning	Action (practice)	Immersive experiences	Interactive and hands-on activities, real-world learning
Supportive role models (teachers/educators participate in activities and support students)	Adult role models	Adult mentors	Adult club leader
Longer duration of programs (not one time experience); repeat experiences; unstructured play (emotional connections)	Efficacy/Emotional connection	Length and frequency of experience with positive emotions associated with them	Club met regularly (weekly or monthly)
Interdisciplinary; real-world learning with relevance; practice skills developed; student driven; competency; autonomy	Empowerment	Ownership	Student-driven; roles and responsibilities for club members; empowerment

a. Blatt, 2014; Chawla, 1998, 1999; Chawla & Derr, 2012; Clayton, 2003, 2012; Holland, 2003; Holland, et al., 1998; Kals & Ittner, 2003; Kals & Muller, 2012; Kempton & Holland, 2003; Liddicoat and Krasny, 2013. b. Dillon, et al., 2006; Heimlich & Ardoin, 2008; Hungerford & Volk, 1990; Stern, et al., 2014; NAAEE Guidelines for Excellence; Zint, 2013

Examining the research findings in significant life experiences research, environmental identity, and social practice theory, I identified many valuable concepts to include in a theoretical framework exploring the long-term influences of participating in environmental education during childhood. The following sections will highlight the basic tenets of these three bodies of literature and explain how I built on these findings to develop the theoretical framework for this study.

Before discussing the theories and literature, it is important to provide some definitions and context for terms that I use throughout this dissertation.

I use the term *environmental education* broadly to define programs that provide people with "the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems, and in the management of the quality of the environment" (UNESCO-UNEP, 1976). Although environmental education has its roots in nature study, conservation education, and outdoor education, it is a distinct field that emerged in the late 1960s. For my research, however, I'm broadly using "environmental education" to describe programs in the past as well as into the future.

The term *identity* is used throughout the dissertation. I define identity as a way of organizing information about the self, and the way in which people define themselves. There are multiple ways of organizing this information, which means that an individual can have multiple identities, which vary in importance according to context and experiences (Clayton, 2003). For this study, I focus on only one layer of identity – environmental identity. I have adapted Susan Clayton's (2003) definition that environmental identity is a way in which people form their self-concept. A sense of connection to the natural environment, based on history and emotional attachment, affects the ways in which individuals perceive and act toward the world.

Environmental identity includes a belief that the environment is important to us and is an important part of who we are.

Significant Life Experience

Environmental significant life experiences (SLE) research investigates formative life experiences that help to shape adult environmental attitudes, beliefs, and behaviors. Significant life experiences are defined as those, occurring throughout life, that are both experiential and memorable. Environmental SLE research began with Thomas Tanner's 1980 qualitative study that looked at significant life experiences of "informed citizen activists" by studying 45 environmental professionals. He defined them as environmentally active, informed citizen conservationists (Tanner, 1980). The researcher asked participants to identify the formative experiences that led them to a career in the environmental field. They most often discussed time they spent in natural areas, especially during their childhood, as well as parents and teachers, books, and the loss of a favorite natural area. From his data, Tanner identified nine categories of influence on adult environmental action:

(1) Outdoor (interaction with natural, rural or other relatively pristine habitats).

(2) Habitat (frequent, perhaps daily, contact with nature, year-round or during summers).

(3) Solitude (frequent contact with relatively pristine habitats, alone or with a few friends).

(4) Habitat Alteration (witnessing the commercial development of one's special natural area)

(5) Parents

(6) Teachers

(7) Other Adults

(8) Books

(9) Miscellaneous (other experiences, reconnecting during adult life with childhood interests)

Significant life experiences (SLE) research aligns to, and complements, environmental identity research and social practice theory's approach to identity development. The key findings within significant life experiences research serve as an avenue through which to explore environmental identity. Significant life experiences research is broad and varied, so for my research I only focus on the environmental SLE research. This body of work investigates formative life experiences that help to shape adult attitudes, beliefs, and behaviors, including environmental attitudes.

The findings from more than 30 years of significant life experiences research suggest there are five major factors influencing environmental careers, interest and actions in adults: formative and frequent outdoor experiences during childhood; adult role models who encourage and value outdoor experiences; involvement in environmental organizations; exposure to nature/science books and other forms of media; and firsthand experience with environmental degradation or disaster (Chawla, 1999; Corcoran, 1999; Palmer, 1993). In Chawla's (1998) review, childhood play in nature was mentioned in the accounts of between 64–91% of the participants.

Through SLE research we understand that an accumulation of experiences helps to form life pathways to environmental action (James, Bixler, & Vadala, 2010), especially positive, frequent experiences in nature and interactions with others (Myers, 2007). Thus, it is not just one experience, but an accumulation of experiences and interactions that help with the formation of life pathways (James et al., 2010). The key findings in SLE research serve as the foundation to explore environmental identity (Figure 1). Investigating past participants of Junior Audubon

Club through the lens of SLE tenets enables me to explore the program elements and design and their impact on individuals.

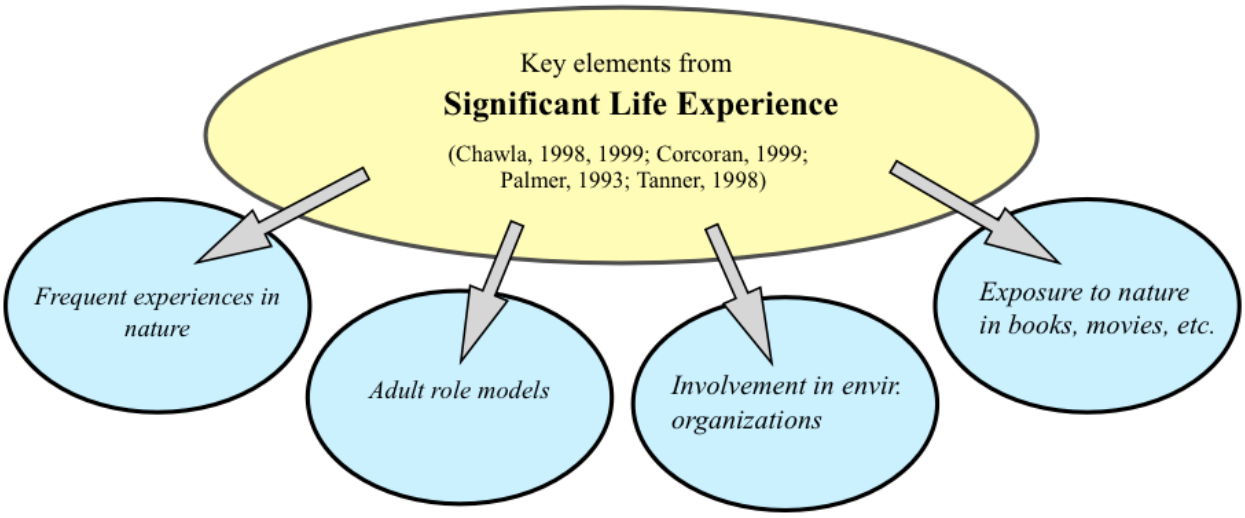

Figure 1. Key elements from SLE research that apply to EE

Environmental Identity

Recognizing that identity plays a role in an individual's actions, it seems logical that having a better understanding of the role that environmental education does and could play in forming environmental identity is necessary. While the goals of many environmental programs may hint at environmental identity formation within some of the program's activities, environmental identity is not often an explicit goal of an environmental education program. Understanding how environmental education programs contribute to the formation of environmental identities may help in assessing the intended impacts of a program. In addition, a better understanding of how individuals develop their environmental identities within the context

of an educational program will potentially help with the development and implementation of environmental education programs that more effectively contribute to the development of identities that foster environmentally positive behaviors.

Clayton (2003) believes an environmental identity is formed through the combination of social experiences and the environment interacting with, and defining, each other. In addition, environmental identity forms by developing understandings of oneself and others (Chawla, 1999; Kals & Ittner, 2003; Linneweber, Hartmuth & Fritsche, 2003; Myers & Saunders, 2002). It is through experiences and interaction with objects, nature, and other people that individuals construct their understandings of the world and develop their identity—a model that correlates with the findings in significant life experiences research.

There are a number of factors that influence whether environmental identities form and how they are maintained. Frequent time spent in nature, particularly during childhood, has a major influence on the formation of environmental identities. Participating in social events that provide individuals with opportunities to gain competence during an activity can enhance motivation for environmental action. The feelings of competency, survival, and overcoming challenges can be significant experiences and emotions felt in nature. Connectedness and relatedness come from feeling a part of something larger, and being part of the environment can be seen as being part of a larger functioning system. Clayton (2003) nicely sums it up by stating that the natural world can provide a good source for self-definition, based on interaction with the environment and self-knowledge obtained in an environmental context.

People who closely identify with nature view the natural world as essential to their very existence. They believe environmental issues are immediate and personal. People with weak environmental identities view environmental issues as less significant (Chang & Opotow, 2009;

Clayton, 2003). Environmental identity can be a key aspect of conservation because personal connections with nature create strong values that can translate into actions on behalf of the environment (Chang & Opotow, 2009).

Many factors play a role in the development of an environmental identity, and the literature on this topic is expansive. Figure 2 shows some of the major influences that have been identified in the literature, and which I applied to my research.

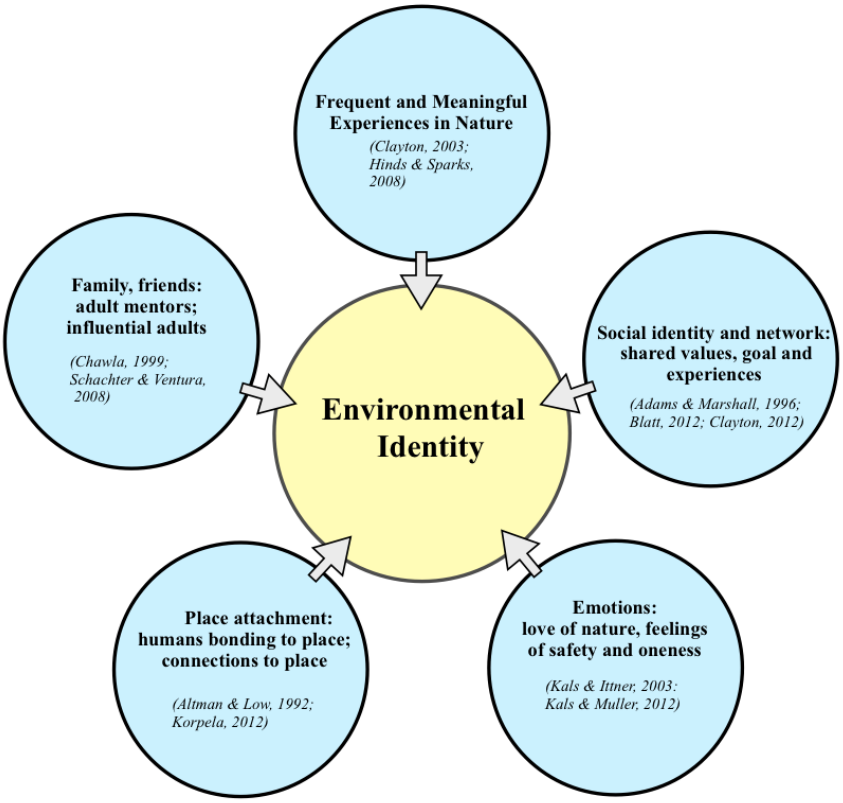

Figure 2. Key elements of environmental identity that can be applied to EE

Social Practice Theory

Social practice theory (SPT) provides an approach or lens to environmental identity with strong links to social and collective identity theories. For my research, I focus primarily on the work of Dorothy Holland and her colleagues (1998, 2003) with social practice theory. They

explored the effectiveness of applying social practice theory to environmental identity and environmental action, especially looking at environmental activism and social movements. Clayton and Myers (2009) wrote "identities develop through experiences, which are interpreted in part through social understanding. Giving people the opportunity to be involved together in conservation activities allows them to label themselves as conservationists" (p. 72).

Identity is formed through the combination of personal experiences and shared cultural and social associations. It is the "image of self in worlds of action," which is lived in and through activities, and therefore developed within social experiences. Identities are a critical component of how people care about what is happening in the world and how they take action (Holland, Lachicotte, Skinner, & Cain, 1998). As discussed, understanding environmental identity formation can be important to better understanding how people become invested in taking action to protect the environment.

Environmental identity is a form of identity that is malleable over time and space resulting from our experiences (Kempton & Holland, 2003). Social practice theory explores central experiences in the continuing alteration of identity over an individual's life. Three changes occur when an individual's sense of themselves in the world of environmental action strengthens: *salience*, *identity*, and *knowledge from doing* (Kempton & Holland, 2003, Williams & Chawla, 2015). Holland, et al. (1998) argues that these do not necessarily occur in sequential order.

- *Salience* refers to an individual becoming aware of environmental problems. Salience of the environment has two dimensions: becoming interested and knowledgeable about the environment; and becoming aware of environmental issues.

- *Identity* means that an individual takes responsibility for, and understands the consequences of their actions and identifies with them. Identity happens when individuals gain a sense of empowerment, and a belief that they can have an impact either by acting alone or as a part of a group.
- *Knowledge from doing* is gained through action. It is collaboratively shaped in a culturally structured context of knowing that is influenced by social values, but it is also unique to each individual (Lipman, 1991). When someone engages in environmental action, they "gain familiarity with the social relations and practical activities of that environmental action" (Kempton & Holland, 2003). At this stage, an individual has the knowledge to become a mentor and to guide others through a course of action.

Social practice theory can both explain identity formation over time and predict how certain interactions might deepen identity. The key tenets of social practice theory**,** which contribute to identity formation are action (practice), social, and place in context (Figure3).

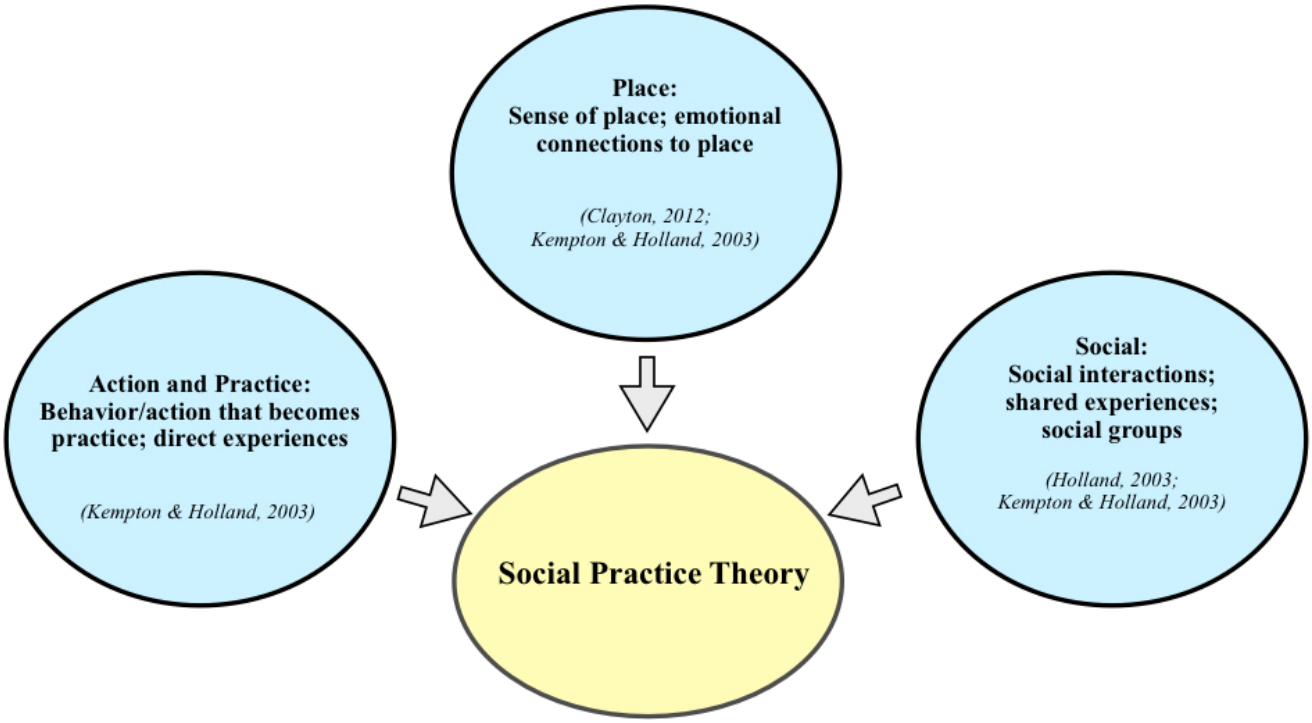

Figure 3. The key elements of SPT that were applied this study

Research Framework

The discussed theories and models suggest that a complex interplay of factors determines behavior. Although behavioral change has been widely explored, there is no single, accepted theory in the literature. This study is informed, most heavily, by the factors that were discussed previously that influence identity formation and meaningful life experiences: participating in action; experiencing and learning in nature; experiencing nature and the environment with others (social experiences); having supportive family and friends, especially adult role models during childhood; and developing an emotional connection to nature. The Venn diagram (Figure 4) shows the overlap and integration of what are elements of significant life experiences research, environmental identity and social practice theory, both as they apply to environmental identity formation in general, and to environmental education as a whole. This integration was used as a framework for this study. By exploring this intersection, an argument can be made that direct experiences in nature, with actions built into them in a socially supportive environment that empowers the individual, can be particularly rich and influential in the formation of an environmental identity.

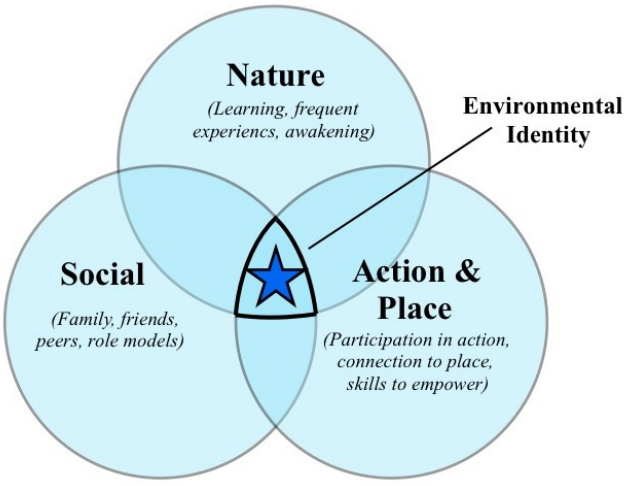

Figure 4. Integration of key tenets of SPT, EI, and SLE research in creating an EI

Research in significant life experiences, environmental identity, and social practice theory indicate the importance of engagement with nature (frequent experiences in the natural world), emotional connections with nature, learning in nature, a connection to place (place attachment), social experiences (social learning), and participating in action (applying skills). Research shows the importance of repeated, accumulated experiences that allow individuals to put what they learn into practice, developing competency, building confidence, applying knowledge and skills to issues that they find personally relevant. Experiences are impactful when individuals learn how, through and from directly participating in action (Liddicoat & Krasny, 2013; McLaren & Hammond, 2005). The literature suggests that time spent in nature is essential to the development of environmental competencies and empowerment, and a sense of belonging and deeper connection with place are essential to the formation and maintenance of environmental identity. I explored and described these perspectives because I view them as having a common thread in how identity is formed and maintained throughout life. I think each perspective helps to illuminate the other and can help us better understand the process of environmental identity formation.

As my research confirms, social practice theory integrated with the findings of significant life experiences research can be used to further explore how environmental identity forms. Social practice theory helps explain many of the findings of SLE research. SLE studies demonstrate the impact and process of developing knowledge of nature during childhood experiences, which leads to more formal learning about the environment, and eventually to the development of environmental skills and strategies (James, Bixler & Vadala, 2010). Implicit in these studies are the roles of the social worlds and social identities that are developed around shared interests and affinity to nature.

Along with regular time spent in nature, social support is critical for the development of a sense of connection to the environment and need to care for it. Research on the formative experiences of environmentally active individuals consistently shows that role models (family members, teachers, etc.) who care for nature and encourage interest in it play a crucial part in the development of environmentalism.

As it relates to peoples' relationships with the natural world, SLE research has found that across cultures and demographics, there are specific interactions with the natural world that often influence individuals' positive attitudes, beliefs, and actions towards the environment. These experiences typically occur over time, beginning at an early age and continuing well into adulthood. It is the long-term influence of these experiences that SLE research explores—and as such, requires people to reflect on their lives and the influence of specific experiences. Social practice theory supports the importance and convergence of the history of place, local sociocultural practices, and the deepening of identity over time.

When considering together the influence of learning environments, action, collective group identity, social surroundings, and place, we can begin to see how these components align to contribute to the meaning, saliency, and significance of experience. This helps to explain how the importance of experience can deepen over time, reinforced through action and integrated into an identity.

When reviewing these three bodies of literature and applying them to environmental education, one can argue that effective environmental education needs to involve a series of experiences during which an individual's environmental identity forms and strengthens. Using components from these different bodies of literature, I developed a framework (Figure 5) to further explore past participants' recollections of what was meaningful and memorable about

participating in the Junior Audubon Club and how it influenced their environmental identity. I investigated how these recalled experiences complement social practice theory, with a focus on the knowledge and emotional bonds formed through direct encounters with nature and participation in shared learning and action.

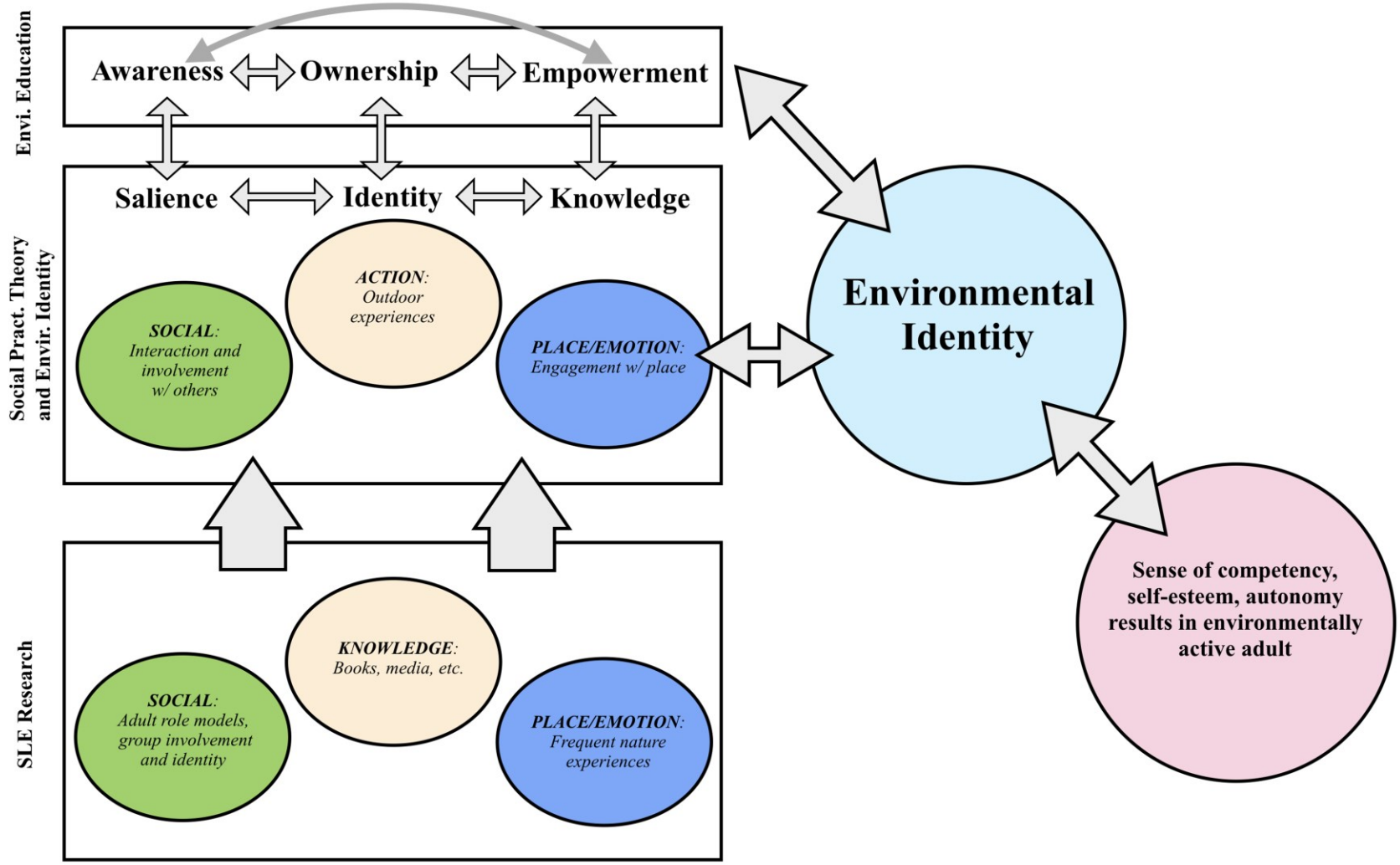

Figure 5. The key tenets of SLE research inform the key tenets of SPT and EI and EE

Chapter III: A Brief History of Junior Audubon Club 1910-1970

In order to explore the lifelong influence of youth environmental education on adult environmental attitudes and actions, my research focuses on the Junior Audubon Club and 19 people who participated in the program. This chapter helps to explain why I chose the Junior Audubon Club as my focus. The program was arguably the largest and longest youth conservation effort in the United States, and its history provides the reader with a greater understanding of its evolution over the more than 60 years of its existence. In order to put the program in context, it is essential to first understand the establishment of the Audubon Society and the wider organization's interest in youth engagement, and how uniquely Junior Audubon Club harnessed energy and enthusiasm for bird conservation.

Early Years of National Audubon Society

The current National Audubon Society has undergone several incarnations and name changes during its long history. It began in 1886 when George Bird Grinnell, owner and editor of the *Forest and Stream* magazine—the leading sportsmen's journal in the U.S. at that time—created the first Audubon Society to combat the massive slaughter of birds, especially for the millinery (hatmaking) trade (Graham, 1990). In the February 11, 1886 issue of *Forest and Stream*, Grinnell encouraged his readers to join him in the protection of wild birds and their eggs. He named the Society in honor of artist and naturalist John James Audubon because Grinnell had been tutored by Audubon's wife, Lucy, and had fond memories of Audubon's artwork and commitment to birds (Chapman, 1933). Membership was free and open to everyone, but each member had to sign a pledge "not to molest birds." Within the first year, there were nearly 39,000 members and the society had become so popular that Grinnell created *Audubon* magazine, which cost 6 cents per issue or 50 cents for an annual subscription. Within two years,

Grinnell was so overwhelmed by the response that he didn't have the time or staff to keep up with the demand, and so disbanded the group in 1888 (Chapman, 1933).

However, outrage continued over the slaughter of millions of birds, particularly egrets, for the millinery trade. Women in Massachusetts, notably Harriet Hemenway, were instrumental in the second coming of the Audubon movement (Mason, 2002). Hemenway gathered all of her wealthy, strong-willed female friends at her Boston house in February 1896, which lead to the formation of the Massachusetts Audubon Society, which still exists today. The goals of the organization were to discourage the buying and wearing of feathers for fashion and to the overall protection of native birds (Gibbons & Strom, 1988).

The years immediately following saw the establishment of other state-level Audubon societies in Pennsylvania, New York, New Hampshire, Illinois, Maine, Wisconsin, New Jersey, Rhode Island, Connecticut, the District of Columbia, Ohio, Indiana, Tennessee, Minnesota, Texas, and California. In 1899, ornithologist Frank Chapman started the magazine *Bird-Lore* for the Audubon Societies, which helped give the Audubon movement a unifying national forum. *Bird-Lore* was the predecessor to the current *Audubon* magazine (Gibbons & Strom, 1988).

By 1900 it became apparent that the state organizations had to work together to influence national policies, and their leaders began discussing a federation of state Audubon societies (Graham, 1990). In 1901, some of these societies formed a loose association called the National Committee of the Audubon Societies of America. Then, in 1905, the National Committee incorporated as the National Association of Audubon Societies for the Protection of Wild Birds and Animals. That name remained in use until 1940, when it became the National Audubon Society, which remains the name today (although it is often shortened to just Audubon). The magazine changed names from *Bird-Lore* to *Audubon* in 1941 (Graham, 1990).

Despite changes to the organizational structure, the mission has remained consistent for more than 100 years ago. The National Audubon Society was founded with two main objectives, which continues today: to enact laws that protect birds in all states, and to educate people about the importance of protecting birds. In 1899, Mabel Osgood Wright, an early Audubon leader and a well-known natural history writer, wrote in *Bird-Lore*: “The very least it [the Society] can do is to help them [the public] to become as intimately acquainted with the bird in the bush as they were with the egg in the pocket and the feather on the hat,” (Osgood Wright, 1899). Although laws are in place today to prohibit egg collecting and the use of wild bird feathers in fashion, the organization remains focused on increasing the public's awareness and knowledge of birds, and mobilizing individuals to take action to protect these species.

Audubon Brings ‘Bird Lore’ to Children

From the very beginning, the Audubon Society wanted to blanket its message of bird conservation throughout the nation, and understood the importance of getting children involved in spreading the word. In the late 1800s, the first Audubon Society in Massachusetts created educational leaflets that were distributed to the public, actively recruited junior members, pushed to create "Bird Days" in schools and gave people, especially children, a pledge card that read: “I promise to not harm our birds or their eggs, and to protect them both whenever I am able,” (Hoose, 2014, p.52). They created posters of birds and distributed them to teachers to hang in their classrooms. Other states followed with pledge cards and junior memberships of their own.

The December 1900 issue of *Bird-Lore* launched the “Young Observers” section of the magazine, where children could contribute articles and letters. Thereafter, each issue of *Bird-Lore* had a section dedicated to both teachers and students, replete with lessons and activities that could be used in the classroom or at home. In 1901, *Bird-Lore* began a contest for children 14

years or younger, while the following year it started the "Question for Students" section, which featured a question to which students would send in their answers. Thousands of letters from children came into Audubon's offices almost weekly.

By 1903, Audubon staff realized the interest that children had in birds and they began discussing the need for what they called "Junior Audubon Societies" that would be implemented by and through teachers. The following year, the need to "interest boys and girls of the country in the preservation of birds" was discussed in the society president's annual address (Bird-Lore, 1904, p. 308)**.** There was a great deal of interest in forming bird clubs for children and using teachers as a way to engage young people. The organization had a strong belief that engaging children in the Audubon Society would be a great benefit to both the organization and its mission. "If we can create among the children an interest in wildlife, this Association will grow immensely in strength and ability to carry out the objects for which it was organized," (Bird-Lore, 1904, p. 308).

During its first two decades (1899-1920), *Bird-Lore* was written for two distinct audiences: adults and children. Each issue had sections dedicated to children, with material both written by and for them. There were poems about birds, songs to sing, and coloring pages. There were also sections aimed at teachers with activities that they could implement in the classroom.

Figure 6. Youth membership card from 1900. Permission from Audubon.

The Association of Audubon Societies' main office received thousands of letters from children, and it became clear that young people across the country were interested in learning more about birds and taking action to protect them. Due to this demand, individual state Audubon Societies began to offer junior memberships, and by 1910 the total junior membership was approximately 35,000—at a time when adult membership was only 11,000 (Bird-Lore, 1910a). This strong base of youth involvement and interest in the organization helped create the foundation for the Junior Audubon Club program.

Dead Robins and the Launch of Junior Audubon Club (early years 1910–1920s)

Today, environmental education is more of a household term, but learning about nature in a school or formal out-of-school setting wasn't always commonplace. Recognizing that engaging children was an effective strategy for changing public attitudes, the Audubon Society early on developed a junior membership program.

Figure 7. First Junior Audubon Club button. From Weidensaul's private collection.

Junior Audubon Classes (later renamed Junior Audubon Clubs) were launched in 1910 thanks to a significant donation from an influential female conservationist in New York City – Margaret Olivia Slocum Sage, the widow of the financier Russell Sage. Shortly after her husband's death in 1906 she created the

Russell Sage Foundation, giving more than $45 million to charities over the next 11 years and becoming the greatest philanthropist of her time (Crocker, 2008). Mrs. Sage first gave Audubon $500 to protect American robins (then considered game birds) in the southern U.S., and a few days later increased her gift to $5,000 to be used in "pushing the work of Audubon in the Southern" states (Bird-Lore, 1910c)**.** She pledged to continue to give $5,000 in the following two years. The funds were used to employ field agents and lecturers, launch an educational effort through the wide distribution of literature, particularly referencing the need to protect robins, hire wardens to protect breeding colonies of birds, and attract teachers from southern states to instruct their students on the subject of bird study. She initially focused on the South because in those states American robins were frequently hunted for food (Pearson, 1917). With this funding, the Junior Audubon Club initiative was born. The 1910 issue of *Bird-Lore* announced the venture and called for teachers and students to participate:

> To form a Junior Audubon Class for bird study, a teacher should explain to the pupils of her grade (and others if desired) that their object will be to learn all they can about the wild birds, and that everyone who becomes a member will be expected to be kind to the birds and protect them. Each pupil will be requested to pay a fee of ten cents each year. The Association will then forward to the teacher, for each pupil whose fee had been paid, the beautiful Mockingbird 'Audubon Button' and a set of ten colored pictures, together with outline drawings and leaflets. The teacher will also receive free of cost the magazine *Bird-Lore*, which contains many suggestions for teachers. It will be expected that the teacher give at least one lesson a month on the subject of birds, for which purpose she will find the leaflets of great value as a basis for the lessons. (Bird-Lore, 1910b, p. 268)

By January 1, 1911, only four months after the launch of the program, it had 3,506 youth members, representing 10 states (TX, WV, LA, KY, GA, AL, AC, VI, NC, TN) (Bird-Lore, 1911b). By the end of its first year, the experiment was hugely successful, with 533 clubs and nearly 11,000 members (Bird-Lore, 1911a).

The following year the National Association of Audubon Societies received an anonymous gift of $5,000, in addition to Mrs. Sage's renewed gift of $5,000, to expand the program into other states. Enrollment jumped again, to 29,369 children in 15 southern and 19 northern states (Bird-Lore, 1912a). With the expansion beyond the South, Audubon Societies at the state level worked with the Association to further expand the program. State societies helped advertise the clubs, involved children in their local meetings and provided specific activities, like bird walks. This close collaboration helped solidify the strong network of Audubon organizations across the country and really developed the model of grassroots work that is still being implemented today (Graham, 1990).

By 1912, there was a legislative campaign initiated in Virginia that resulted in the passage of the Robin Protection Bill (Bird-Lore, 1912b). Much of this was due to the awareness of, and engagement in, bird protection by thousands of children. Mrs. Sage gave her initial donation in 1910 to protect robins. Her vision was to engage youth in caring for birds, especially robins. Her vision became a reality. This is direct evidence of the conservation impact of engaging youth, which the early Audubon Societies' leaders knew was possible and made a focus of the organization for decades.

Within the first three years of the program, the number of members grew annually as participation spread across the country. By 1913, there were more than 93,000 children enrolled in the mainland U.S., there were even members in Puerto Rico. Thousands of children across the

country were learning about birds and helping to protect them. Alice Hall Walter, editor of the School Department section of *Bird-Lore,* wrote that, “The Junior Audubon work is fast becoming a most important part of this great educational movement. The fact that it is being extended to Alaska so efficiently, is a fine exhibition of the energy and power controlling it," (Bird-Lore, 1914b, p. 61). And thanks to their 10-cent payment of junior membership dues, children were contributing more than $9,300 toward the work of the National Association of Audubon Societies.

As the program continued to grow in numbers, the organization began to really understand its impact through thousands of letters and stories received from both students and teachers. Gilbert Pearson, secretary of the organization, wrote to the membership (Bird-Lore, 1914b):

> Our wonder and joy are excited by the fact that all over our broad land groups of children have had their point of view completely changed in respect to the world of life. A bird, or a squirrel, or a butterfly, is no longer to their eyes merely a thing which arouses the barbaric instinct of capture, but a being with distinct and interesting characteristics, qualities, and relations to us and the rest of the world—an object from which something may be learned, and which must not be wantonly sacrificed. With the growth of interest, there naturally arises a sense of care; and bird lovers are inevitably bird-protectors. (pp. 218–219)

Junior Audubon Club members learned about many of the common birds through the use of the coloring pages and cards with paintings of the birds and information on the back. These materials were provided to the club leaders, who were encouraged to take their students outside to see and hear the birds. Adult club leaders received lessons and activities that they could do

with their students. Many clubs recorded when and where birds were observed, launching the first citizen-science programs for children. Students didn't just learn about the birds—they participated in hands-on conservation by building bird feeders and nest boxes that were installed on their school grounds and in nearby parks.

Junior Audubon Club members were not only learning about birds, but they were actively protecting them. Some children, especially boys, were working with local game wardens and were going into the field to scout out locations of birds for the wardens (Bird-Lore, 1915). The impact was much greater than just learning about birds.

One club leader, Miss Edna Stafford, from Albany, Indiana reflected on the impact of the program she saw in one of her students (Bird-Lore, 1914b).

> One day last summer a twelve-year-old boy was out on our street with an air gun, thoughtlessly shooting at every bird he could see. Recently the same boy came to me with a bird which had been hurt, and in the most sympathetic tones said: 'Who do you suppose could have been so cruel as to hurt this dear little bird? What can we do for it?' Our study of birds in the Junior Audubon Society brought about this change in the boy. It has greatly interested the boys and girls, especially in respect to the protection of the birds. (pp. 224)

This was not just an education program; a conservation movement was being born. The program's success was due, in large part, to the cooperation among state and local Audubon societies and bird clubs. It was spreading beyond the United States, with clubs formed in Panama, Canada, and China by 1916.

Even though this program was successful for its first ten years, it did face some major challenges, especially during World War I, when Junior Audubon Club membership declined

dramatically, especially between 1917 and 1918. The enrollment in 1917 had reached a record high of more than 250,000 children, but fell by 100,000 the following year.

In 1919, with the end of the World War and the country gradually returning to normal, the interest in Junior Audubon began to increase. Toward the close of the school year, junior memberships were pouring into the home office, often at the rate of 10,000 a week (Bird-Lore, 1919). To the delight of the organization, the membership began to assume somewhat its pre-war appearance. Scores of communities were inspired to construct and install bird nest boxes, install bird exhibits, offer bird programs and report violations of the game laws. Many of the children served as volunteer deputy game wardens, and were tasked with being on the lookout for hunters who were illegally shooting birds. In hundreds of local newspapers across the country the work of the local Junior members was reported. In 1919, the secretary's executive report stated, "If all the phases of the National Association's activities had to be abandoned but one, it is very probable that the responsible officials would vote to maintain the Junior work as the one most important feature," (Bird-Lore, 1919, p. 270).

Roaring Along in the Roaring '20s

As of Jan. 1, 1920, the National Association of Audubon Societies had organized 55,220 Junior Audubon Clubs throughout the country with a total paid membership of 1,254,636. June 1, 1920, marked the 10-year anniversary of the Junior Audubon Club movement, and also the highest enrollment in the program's history to that point.

During 1921 alone, Junior Audubon members built and installed more than 175,000 bird nest boxes across the country. In addition to bird boxes, children created gardens and habitat areas on their school grounds; they wrote and sang songs about birds; drew and painted birds; and put on plays about nature for their parents and other community members. The *Milwaukee*

Journal newspaper ran an article on one of the local Junior Audubon Clubs in Shorewood, Wisconsin, that demonstrates the expansiveness of the club's activities (Bird-Lore, 1921):

Figure 8. Bird nest boxes built by Junior Audubon Clubs. Permission from Audubon.

> Although formed only two months ago, the society numbers between 80 and 90 children. The older boys plan to circulate petitions asking Wisconsin congressmen to defeat the water power act and Fall River basin bill, which, it is claimed, are destructive to wild life. The children are providing drinking-pools and bird-shelters, and are studying the problem of control of stray cats. Three contests are under way for the best Audubon bird pictures. Prizes will be awarded in each of the three age divisions. (pp. 223–224)

A club leader, Miss Foster from Mississippi, sent a letter to Audubon, which was printed in *Bird-Lore*. She wrote "Each member of this society pledged himself to do something to encourage bird-life on the campus, and upon their home premises. They have made good [on] this pledge by feeding the birds through the winter months, putting up bird houses near their homes, and in other good ways" (Bird-Lore, 1914a, p. 228).

At this time, Junior Audubon also spread further into Canada. Commissioner J. B. Harkin, Department of Canadian National Parks, was impressed with the program and encouraged all of the provinces to form Junior Audubon Clubs in their schools. It was immediately well received by Alberta, Manitoba, Nova Scotia, and Saskatchewan. The National Association of Audubon Societies worked with the National Parks of Canada to develop the Junior Club materials in French, so the materials could be used in the French-speaking provinces (Bird-Lore, 1923).

Peterson Takes the Helm (the 1930s)

By 1934, there were 5 million Junior Audubon Club members across the country and as far afield as Panama, China, Japan, and Canada. By the middle of the 1930s a lot was changing within the National Association and more specifically the Junior Audubon Club program. There was new organizational leadership with a new president, John Baker, who pushed the Audubon Societies to have a stronger education focus because he felt that people interested and knowledgeable about birds would be far more likely to support conservation. Shortly after Baker took the presidency, he hired Roger Tory Peterson, a young man who had already demonstrated a tremendous ability to generate interest in birds with his popular book, *A Field Guide to the Birds*. Peterson's field guide was a bestseller and made bird watching immeasurably more popular than it had ever been. Peterson was hired as Audubon's Education Director with the main goal of attracting new naturalists and engaging them in the conservation cause.

When hired, Peterson's immediate task was to revise the Junior Audubon Club bird leaflets, which had sparked his own interest in birds about 15 years earlier. In 1920, when Peterson was in seventh grade in Jamestown, New York, his teacher started a Junior Audubon Club, which had a major influence on his life and passion for birds. During his first four years at Audubon, Peterson wrote and illustrated more than 60 of these leaflets for students, as well as nine teachers' guides to accompany them. He was involved in the founding of the first Audubon Camp, an educational facility on Hog Island, Maine, and served as the first ornithology instructor when it opened in 1936. He delivered scores of public lectures and radio addresses to attract more people into bird conservation. His articles and presentations were well informed and

engaging, and his accurate, lively illustrations helped set the tone for Audubon's new communication with the public (Rosenthal, 2010).

Figure 9. A one-day shipment of Club materials. Permission from Audubon.

Under Peterson's programmatic leadership, the organization dramatically expanded its education programs across the country. Audubon created nature study camps for teachers, in order to provide educators an opportunity to spend two weeks immersed in the natural world. The goal was for them to learn about the local flora and fauna, and to return to the classroom more knowledgeable and inspired to teach nature to their students. These camps opened up across the country. Peterson wrote in one of the brochures for Junior Audubon Club (circa late 1930s):

> The purpose of the Audubon Association in stimulating the formation of Junior Audubon Clubs is to build up a genuine interest in and sympathy with the birds during the formative years. The future of American wildlife lies in the hands of our children. The child, if made cognizant of the existence and needs of wildlife is its staunchest champion in later years (Peterson, n.d.).

In the 1930s and 40s, the program was praised for its success in academic journals, including the *Journal of Education*, *Science Education*, and the *Journal of Exceptional Children*. In addition, new program components were developed including the *News on the Wing* magazine, which initially came out four times a year. The magazine for club

members featured stories, poems, and drawings from children across the country and beyond, as well as puzzles, games, and activities for the readers. There was a section dedicated to club news, where children or teachers could submit reports and photos on what projects they are working on. In 1939, the editor of the magazine wrote a section asking that club members, if interested, exchange letters with other members. Club members' names and mailing addresses were included. This pen pal program was very successful and continued for several years. Each issue of the magazine would have a new list of people who wanted to exchange letters, including some students from Mexico and Canada who corresponded through this program.

Changing Names and Celebrating Milestones (the 1940s)

The 1940s were a time for many changes, new affiliations and successes in the Junior Audubon program. In September 1940, the board of directors voted to shorten the name of the organization from the "National Association of Audubon Societies for the Protection of Wild Birds and Animals" to the "National Audubon Society." Not only did the organization have a name change, but so did Junior Audubon Club, which became Audubon Junior Club (News on the Wing of Audubon Junior Clubs, 1940). One more name change would occur the following year - the magazine was changed from *Bird-Lore* to *Audubon Magazine,* which eventually was shortened to just *Audubon.*

Between 1940 and 1948 the six millionth, seven millionth, and eight millionth members of the Audubon Junior Club were enrolled. For each milestone membership, a party was thrown at the National Audubon Society headquarters in New York City and club members gathered to meet all the Audubon leadership. This exciting news was celebrated in many newspapers and in the *News on the Wing* magazine. In 1948, the National Audubon Society wrote there are now

"more club members than people living in New York, Illinois and Pennsylvania" (News on the Wing of Audubon Junior Clubs, 1948).

With the increase in membership, the program also expanded geographically. It spread south into Mexico and north almost to the Arctic Circle. In 1941, a government teacher formed an Audubon Junior Club with twelve Native children from Kalskag, Alaska, just south of the Yukon. The program had crossed borders with tremendous success in Canada, where Junior Audubon Clubs were found in every province. In 1948, the Audubon Society of Canada was formed, and with support of the U.S. National Audubon Society it launched *Canadian Nature* magazine, which later became *Canadian Audubon* (Paehlke, 1996). The formation of an Audubon Society in Canada, plus the takeover of the magazine there, led to a dramatic increase in the reach of Audubon and the number of children enrolled in Audubon Junior Clubs. Not only did the program expand north into Canada, but in the 1940s it spread as far as New Zealand, Australia, Hawaii, Costa Rica and further into Mexico. In addition to its expanding geographic reach, it also attracted non-classroom teachers and clubs were offered on weekends and after school hours.

Figure 10. Junior News. From Weidensaul's private collection

Although the 1940s saw great successes and expansion of the program, World War II brought significant challenges. The organization cut back on some of its expenses during wartime, including getting rid of the envelopes used to mail *Junior Audubon News* to save paper, and printing one fewer magazine issue each year to reduce expenses. Many of the stories running in the magazine highlighted clubs helping chapters of the Red Cross and raising funds for local projects. The clubs began to grow more philanthropic, with a

greater focus on raising funds for social and environmental issues. A club in Bethlehem, Pennsylvania, raised funds annually by selling wax paper, with the money going to purchase milk for the needy and to a non-profit that was protecting hawks. Clubs across the country were also taking action on local laws for the protection of wildlife. The Club in Bethlehem, Pennsylvania mentioned previously created a petition and gathered hundreds of signatures to make a local area a sanctuary for wildlife. The petition was delivered to the mayor by an 11-year-old club member (Barlieb, 1970). Other clubs were impacting state game laws through letters, petitions and town meetings.

The High-water Mark (the 1950s)

Audubon's education programs were in full swing with the addition of a traveling wildlife film series bringing entertainment and spreading the conservation message to towns all over America. Audubon Junior Club membership was solid and education materials were going out to thousands of students weekly. In 1952 another milestone for the program was marked when the 9 millionth club member was enrolled—Nancy Bliss, a 6th grader from Bedford Hills High School in New York (News on the Wing of Audubon Junior Clubs, 1952). An article from *Kiwanis Magazine* (Miller, 1953) said:

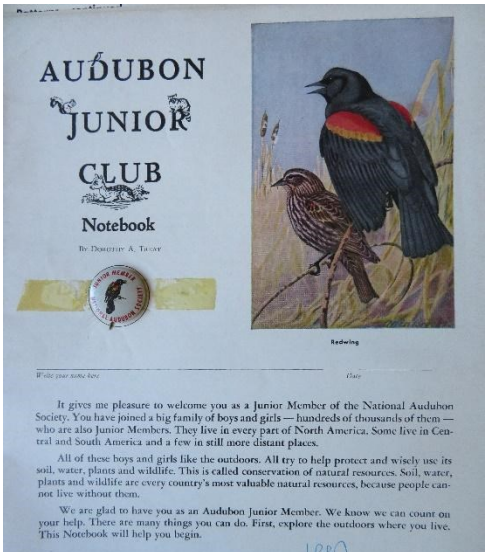
AUDUBON JUNIOR CLUB
Notebook
Redwing
It gives me pleasure to welcome you as a Junior Member of the National Audubon Society. You have joined a big family of boys and girls — hundreds of thousands of them — who are also Junior Members. They live in every part of North America. Some live in Central and South America and a few in still more distant places.
All of these boys and girls like the outdoors. All try to help protect and wisely use its soil, water, plants and wildlife. This is called conservation of natural resources. Soil, water, plants and wildlife are every country's most valuable natural resources, because people cannot live without them.
We are glad to have you as an Audubon Junior Member. We know we can count on your help. There are many things you can do. First, explore the outdoors where you live. This Notebook will help you begin.

Figure 11. Club member's notebook. From Weidensaul's private collection.

> Today, there are 10,000 Audubon Junior Clubs in North America alone, and the international organization has enrolled more than 9,000,000 members….The aims of the Audubon Junior Clubs are simple, but of vital importance to the world: 1) To introduce children to the wonders of the outdoors, the fun of exploring their backyards, schoolyards, neighborhoods and

> nearby country sides to discover the plants and animals living there. 2) To encourage children to be observant and enable them to experience the joy of discovering the wealth of natural objects they can see, hear, feel, taste or smell. 3) To show children the interdependence between plants, animals (including themselves), and the soil, water, and climate. 4) To help children understand the tremendous importance of plants, animals, soil and water to every living thing, including man. 5) To impress on children how man's interference with nature, whether through carelessness or ignorance, has already cost us vast quantities of vitally needed natural resources. 6) To help children understand how we can use and yet conserve our resources, while showing them what they can do to help. (pp. 44–45)

In 1954, Audubon began to offer membership renewal at either the club level, which was 15 cents and required a minimum of 10 children, or as an individual, which was $1.50. The membership included the button, subscription to *Audubon Junior News*, and the new Audubon Junior Club Notebook, which included pictures to color.

The 1950s not only were a time for program expansion, including into Paraguay and Israel, but also was a period of change in both the curriculum materials and target audiences. Audubon Junior Clubs were marketed to Girls Scouts, Boy Scouts, Cub Scouts, Campfire Girls and churches in an attempt to expand its reach. Advertising materials and program curricula were developed for different audiences. Flyers advertised "Audubon Junior Clubs for Sunday schools, vacation Bible schools and religious youth groups."

The decade was also a time of strong press coverage for the program, especially in high visibility publications such as the *Christian Science Monitor* and *New York Evening Post*. It was

even featured on an episode of the TV series *Lassie* in 1958 when Timmy was a member of the Junior Audubon Club and he identified an egret for his club (Archainbaud, 1958). In addition, the program was featured in many academic journals and other publications of teachers.

The Beginning of the Organizational Shift: 1960–'70s

The 1960s saw radical changes in the country, and the beginning of the extinction of this popular program. In 1961, Audubon was forced to increase membership dues to $1 due to increased expenses of running the program. This was a significant jump from the 25-cent fee that was instituted just five years earlier.

In 1965, Dr. W.B. Stapp and Miss Anne Harrison conducted an evaluation of the Junior Audubon program for the leadership of National Audubon Society (Stapp & Harrison, 1965). They recommended moving away from the club model and develop a new Audubon youth education program that consisted of three levels of curriculum (primary, intermediate, and advanced). This appears to be the beginning of the organization's focus on changing the program. In a 1973 memo from Audubon's Director of Education, Dur Morton, to the Education Committee Members, he explains that he visited all of the Audubon centers and discussed the junior membership idea. His suggestion was to launch a membership program for 8-13 years old. They would receive membership cards and newsletters, but they would not participate in an organized program or club (Junior memberships, n.d.).

Not much is documented about why the program began to decline in the 1970s. Piecing together information in the archives, it appears that there were several factors that led to a decline in public interest in the program. The Audubon Society combined all of their education programs into one, merging Audubon Junior Clubs with the movie screen tours and nature center programs. They renamed all these programs "Audubon Aids" and the Junior Clubs lost its unique

identity. Shirley Miller, who had been running the program for years, retired, and without Junior Audubon's strongest in-house advocate, the continuity and growth of the program were negatively impacted. Lastly, at this time period there was an increased reluctance by club leaders, especially teachers, to ask their students to pay membership fees. Due to these factors, by the 1970s, the Junior Audubon Clubs effectively went extinct. While spinoffs and variations of the program (or new programs that used the Junior Audubon name) continued to be offered throughout the country by local Audubon societies and other groups, they were not organized through the national office and the materials were no longer distributed by National Audubon (Graham, 1990).

A Pioneering Program with Lasting Impact

Throughout the program's more than 60-year history, many well-known conservationists who participated in Junior Audubon Clubs as children later wrote about their experiences, including Roger Tory Peterson, world famous artist and author of the Peterson Field Guide series. In his autobiography he reflected on how his participation in Junior Audubon Club in 7th grade fueled his love for birds and art, which continued throughout his life. The nature photographer, lecturer and author Allan Cruickshank was also involved in Junior Clubs, and later went on to run one of Audubon's nature camps for teachers. Howard Zahniser, the legendary leader of The Wilderness Society and author of the original Wilderness Act, was a Junior Audubon Club member when he was in 5th grade—a fact highlighted in his obituary along with many other accomplishments throughout his successful career. The late bird artist John Taylor

noted in his online biography that his "fascination with birds and art began in his fourth grade classroom, when the teacher formed a Junior Audubon Club. She also encouraged him in his initial attempts at bird drawing" (Taylor, n.d.).

Figure 12. A member's scrapbook. From Altadonna's private collection

Many Audubon staff were members, including Robert Allen, research director for Audubon, and the one responsible for making sure the endangered whooping crane didn't go extinct and Henry Bennett, Audubon wildlife tour leader and warden. All these individuals dedicated their lives to bird conservation after participating in Junior Audubon Clubs at an early age.

For more than 60 years the foundation of the program didn't change – adult club leaders received lessons and activities to implement with their students, while members paid annual dues, receiving educational and program materials, membership cards, and bird buttons in return. Some clubs were implemented during the school day and others were outside of school hours. Membership in the clubs ebbed and flowed through the years, with a dramatic decline during the Great Depression. By the mid-1930s, Audubon hired Roger Tory Peterson as its director of education, and he breathed life back into the clubs. Between its inception in 1910 and the 1970s, more than 10 million children were members in Audubon Junior Clubs. The program survived the Great Depression and two World Wars.

The Junior Audubon Club program had an impact on bird conservation in the United States, especially through lobbying for stronger legal protection of birds and their habitat. And as

my interviews with 19 former Junior Audubon Club members made clear it also had an impact on individuals' lives. Finally, it was also what tied together all of the Audubon Societies throughout the country—the national, state and local chapter programs. The clubs created the first national network of Audubon societies working together toward a common goal. The Junior Audubon Club movement was so impressive that Frank Graham, author of *The Audubon Ark*, the official history of the movement, credits the program with transforming the society from a loosely organized set of local institutions into a cohesive national force (Graham, 1990).

There were millions of Junior Audubon Club members and countless stories of how this program changed people's lives. The following chapters provide firsthand reflections from 19 people who were impacted by the program between the 1930s and '60s, and my analysis of their stories, which demonstrates the reasons why this program resonates with people, in some cases eight decades later.

Chapter IV: Research Design

My childhood set the foundation for my lifelong passion, career choices and research interests in the environment. I spent my summers exploring the salt marshes, mudflats and beaches of Cape Cod—examining sea cucumbers that dangled under the dock, and luring squid to the surface at night with flashlights (and, true to my early conservation ethic, making my parents stop to move turtles off busy highways and pick up trash on the beach).

By my late high school years, I knew I wanted to study science; it had been my favorite class since elementary school. An introductory course in ecology my sophomore year of college opened my eyes to the possibility of an environmental career. And there has been no turning back.

Through college and after graduating, I had jobs that focused on field research (monitoring bird populations, observing whale behavior and seabirds). However, early in my career I was drawn to the human side of conservation. As I fell in love with teaching, I also began to understand and value its potential impact. My professional career has been linked with the Audubon Society almost from the beginning. Shortly after graduating from the University of New Hampshire, I accepted an internship at an Audubon center in Maryland. Eventually, I became the founding director of an Audubon center on the Eastern Shore, and after a hiatus to earn my master's degree, I returned to the Pennsylvania branch where I spent nine years overseeing the conservation and engagement programs across the state. I recently starting a new job with the Massachusetts Audubon Society as the director of the 2,000-acre Ipswich River Wildlife Sanctuary, which also includes a number of satellite properties and a large environmental education program that serves tens of thousands of people of all ages, including a certified nature preschool.

I entered into the doctoral program at Antioch University New England with the desire to conduct research that aims to strengthen the environmental field through a better understanding of how to successfully deepen the engagement of people in local environmental action; thus fostering in them an environmental identity.

For the nearly 20 years that I have worked for Audubon, I have both heard about the Junior Audubon Club and met people who participated in the program. It wasn't until the semester of Environmental History at Antioch University that I realized the breadth and impact of this program. During that course, I decided to write a paper about the program, which ran from 1910 to the 1970s, and while researching for a course assignment, discovered that many people, decades later, still identified with the program and the role it has played in their lives.

I came across obituaries that mentioned the individual's involvement in Junior Audubon Club as a child. A few that stood out to me included a woman who passed away in 2003 at the age of 103. She was a former airplane pilot and a member of the NinetyNines, an organization formed in 1929 to encourage female pilots. She was a member of the Air Corps Reserves and helped to train and recruit pilots during World War II and served in the Civil Air Patrol from 1942-44. In 1925, she earned her bachelor's degree with honors in physics at Wheaton College in Norton, Massachusetts—hardly the norm for a woman at that time. She had a rich and full life with plenty to fill an obituary—but at the very beginning, her obituary noted the fact that she was the "oldest and longest-tenured member of the National Audubon Society, having maintained continuous membership since 1913 when she was ten years old" and a Junior Audubon Club member ("George Sargent Janes Leubuscher Obituary," 2006).

A 2005 obituary also stood out; that of a man who had died in his eighties. He, too, had lived a rich, full life—serving in the U.S. Marines during World War II and the Korean War,

working for UNICEF, receiving a master's degree in education, raising a family—all the important milestones that mark a person's time on earth. But what jumped out at me was a single line. His love of nature "began when he was a child at Lawrence County Day School and took field trips to the marshes with his Junior Audubon Club" ("Benjamin Allison Obituary," 2005).

In people's lives that are this eventful, I wondered, why list a club one had belonged to as a young child? Surprising as this might have been to me, I soon found out that it wasn't an anomaly. Again and again, I came across obituaries for people who had risen to great achievement, success and fulfillment—and in each case, their obits or biographies made a point of mentioning their involvement in Junior Audubon Club as young children.

As I dug deeper, I discovered more and more people whom, decades later, still felt connected with this program. Many well-known and accomplished ornithologists and environmentalists mentioned their involvement in the program and its impact on their careers and lifelong passion for birds. These discoveries are what sparked my interest in exploring this program further, investigating participants' experiences in the program and its perceived impact.

Research questions. Thus, the purpose of my research is to explore these questions:

- What do people recall years later from their experiences in the Junior Audubon Club program, and why are those components of the program particularly memorable?
- To what degree, if at all, do participants attribute their Junior Audubon Club experience to their self-proclaimed lifelong environmental identity and behaviors?
- To what degree do the recalled meaning and memorable experiences of participants correspond to the key elements of social practice theory, environmental identity and significant life experiences?

In order to investigate the significant and memorable experiences of past club members, I applied the theoretical framework described in the literature review section (Chapter II) to a case study of participants in the Junior Audubon Club program. This enabled me to investigate the significant and memorable experiences of past club members who participated in the program as children, and how they describe the influences, if any, of the program on their environmental identity formation and actions.

This chapter provides detailed information about the methods I used for my research. The purpose of this mixed-methods study is to explore the lifelong influence of the Junior Audubon Club on environmental attitudes and actions of adults who participated in the program decades ago. The quantitative portion of the study investigated the environmental identity of people who participated in the program as children. The qualitative component involved interviews that were conducted to gain a more in-depth understanding of participants' recalled memories of the program and the influences it had on their environmental attitudes and actions.

The chapter begins with an explanation of the overall approach and rationale for the research design and is followed by an overview of the participant selection process; how the data was collected; and how it was analyzed. It concludes with a discussion of validity threats and my efforts to reduce them and limitations of the study.

Overall Approach and Rationale

Using a combination of archived historical materials, participant surveys, and participant interviews, I triangulated the multiple method datasets to document the meaningful, memorable components of 19 participants involved in the Junior Audubon Club program between 1931 and 1968, and the possible long-term influences of those experiences on their self-reported environmental identities. I employed a mixed-methods approach, using quantitative and

qualitative data together to gain a more complete understanding of my participants' experiences and perceptions. Mixed methods "focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone" (Creswell & Clark, 2011, p. 5).

Using multiple sources of data in a case study enabled me to ensure that findings and conclusions are accurate, valid, convincing and corroborated (Yin, 2014). In summary, the research question used a combination of the data, which in turn enabled me to more fully understand and validate the findings that emerged from this study.

Case study. This case study centers on 19 past participants of the Junior Audubon Club program. Case studies have been defined in many ways and applied in multiple disciplines, but there are similarities in the basics of what represents a case study. Yin (2014) offers a two-fold definition of the scope and features of a case study: An empirical inquiry that "investigates a contemporary phenomenon (the "case") in depth and within its real-world context" (p. 16). Case study design allows a researcher the opportunity to explore individuals, organizations, interventions, relationships, communities, or programs within an authentic context using a variety of data sources (Yin, 2014). For this study, each participant was a case, which enabled me to deeply investigate their experiences in participating in the Junior Audubon Club and gain a larger understanding of the programs impact. Creswell (2009) describes case study research as, "the study of an issue explored through one or more cases within a bounded system (i.e., a setting, a context)" (p. 73). In this study, the bounded system is the Junior Audubon Club program.

A case study is an ideal methodology when a holistic, in-depth investigation is needed. It can offer a researcher an empirical and theoretical understanding of larger social complexes of actors, actions and motives (Feagin, Orum, & Sjoberg, 1991). Case studies promote analytic rather than statistical generalization (Gomm, Hammersley, & Foster, 2009). Thus, they can contribute to the generalization of theory, which can help researchers understand similar cases, phenomena or situations. There are many advantages to case study methodology. Using case studies to research a particular phenomenon identifies specific characteristics of an event or situation (Leedy, 1997), deepens understanding and explanation (Miles & Huberman, 1994), and contributes to the theoretical advancement of a particular subject (C Marshall & Rossman, 1999; Ragin, 1994; Stake, 2000). Also, the purpose of a case study is to aggregate "diverse case studies together under a common conceptual framework so that findings will be cumulative" (Lucas, 1974, quoted in Guba & Lincoln, 1981, p. 250). This study used multiple case study research with 19 individual cases. Understanding each of the individual cases first enabled me to better understand the Junior Audubon Club program and over time. Using Junior Audubon Club members as a case allowed me to deepen the understanding of the influences that program participation had on their adult environmental actions and apply to a conceptual framework.

A mixed-methods case study approach provided a more complete understanding of the research problem and increased my study's validity through triangulation (Creswell & Clark, 2011). This mixed-methods structure followed an explanatory sequential design (Figure 13). This means the quantitative (surveys) took place first and informed the qualitative (interviews). According to Creswell (2013), explanatory sequential design typically involves two phases: first a quantitative instrument phase, followed by a qualitative data collection phase, in which the qualitative phase builds directly on the results from the quantitative data. The quantitative results

are explained in more detail through the qualitative data (Creswell, 2013). Qualitative methods enabled me to capture detailed descriptions of participants' experiences in the program and how they express their environmental identities.

Qualitative methods are particularly appropriate due to the retrospective nature of this study in which participants reflect on an experience in natural (not laboratory) settings. Because such reflection, or reminiscing, is often a social activity, interviews are a reasonable and more effective way to gather memories (Kihlstrom, 2009), and enable participants to describe remembered experiences and examine their meaning and impact through self-reflection and conversation (Holstein & Gubrium, 1999). In addition, when possible, memorabilia from the program was provided during the interview and used as a prompt to trigger memories.

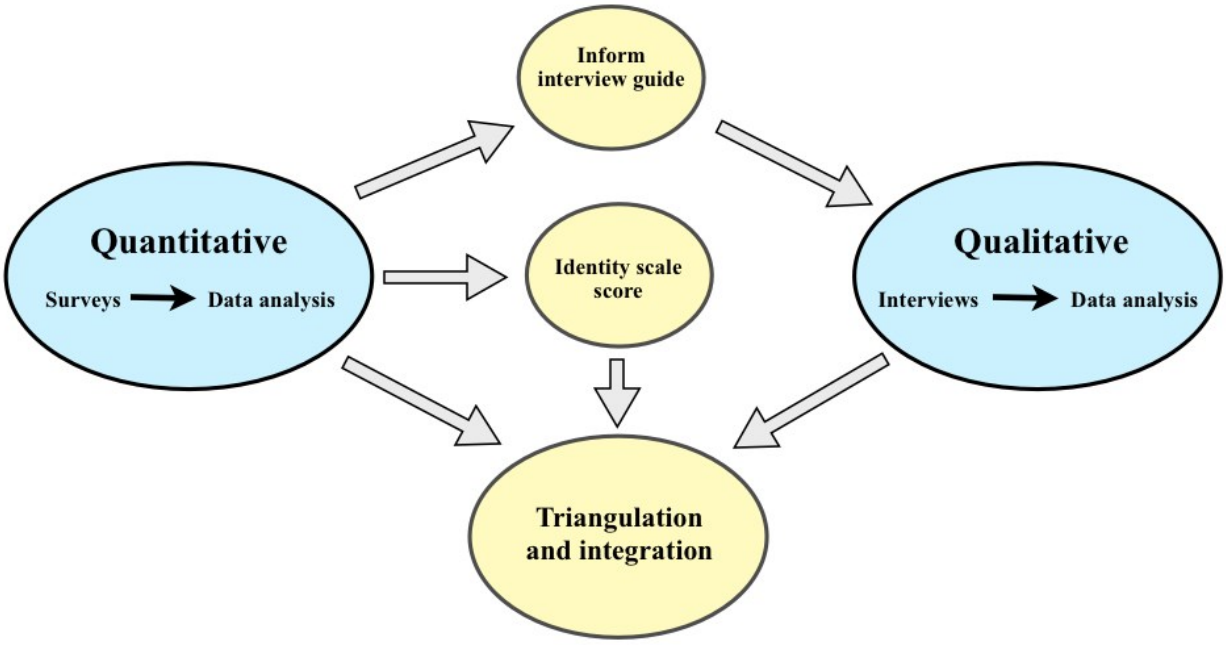

Figure 13. Explanatory sequential design

Study Participants

For this research, I used purposeful sampling to select 19 participants. Purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases for in-depth study (Patton, 2002). This approach involved identifying and selecting individuals who are especially knowledgeable about or experienced with a phenomenon of interest (Creswell & Clark, 2011). In addition to the knowledge and experience, Bernard (2002) discusses the importance of a participant's availability and willingness to participate and the ability to communicate experiences (Bernard, 2002). Patton (2002) argues that the "logic and power of purposeful sampling is in selecting information-rich cases for study in depth… studying information-rich cases yields insight and in-depth understanding rather than empirical generalization" (p. 230). An information-rich case is important because it is a case through which the researcher can learn a great deal about a particular issue of importance, central to the purpose of the inquiry (Suri, 2011).

The research participants were a purposeful sample based on the following criteria:

- Participated in the Junior Audubon Club as a child
- Possesses memories of participating in the program
- Self-identifies with being in the program
- Ability to share verbally their Junior Audubon Club experiences

The purpose of selecting participants as outlined above was to explore which specific elements of the program were meaningful, memorable and attributable their environmental identity and actions, if at all.

Data were collected through interviews with 19 adults who participated in the Junior Audubon Club program as children between 1931 and the 1968. Audubon does not have a list of

the millions of children who were part of this program so I used a snowball sampling method (Patton, 2002) to recruit interviewees. I recruited people by advertising to the National Audubon membership (email blast and social media), as well as networking with staff and members throughout Audubon to recommend people I could interview. I also found participants through internet searches that revealed biographies of individuals who wrote about their participation in Junior Audubon Club as children. I had a geographical distribution of participants who took part in the program in various states, including a mix of rural, suburban and urban settings, as well as gender, and year of program participation (Tables 2, 3, and 4). The demographic information was collected in the survey.

Surveys and interviews did not begin until the study had received IRB approval for the protection for human subjects participating in research (see Appendix B for additional details). There were no known risks associated with this research. Participation in the study was voluntary and free to withdraw from the study at any time. Each participant signed a consent form stated that they would participant in the research.

Participants were contacted by email to see if they were interested in participating in the research. In some cases (n=3) the email was followed with a phone call to discuss the logistics of being interviewed. Consents were signed and interviews were scheduled.

Table 2

Gender of Participants

Gender	Participant #	Percentage of Participants
Male	14	73.7%
Female	5	26.3%

Table 3

Year of Membership in Junior Audubon

Year	Participant #	Percentage of Participants
1930s	2	10.5%
1940s	4	21.1%
1950s	8	42.1%
1960s	5	26.3%

Table 4

Where People Participated in Clubs

Location	Participant #	Percentage of Participants
Northeast (NY; CT; MA; PA; NJ)	11	57.9%
Western, U.S. (CA)	4	21.1%
Midwestern, U.S. (IL, WI)	3	15.8%
Outside of U.S. (Toronto, Canada)	1	5.2%

Historical Archives

For this study, I explored the National Audubon Society's historical archives, which are housed at and managed by the New York Public Library in New York City. This collection contains 996 boxes of the organization's archived materials from 1883 to the 1990s, and includes several boxes with material pertaining to the Junior Audubon Club. This information includes documentation of the donation that launched the program and letters from club leaders and children.

In addition to the New York Public Library archives, I also explored private collections that included Junior Audubon Club materials, newsletters and scrapbooks from club members. Archives at the Moravian Public Library of a club leader in Bethlehem, Pennsylvania, included newspaper articles about the Junior Audubon Club's various activities and her notes about implementing the club. I also contacted the Oregon Historical Society Research Library to access information on the Junior Audubon Club in the Audubon Society of Portland's archives.

"Historical analysis is particularly useful in obtaining knowledge of unexamined areas and reexamining questions for which answers were not as definite as desired. Many research studies have a historical base or context, so systematic historical analysis enhances the trustworthiness and credibility of a study" (Marshall & Rossman, 2014, p. 119). By investigating these archives, private collections and published sources, I was able to gain a greater understanding of the program, its impact and placement within an historical context. In addition, this information enabled me to develop more informed questions used during the interviews. I was able to acquire a clearer picture of the program, which helped with interpretation of the results of my surveys and interviews. I was able to use the information gained from

investigating the archives, in conjunction with the data collected through surveys and interviews, to gain a deeper understanding of the program.

Phase One Data Collection: Quantitative

The first step was to gather data through a survey that included demographic information (gender, age, race/ethnicity, education level, where they participated in the program), posing questions adapted from the environmental identity scale created by Susan Clayton (Likert-type scale items), and including multiple choice and open-ended questions about their participation in the program. Demographic information was collected in order to explore similarities and differences of experiences in the programs across ages, genders, races/ethnicities, and education levels. Fourteen of the 19 participants took the survey prior to their interviews. Due to a variety of reasons including time, age and comfort with technology, five people were not able to complete the survey, but did participate in the interviews.

The two primary objectives of these surveys were to capture the individual's environmental identity and to gain information that informed the development of some of the semi-structured interview questions. The survey took approximately 15 minutes to complete and was available electronically through Google forms. Participants were given the option of completing an electronic or printed version of the survey. All participants (14) completed the survey online. The survey was piloted with five people to determine the approximate length of time it took to complete and assess the overall clarity of the survey.

Some of the data gathered from the survey (Appendix C) was used to better inform the interview questions by highlighting specific program elements to be discussed further. In addition, each participant’s environmental identity was scored and used during the analysis phase in combination with the other data.

The environmental identity (EID) Scale was used to assess the extent to which the natural environment plays a role in a person's self-definition. The scale acknowledges that environmental identity is part of a social identity; that it is both abstract and holistic; and that it emerges through experiences in nature and changes peoples' understanding of themselves and the environment (Clayton, 2003). Permission was granted by Susan Clayton to use the abbreviated environmental identity scale in my research (see Appendix E).

Clayton's (2003) environmental identity scale is composed of 24 statements, which cover five factors of identity: salience of identity, identification of oneself as a group member, ideology, positive emotions, and autobiography. Salience of identity focuses on the extent and importance of experiences in nature. Identification as a group member deals with ways nature contributes to the group or collective with which one identifies. Ideology measures how one supports environmental learning and pro-environmental lifestyles. The positive emotions category explores the positive feelings and enjoyment one gets from nature, and autobiography explores memories one has of interacting with nature (Mileham, 2015).

The environmental identity scale is reliable and valid, as measured by other researchers. The EID scale was tested for convergent, discriminant, and predictive validity using scales such as the Environmental Attitudes Scale to measure attitudes, values and ideology, and behavior (Clayton, 2003). Olivos and Aragones (2011) explored the psychometric properties of the EID using a sample of 282 university students to examine the constructive and convergent validity of the measure. Participants completed the EID in addition to similar measures, such as the Connectedness to Nature Scale and Inclusion of Nature in Self Scale. The average score on each item of the EID was 3.58 (SD=0.51), which proposed that participants identified with nature. Olivos and Aragones (2011) found that the internal consistency for the EID was high at .90.

Findings from the same study also proposed consistent construct validity and the EID as an overall reliable measure for measuring the degree of environmental identity.

The abbreviated environmental identity scale that I used in my research included 14 statements with a 5-point Likert scale of 1 (strongly disagree) to 5 (strongly agree). I used a shortened version of the scale, which uses the same concept in the measurement, but is easier for participants to understand and reduced the length of time it took them to complete the survey. This abbreviated version is a valid and reliable measurement tool as noted by other researchers (Clayton & Opotow, 2003; Olivos & Clayton, 2017). As noted by Clayton, high scores indicate greater identification with the environment and causes related to the environment.

Likert-type scale questions sort the data into an ordinal measurement format (Clason & Dormody, 1994). With ordinal scales, it is the order of the values that is significant, and the differences between each value is not really known (Boone & Boone, 2012). The ordinal data were analyzed using basic descriptive statistics, including mean, frequency, and proportions (Trochim & Donnelly, 2001).

Quantitative data from surveys underwent basic descriptive statistical analysis to clarify any possible trends or relationships in the data (Lapan & Quartaroli, 2009). I explored the patterns and averages across individuals. For each participant the average score for their environmental identity was calculated. In addition, the average score for each statement on the environmental identity scale was calculated, in order to see trends across participants and individual statements. Due to the small sample size and purposeful (not random) sampling, I am not able to make generalizations pertaining to the wider population. The findings will be discussed in Chapters V and VI.

The results from the survey during phase one were used to inform my interview questions. I reviewed the data from the surveys for each participant before their interview in order to develop questions to expand on their survey answers. For example, I asked additional, follow-up questions about specific program elements or activities that they highlighted in the survey or asked them to expand on their answers on the impact of the program.

Phase Two Data Collection: Qualitative

The qualitative phase of my research consisted of semi-structured interviews with 19 selected adults. The interviews provide more in-depth understanding of the memorable components of their participation in the Junior Audubon Club and the possible influences of the program on participants' environmental identities and actions as adults. The main purpose of the interview is to elicit the participant's understandings, memories and perspectives relating to their participation in the program. As such, these interviews provided the opportunity for a dialogue between interviewer and interviewee that "moves beyond surface talk to a rich discussion of thoughts and feelings" (Maykut & Morehouse, 1994, p. 76). An interview guide (Appendix D) included key questions that were asked of all interviewees. However, the order of the questions and specific wording vary slightly with each participant. As shown in the interview guide (Appendix D), the interviews consisted of three main parts: memories, specific program components, and perceived impacts.

Questions and discussion topics were re-arranged and re-worded as needed to fit the conversation, particularly if one memory led logically to another or if an aspect of the program had already been described in detail in answer to a previous question. I asked general questions

first and followed with specific questions, in order to gather un-cued memories before providing prompts for cued memories (Baddeley, Eysenck, & Anderson, 2009).

All interviews were recorded and varied in length from 45 to 90 minutes. The interviews were informal and carried out in a conversational style. When possible I conducted the interview in person (n=4), but due to the geographic location of many of the participants, phone interviews were necessary (n=15). One phone interview was conducted via Skype, allowing for a remote face-to-face conversation. The in-person interviews were conducted in participants' homes (n=3; two in PA and one in CT) and in their office (n=1; in MA). The length of the interviews varied, and how and where the interview took place didn't determine the length of the conversation.

All interviews were digitally recorded, then converted to verbatim transcripts in preparation for data analysis. Accuracy of interview transcripts was checked by reading them while listening to the corresponding digital recording. In addition to audio recording, hand-written notes were also taken throughout face-to-face and telephone interviews. When appropriate, I took notes on the non-verbal aspects of face-to-face interviews, such as body language or tone of voice at different points in an interview. I also observed the participants' surroundings, such as the presence or absence of a participant's binoculars on the kitchen table, environmental magazines on the coffee table, or bird feeders and nest boxes in their yards. These observational notes recorded items not specifically covered during the interview, thus providing a richer picture of four of the participants.

Within two days of each interview, I followed up by email or phone call to see if the participants thought more about the program and wanted to share additional memories and reflections. This allowed participants to share their experiences through writing and enabled me to capture any additional reflections. I found that people continued to think about the impact of

the program beyond the time allocated for the interview, and building this into the methods enabled me to capture additional data. After the interviews, nine of the participants sent me photos of their Audubon button or photos from their club and/or emailed me to express their joy in recalling the wonderful memories from participating in the program. They also shared additional memories and importance of participating in the program.

Data Analysis Methods

As mentioned above, the interviews were recorded and then transcribed by me or by transcription service (Rev.com). The digital recordings of each interview were converted to verbatim transcripts and coding began during review of each transcription. I checked for accuracy by reading transcripts while listening to the corresponding digital recording. In order to gain a general sense of the information and to reflect on an interview's overall meaning, all of the interview transcripts were reviewed for emerging categories and themes.

A list of topics was generated and similar topics clustered. Detailed analysis included a coding process that organized the material into segments of text in order to identify general meanings (Creswell, 2009). Open coding was used first to identify, describe, and categorize each interview transcript. Each interview transcript was analyzed separately, followed by a comparative analysis to determine if there were themes that cut across all the interviews. In addition, qualitative data analysis computer software (NVIVO) was used to collect, organize, and assist with analysis of the content from interviews.

As a first step in data analysis, I looked for distinct concepts and categories in the data, which formed the basic units of my analysis. This first round of coding consisted mostly of open coding and resulted in dozens of codes that emerged directly from the data, including structural,

descriptive, process, and emotion codes (Saldana, 2009). Codes were then grouped into categories of memories and impact, which are connected to my research questions.

I coded data from each interview in these categories (memories and impact) and created a table of common categories with their definitions and their frequency mentioned (Table 11 in Chapter V). I revisited these codes and categories in earlier transcripts to make sure they remained consistent with my initial impressions and made changes as needed. For each participant, I recorded dominant categories for that individual. After analyzing each transcript, I wrote a profile for each participant, condensed portraits of the individuals based on oral interviews, survey responses and email exchanges. A sample of six profiles are included in Chapter V with the remaining in Appendix F. Writing individual profiles enabled me to revisit each participant and helped me categorize the emergent themes with regard to my theoretical framework.

I then reviewed the codes for each of the 19 participants and developed themes within the emergent categories of memories and impact (Figures 14 and 15). In order to present the emergent categories and themes in a context that is accessible and clear to the reader, I created a table listing each of the themes within memories and impact categories and a description of each theme (Tables 12, 18 in Chapter V). I also created a chart to display the number of participants who mentioned each theme and mentioned frequency (Figure 16 and Table 18 in Chapter V). From this list of emergent categories and themes, I revisited my theoretical framework to explore the extent to which it helped describe, explain or align to my research questions and study context. From this theoretical framework, I was able to establish general categories in which to group the emergent themes, and I presented the participants' memories and experiences as they related to each of these broad, theory-based categories. Chapter VI will explore these findings.

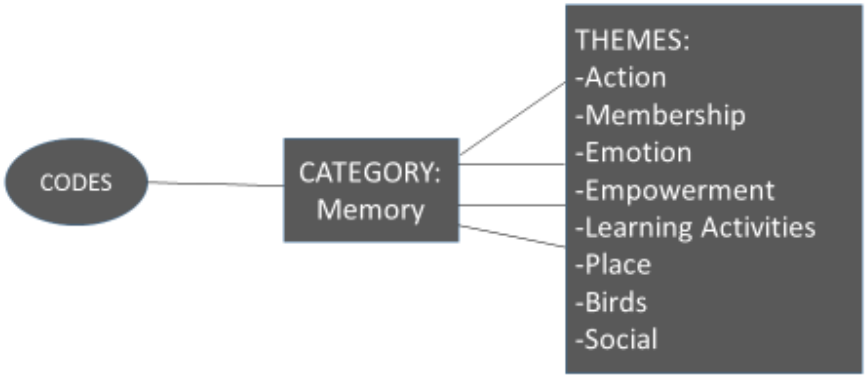

Figure 14. Emergent themes from memory category

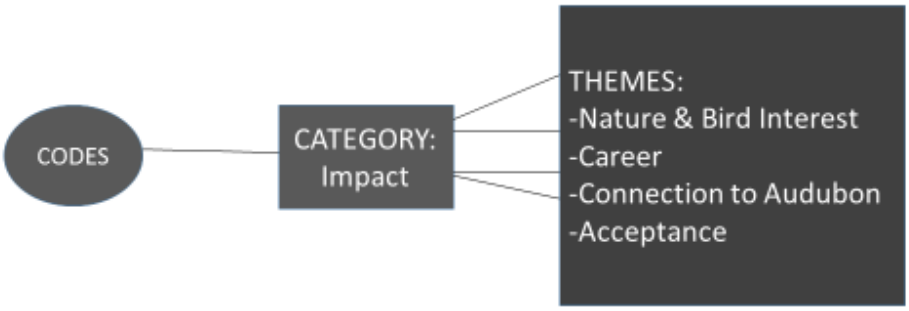

Figure 15. Emergent themes from impact category

Validity Issues

Maxwell (2005) defines validity as the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account. He recommends identifying any potential threats to the validity of one's research and then crafting strategies for minimizing those threats (Maxwell, 2005).

Creswell (2009) states that threats to internal validity can arise from a variety of sources associated with the study design and procedures that prevent a researcher from drawing appropriate conclusions. Additionally, researchers must remain impartial as the data are transcribed and analyzed to prevent researcher bias when making inferences.

Threats to external validity prevent a researcher from generalizing results to other groups or populations. Creswell (2009) states that threats to external validity can arise from interaction between demographics and the history of the population. However, Creswell further states that external validity is not a significant factor in qualitative research because the data obtained from the participants are not uniform nor are they in specific categories. Data obtained from qualitative research are in the form of words and descriptions unique to each participant.

Lincoln and Guba (1990) propose four criteria for researchers to assess the validity, or trustworthiness, of their data: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1990). My research demonstrates validity through being credible, transferable, dependable and confirmable. My approach to addressing these validity concerns is described below.

Credibility is established through the researcher's extended engagement with the participants and triangulation of information from multiple sources. Engaging with participants more than once (a minimum of three times by email and phone) provided opportunities to triangulate data from their responses to surveys and semi-structured interviews, as well as from historical documents, and enhanced the credibility of my research.

Transferability is based on describing how the research findings may be applied to other contexts. This is facilitated by providing “thickly detailed descriptions” that allow audiences to identify similarities between the research setting and other contexts. For my research, I applied

my findings to the environmental education field. Where appropriate, I noted what aspects of the research may or may not be transferable to other locations, studies and circumstances.

Dependability and Confirmability are provided by "audit trails" that allow readers to follow the process of data collection and analysis and, where appropriate, provide readers access to the raw data. To ensure my study is dependable and confirmable, I have provided a list of codes identified during analysis. Also, I was able to corroborate specific materials and program activities that participants mentioned during the interview with what I found in the historical archives, confirming that these reported materials and activities were indeed part of the program.

Limitations in Research Design

This study explores meaningful and memorable experiences of past participants in the Junior Audubon Club and the possible influences that program had on their environmental identity. The study design and framework were developed to explore selected participants recalled experiences and program impact. Only participants who self-identified with the program decades later participated in this study. Like most studies involving people, this study is limited by the truthfulness of the participants' responses to the survey questions and interviews, and the accuracy in which they recalled their experiences in the program and its perceived impact. These responses could be influenced by the researcher's background and experience with Audubon along with the participants' desire to provide responses to the interview questions that they thought the researcher wanted to hear. In this situation, it was essential for the researcher's experiences to remain disconnected from the study participants' experiences. This also reduced the risk that the study participants would embellish their experience to impress me, the sole researcher. Lastly, the program no longer exists, which was essential for the participants to know

so that they didn't feel that their answers would negatively or positively impact an existing program. This is discussed more in the following section.

For Phase One of my research, I developed and distributed a self-administered, self-report survey to obtain data. Fourteen of the 19 participants completed the survey; a response rate of 74%. For the remaining five people, I explored their environmental identity through questions about current environmental actions.

Phase One, the self-report survey, is a widely used method in survey research, but has limitations in regards to data collection. First, self-reported measures of attitude and affect can determine only how knowledgeable individual respondents are about their attitudes and emotional responses, and how willing they are to relate these. Second, the participants may misinterpret questions, and the researcher may be unable to assist in clarifying the items. A third assumption, which may also limit this study, is that the reported behaviors are not behaviors that have been observed by the researcher, but rather are perceptions of the participants' own behaviors. A fourth assumption may be that the participants' responses are influenced by their knowledge that their survey responses are not confidential and will be read by the person who will also be interviewing them. All of this is taken into consideration when reporting the findings of this study.

During Phase Two, in-depth interviews were conducted either in person or on the phone. For various reasons (financial, geographic, and time limitations), 14 interviews were conducted by phone. The drawback of phone versus in-person interviews is that the researcher cannot see the informal communication of the study participants, such as facial expressions, body language, and other non-verbal cues. I was able to obtain a great deal of data from the phone conversations, but they were shorter in length than in-person interviews. Additionally, I was unable to capture

nonverbal information about the individuals, such as their interest in birds and nature via bird feeders in their yard or binoculars on their kitchen table. For the in-person interviews, however, I was able to capture this additional information to paint a more in-depth picture of the individual. While this was not a major limitation of the study, it did limit the amount of data collection for some participants.

While interviews allow for in-depth probing and follow-up questions, they are inherently time-intensive, which often limits study samples to a small number. Another limitation of this study, which is shared with most qualitative research, is that the results are not necessarily generalizable to broader populations. However, the study still shed light on using best practices in designing local and international environmental education programs. The stories recounted in this study were lived experiences that held true for these individuals.

The sample size was small and the participants were relatively heterogeneous with a lack of racial and ethnic demographic variability. In this study, 95% (18) of the participants were Caucasian. This limits perspectives of the program from broader racial and ethnic backgrounds. Also, the majority of participants (73.7 %, 14) identified as male. This limits the female perspective on impact of the program. I don't know the gender and racial breakdown of the program throughout the years, but looking through the archives, there was a broad reach and the greater diversity served through the program than represented by my participants.

Another limitation is that participants self-reported their memories and beliefs about what occurred during their experience in Junior Audubon Club. Memory is often flawed and subject to fluctuations, while beliefs inherently limit what parts of an experience may be retained in memory. Also, retelling the story within the structure of the formal interview may have influenced which aspects of the story were highlighted and explored by the participant. I

attempted to reduce these challenges and limitations by exploring the historical archives to compare shared memories with historical aspects of the program. For example, many people talked about specific materials received during participation in the program, and historical archive research confirmed that these reported materials were indeed part of the program. Also, I am not looking for specific details of program participation, but broader memories and influences. Participants in this study were part of the Junior Audubon Club 40 to 70 years ago, so their ability to remember the program in any detail at all is a finding in itself. If the program was not very significant, either in a positive or negative sense, it would probably have been forgotten or it would have been difficult to discuss in detail.

Ethical Considerations

Objectivity: My research strives to avoid bias in all aspects of the study, including the design, data analysis, data interpretation, and other aspects of research where objectivity is expected. However, where bias is unavoidable, such as in analysis and interpretation, full disclosure is made.

As the sole researcher in this study, I need to ensure that both the analysis and triangulation procedures minimize or prevent researcher bias. I identified threats to the validity of my research and described below how my triangulation process helps to minimize them.

I have worked for Audubon for nearly 20 years and serve in a leadership role overseeing conservation and education programs. I believe that in general, Audubon's conservation and education programs are valuable to participants and successful. I also have pre-existing beliefs about what, in general, makes an effective education program, and I believe many of the components of the Junior Audubon Program like the club format, frequent experiences in nature with peers, and real world learning are what make effective programs. These factors might

threaten the validity of my research findings. There is the potential for me to unconsciously have allowed my beliefs regarding the impact of Audubon's education programs to influence my data analysis. This threat is addressed in three ways. First, the Junior Audubon Club program is no longer offered by Audubon, so the results of my research will not directly impact the program positively or negatively. Second, I did not conduct this research as part of my job and was not paid to complete the research. Third, I used a mixed-method approach to provide a thick description of the participants' experiences in the program in conjunction with archival and survey data. This helped ensure that emergent themes were revealed from the data rather than from my prior beliefs or wishes.

There are power dynamics inherent between researchers and research participants, and my research project is no exception. Participants' responses to the survey questions and interviews could have been influenced by my (the researcher's) background and experience with Audubon, as well as the participants' desire to provide responses to the interview questions that they thought I wanted to hear. In this situation, it was essential for the researcher's experiences to remain disconnected from the study participants' experiences. Lastly, because the program no longer exists, participants didn't feel that their answers would negatively or positively impact an existing program.

In addition, to reduce the potential power dynamic in this study, I provided participants with information and transparency of the purpose and intended outcomes of the research. I also clearly communicated to participants the potential risks and benefits of participating in the study. Participation in the research was voluntary and they could decide anytime to stop participating in the study. All participants gave their informed consent.

Responsible Publication: A primary objective of my research is to advance the environmental education field. Thus the goal is to have my findings published and shared with the field.

Human Subjects Protection: Institutional Review Board (IRB) approval was granted for this research. In accordance with the IRB guidelines, while working with participants I made every effort to "minimize harms and risks and maximize benefits; respect human dignity, privacy, and autonomy; take special precautions with vulnerable populations; and strive to distribute the benefits and burdens of research fairly" (Shamoo & Resnik, 2009, p. 24).

There are no known risks associated with this research. Participation in any aspect of the research process was voluntary and participants were able to stop their involvement at any time, if they chose. Before participating in the research, potential participants were asked to sign an informed consent form, which discussed any possible risks they may face and informed them of their rights in the research process. Participants are referred to by their first name only, unless participants choose to use a different name. They are anonymous.

Chapter V: Study Findings

This study investigates the salient and memorable experiences of past Junior Audubon Club members who participated in the program as children, and if and how they describe the possible influences of the program on their environmental identity formation and actions. This chapter provides information about my research participants based on both the quantitative and qualitative data collected. It begins with an overview of the participants based on data collected and analyzed through a quantitative survey, followed by results of the environmental identity scale. The final section of this chapter provides a sample of profiles of six participants to give the reader a glimpse of the breadth of experiences in Junior Audubon Club and to illustrate some of the themes that I will discuss in the following chapter. The following chapter will dive deeper into the findings of this study, but first I will provide a broad overview of the participants of this study.

Using the purposeful sampling approach for participant selection, as outlined in Chapter IV, 19 people were recruited for the study. The first phase of my research was to gather data through a survey soliciting demographic information (gender, age, race/ethnicity) and information about their participation in the program. The survey also included the environmental identity scale. Fourteen of the 19 participants took the survey prior to their interviews (Table 5). Table 6 summarizes the demographic information collected from the study participants and information about their participation in the Junior Audubon Club. Table 7 provides an analysis of the demographic information. Fourteen participants (73.7%) were male and 5 were female (26.3%). Two (10.5%) participated during the 1930s; 4 (21.1%) during the 1940s; 8 (42.1%) during the 1950s; and 5 (26.3%) during the 1960s. In terms of geographic distribution of where

people participated in the program: 11 (57.9%) in the Northeast, U.S.; 3 in the Midwest; 4 (21.1%) in the western U.S.; and 1 (5.2%) outside of the U.S. in Canada.

Table 5

Number Surveyed and Interviewed

Method	Participant
Survey	N=14
Interview	N=19

Table 6

Year and Location of Participation in the Club

Decade Participation	# of Participants	% of Participants	Location of Participation	# of Participants	% of Participants
1930s	2	10.5%	Northeastern U.S. (NY; CT; MA; PA; NJ)	11	57.9%
1940s	4	21.1%	Western U.S. (CA)	4	21.1%
1950s	8	42.1%	Midwestern U.S. (IL, WI)	3	15.8%
1960s	5	26.3%	Outside of U.S. (Toronto, Canada)	1	5.2%

Table 7

Demographic Information of Participants

Gender	# of Participants	Percentage of Participants	Race/Ethnicity	# of Participants	Percentage of Participants
Male	14	73.7%	Caucasian	18	94.7%
Female	5	26.3%	Multiple races, ethnicity (Black, Asian, Native American)	1	5.3%

Environmental Identity

Because I am investigating the experiences of past club participants, and if and how they describe the possible influences of the program on their environmental identity formation and actions, I wanted to assess their current environmental identities. To do this, I used an abbreviated version of Susan Clayton's (2003) environmental identity (EID) scale to assess the extent to which the natural environment plays a role in a person's self-definition (Appendix B). There are 14 statements in the abbreviated version, to be rated by the participant on a 1 to 5 scale, where 1 equals strongly disagree, 3 equals neither agree or disagree, and 5 equals strongly agree.

Total possible scores on the EID range from 14 to 70, with a high score suggesting that an individual has a strong identification with the natural environment and, subsequently, with environmental causes (Clayton, 2003). The mean score on the EID for participants in this study was 63.86 (*SD*=4.400), suggesting high identification with the environment. It also suggests a high awareness of environmental concerns. The average score for each item on the EID was 4.51 out of 5 (*SD*=0.405). This score reflects greater affinity with the natural environment compared to the norming sample's average item score of 3.58 (*SD*=.51) (Olivos & Aragonés, 2011). In conclusion, all 14 survey participants have strong environmental identities. The remaining five participants who did not complete the survey, but who did participate in an interview discussed their current actions that demonstrate pro-environmental behaviors (e.g., current participation in environmental groups, local Audubon clubs, spending time in nature, positive emotions towards birds and the environment, environmental careers). All 19 participants expressed a connection to nature as adults.

Statements on the scale that had the highest mean scores were statements about the importance of learning about nature as a child and of nature being an important part of their life. All 14 participants strongly agreed with those two statements (score of 5). Although still above average for the scale, the three lowest mean scores were statements about nature being a part of oneself; receiving spiritual sustenance from nature; and having a strong connection to a geographic location. See Table 8 for additional details on the highest and lowest responses to statements. See Appendix G for all of the results of the environmental identity scale.

Table 8

EI Scale Results for Highest and Lowest Responses

Environmental Identity Scale Item	**Participant Responses (Mean)**
Learning about the natural world should be an important part of every child's upbringing.	5
I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.	5
I think of myself as a part of nature, not separate from it.	4.86
I feel that I receive spiritual sustenance from experiences with nature.	3.64
I have seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.	3.71
I feel that I have roots to a particular geographical location that had a significant impact on my development.	4.36

An overview of basic information about each of the 19 participants are in Table 9. Participants were involved in the Junior Audubon Club in the first grade (3, 15.79%), fourth through fifth grades (13, 68.42%), and sixth through eighth grades (3, 15.79%). Six (31.58%) of the participants were involved in the program for one year, and 13 (68.42%) for two years.

Table 9

Participant Information

NAME	GENDER	RACE, ETHNICITY	LOCATION PARTICIPATED IN CLUB	YEAR IN CLUB	# OF YEARS IN CLUB	GRADE IN CLUB	EID SCORE
Heinz	Male	Caucasian	Wyncote, PA	1931	1	1st grade	No data
Dur	Male	Caucasian	Hingham, MA	1932	1	4th grade	No data
Bart	Male	Caucasian	Pittsburgh, PA	1940	1	5th grade	No data
Nancy	Female	Caucasian	Plainfield, CT	1941	1	1st grade	No data
Steve	Male	Caucasian	New York, NY	1943	2	5–6th grade	58/70
Sarah	Female	Caucasian	Carmel, CA	1948	2	6–7th grade	67/70
Forrest	Male	Caucasian	Endicott, NY	1950	2	5–6th grade	68/70
Bill	Male	Caucasian	Spring Lake Heights, NJ	1950–51	1	5th grade	59/70
Carole	Female	Caucasian	Long Island, NY	1950	2	5–6th grade	63/70
Barry	Male	Caucasian	Toronto, Ontario, Canada	1954	2	5–6th grade	64/70
Wayne	Male	Caucasian	Wellesley, MA	1955	1	5th grade	64/70
Tom	Male	Caucasian	Hamburg, NY	1956-57	2	4–5th grade	70/70
Stefan	Male	Caucasian	Vacaville, CA	1958	2	4–5th grade	68/70
Loren	Male	Caucasian	Decatur, IL	1959-60	2	7–8th grades	62/70
Betty	Female	Caucasian	Chicago, IL	1960-61	2	4–5th grades	54/70
David	Male	Caucasian	Waukesha, WI	1960	2	1st–2nd grade	65/70
Joe	Male	Caucasian	Glenside, PA	1960	2	5–6th grade	66/70
Ann Marie	Female	Caucasian	Claremont, CA	1968	2	5–6th grade	No data

Charles	Male	Black/African America, Asian, Native American	Pasadena, CA	1968	2	7–8th grades	66/70

The participants were involved in the club during the ages of 7 to 13 with nearly 70% being approximately nine and ten years old. Ages 6 to 12 – the "middle childhood" age group – has been shown to respond particularly well to developing positive relationships with nature (Kahn & Kellert, 2002). "Middle childhood is a critical period in the development of the self and in the individual's relationship to the natural world," Kellert (2002) wrote (p. 133). "Children at this age become more comfortable, familiar, and appreciative of other creatures and natural settings, although often in relative proximity to the home rather than in pristine or wild areas"(Kellert, 2002). This developmental stage marks the beginning of greater independence from their parents and coincides with a child's desire to create and build things. The emotional attachment that occurs during this time can "become a legacy carried into adulthood," (Kellert, 2002, p. 126) with lifelong consequences. This will be discussed more in the following chapter.

Select Participant Profiles

The purpose of this study is to understand if participating in the Junior Audubon Club impacted an individual's lifelong interest in the environment. Specifically, I want to understand what about this program was meaningful and memorable enough to last into adulthood. My interviewees participated in the program as early as the early 1930s, into the late 1960s. Individuals participated in the program in urban, suburban and rural towns and cities in the U.S. and Canada.

Below are profiles on six former Junior Audubon Club participants. The profiles are condensed portraits of individuals based on oral interviews, survey responses and email exchanges. The six profiles were selected to give the reader a glimpse of the range of the participants, as well as to illustrate some of the themes that I will discuss in later chapters. The remaining 14 profiles are in the Appendix F.

AnnMarie.

AnnMarie participated in the Junior Audubon Club in approximately 1968 in southern California. She was in the club for two years during her fifth and sixth grades (9 to 11 years old). She moved a lot during her childhood, and she was in the club just after returning from living in Chile. Her town of Claremont, California, was surrounded by several colleges/universities, and she describes the students in her school, especially the club, as "faculty brats."

As an adult, AnnMarie speaks about her experience in the Junior Audubon Club fondly and often. She said during our interview, "Whenever I tell people about Junior Audubon Club they kind of laugh. I always considered it special, wonderful and very meaningful to me." Because she spoke of it often, she was suggested to me by several birdwatchers who had heard her speak affectionately about her time in the program as a child.

AnnMarie's Junior Audubon Club took place outside of school hours. Her mother Lucille and another woman named Sally—classmates in college and both botanists—were the club leaders, and neither were school teachers. I interviewed both women to learn about their perspectives of the program as club leaders. Sally shared with me that she "taught the program because I had a love of nature and wanted to share my knowledge with young people in hopes they would grow up to love and protect it. I think it is really important to pass on a love of nature to kids."

When AnnMarie reflected on the program, what stood out to her the most were the field trips to local natural areas, including the Rancho Santa Anna garden, where the club would go on a regular basis. During their explorations in nature, they would "do various ecology, birdwatching [and] botany, and each child had their own little transect area that they observed weekly and recorded change over time." AnnMarie describes it as "very scientific" and real because of the data collection, following a research protocol, and the belief that they were contributing to science. She described how "we were all responsible for…. a transect and keeping it going. I remember being under the shade of an oak tree or something. Checking everything and keeping track of what was there."

There were six to 12 kids in the club, many, although not all, of whom AnnMarie remembers. She described several of the boys in the club and recalled how they were sometimes obnoxious, but nevertheless her pals. She moved away from California after the club and didn't remain in touch with the students, but to this day she recalls many of them. She said that they were "really good kids. I remember the enthusiasm for what we were doing and everyone's plots. Everyone really got along."

AnnMarie recalls doing "super cool stuff." Most of her memories involved being in nature, exploring natural areas and having fun. "I remember being out in the field. And one place we went that really stands out…some preserve in Los Angeles where they filmed all the Tarzan movies and it was like a jungle. And we went there on a tour and there was a biologist there. I remember he was tall and I just had the best time. This was one of my primo memories. We found so many different things… there were salamanders, frogs, birds, plants. It was a really special day."

AnneMarie's passion for birds started before the Junior Audubon Club, and her family encouraged her love for nature. Her mother, who was one of the club leaders, is an ethnobotanist and her late father was an avid fly fisherman. Being outdoors and enjoying nature was something the entire family did. “I was always very much, even as a little girl, very interested in birds.” AnnMarie explained that her time in Chile, before the Junior Audubon Club, was when she really got interested in birds. There was a woman there who was studying birds and shared that passion with AnnMarie. This interest has remained with her throughout her life. She had a career leading nature tours with a focus on bird watching. She keeps binoculars at her bedside “in case there is something outside of my window.” “That’s my passion … birds,” she said.

Looking back, she has very fond memories of her time in the Junior Audubon Club. When I first reached out to her to set up a time to chat, she wrote, “I'm really looking forward to sharing some good stories about my wonderful and life-forming experiences with Junior Audubon.” AnnMarie acknowledges that her family was very influential in encouraging her love and passion for nature. But the club “kept alive what my parents taught us and our actions. It kept us connected (to nature). All the kids running around (outside) and kept us out in nature. And then as I grew older….I did a whole business taking people all around the world….getting people connected to nature.”

AnnMarie still has her Junior Audubon Club button and membership card. During the interview she mentioned keeping the button in her jewelry box, and afterwards she emailed me a photo of it. When I asked her why she kept it she simply said, “Because it was my Junior Audubon Club button. It is beautiful.”

Forrest and Carol-Ann.

Forrest participated in the Junior Audubon Club in 1950 in Endicott, New York. Forrest had a long, successful career in molecular biology, including time spent with the Atomic Energy Commission, but in his retirement, he has become a sculptor and painter with the majority of his artwork focusing on nature. Forrest includes in his professional biography the fact that he was involved in the Junior Audubon Club as a child in fifth grade. I came across an article about Forrest's artwork, which mentioned the impact the Junior Audubon had on him. In a blog about his Ivory-billed Woodpecker painting he writes, "I was in grammar school. We had a Junior Audubon Club in our school—I was an enthusiastic member. What I remember most in the little magazine that we received, was J.J. Audubon's iconic painting of a family of Ivory-billed Woodpeckers. Audubon and the Junior Audubon Club had a lasting impact on my entire life. I was that kid you could always find turning over rocks in streams, looking for what wonders nature would disclose to me. I was lucky to study biology in high school, college and graduate school. My curiosity about the natural world led me to a life as scientist and organizational executive. Now in retirement, I am again doing what I did in grammar school—turning over rocks and sculpting and painting the wonders that nature discloses."

Forrest and his wife Carol-Ann both participated in the Junior Audubon Club as children in different towns in New York (Carol-Ann was in a club on Long Island). Both are involved in their local Audubon chapters and remain interested in birds.

Forrest was nine and ten years old when he participated in the club and he remembers fondly his club leader and teacher, Mrs. Conklin. He said, "I'll never forget her. …many of the things that I continue to be passionate about today are things that I learned in fifth grade from Mrs. Conklin." The club met monthly after school and they went on field trips to nearby natural

areas. “We got out of school… at 3:30 or something like that and she [club leader] would take everybody in the club down to the creek and we would go on nature walks.” Forrest also recalls the magazine that the club members received and the bird coloring pages. He spoke fondly of the magazine. “I cherished that little magazine. We got that little magazine and we read stories to each other at the Audubon Club meeting. Then I used to take them and cut the pictures out and paste them together, making a collage out of them.” Forrest also recalled getting Audubon bird cards with a drawing of the bird on one side and information on the other, which he used to learn more about birds. The club, he said, opened his eyes to the universe of birds. “I spent every minute I could in the library. In the school library, grabbing every book on birds I could find. Then that evolved to frogs and other things. But it was pretty much the Junior Audubon Club that gave me an organized way to think about nature.”

There were about 15 students in the club. He remembered that in the spring he would “even opt to go on the nature walk rather than play baseball in the playground. So I mean, that’s something!” Forrest spoke passionately about the impact that his club leader had on his life.

Both Forrest and Carol-Ann remember the bird buttons. Forrest said, “I remember my two uncles were in the Army and Navy. And my uncle Dwayne gave me a bunch of his old Army hats. I put my button on that hat and wore it to school. You know, kind of like a bird soldier. I haven’t thought about that in well, 60 years.”

Throughout the interview, Forrest and Carol-Ann shared stories about watching birds, for which they share a true passion that they credit to the Junior Audubon Club. It opened their eyes to how many birds were in their area and sparked their desire to learn more and see more birds. When I asked Forrest if he was interested in birds and nature before the club, he replied, “Not so much. It wasn’t until the Junior Audubon Club and those walks down to the creek did I get a

sense of the universe of birds." Carol-Ann said that the club "opened our eyes to all these other birds." She looked forward to the meetings, "mainly because it was much more interesting than most of the other stuff. It was the high point of the week. I think more than anything, Junior Audubon awakened a curiosity about birds that we probably wouldn't have had. Just seeing the everyday things that were just indigenous to where we were." Forrest said the club "woke up an interest in the rest of the world that we hadn't had up until that point."

Forrest spoke about how the program had a huge influence on his later life. "It completely formulated my whole life. I mean, without the Junior Audubon Club I'd be pumping gas or something. I mean, it gave me a direction and purpose that I have to this day… I was from a poor town with a poor and fairly dysfunctional family. I was lucky enough to get to go to college and I was a biology major… I can't think of any greater influence in my life that guided my future. Frankly, it was the reason that I became a biologist and now a nature-inspired artist. It was my entrance into the world of science… It was the beginning of a lifelong love of science and nature. From that seed of Mrs. Conklin and the Junior Audubon Club I had a lifetime trajectory as a science and nature lover. And it continues today."

Charles.

Charles participated in Junior Audubon Club in 1968 in Pasadena, California. Charles currently works for Outward Bound Adventures, a non-profit organization that provides underserved urban and low-income populations with meaningful and educational opportunities in nature, which results in a greater appreciation of nature, self, family and community. Outward Bound Adventures evolved from a Junior Audubon Club that was created by Helen Mary Williams.

Mrs. Williams was a teacher at Cleveland Elementary in Pasadena, the same school that baseball legend Jackie Robinson attended. Mrs. Williams recognized that her students could benefit from time spent away from the city, and so began a Junior Audubon Club at the school. Mrs. William's students were primarily African-American, Asian, and Hispanic youth from economically disadvantaged families. In the late 1960s, the Cleveland Elementary Junior Audubon Club formally changed its name to Outward Bound Adventures and incorporated as a nonprofit organization, which remains in existence today.

Charles was in seventh grader in Mrs. Williams' science class at Cleveland Elementary when he joined the Junior Audubon Club. Charles recalled how he ended up in her class: "I got in trouble. I got kicked out of my class. She (Mrs. Williams) went to the principal and she spoke to him. She asked that I join her science class. She believed in me and thought the outdoors would be good for me. She got me into her class."

Charles spoke fondly on Mrs. Williams and the impact she had on his entire life. "She kept connecting with me throughout my life." During our interview he said, "I got involved in [Junior Audubon Club in] 1968, the year that Dr. King was killed. I remember it well. Mrs. Williams was somewhat of an anomaly at that time. She was a white woman working in an all brown and black school. She was ahead of her time. She was bringing outdoor education into the schools, before most people knew about it. She took kids out to the desert. She was very good at taking kids out of their comfort and getting them in nature. She mentored thousands of kids. She was my mentor until she died in 2006."

Mrs. Williams connected the club members with the local Audubon chapter and provided opportunities for them to attend meetings and events. "She encouraged kids to join Audubon and participate in the local club. Audubon was primarily white people. We would go to the local

Audubon meetings and programs. We were the only black and brown faces. We were the only young people, too." Charles remembered attending the meeting, listening to the programs and talking with the members. Mrs. Williams also provided scholarships for the Junior Audubon Club members to attend Audubon Camps across the country. "I went to the Audubon Camp of the West in Wyoming. I did the bird studies camp. Mrs. Williams got us scholarships. She wanted us to experience new things. She would send a few of us at a time so we didn't go by ourselves."

Charles recalls receiving the Junior Audubon club materials. "I remember the bird identification and plant identification information. We used those all the time both in the classroom and in the field. I remember the newsletters." Beyond learning, the club went on extended camping trips and were fully immersed in nature. For example, Charles went on a 14-day backpacking trip in the desert as a part of the club.

Mrs. Williams remained engaged with the students throughout their lives. She and Charles remained very close until her death. As he got older, she trained him to become a Junior Audubon instructor to the younger students. He said, "She also kept engaged with us beyond the one year (of the club). She trained many of us to become instructors. I became an instructor when I was about 16 years old."

Many of the friendships he formed in the club remain close today. When I asked him about other club members, he said, "When I was younger I hung out with a bad group of kids. When I was in Junior Audubon Club, I made lots of friends. They are still some of my closest friends…Many of them didn't go onto environmental work, they are lawyers and pilots. We all stayed close. Mrs. Williams was very intentional about having us do activities together…She wanted to make sure we had someone else to experience things with."

When I asked Charles if he thought the program had influence on him, he simply said, "Yeah, it is why I am who I am. Those materials opened my eyes. Without Audubon and Outward Bound Adventures and Mrs. Williams, I doubt I would be doing what I do. I know it made the path for me to who I am today." In the survey he wrote, "It connected me to my career and kept me off the streets."

Heinz.

Heinz was the oldest person I interviewed, having participated in Junior Audubon in 1931 in Pennsylvania when he was in first grade. I met Heinz at the 100th anniversary of Wyncote Audubon Society, where he shared stories of being part of a Junior Audubon Club (called the Kinglet Bird Club) as a child. I later went to his house to interview him. He had bird books in his family room with natural history magazines spread out on the coffee table. Heinz showed me his bird feeders and discussed his list of birds that he has seen in his yard. After our interview he took me to a feeding station that was installed, at his request, in his retirement village, where he is an active member of the birding club. He told me, "I must say, no matter where we've lived, we've been interested in the out-of-doors, especially birds. We've always fed them. No matter where we've lived, we've watched birds outside."

Heinz was involved in the Junior Audubon Club in first grade. He recalls that they met after school, probably monthly. He said, "There was a teacher; as I recall, her name was Mrs. Smith and she started this (club) …and was a member of Audubon. We held meetings at the Episcopal Church…I guess we met once a month. We learned a lot." He remembered going on field trips to the Griscom property, which is now a nature center (and the place where the 100th anniversary celebration of the local Audubon Society was held). The children would go to the Griscom property to watch birds. "Mrs. Griscom would be pointing out birds from the big room

with the big window. I remember her quietly telling us to be careful, we must not scare the birds. She was quite a lady."

The Junior Audubon Club was connected with the local Audubon chapter, Wyncote Audubon Society. Heinz remembers doing bird walks with the chapter, and giving a talk to the chapter himself about a long-distance migrant, though couldn't recall which bird species.

In addition to the field trips to Griscom property, Heinz also remembers going on field trips to see birds in New Jersey. "I remember a couple of the trips. I remember one time, one of the women had a touring car that was open and my mother and I and maybe others took a trip down to New Jersey. It scared the devil out of my mother because the driver suddenly saw a bird and stood up behind the steering wheel and pointed out a bird landing on a tree or a pole. Of course, the car was moving when she did this. She was more interested in the bird than driving. That sticks in my mind after 80-some years."

Halfway through the interview, Heinz remembered that he had a photo from his time in Junior Audubon Club. Looking for it, he recalled, "One of us was a bird, an eagle, one was a farmer and I can't remember the third one. I hope I can find it (the photo)." At the end of the interview he pulled down a photo album and found the black-and-white photo of three boys, who were about 6 years old, in costumes and acting out a play about eagles and farmers.

When I asked Heinz if he thought the program was impactful, he said, "Yes, I would say it certainly roused my interest in bird life and the out-of-doors. More than just being out-of-doors." Heinz talked about the activities being focused on learning and experiencing nature and not just playing outside, like riding bikes or playing baseball, which he was already doing. Heinz eventually earned a degree in forestry from Penn State and has been a lifelong bird-watcher.

Tom.

Tom participated in Junior Audubon Club in Hamburg, New York, in 1957, when he was approximately 8 years old. Several people suggested I contact him to capture the story of his participation in the program. He is active in the birding community and speaks often about how the Junior Audubon Club started it all for him. Tom has been a birder since childhood, and in his mid-40s started an Audubon chapter in North Carolina. He said that in regards to birding and engaging others in it, "it kind of became a lifelong thing." For the past several years he has started and successfully implemented a national Christmas Bird Count for Kids (called CBC4Kids). Hundreds of children, with their families, have participated in this program across the country and beyond. He said that who he is, and what he is working toward now, are all "rooted in an incredible childhood." Tom's family was very influential in his love for birds and nature. His "mom and dad were very keen on nature. They always had bird feeders and always had bird books."

Tom's Junior Audubon Club, affiliated with the local Buffalo Audubon Society, was led by Anna Mae and John Bacon. Tom shared many memories of the couple. "Mrs. Bacon was a teacher in the school and Mr. Bacon worked for the railroad and was the postman. Mr. and Mrs. Bacon lived across the Eighteen-mile Creek from my grandparents." The club of about 12 children would meet at the Bacon's property on Saturday mornings. The club involved a variety of activities, including field trips, but much of the time was spent at the Bacon's house, which in 1963 became a nature preserve in honor of Anna Mae Bacon, the "bird lady of Hamburg."

Tom explained that everyone would walk to the Bacon's house. "We couldn't wait to get there because first of all, Mrs. Bacon made this phenomenal—and now historically well-known in the Buffalo Audubon Society—apple crisp. When we went to the house, Mrs. Bacon had

drawers and drawers of stuffed birds, mounted birds. She was a local rescuer, bird rescuer. We would watch Mrs. Bacon go through the taxidermy process…we would practice on starlings… all together (sitting) around the dining room table, all of our baking soda and different powdery products, we would practice doing taxidermy. You can imagine how exciting that was."

"I'll never forget that she had all of these bird traps where they would band birds. We would learn how to trap the birds properly. They taught us how to record and band and hold the bird in our hand. And to look at their plumage, to see, to learn about age. Is it a male or female? Is it first- or second-year plumage? So on and so forth. And if we got a bird that already had a band on it and came back the next year, that was a real big hit." Because the Bacon's home served as a local bird rescue center, the children learned to care and see up close a variety of birds including owls, merganser, and songbirds.

In addition to learning about birds, the club participated in events that allowed them to share their passion and knowledge with others. One example that Tom shared, and provided a photo from, was the club's involvement in the 1957 Erie County Fair. "Erie County Fair…. was the biggest county fair. Biggest and oldest. We were preparing the butterfly cases, mounted birds, and nests and charts and snakes and aquariums and feeders." Tom showed me a black-and-white photo of himself with four other children, standing at their booth at the fair. Each child is holding a butterfly case or mounted bird, while the table is covered with bird nests and birdhouses, and the children are sharing with fair-goers what they had learned and done in the Junior Audubon Club. One girl is proudly wearing her Junior Audubon Club button on her collar. Tom explained that the children would "wander out the door and into the creek immediately outside the Bacon's house and collect butterfly cocoons and old nests. We could make our display for showing and sharing with the public—that was a big thing for all of us."

They also held a birdseed sale, the proceeds of which the club used to pay for their field trips, especially the trips to the Cornell University Lab of Ornithology's Sapsucker Woods. They went on annual spring and fall weekend trips to such memorable places as Niagara Falls, Beaver Meadows, Cornell's Sapsucker Woods, and Montezuma National Wildlife Refuge. Tom said, "Fall trip to Beaver Meadow, Buffalo Audubon's preserve and then onto Montezuma National Wildlife Refuge. And to stay in the small roadside hotel. We couldn't see straight because we were so excited."

Asked what was most impactful and memorable about participating in the club, Tom said doing taxidermy, building bird feeders and bird houses, learning to trap and band birds, and going on birding trips. They built bluebird nest boxes and then asked farmers for permission to install them. Tom remembers that he and his buddy packed their dinners and rode their bikes from farm to farm asking if they could put up the nest boxes. He remembers they would say to the farmers, "We are with Junior Audubon and we wondered if it would be possible to put bluebird houses on your farm and we promise to monitor it over the nest[ing] season." They developed and monitored several miles of bluebird trail installed on farm fences. "We really felt like we were contributing to science, protection of the bluebird, its habitat and learning at the same time… It was fabulous."

When I asked if and how the program had an impact on him he said, "I think the exposure to Junior Audubon Club was life-changing in that it helped to develop the early awareness of how to move through nature. Like John Muir said, tug on anything and you will find it connected to everything else. The only way I knew how to practically change things and talking the talk and walking the walk, was to create the Audubon chapter, create the tree-bird map, create the CBC, create bird camps, create the nature lecture series and on and on. I'm an

action person. I don't believe in sitting around and talking about it. Life is way too short. Go do something."

Summary of Participant Profiles

These six profiles (approximately 32% of my interviewees) demonstrate a range of experiences in Junior Audubon Club, including positive outdoor experiences, learning about birds, building nesting boxes for birds, sharing experiences with other students, and support of adult club leaders. Of the six profiles presented, some participated in the club during the school day and others out of school time, in suburban, rural and urban settings, ranging from the 1930s to 1960s.

Emergent Themes

The purpose of this study is to investigate the salient and memorable experiences of past Junior Audubon Club members who participated in the program as children, and if and how they describe the possible influences of the program on their environmental identity formation and actions. In this chapter, I present a descriptive analysis of self-reported meaningful memories of former Junior Audubon Club participants and the program's impact, presented in relation to my research questions and theoretical framework. My research framework is used to further explore past participants' recalled experiences and how those memories complement environmental identity and social practice theory, with a focus on the knowledge and emotional bonds formed through direct encounters with nature and participation in shared learning and action.

This chapter explores the dominant emergent themes from interviews with 19 participants. I explore how social practice theory integrated with the findings of significant life experiences research is used to explore the formation of environmental identity. By weaving

together the theoretical concepts of social practice theory, environmental identity development, and significant life experiences research, I developed a theoretical framework for my research that explores how the Junior Audubon Club contributed to long-term impacts on adult environmental identity and action (Figure16).

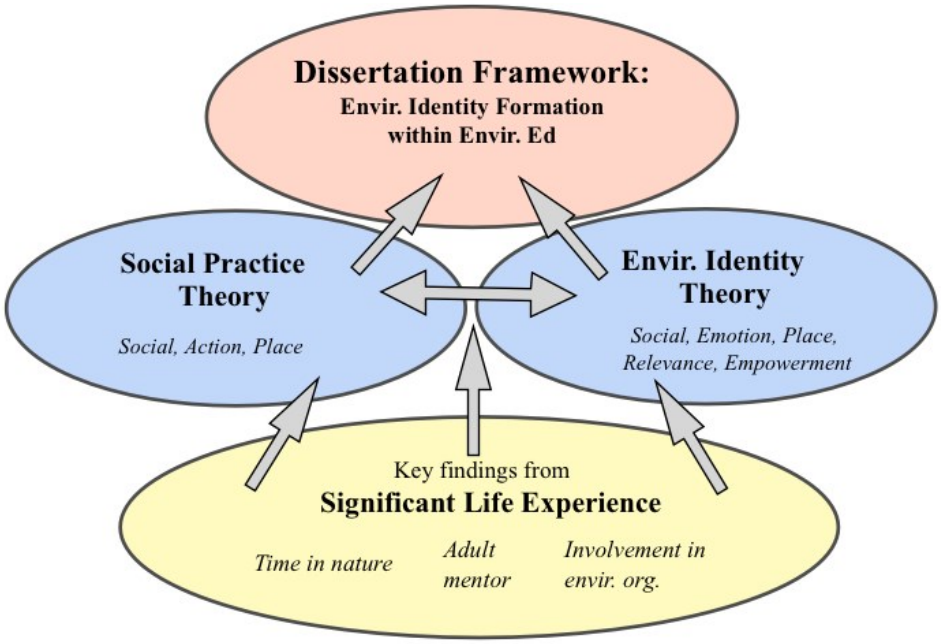

Figure 16. Integration of bodies of literature to develop the research framework

During the initial data analysis, I looked for distinct concepts and categories in the data. This first round of analysis consisted mostly of open coding and resulted in dozens of codes that emerged and later were grouped into two categories, memories and impact, which are connected to my research questions and are presented in Table 10. I calculated the frequency of each category across all 19 interviews. Frequency is the closest measure of saliency based on the participants' recalled memories of involvement in the Junior Audubon Club (Williams &

Chawla, 2015). The frequency of these categories helped me explore the importance of memories.

Memories and reflections on the experience were not noticeably different across the varying time periods when people went through the program. In addition, impact did not vary between the decades in which participants took part in the program.

Table 10

Participants Who Mentioned Memory and Impact Categories

Category	**Number of Participants Who Mentioned Them (n=19)**	**Frequency of Mention**
Memories	19 (100%)	166
Impact	19 (100%)	91

Memories

My first research question is "What do people recall years later from their experiences in the Junior Audubon Club program, and why they think those components of the program are particularly memorable?" In order to answer that question, I analyzed the participants' answers to both the survey and interview questions that addressed recalled memories.

In the survey that 14 of my 19 participants completed, one of the multiple choice questions asked, "Which activities, if any, do you remember participating in while in the Junior Audubon Club program?" There was an option to write in additional activities. Figure 17 is the breakdown of responses in the survey. These results align with what emerged from the interviews.

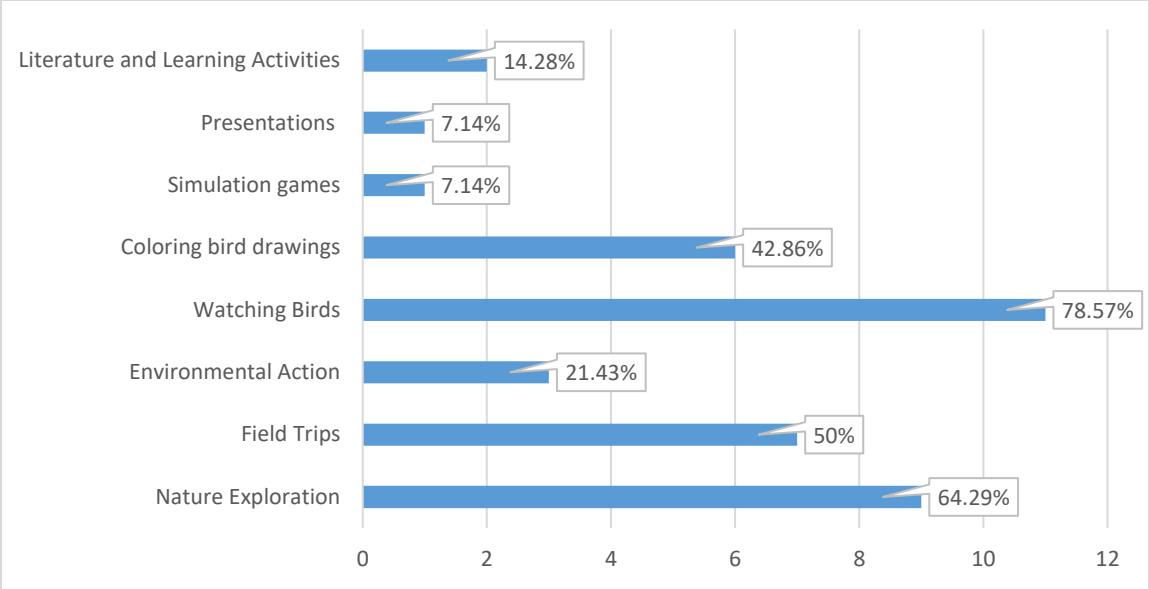

Figure 17. Results from the survey question about club activities

The highest responses were watching birds (11 responses, 78.57%), nature exploration (9 responses, 64.29%), field trips (7 responses, 50%), and coloring birds (6 responses, 42.86%). The majority of the write-in responses could be lumped into the category of "literature and learning activities," which included written comments about the materials received as members of the club; learning about birds and nature; preparing presentations about birds; and identifying birds.

I used the survey as a base for deeper discussions during the interview. One of the first questions during the interview was to ask participants to share meaningful memories of their participation in Junior Audubon Club. Nine consistent themes of memories emerged from the interviews, which complement the survey results. These nine themes are action; membership; emotion; empowerment; learning activities; adult leader; place; birds; and social (described in more detail in Table 11). These themes are directly related to the Junior Audubon Club and are reflective of what features participants attributed to their program experience. Figure 18 depicts

these themes, the frequency of mention across the participants, and the number of participants who shared that memory during the interview.

I did not ask about each individual theme to determine their presence or absence. Although not all of these themes were mentioned by each participant, it does not mean that these themes were absent from participants' experience. I asked each participant to reflect on their experience in the program and to share what meaningful memories they have from it.

Table 11

Description of the Themes within Memory

Emergent Memory Themes	**Description (keywords)**
Action	Nature exploring; field trips; finding animals and plants; being outside; building nest boxes; interactive learning; taxidermy
Membership	Club; being part of National Audubon; receiving membership cards and club buttons
Emotion	Expressed joy of the program (enjoyment, fun, playful)
Empowerment	Participants gave presentations to adults; responsibilities; ownership of projects; role in club (officers)
Learning Activities	Learn about birds through materials received in club; gained knowledge about natural world; materials unique to club that aided in learning
Adult Leader	Club leader (adult)
Place	Specific natural places mentioned that the club explored
Birds	Firsthand experience with birds; watching birds; taxidermy
Social	Friends; peer-to-peer engagement

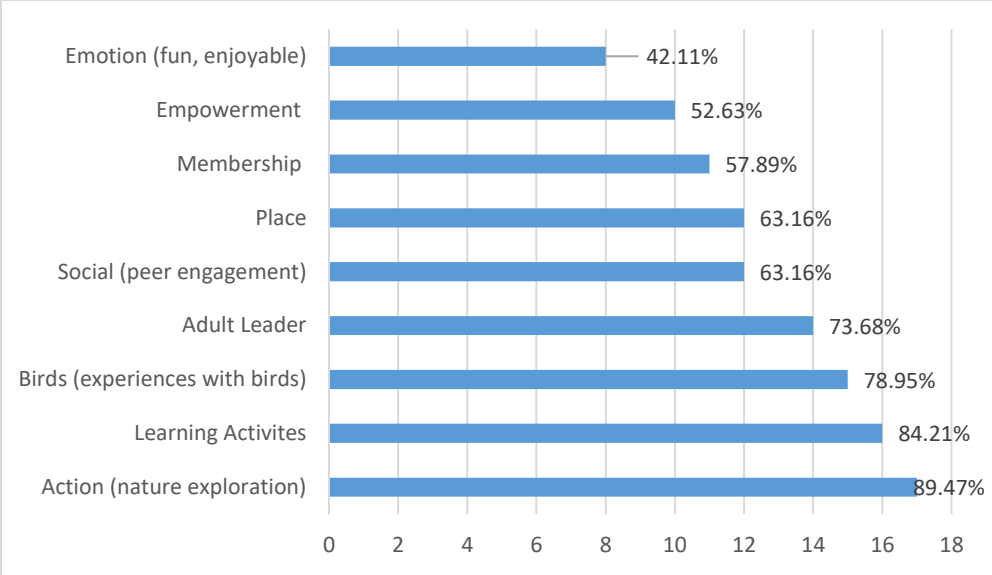

Figure 18. The memory themes with number of participants

What emerged from the interviews was the importance of hands-on learning in nature, support of adults and peers, and connection to birds. While the individual clubs varied in specific activities and format of the club, these themes were consistent across participants. Participants frequently recalled how the program fostered a love for nature and birds. They also mentioned the supportive atmosphere that the club created through encouragement of adult club leaders and acceptance from their peers.

Action. What emerged most significantly out of the interviews were memories of participating in hands-on opportunities, such as nature exploration, watching birds or building birdhouses. These actions are essential in creating significant experiences. These repeated experiences were crucial in thickening their identity over time. Participants were involved in the club throughout the year and sometimes more than one year. The influence of repeated experience is reinforced by similar findings within the literature on significant life experience, social practice theory, and environmental education.

The goals of the Junior Audubon Club throughout the entire 60-plus years of its existence was to educate children about birds; to inspire a genuine interest in and sympathy toward birds; and to have them experience the joy of knowing birds. Each adult club leader was given a packet of lessons and suggested activities, and each student received his or her own complementary materials as part of the club. Flexibility was built into the club design, enabling each club leader to run their program as they chose. Leaders had the freedom to implement a variety of activities with their students based on their location and the interests of their student population, as well as their own interests and comfort with teaching the activities. Because of this flexibility, the specific activities varied with each club, and throughout the life of each program. Almost 90% of the participants mentioned memories that were categorized as action memories.

The action theme included outdoor exploring and field trips; conservation projects; activities with local Audubon chapters; and interactive activities. Outdoor exploration, which included field trips and catching animals, was mentioned by the most people and the most frequently (52.63%).

Outdoor exploring. Adults who display pro-environmental behaviors often had positive significant life experiences in nature as young children (Chawla, 1999). A common theme among the participants' recalled positive memories of the club were repeated time spent outside and exploring in nature. Their experiences in nature took place on field trips to destinations with natural areas or exploring nature near their school grounds or in their immediate community. Forrest, who participated in the program in 1950 in New York, shared many memories of his experiences in the club. He spoke about exploring, with the other club members, nearby natural areas in his own community, which he continues to do as an adult:

> We lived in a little town and right down from the school, which is no longer there, was the Nanticoke Creek… and we got out of class, out of school at 3:30 or something like that and she [the club leader] would take everybody in the club down to the creek and we would go on nature walks. (Forrest, 1950)

Some people went much further away on field trips, including overnight experiences. Sarah, who participated in the program in 1948 in California, shared fond memories of both her club's local outdoor exploring and their big adventure on a horseback camping trip to Sequoia National Park. She mentioned this trip several times throughout the interview; it obviously left quite an impression on her. It was one of the first times she went on an overnight trip without her family and it was the first trip of its kind that she ever experienced:

> Quite a few Saturday mornings we'd go to this local river or down by the beach. You know even the high school was a great spot [to bird and experience nature]. Then one summer they did arrange, I think it was about a 10-day trip to Sequoia National Park, and not just to bird, but we backpacked on horseback into the mountains. It was a neat outdoorsy experience that was geared toward wildlife watching, not just birds, but all wildlife. (Sarah, 1948)

Charles participated in Junior Audubon Club in 1968 in Pasadena, California. He shared how he ended up in Junior Audubon and his experiences in nature, "I got in trouble. I got kicked out of my class. She [Mrs. Williams] went to the principal and she spoke to him. She asked that I join her science class. She believed in me and thought the outdoors would be good for me. She got me into her class." He recalled that his club went on extended camping trips and were fully immersed in nature, including a 14-day backpacking trip in the desert as a part of the program.

Tom, who now organizes annual Christmas Bird Counts for children, went on several field trips with his club, which raised the funds to pay for distant excursions. He shared vivid memories of club field trips in search of unusual birds in places known as birding hotspots, trips that enabled them to see species they didn't find on usual club outings.

> When the call came out that there was a snowy owl on Lake Erie, oh, my word! There was no snow that stopped any of us from getting there. We would go to Niagara Falls ... a fall trip to Beaver Meadow, Buffalo Audubon's preserve and then onto Montezuma National Wildlife Refuge. This was an introduction to what a wildlife refuge was and to see the fall migration. And to stay in the small roadside hotel. We couldn't see straight because we were so excited.

Some of the participants talked about their families' involvement in the club, either by being a club leader or attending field trips. Heinz went through the program 1931 and shared stories of birding trips that he went on with his Junior Audubon Club. He said his mother went along, although she wasn't very interested in nature or birds specifically, but supported his interests.

> I remember a couple trips. I remember one time one of the woman had a touring car that was open and my mother and I and maybe others took a trip down to New Jersey. It scared the devil out of my mother because the driver, either Mrs. Ester or Mrs. Heacock, suddenly saw a bird and stood up behind the steering wheel and pointed out a bird landing on a tree or a pole. Of course, the car was moving when she did this. She was

more interested in the bird than the driving. It scared my mother to pieces. That sticks in my mind after 80-some years.

Participants shared memories of catching animals or interacting more closely with flora and fauna as part of their club's activities. David shared memories from 1960 when he explored a marsh and experienced firsthand the plants and animals that lived there. "Catching bullfrogs in the pond. Exploring the marsh," he said. "One really vivid memory that I have is, I was in cattails that were as tall as I was, [I was] kind of spreading them apart, and I came across a red-winged blackbird nest with nestlings in it. And as I peered down inside of it I got dive-bombed by the adult, the male."

Tom's club met every weekend at the home of Mrs. Bacon, the club leader, and they spent their time exploring the property. "We could wander out the door and into the creek immediately outside the Bacon's house and collect butterfly cocoons and old nests."

Activities with local Audubon chapter. Some of the Junior Audubon Club leaders were involved in their local Audubon chapters, providing opportunities for the club to engage with the adult chapter members. Some of the participants talked about participating in chapter meetings, attending programs with local Audubon members or attending their field trips. Joe, who remains involved in his local Audubon chapter decades later, shared stories about being involved in the chapter throughout his youth when he was in Junior Audubon Club and afterwards. "They [Wyncote Audubon Society] had these lectures, these illustrated lectures, at night. Of course, we just ate that up."

Charles, who participated in the Junior Audubon Club in 1968 in Pasadena, California, remembered being involved with the local Audubon chapter:

> She [his club leader] encouraged kids to participate in the local [Audubon] chapter. Audubon was primarily white people. We would go to the local Audubon Society meetings and programs. We were the only black and brown faces. We were the only young people too. It was Pasadena Audubon Society. I went to meetings. I remember one program, it sticks out in my memory; it was about newts and salamanders. Not about birds. I remember talking to the members, the people who were there. They were all white and much older. We got scholarships to attend Audubon Camps. I went to the Audubon Camp of the West in Wyoming and I did the bird studies camp. Mrs. Williams got us the scholarships. She wanted us to experience new things.

Conservation projects. Junior Audubon Club members didn't just learn how to identify birds—they also participated in hands-on conservation by building bird feeders and nest boxes that were installed on their school grounds and in nearby parks. Throughout the life of the program, the materials developed for the Junior Audubon Clubs included suggested action projects, such as creating schoolyard habitats, planting trees, or building birdhouses. In 1921 alone, Junior Audubon members built and installed more than 175,000 bird nest boxes across the country.

Loren and Tom talked about their memories of helping bluebirds from becoming extinct by building and installing birdhouses in their communities.

> [As part of the club] we did this whole thing about birdhouses. How to make them, where to put them up. We were trying to save bluebirds. I remember, I've been to the Audubon here and seen bluebirds, but I remember the years in between where it was almost like the bluebirds were going to become extinct if it wasn't for the Junior Audubon Club out there saving them. It was different things like that that I really remember. (Loren, 1959).

> One of the cool things that spun out of this whole experience is that we learned to make bluebird houses… We would pack up our tinfoil dinners and pack up our [news] paper wagon filled with bluebird houses and hike, pulling our wagon, all the way up to the park. Along the way we would stop at farmhouses and knock on the people's doors and introduce ourselves. "We are with Junior Audubon and we wondered if it would be possible to put bluebird houses on their farm and we promise to monitor it over the nesting season." We, my gosh, [installed a lot of] bluebird houses, you can imagine. Bluebird houses strung out for miles. We really felt like we were contributing to science, protection of the bluebird, its habitat and learning at the same time. At the end of the day, we had our tinfoil dinner and our campfire and whatever. It was fabulous. (Tom, 1956)

Nancy, who participated in the program in 1941 in Connecticut, remembered learning about birds, plants, and how to attract birds to one's yard or neighborhood. "I remember planting in the garden according to attracting certain birds. It was always the Baltimore Oriole. I remember that Baltimore Oriole and actually finding it." Her love for gardening continued into adulthood and she talked about attracting birds to her yard by planting the right vegetation.

Interactive activities. While several participants did share their recollections of specific activities, what remained salient to them was the overall experience of learning about birds and seeing them. Tom remembers learning to do taxidermy, while Heinz remembers putting on plays about birds, and Betty recalls making crafts. Tom's club participated in a unique experience of helping with banding birds that his club leader facilitated:

> I'll never forget that she [his club leader] had all these bird traps where they would band birds. Right through the windowsill of the whole house there were strings that ran down

> to a little stick that we set on the very edge of the door that would spring shut. The cool part was that there was a whole other side of this, we would learn how to trap the birds properly…. So whether it was a hawk, duck, robin, cardinal, they taught us how to record, band and hold the bird in our hand. To hold their leg with a thumb and finger and to look at their plumage, to see, to learn about age. Is it a male or female? Is it first or second year plumage? So on and so forth. And if we got a bird that already had a band on it and came back the next year that was real big hit. (Tom, 1956)

AnnMarie participated in the Junior Audubon Club around 1968 in southern California, outside of school hours. Her mother Lucille and another woman named Sally—classmates in college and both botanists—were the club leaders, though neither were school teachers. AnnMarie recalls doing "super cool stuff." Most of her memories involved being in nature, exploring natural areas and having fun. "I remember being out in the field. And one place we went that really stands out…some preserve in Los Angeles where they filmed all the Tarzan movies and it was like a jungle. And we went there on a tour and there was a biologist there. I just had the best time. This was one of my primo memories. We found so many different things… there were salamanders, frogs, birds, plants. It was a really special day."

When AnnMarie reflected back on the program, what stood out to her the most were the field trips to local natural areas, including the Rancho Santa Anna garden, where the club would go on a regular basis. During their explorations in nature, they would "do various ecology, birdwatching (and) botany, and each child had their own little transect area that they observed weekly and recorded change over time." AnnMarie describes it as "very scientific" and real. She described how "we were all responsible for…. a transect and keeping it going. I remember being

under the shade of an oak tree or something. Checking everything and keeping track of what was there."

Membership. Junior Audubon was designed to be a club, with children as members and an adult leader who provided support and direction. Not only were the children part of this club, often connected to the local Audubon Society, but they were also part of a national organization, the National Audubon Society, and thus junior members of a movement throughout the country. Only children who enrolled in Junior Audubon Club would receive the specific materials, including magazines, newsletters, membership cards, and buttons. This allowed the children to feel that they were part of an exclusive group and develop a group identity around their membership in the club.

Group identity is a type of social identity and is based on shared attributes. This can be an organized group, such as a sports team, a music band or membership in a club (Clayton, 2012). The difference between social and personal may not be that clear, but personal identities become social identities when like-minded individuals come together and social meaning is attributed to that identity (Clayton & Opotow, 2003).

Group identities, according to Clayton (2003), reflect a sense of belonging to or involvement with a group based on shared values, goals, or characteristics. They arise from recognized characteristics such as race or gender as well as from shared experiences and interests. The Junior Audubon Club identity may be reshaped by sharing experiences with other participants in these organizations.

Participants remarked that being part of the club provided a sense of community and belonging. A component of the feeling of belonging was the items that they received because they were a member of the club. These club mementos and physical reminders of being in the

club, such as the pin and membership cards were significant. Not only did participants recall memories of being a part of the club and receiving special materials—many kept those materials for decades, as mementos of their membership. The bird buttons were a unique

aspect of the club, available only to Junior Audubon Club members. Many still have the buttons decades after participating in the club.

Table 12

Recalled Memories of Materials Received

We got the button and the membership card….I [still have the membership card]. It's a little card to put in your wallet. I know I have the button, for sure. I still do have the egret button. [I kept it] because it was my Junior Audubon Club button. It is beautiful. (AnnMarie, 1968)
We had little buttons that we could wear, if we wanted to and put on a cap or a hat. This was before the days when everybody had buttons all over everything. Audubon was kind of a pioneer with that…. there was no hesitancy to wear the Junior Audubon button. (Bart, 1940)
We did have a little button that we were members of the Junior Audubon Society. I remember my two uncles were in the Army and in the Navy. And my uncle Dwayne gave me a bunch of his old army hats. You know the ones that kind of folded up? I put my button on that hat and wore it to school. You know, kind of like a bird soldier, you know? I haven't thought of that in well, 60 years. (Forrest, 1950)
The Junior Audubon Club was one of the earlier "formal" organizations, along with Scouting, that encouraged nature exploration and increased my knowledge and interest that led on to completing degrees in biology, ecology, and a satisfying career as a research wildlife biologist. (Joe, 1960)

Emotion. For some, the memories they shared were of the club being fun and enjoyable. AnnMarie recalled that the club “was just fun” and Betty said, “It was fun and interesting.” CarolAnn’s club was part of her fifth grade experiences, and “we all looked forward to that,

mainly because it was much more interesting than most of the other stuff," she told me. And she said that the club meeting "was kind of the high point of the week."

For my participants, the memories of the club were uniformly positive. When Stefan was asked about his memories of the club, he simply said, "It just brings a smile to my face when I think about it." And Tom shared memories of feeling excited about the field trips, bird sightings and "it was so thrilling to see all of this nature in a room." Reflecting on the overnight birding trips, he recalled, "We couldn't see straight because we were so excited."

Empowerment. Outcomes of empowerment and ownership are best practices for environmental education programs that drive positive results in knowledge, awareness, attitudes, intentions, skills, and behavior (Heimlich & Ardoin, 2008; Hungerford & Volk, 1990; Stern et al., 2014; Zint, 2012). The research participants shared memories of being empowered and taking ownership during their experiences in Junior Audubon Club. For some, the positive memories involved giving a presentation to adults at an Audubon meeting; adults asking for their input and expertise on bird identification; or being elected president of their club. Barry, who was president of his club, shared one such memory: "I remember occasionally, either correcting a teacher or assisting them in what they knew or didn't know about birds. And I remember them deferring to me. You know, like they were quite happy that I knew more about birds than they did, or more about nature generally than they did. They wouldn't question me or anything like that. And, so, I do remember that part."

Wayne, who was also his club's president, remembered being asked to give reports on birds seen that day:

> I remember that Mrs. Doubty, to her credit I have to say, and she was wonderful. She was a nice teacher. She appreciated what we were doing, but she would make us give

a quick report to the class of what we'd seen. Of course, the rest of the class could not have cared less, but I think they must of had some level of interest, above and beyond just the sarcastic, 'Oh look at those guys, they gonna talk about the birds they saw.' That was fun too… She was always very interested and supportive. She would sometimes ask us, even if it was just on a one on one, 'Have you boys seen anything interesting this week or today?

Heinz and Loren recalled being asked to give presentations at their local Audubon Clubs. Loren remembered going to the Audubon Society in downtown Decatur, Illinois. "We would go there and it wasn't a requirement to be in the club, but she would ask certain people would they give presentations on birds. I certainly remember my cardinal [presentation]. They were all very happy and wonderful and just lots of applause without applause reinforcement of all doing a good job, because we were young, but we weren't young, we were about 13. We thought we knew everything in the world. I remember that."

Charles recalled his club leader, who was his mentor throughout the years, training club members to become instructors for younger students. "She knew the power that nature could have. She also kept engaged with us beyond the one year. She trained many of us to become instructors. I became an instructor when I was about 16 years old. I was scared shitless the first time. I didn't know what I was doing. She would always point things out and give us information or activities to do with the young kids. I would go into the classroom with her and use the Audubon materials."

Tom recalled organizing and participating in birdseed sales to raise money to allow his club to go on field trips, and having an information table at a county fair. "The cool part was the big, big event in August, the Erie County Fair," he said. "Erie County Fair, next to Los Angeles,

was the biggest county fair [in the country]. Biggest and oldest. It is different than a state fair." He emailed me a picture of his club at the table at the fair, teaching others about nature with bird nests, insects cases and other natural items.

Learning activities. Learning about birds and the natural world was a major focus and goal of the Junior Audubon program. Many participants shared memories of learning about birds and the activities that helped them learn. Sarah, who participated in the club in 1948, shared, "I learned about birds when I was in the Junior Audubon Club. I learned that there were different kinds of birds that eat differently and have different beaks. That was interesting and I wouldn't have paid much attention to that if I hadn't been a Junior Audubon Club. If you can teach simple stuff, the right stuff, it makes the whole thing more interesting."

Many people shared rich memories of the materials received through participation in the club, including the leaflets and newsletters that were created exclusively for club members. Several people still have the materials, many decades later. After the interviews, several participants shared photos of their Junior Audubon Club buttons or the coloring pages that they received while in the club. Within this theme people mentioned Junior Audubon Club materials; bird cards produced by Audubon; books about birds to expand learning; and general mention of learning about birds.

Throughout the life of the program, bird art was incorporated into all of the materials that were distributed to the Junior Audubon Club members. Bart, who participated in the program in 1940, recalled the materials he received as part of the club, "They were sort of monthly little four-page folders with a colored painting of a bird on the front. It was before the days of Roger Tory Peterson so it was probably Arthur Allen or somebody like that who did the paintings. And then there was a description of the bird and its habitat and behavior and all that. And then a

black-and-white outline, on which you were supposed to try and duplicate or imitate the colored painting on the front with colored pencils." The artwork and coloring pages were designed to help children learn the birds and how to identify them. "It wasn't just reading about it [birds]. You actually then had to try and color the picture yourself," Bart said.

Three of the participants I interviewed are artists, two professionally and one as an amateur during retirement. Art was a theme throughout these interviews. Bill talked about his grandmother being an artist and her interest in birds. During the interview, he got up in the middle of talking about his grandmother to grab something off a shelf and returned with her bird book. Inside it was a child's drawing of a scarlet tanager—Bill's drawing from when he was in Junior Audubon Club.

Many mentioned receiving and collecting the Audubon bird cards, which were about the size of playing cards. They had artwork of a bird on one side and information about that species on the other. Given the relative scarcity of field guide in these pre-internet days, the bird cards were an important source of information for participants, who mentioned the cards without being prompted. They shared that they collected them and used

Figure 19. Bird cards. From Weidensaul's private collection

them to learn the birds. Figure 19 exhibits some of the cards and Table 13 highlights some of the memories shared about the bird cards.

Table 13

Recalled Memories of Bird Cards

Those cards were incredibly important to me because they had pictures of birds either that I might go out and see, or better yet, 'cause I was interested in what I didn't know, [like] the western set of birds that I would only see if I went out west…. I do remember that. That was important, but so was the [other] materials. (Barry, 1954)
I did collect a lot of those bird cards, and started memorizing birds from that, but then we spent a lot of time getting out in the field. (Joe, 1960)
They had cards, and we ended up collecting the cards. I remember some little 4x4 cards, and on the back it told a story about the birds and how to identify the birds. I thought it was great, because it had information. You know you were looking at the different birds. (Nancy, 1941)
They were postcard size. Alan Brooks did a lot of the [artwork], and we used to use those to test each other. We learned all the birds and used those to test our identification skills. I remember that. (Steve, 1943)
We had this bird cards like the meadowlark. When we had to write [for class], I had a write- up on meadowlarks with the picture of the meadowlark. Ms. Kimbel always handed these out because she knew I didn't like writing or learning about writing, but writing about a meadowlark was a different story. (Tom, 1956)
Audubon cards, the large flash cards of that sort and I was fascinated with these. We'd go through the pictures and I would gradually learn the names of them and so forth and so on. As I recall, the best I can recall, and my mother, who's still living at 96 , she's not in the best of health obviously, but in any case, through the years, she would attribute my seminal interest [in birds] to those flash cards. (Wayne, 1955)

In addition to the bird cards, participants recalled other materials received as part of the

Junior Audubon Club, including newsletters, magazines, bird charts and posters, and the activities packets. Joe talked about using the materials to learn the birds. He said, “That's how we learned them. I think that was before I even got my first Peterson [guide] ... A lot of my bird learning was from those posters. That was important. Then all the brochures they sent out, I would read those.” (Joe, 1960)

David still has his Junior Audubon Club materials more than 50 years later, and he keeps them on a bookshelf in his office, where he looks at them every once in a while. “The packet that I got, especially that little booklet, 'Let's Explore Our Country,' let's explore it, I still have in front of me here. That by itself had a big impact on me ….in getting me interested in things in the natural world.” The materials “include a coloring thing that I did, my bird book, with things in it, and so ... I saved it. [My mother was] probably the one that kept it from being trashed somewhere along the line. When she gave it back to me, it brought back all these great memories. I've hung on to it, and look at it from time to time.” (David, 1960)

In Table 14, there are additional comments about the materials received while participating in the club.

Table 14

Memories of Club Materials

We got that little magazine and we read stories to each other at the Audubon club meeting. Then I used to take them and cut the pictures out, and paste them together, make [a] collage out of them and all kinds of things like that…. The thing that I cherished was that little magazine. (Forrest, 1950)
The wall posters of birds. Some were the summer birds, winter birds, maybe fall. They were big posters with a lot of different species. I set up a little den in the basement, or a museum, and all the walls were covered with those posters. (Joe, 1960)
I remember you got a picture, an actual picture of the bird, and I'm sure it was a painting, a lithograph or something. Then you had one out in the same pictures, but it was an outline in black and white. Then there was a folder that came with it. (Nancy, 1941)
I remember the bird identification and plant identification information. We used those all the time both in the classroom and in the field. I remember the newsletters. (Charles, 1968)

Participants talked about how the materials helped them learn about birds and nature more generally. Loren talked about his hunger to learn: "I just was like a sponge for everything that I could get from the club." Steve recalls the chart of raptors and how it was "scientific, and was illustrative, and it was interesting." It sparked his lifelong passion for birds of prey.

Adult leader. All participants in the study remembered having a club leader and 14 of the 19 (73.68%) shared lively memories and detailed descriptions of their leaders. For many, the club leader was one of the first unprompted memories shared with me. A theme across the interviews emerged that the clubs created a sense of community with strong support from an adult leader. This was an integral piece to their experience and why the program resonated with them decades later.

Leaders came from the ranks of a classroom teacher, mother or a close friend of the family, and other adults in the community. A few participants remained connected to their club

leaders well beyond their time in the club itself. Many talked about the impact their leader had on their club experience, their personal growth and the way they helped to spark or fuel their passion for birds and nature.

Betty's club was not associated with her school and met on Saturdays at her club leader's house in 1960 in Chicago. During the interview Betty said, "I remember the Audubon Club very well. It was not through school. I recall it was on a Saturday and it was in a wonderful old house. I grew up in Chicago in an old historic neighborhood, and there [were] a lot of beautiful old kind of executive's houses of the early 20th century. The leader was Miss Doyle." Betty had many memories of her club leader, whom she described as "a little different. She wasn't like our mother. Thinking back now, [she was] kind of like a proto-hippy. Her hair was kind of long, she wore ... artistic clothes. Not like our mothers looked. It introduced me to something different from what I was used to." Betty said that Miss Doyle "had a way of making [science and nature] interesting to us. I liked the classes. It was fun and interesting. I remember she really wanted us to be interested and she wanted us to understand."

When I contacted Bill to see if he would be willing to participate in my research he responded enthusiastically. "We had a venerable fifth grade teacher, Estelle B. Cadmus, who had successions of fifth graders become Junior Audubon members and fulfill a birding project," he wrote. I interviewed Bill at his house, and before we started the interview, his wife laughed about how she has been hearing about Mrs. Cadmus and Junior Audubon Club since they started dating more than 50 years earlier. During the interview, Bill shared many memories of Mrs. Cadmus and her impact on him:

> She was much younger than I am now but she looked ancient. She was like a quintessential 19th century teacher, you know, gray hair in a bun kind of thing and very

practical clothes and practical shoes and all that sort of thing…Of the teachers I had ... Mrs. Cadmus got so excited about things like this bird project…because certainly it was in nobody's elementary school curriculum. She brought that, she nurtured it and so her natural enthusiasm, if you're gonna be infected, you were infected. (Bill, 1950)

Forrest spoke fondly about his club leader, Mrs. Conklin, who was also his classroom teacher. His club met in 1950 and while it was associated with school, it took place outside of school hours:

I was in fifth grade and the teacher's name was Mrs. Conklin. I'll never forget her. And she was—many of the things that I continue to be passionate about today are things that I learned in fifth grade from Mrs. Conklin…Every now and then you have one of these extraordinary, life-changing teachers. I think Mrs. Conklin simply did more than the average teacher would have done with it. (Forrest)

Steve's club, in New York City in 1943, was also organized by one of his teachers, Bertha Claire, but also took place outside of school hours. "I remember a lot about her," he said. "She was very interested in birding. The school had a cabinet, six or eight feet high with shelves in it with stuffed birds. And we used to go up there and look at the birds and look at the cards to identify the birds and then we used to go birding in Central Park. I remember her taking us. She was a teacher and she was a tutor." He later said, "She certainly encouraged the interest [in birds] and everything else. She was very supportive and helpful."

Loren participated in his club in 1959 in Illinois. It took place during school hours, but included field trips off site. During our email exchanges following the interview, he sent me a scan of a photo from his 1959-60 school yearbook of the Junior Audubon Club

with him in the front row. Loren spoke passionately about his homeroom teacher and Junior Audubon Club leader, Mrs. Rutherford:

> She was a homeroom teacher, but she was also a science teacher. I remember her as being extremely skilled in drawing—nothing like a [trained] artist or anything like that, but sketches of birds, sketches of insects, different things like that. She liked to do that and encouraged us to do it even if we weren't good artists. It wasn't about the art, it was about remembering the wildlife… There was a lot of passion and energy in her homeroom and that's what I really remember, it's almost an esoteric sort of remembrance. Not of her speech patterns or anything, but … she looked very old to me, being very young [myself], of course. She maybe was in her 40s, I remember her gray hair and wrinkles and yet, coming out of this woman was all this passion and it seemed really very inspiring to see somebody that was so old and so learned and yet she could be so passionate about birds and Audubon…It was a great time with a passionate teacher who loved birds. (Loren, 1959)

For some, their club leaders were involved in their lives beyond the Junior Audubon Club. Charles is an example of someone remaining very close to his club leader many years after his participation ended. In fact, he is currently the executive director of Outward Bound Adventures, a non-profit organization that provides underserved urban and low-income populations with meaningful and educational opportunities in nature—an organization that evolved directly from the Junior Audubon Club he was member of, created by Helen Mary Williams. Mrs. Williams was a teacher at Cleveland Elementary in Pasadena; because she

recognized that her students could benefit from time spent away from the city, she began a Junior Audubon Club at the school.

Charles spoke fondly on Mrs. Williams and the impact she had on his entire life. “She kept connecting with me throughout my life,” he said. “I got involved in [Junior Audubon Club in] 1968, the year that Dr. King was killed. I remember it well. Mrs. Williams was somewhat of an anomaly at that time. She was a white woman working in an all brown and black school. She was ahead of her time. She was bringing outdoor education into the schools, before most people knew about it. She took kids out to the desert. She was very good at taking kids out of their comfort and getting them in nature. She mentored thousands of kids. She was my mentor until she died in 2006.”

David also had a strong bond with his Junior Audubon Club leader. His experience in the club was unique, as he was only five or six years old when he participated in the program in 1960—much younger than others to whom I spoke. His club leader was a family friend, Florence Retzer, and the club activities took place outside of school. Throughout the interview, David spoke passionately and lovingly about his club leader, who remained in his life until she passed away. David said that Florence “was my mentor, along with my parents, in getting me interested in things in the natural world. I explored her property and some of this resonated with me, even back when I was five [years old].” Later in the interview he said “I can’t say enough about how strong an influence she had on me.” He remained in contact with Florence throughout his life.

Place. Most of the participants mentioned specific natural places that were special to them during their childhood. For some, these places were directly connected to their experiences in Junior Audubon Club, including field trip destinations or places that they regularly visited as part of the club. Some of these memories are highlighted in Table 15. Many have returned to

those special places later in life as adults. Joe shared memories of a woodlot that he explored with the other club members when he was a child. He recently returned to the woodlot, which is now a town park, visiting the site with his childhood friend, who was also involved in Junior Audubon. Joe said, “We went in there and wandered all over, and looked at it, and we remembered trees. I remembered finding certain trees, and they're still there. We see where invasive exotic plants had moved into the disturbed parts, but there were still parts that hadn't yet been invaded. The oaks were still there, and the tulip poplars were still there, and the beeches were still there. They were a little bigger, a little more storm damage, a couple of tree fall gaps that were new, but by and large it is the same.”

David’s memories of place were focused on his club leader’s property, which he would spend hours exploring. He remained in contact with the leader throughout his life. In college, he took care of her property during the summer and was able to return to some of the special places he had explored as a young child. Her property is now a county park. “She donated her property to Waukesha County when she passed away and it has become the focal point for the county’s environmental program.” David visits the property whenever he is in Wisconsin. Many trees have been planted on the property in memory of David’s loved ones, including his club leader, Florence Retzer.

Table 15

Memories of Specific Places

There was a little patch of wood line adjacent to school, just a thin stretch of Scotch pines. And it adjoined one of these cemeteries … there was a little bit of natural habitat, which would have been productive for an experienced bird watcher possibly a few days a year, you know, when the warblers are going through or whatever. (Barry, 1954)
I remember [it] being green and leafy… we were outside in [the club leader's] yard. This particular street she lived on was Longwood Drive. The houses were well known [for] having big, estate-like large yards, very unusual. We were outside. (Betty, 1960)
My brothers and I would explore her [club leader] property, which had woods. It had ponds. It had marshland, plants of all kinds. So they'd be, 'Let's Explore a Pond; Let's Explore a Farm.' They [Junior Audubon Club materials] fit right in with what I was doing. (David, 1960)
Briar Bush was pretty important. We even had closer places to home than that. I think the fact that we had a place where we could go get out in the woods was pretty instrumental… One of the saving graces was we had a patch of woodland that we spent a lot of time going through. Leigh and I crawled all over that wood patch. We knew it. (Joe, 1960)
The Spitler Woods is a much longer trip, maybe 20 minutes out of the city. The place where the school was didn't really have a lot of greenery around it. I remember there was less development around it than there is around it now so there probably were more trees because they still had the huge sports fields and at the edge of the sports fields they would have a growth of trees. I'm sure Mrs. Rutherford took us out there to look for birds that were not extinct yet, like bluebirds, we were all scared to death was going to die out. (Loren, 1959)
Up in the mountains and Sequoia National Park is kind of similar to Yosemite, but not as famous, but beautiful. (Sarah, 1948)

Birds. Another common theme that emerged from the interviews was the frequent experiences with birds. From the very beginning, the purpose the Junior Audubon Clubs was to "build up a genuine interest in and sympathy with the birds during the formative years. The future of American wildlife lies in the hands of our children. The child, if made cognizant of the existence and needs of wildlife is its staunchest champion in later years." (National Association of Audubon Societies, n.d.). Because Junior Audubon Clubs focused on birds, many of the participants shared memories of bird watching or seeing specific birds while in the club. The interaction with animals, especially birds, was a theme that emerged from the interviews (Figure 20).

Figure 20. Results of interviews coded to interaction with birds.

Table 16

Memories of Experiences with Birds

It was amazing because Barn Swallows have these great mud nests… It was times of day when the birds would be feeding and [I'd count] how many chicks there were, fledglings were hatched and when did the fledglings first take flight, leave the nest and all that good stuff. (Bill, 1950)
Exploring the marsh. I mean, one really vivid memory that I have is, I was probably about five and I was in cattails that was as tall as I was, kind of spreading them apart, and I came across a red-winged blackbird nest, with nestlings in it. (David, 1960)
Mrs. Griscom would be pointing out the birds from that big room with the big window and we could watch the birds. I remember her quietly telling us to be careful, we must not scare the birds. (Heinz, 1931)
We had a trip there [Briar Bush], and I was really impressed with all the feeders and all the birds. The front was all open, and you sat still with all the tufted titmice and nuthatches would come in. (Joe, 1960)
I remember that Baltimore Oriole and actually finding it. That kind of sticks out in my mind… Seeing the birds, loving to see the hummingbird, and the bee balm, and the flowers. I think being exposed and actually seeing them -- having a picture, the thing was mailed to me -- and then to be able to go out with my family and actually see this bird. I mean, that's quite an experience. (Nancy, 1941)
I can remember having him point out a vireo and I can remember that very well…I mean you know a little brown bird. It's so exciting to see it you don't see too often. (Sarah, 1948)
And it, it just opened our eyes to all these other birds…But we started looking and we were aware ,you know, just among ourselves, and wondering where we might see these birds. And I think the first place we saw a brown thrasher, I guess. Not a brown thrasher, but a rufous-sided towhee. (CarolAnn, 1950)

Social. When my participants shared their memories of involvement in the Junior Audubon Club, they shared stories of other children in the club. Stories about peer-to-peer learning illuminate the role education programs play on environmental identity formation. The creation of community of like-minded children was critical to the individuals' identity and lifelong interests.

AnnMarie recalled there were six to twelve kids in her club. She described several of the boys in the club and shared how they were "super smart and they were like obnoxious little boys at that time, but pals. There was a high level of engagement." She moved away from California after the club and didn't remain in touch with the students, but to this day she recalls many of them. She said, "Those guys were super talented, really good kids. I remember the enthusiasm for what we were doing and everyone's plots. Everyone really got along."

Some remained connected to the people who had been in their club for decades. Charles spoke about specific people who were in the club with him, and talked about how many of the friendships he formed in the club remain close today. When I asked him about other club members, he said, "When I was younger I hung out with a bad group of kids. When I was in Junior Audubon Club, I made lots of friends. They are still some of my closest friends… Many of them didn't go onto environmental work; they are lawyers and pilots. We all stayed close. Mrs. Williams was very intentional about having us do activities together…She wanted to make sure we had someone else to experience things with."

Sarah's club, with about 16 students, met on Saturdays a couple times a month. She remains friends with a few members, including one with whom she goes on bird-watching trips. "One of the guys in the club, who was in my class, later he and his wife and I traveled to Belize to bird and to Ecuador to bird. So it was fun—we started off knowing each other since

kindergarten and then much later we birded. You know, 60 years later, we bird together and it's a fun thing."

A few talked about how they did not fit in socially during childhood, but they found like-minded children in the club, peers who socially accepted them. Barry talked about befriending one boy: "He was noted to be a tough little kid. You know, he was very interested in birds so the two of us hung out. And it was good in a way because the few times that I was bullied he would make sure that I wasn't. Symbiotic relationship, you know. And there's a couple of other kids who shared my interest. There was one up the street who was my best buddy."

Halfway through the interview with Heinz, he remembered that he had a photo from his time in Junior Audubon Club. Looking for it, he recalled, "One of us was a bird, an eagle, one was a farmer and I can't remember the third one." At the end of the interview he pulled down a photo album and found the black-and-white photo of three boys, about 6 years old, in costumes and acting out a play about eagles and farmers. "All three of the guys are still living; in their 90s. One lives in New England and one in South Carolina." They still exchange Christmas cards every year.

Lifelong Impact

My second research question is, "To what degree, if at all, do participants attribute their Junior Audubon Club experience to their self-proclaimed lifelong environmental identity and behaviors?" In order to answer that question, I analyzed the existing environmental identity of each participant (see chapter V) and explored participants' answers to both survey and interview questions that addressed their self-identified impact of the program. The survey questions were all write-in answers so these data were added with the interview data in NVIVO to be coded. I then sub-coded the impact theme into four subcategories: lasting nature and bird interests;

inspired a career path; sparked a lifelong connection to Audubon; and provided acceptance and validation that lasted a lifetime (See Table 17 for a description of each theme).

Although not all of these themes were mentioned by each participant, it does not mean that these themes were absent from participants' experience. I did not ask about the individual impact themes to determine their presence or absence. I asked each participant to reflect on their experience in the program and its possible influence. Further explanation of each of the themes is listed in Table 17, while Table 18 lists the number of participants and frequency of response for each theme.

Table 17

Description of the Emergent Themes for Impact

Emergent Themes for Impact	**Description (keywords)**
Nature and Bird Interests	Sparked an interest in nature, birds or science, which lasted through life. Fueled and fulfilled a hunger to learn about nature, birds and/or science.
Career	Influenced or inspired a career path or lifelong volunteer efforts (non-birding).
Connection to Audubon	Sparked a lifelong connection and involvement with Audubon.
Acceptance	Provided social acceptance and validation of interests, which lasted through life.

Table 18

Number and Frequency of Mention of Each Theme

Impact	**# People Who Mentioned it**	**% People**	**Frequency of Mention**
Nature and Bird Interests	19	100%	51
Career	11	57.89%	15
Connection to Audubon	6	31.58%	8
Acceptance	7	36.84%	17

Nature and bird interests. One of the most significant impacts that participants remarked about was the overall awareness and appreciation for nature that was gained from being in the program and their experiences, which had a lasting influence on their lives.

This theme of impact was mentioned by all of the participants (n=19) and had the highest number of mentions. Participants said the program sparked or fueled their interest in nature—science more broadly, and more specifically birds. For some, participating in the Junior Audubon Club opened their eyes for the first time to nature and birds and sparked a lifelong interest in them. It also fueled and fulfilled a hunger to learn more about nature, birds and/or science. For others an interest in nature, science and birds existed before the club, but participating in the program helped cement their passion.

As mentioned earlier, the connection to animals can be strong, especially for children; animals can be the key starting point in developing a sense of caring for the environment (Myers & Saunders, 2002). The club provided opportunities for children to learn about, observe and

experience wild birds, and it also provided opportunities for children to experience birds as a social group, as together they created meaning from those encounters.

Participants talked about the impact the program had on inspiring their interest and passion for birds and nature. CarolAnn said that the Junior Audubon Club "opened our eyes to all these other birds… I think, more than anything, Junior Audubon awakened a curiosity about birds that we probably wouldn't have had." Her curiosity for birds continues to this day, more than 60 years after the club. She said she has a "continued interest in feeding and identifying our backyard birds, as well as the diversity on previously unseen birds when we travelled. I think the Club enriched my life and led to my curiosity about the natural world." Sarah said:

> I am an active birder. Monterey County [California] is a terrific site for a large number of birds so what I learned then started an exciting interest for me. Besides birding around the U.S., I have birded in 19 additional countries…. [When] I joined the Audubon Club is when I got interested in birds. I mean, I think I looked at nature and I looked at animals, but I learned about birds when I was in the Junior Audubon Club." And it stuck. "If I hadn't had Junior Audubon then I wouldn't have been interested. Maybe later I would have started birding as an adult because I was attracted to birds, but it wasn't as though anyone else in my family was interested.

Betty said the program impacted her life. "I think being introduced to something that was really kind of foreign in my own life. I think it makes you see that you can have a place in being interested in something like that [nature]. Something like that was for you. If it wasn't for other people, you could have that as part of your life, too. Also, I think it is really helpful to have that 'other'…it is not school, it is not church; it is something else. Another way to relate to people. Another place, you know, to have friends. Yeah, definitely."

For Tom, it helped him to have a stronger awareness of and connection to the natural world. “I think the exposure to Junior Audubon was life changing in that it helped to develop the early awareness of how to move through nature.” For some, the interest in birds was there before the club, but participation provided fuel for their interest. Stefan is one example. He participated in the Junior Audubon Club in 1958 when he was eight years old and is now an accomplished bird sculptor. Stefan had been interested in birds from a very early age. “I came into this world thoroughly fascinated with birds…I'm all about birds. Birds just really pretty much provided me a wonderful life. I'm one of those few that have never strayed from my passion. Junior Audubon was just the very beginnings ... I can't say that it influenced me to take interest to birds because I already had that, but it certainly did nurture and nourish my interest.”

Birds were a theme throughout the interviews. Forrest shared stories about watching birds, a true passion that he credits to the Junior Audubon Club. It opened his eyes to the birds near his house and sparked his desire to learn more and see more species. When I asked Forrest if he was interested in birds and nature before the club, he replied, “Not so much. It wasn’t until the Junior Audubon Club and those walks down to the creek did I get a sense of the universe of birds. And then I spent every minute I could in the library—in the school library grabbing every book on birds I could find. It was pretty much the Junior Audubon Club that gave me an organized way to think about nature… It just woken up an interest in the rest of the world that we hadn't had up until that point.”

The hunger to learn more about the natural world was a common theme that many shared. Barry talked about his current personal library of bird books, but when he was a child, it was harder to access information. “I can't tell you how thirsty I was for all that kind of information, both pre-teen and through my teens and, I guess, really in a way up to the present.” Joe shared

similar reflections about his current book collection, his hunger to learn and his obsession with natural history books. “That just kept fueling it. It all happened in that early sixth, seventh grade, and that junior high period. That was a pretty pivotal time.”

Career. The findings from more than 30 years of significant life experiences research suggest there are five major factors influencing environmental careers, interest and actions in adults: formative and frequent outdoor experiences during childhood; adult role models who encourage and value outdoor experiences; involvement in environmental organizations; exposure to nature/science books and other forms of media; and firsthand experience with environmental degradation or disaster (Chawla, 1998, 1999; Corcoran, 1999; Palmer, 1993, Tanner, 1998). Involvement in formal or non-formal education programs were rarely mentioned. However the elements described above are components mentioned by participants as memories from their involvement in Junior Audubon Club.

More than half of the participants (52.63%) mentioned that the program influenced their career path or their volunteer commitments, which took up a great deal of their lives. For example, one of my participants started an Audubon chapter as a volunteer and now runs a Christmas Bird Count for children. These actions were not part of his professional career, but they involved a lot of time and commitment.

Forrest spoke about how the program had a huge influence on his later life. “It completely formulated my whole life. I mean, without the Junior Audubon Club I’d be pumping gas or something. I mean, it gave me a direction and purpose that I have to this day… I was from a poor town with a poor and fairly dysfunctional family. I was lucky enough to get to go to college and I was a biology major… I can’t think of any greater influence in my life that guided my future. Frankly, it was the reason that I became a biologist and now a nature-inspired artist. It

was my entrance into the world of science… It was the beginning of a lifelong love of science and nature. From that seed of Mrs. Conklin and the Junior Audubon Club I had a lifetime trajectory as a science and nature lover. And it continues today."

Charles participated in Junior Audubon Club in 1968 in Pasadena, California. Charles is currently the executive director of Outward Bound Adventures, a non-profit organization that provides underserved urban and low-income populations with meaningful and educational opportunities in nature, which results in a greater appreciation of nature, self, family and community. Outward Bound Adventures evolved from a Junior Audubon Club that was created by Helen Mary Williams, who was Charles' Club leader.

When I asked Charles if he thought the program had influence on him, he simply said, "Yeah, it is why I am who I am. Those materials opened my eyes. Without Audubon and Outward Bound Adventures and Mrs. Williams, I doubt I would be doing what I do. I know it made the path for me to who I am today." In the survey he wrote, "It connected me to my career and kept me off the streets."

David, a botany professor, said that the Junior Audubon Club "helped lay the grounding for what became my professional interests and life work… "botany [major], and minor in zoology, and learn about all aspects of the natural world, become an ecologist and a professor here. All of that, you know, all of that connects up as profound influences on my life." He knows that many experiences and people helped to shape him and influenced his career path. When reflecting on the impact of the program he said, "Junior Audubon was a tiny component of this, but an important one with the things that opened up for me and led to a greater respect for it [nature]."

Joe has been interested in birds for his entire life and has spent his career studying them. The Junior Audubon Club was "one of the earlier formal organizations, along with Scouting, that encouraged nature exploration and increased my knowledge and interest that led on to completing degrees in biology, ecology, and a satisfying career as a research wildlife biologist." He later said, "What turned me around as a student was making the connection that there was more of this bird stuff to learn, and this natural history stuff. You could actually become a biologist." That is exactly what Joe did and he has spent decades researching birds and teaching students about ornithology and ecology.

Connection to local Audubon. As noted earlier, the Junior Audubon Club program was developed and distributed by the National Audubon Society, and some focused on connections to the local Audubon chapters. In the memory section of this chapter, I discussed experiences associated with involvement in the local club. For some participants this connection to the Audubon Society started in Junior Audubon Club and continued throughout their lives. I found many of the participants by contacting local Audubon chapters to see if any of their membership had been involved in the program as children.

Bart participated in Junior Audubon Club in 1940 in Pittsburgh, Pennsylvania, when he was in fifth grade. I met Bart at the National Audubon Society's convention in Utah in July 2017. During the opening ceremony, with more than 500 people in the room, the speaker asked people to stand if they had been a member or employee of Audubon for 10 years. Then 20 years, 30 years, 40 years and so on. Bart was one of only two people still standing at 60 years or more. He then went up to the microphone and explained to the crowd that his mother had been a lifelong member of Audubon, starting in 1911 when the organization was still called the National Association of Audubon Societies. He said that his membership began in 1940 as a result of

being a Junior Audubon Club member, and that he has remained involved with the organization for more than 70 years.

Bart has had a lifelong connection to the Audubon Society, starting with his mother's involvement in Audubon Society of Western Pennsylvania, the local chapter in Pittsburgh. Bart eventually was asked to serve on the National Audubon Society board of trustees. He laughed while telling me, "I served on the national board for 12 years. And they gimmicked me by making me a vice president so I could spend an extra term. I've just sort of stayed involved on and off in the local chapter. They made me a board member emeritus." At the age of 87, he serves on the board of Audubon Rockies, the regional office of National Audubon Society. Bart has had a long history with Audubon Society and a real passion for the mission. After explaining his involvement with the organizations over the decades, he ends by telling me it "all started with May Williams and Junior Audubon."

Dur is another life-long Auduboner. He not only participated in a Junior Audubon Club when he was a child, in the fourth grade in Hingham, Massachusetts, but he also started a club with his own students when he became a teacher years later in Connecticut.

Dur has long been connected with the National Audubon Society as a staff member, board member and a volunteer for several projects across the country. Dur was the director of the Greenwich Audubon Center in Connecticut, the Hog Island Audubon Camp in Maine, and served as vice president of education for National Audubon. He has remained involved with Audubon programs throughout his life, even today in his 90s.

Wayne is also a life-long Auduboner. Wayne participated in the Junior Audubon Club in 1955 when he was in fifth grade in Massachusetts, and today works for the Massachusetts Audubon Society. He is an author, educator and conservationist, and has spent more than 35

years conducting birding workshops, writing about birds and leading trips from Madagascar to the Arctic. He is currently the director of the Important Bird Areas Program for Mass Audubon, where he has worked for decades.

Wayne has had a lifelong interest in birds—and not just a passion, but a career dedicated to birds. He said, "I will say that Mass Audubon was always very much a part of my existence, even when I wasn't working for them."

Although Tom hasn't worked for Audubon, he has been very involved in the organization in a variety of ways, starting an Audubon chapter in North Carolina in his mid-40s. He is very active in the birding community and speaks often about how the Junior Audubon Club started it all for him in childhood. He said that in regards to birding and engaging others in it, "it kind of became a lifelong thing." Several years ago he started and has successfully implemented a national Christmas Bird Count for Kids (called CBC4Kids). Hundreds of children, with their families, have participated in this program across the country and beyond. He said that who he is, and what he is working toward now, are all "rooted in an incredible childhood."

Nancy has also been involved in Audubon since her childhood, as a member of Junior Audubon Club in Plainfield, Connecticut in 1941. In 2014, Nancy received the President's Award from New Hampshire Audubon for her dedication and lifelong commitment to Audubon's mission of connecting people with nature. In her acceptance remarks, she mentioned that she had been a Junior Audubon Club member as a child and has been connected to the organization, in multiple states, ever since.

Nancy has been involved with New Hampshire Audubon for many years and has volunteered with its education programs and in its gift store, among many other tasks. In addition to her involvement in New Hampshire, when she and her family lived in Massachusetts they

were involved with the Massachusetts Audubon Society and spent a lot of time at Stony Brook Wildlife Sanctuary. She shared stories of bringing her children there for programs, family picnics and walks in the woods. She has been interested in birds since her childhood and has had a strong connection to nature throughout her entire life.

Steve participated in Junior Audubon Club in Manhattan, New York, in 1943. A part of his club they visited the National Audubon's headquarters in New York City. Steve has been involved in Audubon and other bird conservation organizations throughout his life, including serving on the Connecticut Audubon Society's board of trustees. During the interview, he said, "If I didn't know about Junior Audubon, I wouldn't have heard about Audubon and I would never have gone across the park to National Audubon and would have never become involved."

Acceptance. I noted earlier the importance of the social component of sharing experiences with both peers and adult role models. These are critical components to identity formation. The social aspect of the program was mentioned by participants as they shared meaningful memories. In addition, when speaking about the impact of the program many mentioned the social acceptance and validation of their interests they experienced. Before participating in the club, some said they felt socially isolated and were the only ones in their social circle who were interested in birds or nature. The feeling of acceptance was experienced during the club, but it had lasting impacts on their life, interests in the environment and actions. For some, those friends formed during their club lasted into adulthood.

In the survey, Barry wrote, "I had a burning, intense, all-consuming interest in birds and nature, and in a very real sense I feel Junior Audubon legitimized that interest, made it seem important. The materials inspired me to go out into the field. The Allan Brooks artwork inspired my own burgeoning interest. I was made president of the club, I recall that was the only time I

was in any such position." Barry said he didn't really like school when he was a child; he was very interested in nature as opposed to what was being taught in the classroom. He said an exception was the Junior Audubon Club, which he thoroughly enjoyed. That, he said, was where he "was allowed to shine."

Barry mentioned several times in the interview and survey that the club validated his interest in nature and birds. He said that he didn't have many, if any, friends who were interested in the same thing. "[The club] was the one time and one place where my interest was taken seriously within the context of, you know, what was socially the norm, if you will," he said.

When I asked Barry about the impact of the program, he said, "For me, as a child, I know [that] the one thing it did do, it provided a sense of legitimacy, a validation for my inherent interest. So, all the things that I've done with my life in terms of natural history and the environment and being a bird artist and a writer—I wrote a nature column for the Toronto *Star* for 25 years—all of those things probably would have happened even if I hadn't had the experience. But how much better it was for me as a child, and how much happier I was, and how much just more productive in pushing me ahead further that I did have it." He continued: "When something comes along that shows you that you're not alone, I think when you're a young child that's very, very important."

Throughout the interview with Joe, he shared stories of birding adventures during his youth with close friends, who remain so today. The connections through birds, social acceptance and Junior Audubon Club were critical to Joe. "[Junior Audubon] also reassured me that having an interest in natural history was a good thing to do, especially at an age when most peers my age would tease me or ridicule me for having an interest in nature or birds. Also it facilitated meeting others my age who had similar interest." Later in the interview he mentioned again the

importance of social acceptance. “When you’re a kid at that age and you’re excited by all of this, your peer group is not. You’re sort of embarrassed to admit to anybody that you have those interests. All of sudden when you find some other kids your age who have those same interests, it's fantastic. That little Audubon group did that.”

Not only was peer acceptance critical and mentioned by the participants, but so was the influence of the adult club leader as a mentor and provider of support. Nearly all of the participants recalled their club leader and had positive memories of him or her. For some, the importance of an adult validating their interests and sharing those interests was highly impactful. David spoke emotionally and lovingly about his club leader, Florence Retzer. Florence “was my mentor, along with my parents, in getting me interested in things in the natural world. I explored her property and some of this resonated with me, even back when I was five [years old].” Later in the interview he said “she was the first person outside my family, aunts and uncles, who would talk to me as though I wasn’t just a snotty little kid. She’d engage me in discussions of things and ask my opinion on things. The time I spent with her was just wonderful. I can’t say enough about how strong an influence she had on me.” He remained in contact with Florence throughout his life and dedicated his Ph.D. dissertation to her.

Loren spoke emotionally about his homeroom teacher and Junior Audubon Club leader, Mrs. Rutherford. She encouraged his interests, while he didn’t feel that from others in his life. “I was a wildlife nerd. It was difficult finding a "safe place" for my interests,” he said. “In some ways the Junior Audubon Club was a refuge. It was safe, it encouraged me to study nature… I think it certainly gave me, as I was going into high school and after, having these really wonderful two years in the Junior Audubon to feel like there were other people out there like me. There was lots of hope in conservation and birds. It is interesting—wherever I've gone

and met other museum people or science people, it's always nice to talk to people who are birders because there's a common thread there, even though I don't particularly identify myself as a birder."

Theoretical Framework

The findings from my study reflect environmental identity formation and align with my theoretical framework. The key components of my findings are categorized into action, social (adult leader and peer to peer), place and interactive learning/knowledge (Figure 21). These are not isolated comments, but were common themes that emerged from the interviews. My retrospective research explores program participants' memories decades later to determine whether these experiences correspond to the key elements of environmental identity formation and social practice theory (Kempton & Holland, 2003). I explored the process of environmental identity formation during childhood to see how it complements social practice theory, with a focus on the knowledge and emotional bonds formed through direct encounters with nature and participation in shared learning and action (Figure 21). There are themes that emerged from my research that complement the key elements of the three bodies of literature. Figure 21 highlights these key components.

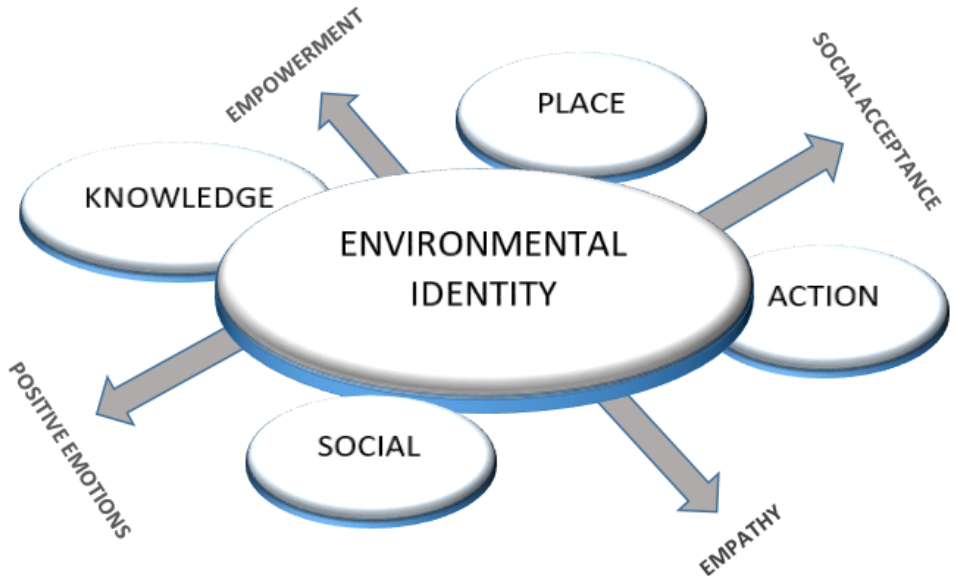

Figure 21. Framework for this study

Each of these major categories line up with my theoretical framework. Below lays the foundation for the theory that aligns to the findings from my study, discussed above.

- Action: The action theme was used to code comments during the interviews that had to do with activities that club participants recalled, including exploring nature, going on field trips, building bird nest boxes and other interactive, hands-on learning. Environmental action is a fundamental part of one's environmental identity (Kempton & Holland, 2003). Kempton and Holland see action as an outcome of increased salience and empowerment, which integrates action and identity development. Vivid memories that involved action were recounted by nearly all participants because they shape who we are and influence our environmental identity (Chawla & Derr, 2012). Action is influenced by two forms of knowledge: direct experience where people become immersed in nature and

learn how to protect it through trial and error; and secondhand information about environmental issues and problem solving from books, movies, and stories. Club participants remarked on both forms of knowledge gain through participation in the program. A sense of efficacy is critical to achieving valued goals, which people gain when they realize that they have an impact on the world, working either alone or in groups (Chawla & Derr, 2012).

- Adult & Peer Social Interactions: Social interactions, especially with adult role models, help to shape experiences. Social groups, including family, friends, mentors and organized groups have major influence on how identities form and are maintained. Environmental identity is formed through the combination of social experiences and the environment interacting with and defining each other (Clayton, 2003). Environmental identities are socially influenced and develop from interactions between nature and social connections. It is through experiences and interaction with objects, nature, and other people that individuals construct their understandings of the world and develop their identity. Participants remarked on the influence that their club leader played in shaping their experiences and the sense of belonging gained through peer-to-peer engagement.
- Knowledge: Active learning is a core feature of environmental learning and the relationship between action, learning and memory highlights its importance (Knapp, 2008). Knapp found that programs involving active learning, repetition of concepts, and personally relevant information are particularly memorable.

Effective programs should include: real-world learning in nature; hands-on learning opportunities for individuals; ability for individuals to apply learning

through taking action and practicing skills; learning in a social setting; peer-to-peer learning (Blatt, 2014; Stern et al., 2014; Williams & Chawla, 2015; Zint, 2012). These types of programs provide experiences that have been associated with pro-environmental behaviors, according to both significant life experience research and environmental education outcomes studies (Chawla & Derr, 2012; Stern et al., 2014; Zint, 2012). Participants recalled the learning activities they participated in, learning experiences with peers, and unique educational materials they received as part of the club.

- Connection to Place: Adults with environmental identity have an emotional affinity toward nature that is connected to their present and past experiences with the natural environment (Kals & Ittner, 2003). People "had either special places in nature, a place that had been special to them but was developed or destroyed, or a particular experience in nature that was significant in developing their concern for nature" (Zavestoski, 2003, p. 304). Connection to place influences the development of an environmental identity. The context of place is also consistent with social practice theory and the significant role it plays on how identities are shaped, perceived and taken up (D. Holland, 2003; Kempton & Holland, 2003). Participants mentioned experiencing nature in specific places and recalled vivid memories of those places.
- Connection with Birds: Children possess a natural affinity for animals from a very early age. From an early age children have a strong attraction to and liking for animals, which fosters caring about the natural world (Myers & Saunders, 2002). The hands-on experience with animals can have a lasting influence for how

children perceive and value wildlife and the environment, leading to individuals taking action to protect the environment. Research has found a correlation among environmental identity, a sense of connection to animals, and an individual's environmental concern (Clayton, Fraser, & Burgess, 2011). Participants shared memories of bird watching or seeing specific birds while in the club.

- Emotion: Emotional affinity to nature has proven to be a formative base for development of pro-environmental behaviors. These emotions can include happiness, fascination, joy, and curiosity. Affinity to nature can be encouraged by participating in frequent positive experiences in nature and by experiencing nature through all the senses (Gebhard, Nevers, & Billmann-Mahecha, 2003). An emotional affinity to nature is influential in forming and maintaining an environmental identity (Clayton, 2003; Kaplan & Kaplan, 1989). For youth, one of the positive impacts of contact with nature is the development of a stable emotional attachment to it (Kals & Muller, 2012). Participants shared that the club was fun and enjoyable. For my participants, the memories of the club were uniformly positive.

Conclusion

My retrospective research explores program participants' memories decades later to determine whether these experiences correspond to the key elements of environmental identity formation and social practice theory (Kempton & Holland, 2003). I explored the process of environmental identity formation during childhood to see if it complements social practice theory, with a focus on the knowledge and emotional bonds formed through direct encounters

with nature and participation in shared learning and action. Exploring individual's participation in a specific program enables us to have a stronger understanding of the programmatic elements that can influence the formation of environmental identity. This can inform educators on how to better design programs with a lasting impact on participants. Research shows that having a strong environmental identity with personal connections to nature translates into action—greater pro-environmental behavior, attitudes and values.

Chapter VI: Discussion and Recommendations

Although I have heard about the Junior Audubon Club for years, and even met people who participated in the program, not until I started my research did I realize how important this program was to so many. People continue to identify with this program into their adulthood, decades after participating in it.

Many well-known conservationists who participated in Junior Audubon Clubs as children later wrote about their experiences, including Roger Tory Peterson, world famous artist and author of the Peterson Field Guide series; the nature photographer, lecturer and author Allan D. Cruickshank; Howard Zahniser, the legendary leader of The Wilderness Society and author of the original Wilderness Act; and the late bird artist John Taylor.

The list goes on, including many Audubon staff members such as Robert Allen, research director for Audubon and the one responsible for the survival of the endangered whooping crane, or Henry Bennett, Audubon wildlife tour leader and warden. All these individuals dedicated their lives to bird conservation after participating in Junior Audubon Clubs at an early age.

Not only well-known conservationists and ornithologists biographies and obituaries mentioned the importance of the program, but people who followed different career paths, such as pilots and generals in the Army. All these individuals had rich, full lives and mentioned their membership in the Junior Audubon Club as young children. I soon realized that many people who had risen to great achievement, success and fulfillment identified with being a member of a Junior Audubon Club as young child. That alone shows the
importance of this program.

I discovered more and more people who, decades later, still felt connected with this program. These discoveries are what sparked my interest in exploring this program further, investigating participants' experiences in the program and its possible perceived impact. My

findings confirm that the program had lasting impacts on the 19 participants involved in this study.

Findings

I investigated the salient and memorable experiences of 19 past Junior Audubon Club members who participated in the program as children, and how they describe the influences of the program on their environmental identity. Using a combination of archived historical materials, participant surveys, participant interviews, and follow-up questions after the interviews, I used these multiple method datasets to document the meaningful, memorable components of the program for participants who were members between 1931 and 1968.

Not only are there very few papers written specifically about the Junior Audubon Club, but more generally there are only limited studies looking at the role that specific programs play in environmental identity, or at lifelong influences of environmental programs. My research helps to fill this gap in the research. In some respects, my findings reinforce what other studies have found, including the importance of active learning, frequent time in nature, peer-to-peer learning and supportive adult role models. However, my research looked at the long-term impact of participating in a specific program, while other studies have explored the impacts of more general childhood experiences.

In addition, there is a limited number of studies that explore the impact of programs on environmental identity formation or maintenance. Identity, or how participants view themselves, may be very important in understanding an individual's relationship with the environment. This suggests a new way in which to explore the impact of environmental education on participants. If a person's environmental identity is a strong component of how they define themselves, that individual will be more invested in taking action to protect the environment (Clayton & Myers,

2009). Learning more about how people view the environment as it relates to their own sense of self may help toward understanding the impact of environmental education programs like the Junior Audubon Club.

Not only does this help educators better understand the impact of programs, but it also can aid with the design of environmental education programs. My research findings can be applied to the development of future environmental education programs in order to reflect the educational components that my research participants recalled as impactful decades after participating in the programs.

These are the components, which are supported by social practice theory, environmental identity and significant life experience research, that have motivated and engaged millions of children and attributed to the development of their environmental identity in ways that may impact them for the rest of their lives. Based on data collected from the survey and interviews, everyone had very positive memories of participating in the program. Furthermore, all said that their involvement in the club influenced their lives, including how they view nature, environmental issues, and actions they take toward the environment.

The importance of emotional engagement in environmental learning is not a new concept (Chawla, 2007; Kahn & Kellert, 2002; Kellert, 2002). However, as did Liddicoat (2013), my findings document the importance of positive experiences in creating lasting memories (Liddicoat, 2013). Memories shared by participants during the interviews were overwhelmingly positive. The Junior Audubon Club program was designed to include fun, active experiences in nature with peers and caring adults. Memories of joyful experiences with positive emotions associated with them tend to last longer (Walker, Vogl, & Thompson, 1997). This finding

reinforces the importance of providing programs that are fun, enjoyable and positive emotional experiences for children, and have lasting impacts.

It should be mentioned that I did not directly ask participants if they had any negative memories from participating in the program. No negative memories were shared during the interview and the overall positive feelings could be due to how I recruited and selected my participants. I was seeking people who remembered participating in the program and self-identified with the program.

This study found that the 19 participants, who scored high on the environmental identity scale, recalled positive memories of participating in the Junior Audubon Club. Participants were involved in the program in different places throughout the U.S. and Canada during different times from 1931 to the late 1960s. However, the same themes emerged from the interviews no matter where, when or for how long participants were involved in the program. The participants repeatedly reported the importance of experiences in nature, watching birds, active and real learning, and doing so with supportive peers and adults in a club setting.

While the individual clubs varied in their specific activities and format, these themes were consistent across all participants. Participants frequently recalled how the program fostered a love for nature, particularly birds through activities and experiences. They also mentioned the supportive atmosphere that the club created through encouragement from adult club leaders and acceptance from their peers. Other studies have found similar findings, but very few have looked at a specific program that combined all of these influences.

Active participation. Many who are involved in environmental education would agree that hands-on and direct experiences in nature are most beneficial (Clayton, 2003; Dillon et al., 2006; Kahn, 2003; Sobel, 2005; Stern et al., 2014; Zint, 2012). These opportunities for hands-on

learning in nature are essential in creating significant experiences that last a lifetime. Participants mentioned experiences that took place throughout the time they were involved in the program, which for many was only one-year, but for some it was multiple years. Such repeated experiences, even if only during the course of a single year, are a critical factor in the thickening of identity over time. The importance of repeated experiences has been widely documented in environmental education research. However, I think it is important to reiterate that all participants were involved in this program for two years or less and yet it had a lasting impact on them, too.

The number and quality of memories of Junior Audubon that people shared during the interviews was remarkable—vivid recollections of their involvement, which for some occurred more than 70 years ago. In some cases, the details had faded, but the overall positive memories of nature exploration, learning about birds, being part of an exclusive club, and the supportive atmosphere that was created through shared experiences were easily recalled. All participants had positive memories of participating in the program; in many cases one could hear the positive emotion as they shared their recollections. In addition, several emailed after the interviews to continue to share memories or express the importance of the program. Some found their club pins after the interviews and sent me photos of them, showing an emotional connection to the program that remains today.

Connection to birds. In addition to the hands-on, experiential learning, a connection to birds was an important theme that emerged from the interviews. The Junior Audubon Club always had a specific emphasis on birds and their protection. In fact, it was formed in 1911 to engage youth in bird protection, specifically robins, so it is not surprising that learning about birds and watching them was a focus of the clubs. However, the program experience was deeper

than just learning about and watching them. Participants shared memories of building nest boxes for birds, feeding birds, saving injured birds, and helping birds to not go extinct. A majority of the participants have maintained a passion for birds throughout their lives. Creating empathy for birds seems to have been crucial to developing these lasting connections.

Not surprisingly, children from an early age have a strong attraction to and liking for animals, which can provide that link to caring about the natural world (Myers & Saunders, 2002). The hands-on experience of interacting with animals can possibly have a lasting influence on how children perceive and value wildlife and the environment, leading to individuals taking action to protect them both. Research has found a correlation between environmental identity, a sense of connection to animals, and an individual's environmental concern (Clayton et al., 2011).

Research reveals that children often learn compassion from interaction with animals as they compare and explore their own feelings (Clayton & Myers, 2009; O. G. Myers, 2007).

This act of empathizing with animals aligns with the findings from this study. When these feelings are reinforced over time by adult role models, they can lead to a greater sense of ownership and empowerment. Experiencing nature as part of a social group, creating meaning together from shared experiences and interactions with animals contributes to environmental identity formation.

Junior Audubon Clubs focused on birds, and for good reason. Birds are inherently interesting; they are diverse, colorful, melodic and easy to observe. They are found in every habitat, on every continent, from highly urbanized cites to remote wildernesses, and at every season of the year. People don't have to travel to the edges of the planet to find them, though some do—birds are common in yards, schools and city parks. I believe their accessibility is a major reason people are curious about birds.

Organized groups dedicated to studying and watching birds started almost 150 years ago in the U.S. The Nuttall Ornithological Club was founded in 1873 in Cambridge, Massachusetts, and continues today with a thriving membership base. In Philadelphia, the Delaware Valley Ornithological Club started in 1890 and continues to provide bird walks and programs to a robust membership. Since the 1900, hundreds of other bird clubs have formed throughout the country.

During that time, other groups for adults and children focused on broad natural history, as well as more specific taxa, such as the Amateur Entomologist's Society. However, organized groups that focus exclusively on birds have remained the most popular. The number of self-proclaimed bird watchers continues to grow. According to Bradnee Chambers, executive secretary of the United Nations Environment Programme Convention on the Conservation of Migratory Species of Wild Animals, "24 million Americans play basketball, 23 million baseball, and 9 million play American football — at the same time, there are estimated to be nearly 60 million American birdwatchers" (Chambers, 2014). In addition to adult bird watchers, there are dozens of young birder clubs being started across the country ("Young Birder Clubs - eBird," n.d.).

Birds are not just the most easily observed wildlife in the world, but almost designed to be interesting to humans, which makes them intrinsically ideal as the base for a conservation education program, and a gateway to environmental identity. There seems to be an innate human curiosity and interest in birds. However, there doesn't seem to be research that has explored the educational and behavioral impact of focusing on birds, instead of other fauna. In the course of my research, participants shared many stories about birds, which were clearly an important aspect of the Junior Audubon program. Further research, exploring why people develop

connections to birds and the lasting impact of programs that focus on birds, would be a fruitful avenue of study.

Direct experiences in nature. Experiences in nature, especially for children, create strong connections to nature, which tend to instill positive emotions toward it, viewing nature as a source of wonder, delight, and inspiration. A growing body of research links healthy child development with time spent in nature, especially during early childhood. Direct experiences in nature before age 11 promote a long-term connection to nature (Wilson, 1994). The "middle childhood" age group, between 6 and 12 years old, has been shown to respond particularly well to developing positive relationships with nature (Kahn & Kellert, 2002). "Middle childhood is a critical period in the development of the self and in the individual's relationship to the natural world," Kellert (2002) wrote (p. 133). "Children at this age become more comfortable, familiar, and appreciative of other creatures and natural settings, although often in relative proximity to the home rather than in pristine or wild areas"(Kellert, 2002). This developmental stage marks the beginning of greater independence from their parents and coincides with a child's desire to create and build things. The emotional attachment that occurs during this time can "become a legacy carried into adulthood" (Kellert, 2002, p. 126) with lifelong consequences. This corresponds with findings from my study with participants being involved in the club between the ages of 7 and 13, with nearly 70% being approximately 9 and 10 years old. When developing youth programs, being aware of age levels and providing experiences that can have a long-term impact is important.

Duration of environmental education programs is critical in the level of impact. Participants were involved in the Junior Audubon Club for a minimum of a year, although some individuals were involved over multiple years. The club would meet frequently, either weekly or

monthly, enabling participants to have repeated experiences in nature and to build relationship with the club leader and fellow club members.

Social interactions (peer-to-peer and adults). There is limited research about the role and impact of social learning in environmental education programming, yet the social aspect of participation was a major theme that emerged from the interviews. Humans are social beings who interact with the physical world and with each other based upon shared meanings, which helps to develop their understanding of the world and themselves from these social interactions (Hutchison, 2014). The social component of participating in the club, where children shared experiences as a group, exploring and learning from each other, were critical.

In addition to peer-to-peer interaction, the role of the adult club leader, who created a supportive environment and encouraged the children's' interests in birds and nature, was a major theme throughout all of the interviews. Identification with others, a sense of belonging, and social acceptance can come from the social aspects of clubs, and these social, team-structured activities also help individuals learn more through peer interactions (Carruthers & Busser, 2000). This was especially apparent in the recollections of several participants, who shared stories of feeling socially isolated as children, especially in regards to their interests in nature.

The club created a safe place for them to engage with peers who had similar interests, and with adults who encouraged those interests. Feeling valued and validated by others, particularly those outside of their family, can play a role in a child's understanding of who they are and the value they place on their role in that community. The club created a community of support for many of its participants, a place where they received support, but through which they also contributed to the group. The Junior Audubon Club was an exclusive group of people; children paid membership dues to belong to it, and received materials exclusively for club members. It

was designed to provide opportunities for children to receive and provide support, helping to form a sense of belonging, ownership and investment in that group. Through these peer-to-peer interactions, students build respect for one another as equals, which allows for further development of emotional independence (Wadsworth, 1996). These feelings are crucial to individuals feeling connected to and valued within a group in order to take that on as a part of their identity. This study confirmed the importance of social aspects, both peer interactions and adult-child connections to environmental identity formation.

Ownership and empowerment. Building on the importance of social acceptance is the need for individuals to share their knowledge with others and take ownership over the learning. Participants in this study shared memories of feeling empowered by their club leaders to share their expertise with others. For some this was in the form of formal presentations at a local Audubon chapter meeting or other public venues. This sense of ownership and empowerment are critical to identity formation. Identity is strengthened when individuals gain a sense of empowerment, and a belief that they can have an impact either by acting alone or as a part of a group (Kempton & Holland, 2003; Kitchell, Kempton, Holland, & Tesch, 2000). Kempton and Holland (2003) found that those who identify themselves as environmentalists have acquired this sense of empowerment by taking on a role where action was a necessary part of their environmental involvement.

Stapp and Harrison (1965) evaluated the Junior Audubon Club by surveying club leaders. They found that club leaders said the program was impactful because it was "child-centered and each individual gets to keep his/her own booklet." They also found that "program [gave] the members a feeling of togetherness and a chance to meet others with the same interests. Leaders

often mentioned that the children feel important being identified with a national organization and by the fact that they're working for a good cause" (Stapp & Harrison, 1965).

Individuals developed these skills through club participation and were able to advance those skills by interacting with each other. The role of the club leader was critical in shaping the knowledge and expertise and positively reinforcing the skills. Participants recalled times when they gained new skills in the club and felt empowered to share with others.

In the 1965 assessment of the Junior Audubon Club, "the majority of teachers valued the club [design] of the program for the opportunity it gives to develop leadership and a sense of responsibility, to teach parliamentary procedure, and because learning becomes fun, too, when the children can do it in a club situation" (Stapp & Harrison, 1965). Also, that study found that the "children love[d] belonging to a club and enjoy[ed] the group activities, which made the program a "doing" project, rather than seeming too much like classwork" (Stapp & Harrison, 1965).

Keepsakes. Part of the formation of the group identity was the importance of receiving materials designed specifically for Junior Audubon Club members. Many kept those materials from their childhood, adding an element of feeling part of a special group. Similar to what Williams and Chawla (2015) found in their study, mementos or keepsakes were a repeated theme that came out of my interviews (Williams & Chawla, 2015). Studies have explored how people use cultural objects and symbols in order to strengthen behaviors and reinforce group-oriented actions and identity (Holland & Lave, 2009).

The majority of participants had specific memories of the materials received as part of the club, including their bird pins, membership cards and bird coloring pages. Several still had those materials decades after participating in the club, which served as physical reminders of their

experiences in the club and the positive memories associated with the program, regardless of where, when or for how long they participated. Some kept them in prominent places in their houses, framed and hanging in their living rooms or displayed in their offices. Those who no longer had the materials (often because of multiple moves during their lives) still recalled the details about them. For example, a number of individuals recalled fondly which bird was on their Junior Audubon Club pin, even though they no longer had the pin. There needs to be further exploring to see what impact these keepsakes play in personal and group identity formation, maintenance and thickening. Some participants mentioned wearing the pin with pride, as it identified them as a member of a perceived exclusive club. These materials appear to have helped develop their group identity and helped thicken their environmental identity over time. Participants said that they kept the materials because they reminded them of a joyous time in their lives and reinforced positive memories. The materials served as reminders of what they had experienced as children and the significance of that time in their overall lives, a piece of their personal histories. Future research could explore the role that keepsakes and specialized materials play in thickening identity.

Implications

The findings from this research contribute to the limited understanding of the long-term impacts of participating in environmental education programs during childhood. Not only did people recall memories of their participation in the program many decades earlier, but they also shared the self-proclaimed impacts of the program. Based on the findings from this study, there are specific components of their experience in the Junior Audubon Club that proved most influential and lasting.

These program elements included active learning, supportive adult mentors, socialization in nature, peer acceptance, and engaging with birds (Table 19). These findings suggest that learning environments, especially clubs, can be particularly effective in making a lasting impact when there are repeated interactions (with nature and other participants); opportunities for social group formation; validation of shared interests; peer-to-peer learning; and empowerment from supportive adults. These findings can be applied to the development of new environmental programs.

Participants said they felt empowered by adult club leaders when asked to present on certain topics, when they felt that they were listened to, asked for their expertise, and asked to serve as president of the club. These findings support additional research that documents the importance of empowering children and youth, which has lasting impact on them (Chawla & Cushing, 2007; James, Bixler, & Vadala, 2010). The club model—with a club leader and members—allowed children to be part of an exclusive and unique group, very different from their typical classroom and school learning experience. In addition, group identities were established by participating in the club. The bird pins worn by club members helped solidify the identity of the group, as did receiving specific materials as club members. Throughout the interviews, participants mentioned the materials and the bird pins they had received. Many still have these items, which helped to strengthen memories and the overall experience of being in a Junior Audubon Club. Developing new programs with a focus on creating a group identity can have lasting impacts on participants.

Table 19

Implication of Key Findings

Key Findings	Implications
Active learning	Create frequent hands-on, action-based learning experiences
Supportive adult mentors	Provide opportunities for adult to be role models and empower youth
Socialization in nature	Create frequent, positive, supportive social learning opportunities in nature
Peer-to-peer learning and acceptance	Create frequent peer-to-peer support and learning experiences
Engaging with birds	Focus on experiencing and learning about local fauna
Social group formation	Develop group identity through club model
Validation of shared interests	Provide opportunities for acceptance from adults and peers
Youth empowerment	Create positive youth development

The club model could be applied to the classroom as well, with classrooms teachers providing that mentoring and supportive role. Through peer-to-peer supportive learning, unique, hands-on learning experiences and exposure to nature can provide similar impact to an out-of-school time program. For some participants, their club was implemented during the school day with the classroom teacher. My findings could apply to programs during the school day and outside of classroom teaching.

Members and club leaders shared an interest in nature (and more specifically birds), which united them—not only as a group, but through social acceptance and validation of those interests. The focus of the Junior Audubon Club program for more than 60 years was on birds

and inspiring children to care about them. All participants mentioned learning about and watching birds as part of their club. Future research should explore the influence of learning about and experiencing local fauna, especially birds because they can be found in virtually all rural, suburban and urban settings around the world.

Similar to the research of Williams and Chawla (2015), this study helps expand our understanding of social practice theory into additional areas of research, especially environmental education, where it currently has limited application. A key component of social practice theory's understanding of identity is the need for action and active participation (D. Holland, 2003; D. Holland & Lave, 2009; Kempton & Holland, 2003), which can be applied directly to environmental education. My findings reinforce the need for hands-on learning, repeated nature exploration and active participation in conservation projects.

The findings of this study may seem to point to obvious elements of an effective and successful environmental education program. As educators, however, are we intentional about developing programs that include such elements as repeated experiences in nature, hands-on interactive learning, opportunities for students to be empowered, and creating supportive peer-to-peer learning and sharing? Often the goals of environmental education programs focus on knowledge gained and skills developed. What if educators began to think about the role that programs have on developing or thickening environmental identity? Designing programs whose intended outcome is environmental identity could lead to long-term impacts on pro-environmental behaviors and actions. Lastly, the field can be more intentional and thoughtful about the role that the educator plays in supporting students' interests and experiences in nature.

With the increase in technology and its strong connection with youth, which can lead to isolation, social groups are needed more than even. Research studies have documented the importance of experiencing nature and the innate need for humans to connect to it.

The results of this study suggest that when children—especially between the ages of 7 and 13—have repeated, direct, hands-on experiences in nature with a supportive adult mentor and peers, they are likely to develop a care and love for the natural world that lasts a lifetime. When these emotional connections with nature are reinforced over time, especially by adults and peers who provide acceptance, individuals are more likely to maintain that care, which becomes how they view themselves—a core part of who they are. These elements can and should be applied to the design of future programming.

Limitations

The 19 people I interviewed were either suggested to me by Audubon staff and bird watchers, or responded to announcements that I posted seeking former Junior Audubon Club members. These is a narrow, disproportional sample size of the millions of people who went through the program and due to my research design, I'm only able to assess the impact of the program on these 19 people. Given how I found my research participants, they were more likely to have had positive experiences with the program, and indeed all of the interviews were positive in tone and reflection. All participants had positive experiences with the club, limiting my analysis to only positive perspectives. I did not explore the possible negative implications of the program, and the research questions and design were formed with the objective of exploring positive experiences within the program. However, it is important to acknowledge this as a limitation due to the positive bias it creates. In addition, the limited sample size prevents generalization of my findings to the wider public.

Like most research involving people, this study was limited by the truthfulness of the participants' responses to the survey questions and interviews, and the accuracy with which they recalled their experiences in the program and its perceived impacts. These responses could have been influenced by my (the researcher's) background and experience with Audubon, as well as the participants' desire to provide responses to the interview questions that they thought I wanted to hear. In this situation, it was essential for the researcher's experiences to remain disconnected from the study participants' experiences. This also reduced the risk that the study participants would embellish their experience to impress me, the sole researcher. Lastly, because the program no longer exists, participants didn't feel that their answers would negatively or positively impact an existing program.

In addition, this retrospective research relied on individuals' sharing their memories of participation in the program. There may be concern regarding the accountability and reliability of those memories. Memory is often flawed and subject to variation, while beliefs inherently limit what parts of an experience may be retained in memory. Also, retelling the story within the structure of the formal interview may have influenced what aspects of the story were highlighted and explored by the participant. I attempted to reduce these challenges and limitations by exploring the historical archives to compare shared memories with historical aspects of the program. For example, many people talked about specific materials received during participation in the program; my historical archive research confirmed that these reported materials were indeed part of the program. Also, I was not looking for specific details about program participation, but rather broader memories and influences. Participants in this study were part of the Junior Audubon Club 50-80 years previously, so their ability to remember the program in any detail at all is, I believe, a significant finding in itself. Were the program not very significant,

either in a positive or negative sense, it would probably have been forgotten or have been difficult to discuss in detail.

Results of the study indicate that a positive experience in the Junior Audubon Club impacted their environmental identity. However, many experiences help shape and reshape our identities, making it difficult to make a case for direct correlation between participation in this program and each interviewee's environmental identity. My research was exploratory, and I was not looking to assess the program. My approach was to capture the meaningful and memorable aspects of the program, enabling participants to explain their experiences in it and its impact. I wanted to better understand the experiences in the Junior Audubon Club.

Each club was structured slightly differently, so I was unable to do a uniform comparison of everyone's experience in Junior Audubon. Some clubs were implemented as part of the school day while others were not associated with school at all. I was not able to account for the impact of different club formats. However, the major themes were universal across all participants and did not vary depending on club design.

There may be criticism regarding the capture and generalization of individuals' experiences that took places over many decades. For example, learning experiences and opportunities in the 1930s were presumably vastly different from those in the 1950s, and surely would not apply to today's youth. I agree that each decade brought different cultures, norms and experiences, but my findings suggest that across the decades, certain elements remain constant and significant, regardless of societal influences. As supported by research in significant life experience, environmental education and social practice theory, real world experiences that nurture and provide hands-on experiences; a supportive environment through positive relationships with adults and peers; and active and repeated interaction with nature; have been

shown to be important influences on people. No matter the advances in technology, children remain children. Providing engaging, supportive experiences remain as critical today as they were 80 years ago.

Every study has limitations, and my research is no exception. However, I believe this study's findings can offer important guidelines to the design and delivery of future environmental education programs.

Recommendations for Future Studies

This study's findings contribute to the limited understanding of the lifelong impact of youth environmental education programs. Based on these findings, there were specific components of the Junior Audubon Club that proved most influential and lasting for the 19 participants interviewed. These included active learning in nature; supportive adults who shared similar interest and passions; and establishment of a sense of community through social acceptance and group identity. This study suggests that childhood participation in programs can be particularly successful, and have a lasting impact, when a sense of community is created with peer acceptance, supportive adults and repeated experiences in nature.

More than 10 million children participated in the Junior Audubon Club between 1910 and the 1960s. Future studies could use different participant selection protocols and methods to investigate more people's experience with the program. Future studies could look at programs similar to Junior Audubon Club to explore the degree of lasting impact from those experiences. In addition, the club model of Junior Audubon Club was found to be especially impactful, and additional studies could explore the long-term impact of participation in nature after-school clubs or similar club programs.

There is a need for longitudinal studies that follow participants during the program itself as in subsequent years in order to document changes over time. Longitudinal studies are time consuming, expensive and can be challenging to design, but there would be great value in seeing the impact of programs over the lifetimes of individuals.

For this study, I did not do an extensive review or analysis of the curriculum of the Junior Audubon Club. Future studies could explore more deeply the uniqueness of the curriculum and compare it with similar program designs. The role that the adult club leader had in shaping the participants' experience was a significant theme that emerged from the interviews. Several of the participants described their club leaders as being different from family and friends. Future studies could explore the characteristics of club leaders who had a lasting impact on participants. Studies could investigate how exposure to adults other than family members broadens a child's perspective on becoming an adult. The club leader played a role different from that of a classroom teacher or parent; investigating how that role enabled a different relationship between the child and adult to form would be valuable.

Another theme that emerged from this study that warrants further exploration is the role that keepsakes or mementos play in reinforcing identity, both during a program and throughout the life of the individual. The materials received through the Junior Audubon Club were meaningful and memorable to participants, many of whom kept them throughout their lives. Exploring other programs that used objects to identify the group as unique, and exploring whether or not that was impactful, would be an interesting study. For future program design, incorporating keepsakes or mementos of program participation could be impactful.

The participants I interviewed all had a strong passion for birds and bird-watching. For several, their participation in Junior Audubon Club helped to form a strong, lifelong interest.

Others entered the program with a pre-existing interest that was strengthened through their involvement in the club. Future studies could explore programs that focus on birds as a way to strengthen individuals' connections with nature and the development of pro-environmental behaviors.

Finally, there is an opportunity to further explore the role that programs play in forming and shaping environmental identity. How would a program be designed differently if the intended outcome was the formation of an environmental identity? Such research could build on the existing research into environmental identity, but focus on program participation.

Application to Future Program Design

The following recommendations are based on the findings and conclusions of this study. The recommendations are for educators and can be applied to recreating a modern day Junior Audubon Club or similar program with the goal of building and maintaining program participants' environmental identities that last a lifetime.

The following program elements have emerged from my analysis of the data collected during my research and the existing literature. This is by no means a complete list, but captures the major program elements.

- Establish a club model with frequent, scheduled meetings or programs that enable on-going interactions with the members. Create a community, which enable youth to connect with one another. These connections are social relations that extend beyond immediate familial ties, and which mutually define that relationship as important to the participant's social identity and social practice. Not only does a sense of community generate ties among youth, but it can provide a setting for pro-environmental social norms to be created and can foster a sense of personal and collective environmental efficacy.

- Encourage positive peer-to-peer learning and support with focus on social acceptance and validation of interests. Allow time and space for youth to develop relationships with supportive and charismatic adult leaders; provide opportunities for club members to learn to accept diversity among their peers; and advance social skills.
- Establish an adult club leader who is a role model, providing social support for the youths' development of a caring relationship with the natural environment. Adults share experiences in nature with the youth; model care for the environment; show appreciation of participants' interest in nature; and help expand participants' environmental knowledge.
- Develop a membership that includes branded logos and materials, which are limited to club/program participants. This helps youth feel like they belong to something special and beyond the norm. Branded materials that are only available to members can aid in group identity and a feeling of community. These items could include physical items, such as clothing (jackets, sweatshirts, etc.) or online badges that can be shared on social media.
- Offer regular experiences in nature with real world learning and hands-on inquiry, which allow youth to build emotional ties to the environment. Frequent positive experiences in nature build empathy toward nature and emotional bonds to it, which can last a lifetime. These experiences also allow youth the opportunity to practice the skills of active civic engagement and apply what they learned to the real world through action-based activities in nature.

- Empower students to take ownership of their learning through well-designed activities that provide a sense of independence and encourage connections among peers using small group work.
- Provide unique field experiences that are unlike their other learning experiences. These become memorable and can have a lasting impact. Experiences such as exploring new places, spending the night away from family members, travel to new areas, and new outdoor experiences with personal challenges can be transformative experiences with lasting impact.

Conclusion

How do people develop a deep and lasting concern for the environment? This is a crucial question for anyone who believes that a concerned, informed and active citizenry is critical to the effective stewardship of our planet. Environmental education should play a vital role in helping individuals experience nature, develop emotional bonds to it and become effective stewards of it. Ultimately, the citizenry's combined knowledge and motivation to act, gained in part through formal and non-formal education, can be one of the most persuasive and successful strategies for environmental health (Hungerford & Volk, 1990).

The findings from my research contribute to a relatively new body of literature examining the linkages between childhood experiences in education programs and adult pro-environmental behaviors, and the role that environmental education plays in the formation of environmental identity. These findings make valuable contributions to the environmental education field by identifying program elements that were significant in terms of shaping participants' environmental actions, attitudes and identity. Having a stronger understanding of

the programmatic elements that influence the formation of environmental identity will guide educators in better designing programs that have a lasting impact on participants. Research shows that having a strong environmental identity with personal connections to nature translates into action—greater pro-environmental behavior, attitudes and values.

Based on the findings from this study, there are specific components of an individual's experience in the Junior Audubon Club that proved most influential and lasting. These findings suggest that learning environments, especially clubs, can be particularly effective in making a lasting impact when there are repeated interactions (with nature and other participants), social group formation, validation of shared interests, peer-to-peer learning, and guidance and empowerment from supportive and passionate adults.

It is evident from the 19 people interviewed, as well as obituaries of deceased members, that the Junior Audubon Club left a powerful impression on people over the course of their lives. All of my participants scored high on their environmental identity; the majority expressed lifelong interest in birds; and some chose environmental careers. It is evident that a program like the Junior Audubon Club can have a lasting impact on its participants. It is clear from the findings of this study that this program shaped and contributed to the environmental identity, passion for nature, and an understanding of the natural world of many members. This research indicates that the Junior Audubon Club played a role in the lasting impact on my participants.

Developing a deep and lasting concern for the environment is critical to our planet. Our society faces unprecedented environmental challenges, from loss of habitat to a warming globe, and our future relies on a well-educated public acting as responsible stewards of the Earth. Environmental education should play a vital role in helping individuals connect to nature and establish lifelong emotional ties to it, which shape their actions. A sense of appreciation and

caring for the natural world can be the foundation for environmental stewardship (Kellert, 2002; Sobel, 2005). Junior Audubon Club established, and in some cases solidified, this foundation by providing opportunities for children to deepen their sense of appreciation and caring for birds, and the greater natural world. All participants recalled activities and experiences in the club. Field trips, exploring nature in their communities and watching birds helped develop connections to the natural world that lasted through their lives. Participants said that the program opened their eyes to nature and inspired an excitement about birds; for several, who already had the interest, it further fueled their passion. The overall awareness these participants gained by being in the natural world has had a lasting influence on their lives. The importance of time spent in nature is not a new finding, but environmental education programs often focus on the delivery of content and the acquisition of knowledge, and often focuses less on the experience itself and people sharing that experience (Heimlich, 2010; Leeming, Dwyer, Porter, & Cobern, 1993; Rickinson, 2001; Stern, Powell, & Hill, 2014; Zint, 2012). The participants recalled memories of time spent in nature, exploring and experiencing the wonders of the natural world.

As an environmental educator, I have always believed that the programs I taught had lasting impacts, but little evidence to demonstrate it. Findings from this study document the long-term impacts that participation in a program as a child can have throughout an individual's lifetime. Not only did people identify with the program many decades after participating in it, they recalled vivid memories of it and its impact, even though many only participated in this program for a single year, showing that even relatively brief participation can have lasting impacts. It is hoped that the results of this study can be applied to the development of both formal and non-formal environmental education programs as well as to future studies about the long-term impacts of efforts to develop ecologically literate and active citizens.

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Appendix A: IRB Online Application

IRB Online Application Questions

1. Name and mailing address of Principal Investigator(s):

[redacted]

2. Academic Department: Environmental Studies

3. Departmental Status: Student
4. Phone Number: [redacted]
5. Name of Research Advisor: Dr. Jimmy Karlan
6. Name & Email addresses of other researchers involved: N/A
7. Title of Project: Exploring Lifelong Environmental Influences of Junior Audubon Club Participants
8. Is this project federally funded: NO
9. Expected start date for data collection: January 15, 2017
10. Anticipated completion date for data collection: Dec. 30, 2017

You must respond to every question in this section. All supplemental documents / attachments must be added using the "Attachments" tab.

11. Project Purpose (500 words):

The proposed project is my dissertation research, which will explore the recalled meaningful and memorable experiences of the Junior Audubon Club on participants and how those experiences may have played a role in the development of an individual's environmental identity. The purpose of my research is to answer these questions:

- What do people recall years later from their experience in the Junior Audubon Club program, and why are those components of the program particularly memorable?
- To what degree, if at all, do participants attribute their Junior Audubon Club experience to their self-proclaimed lifelong environmental identity and behaviors?

This retrospective research will explore whether a Junior Audubon Club participant's recalled memorable experiences correspond to the key elements of environmental identity formation and social practice theory. I will use Junior Audubon Club participants as a case study to explore the process of environmental identity formation during childhood to see if it complements social practice theory, with a focus on the knowledge and emotional bonds formed through direct encounters with nature, positive role models, and participation in shared learning and action.

I believe having a stronger understanding of the programmatic elements that influence the formation of environmental identity will inform educators on how to better design programs that may have a lasting impact on participants. Research shows that developing a strong environmental identity with personal connections to nature translates into action—greater pro-environmental behavior, attitudes and values (Clayton & Myers, 2009).

12. Describe the proposed participants – age, number, sex, race, or other special characteristics. Describe criteria for inclusion and exclusion of participants. Please provide brief justification for these criteria (up to 500 words)

For my research, I will use purposeful sampling to select 20 participants. The participants will be selected based on the following criteria:

- Participation in the Junior Audubon Club as a child
- Memories of participating in the program
- Self-identification with being in the program
- Are able to verbally and (when needed) through writing share their experiences of being in the Junior Audubon Club

- A mix of gender, and diverse geographic locations where they participated in the program, will be a goal

The purpose of selecting participants who recall participating in the program and can articulate their memories of it is to explore whether specific elements of the program influenced their environmental identity and actions. Data will be collected through surveys and interviews with 20 adults who participated in the Junior Audubon Club program as children between 1930 and the 1970s. I aim to have geographical distribution of participants who were part of the program in various states, including a mix of rural, suburban and urban settings; a gender mix of both men and women; and different years in which they participated in the program. This demographic information will be collected in the survey.

13. Describe how participants are to be selected and recruited (up to 500 words)

The National Audubon Society, which ran the Junior Audubon Clubs, does not have a list of the millions of children who were part of this program, so I will use a snowball sampling method to recruit interviewees. I will recruit participants by advertising to the National Audubon membership and long-standing bird clubs (email blast and printed materials), as well as networking with Audubon staff and members and the wider birding community, seeking recommendations of people I can interview.

Once potential participants are identified, I will contact them by email, postal mail or phone to determine whether they are willing and suitable for my research.

14. Describe the proposed procedures (e.g. interview surveys. Questionnaires. Experiments etc) in the project. Any proposed experimental activities that are included in evaluation, research, development, demonstration, instruction, study, treatments, debriefing, questionnaires, and similar projects must be described. USE SIMPLE LANGUAGE, AVOID JARGON, AND IDENTIFY ACRONYMS. Please do not insert a copy of your methodology section from your proposal. State briefly and concisely the procedures for the project. (500 words)

My research will involve a mixed method case study. I will obtain past participants' experiences of being in Junior Audubon Clubs through survey questions and semi-structured, in-depth interviews. The data obtained through the surveys will allow for better understanding of

the participants' environmental identity and will be used to develop more informed interview questions. The surveys will be available either online through Survey Monkey or in printed format. The surveys will take approximately 15 minutes to complete. The in-depth interviews will enable me to better understand the participants' experiences in the program and the possible long-term influences on their environmental identity and actions. The main purpose of the interview is to elicit the informants' understandings, memories and perspectives relating to their participation in the program. All interviews will be recorded and are expected to vary in length from 45 to 90 minutes. The interviews will be informal and carried out in a conversational style. Preference will be to conducting in-person interviews, but due to geography (more than 500 miles from my home) some phone interviews may be necessary. All interviews will be digitally recorded, then converted to verbatim transcripts in preparation for data analysis.

15. Participants in research may be exposed to the possibility of harm — physiological, psychological, and/or social—please provide the following information: (Up to 500 words)

    a. Identify and describe potential risks of harm to participants (including physical, emotional, financial, or social harm).

Participating in this research is very low risk. There are no physical, emotional, criminal, social, financial danger or risk of breach of confidentiality associated with this study. There is a small chance that participants will reveal sensitive information from past personal experiences, but this will not be the focus of the questions asked. To minimize the risk, participants will have the right to not answer any questions or to stop participation in the study at any point during the interview. If participants find any of the questions uncomfortable they can decline to answer any questions or stop the interview. The interview is focused on sharing memories of a positive childhood experience so low potential harm to participants is anticipated. However, negative memories might surface during the interview and if the participant is showing signs of emotional discomfort, I will ask if they need to take a break from the interview and will remind them that

interview is voluntary

and they can stop, if needed.

b. Identify and describe the anticipated benefits of this research (including direct benefits to participants and to society-at-large or others)

There will be no direct tangible benefits to those participating in this study (no payment or other compensation will be provided). However, the information that I will gain through the interviews may help improve future environmental education programs. Because the interviews will focus on positive childhood experiences, I anticipate people will enjoy recalling the memories and will gain pleasure from sharing their stories. I conducted pilot interviews in 2015 and participants enjoyed sharing their memories (IRB approval was obtained before conducting the pilot interviews).

c. Explain why you believe the risks are so outweighed by the benefits described above as to warrant asking participants to accept these risks Include a discussion of why the research method you propose is superior to alternative methods that may entail less risk

Risk is very low and the benefits will outweigh the harm. In my experience with pilot interviews, people enjoy recalling and sharing stories of participating in Junior Audubon Clubs. In-depth interviews will enable me to capture the participants' memories of their experience participating in the program. Other methods would not allow the researcher to gain the depth of sharing that an interview will enable.

d. Explain fully how the rights and welfare of participants at risk will be protected (e.g., screening out particularly vulnerable participants, follow-up contact with participants, list of referrals, etc.) and what provisions will be made for the case of an adverse incident occurring during the study.

This study will not include vulnerable populations. Consent forms will be signed and participants will have the ability to review entire transcripts, if interested. Participation in any aspect of the research process will be voluntary and participants will be able to stop their

involvement at any time, if they chose. Before participating in the research, potential participants will be asked to sign an informed consent form, which will discuss any possible risks they may face and inform them of their rights in the research process.

16. Explain how participants' privacy is addressed by your proposed research. Specify any steps taken to safeguard the anonymity of participants and/or confidentiality of their responses. Indicate what personal identifying information will be kept, and procedures for storage and ultimate disposal of personal information. Describe how you will de-identify the data or attach the signed confidentiality agreement on the attachments tab (scan, if necessary). (Up to 500 words)

Participants will be asked to provide basic biographical information (their age, race/ethnicity, where and when they attended the Junior Audubon Club and their approximate age or grade while in the program). Full names will not be used and permanent addresses will not be collected. Only pseudonyms or first names will be used for each participant. Interviews will be recorded and then transcribed. The electronic transcriptions and recordings will be stored on my computer (password protected machine) along with electronic (scanned) copies of their consent forms. Consent forms and transcripts will be saved separately in different folders on my password protected computer. All personal information will be destroyed when the research is complete (all contact information will be destroyed).

17. Will electrical, mechanical (electroencephalogram, biofeedback, etc.) devices be applied to participants, or will audio-visual devices be used for recording participants?

The audio of the interviews will be recorded and consent will be obtained from the participants before recording begins. Recordings will be stored on my computer and deleted from the recording device after they are downloaded.

18. Type of review requested: expedited

    Please provide your reasons/justification for the level of review you are requesting

    There is minimal risk involved in participating in this study and the population I will interview are not classified as vulnerable so expedited review is sufficient.

19. Informed consent and/or assent statements, if any are used, are to be included with this application. If information other than that provided on the informed consent form is provided (e.g. a cover letter), attach a copy of such information. If a consent form is not used, or if consent is to be presented orally, state your reason for this modification below. *Oral consent is not allowed when participants are under age 18.

    Attached are my cover letter and consent form

20. If questionnaires, tests, or related research instruments are to be used, then you must attach a copy of the instrument at the bottom of this form (unless the instrument is copyrighted material), or submit a detailed description (with examples of items) of the research instruments, questionnaires, or tests that are to be used in the project. Copies will be retained in the permanent IRB files. If you intend to use a copyrighted instrument, please consult with your research advisor and your IRB chair. Please clearly name and identify all attached documents when you add them on the attachments tab.

Attached are my survey and interview guide

Appendix B: Informed Consent Letter and Form

ANTIOCH UNIVERSITY
NEW ENGLAND

40 Avon Street, Keene, NH 03431-3516
603-357-3122 www.antiochne.edu

Date

Interviewee Name
Address

Dear Name,

I am writing to ask you to be a part of my research study about the Junior Audubon Club program. The purpose of this study is to explore the program experiences of past participants like yourself. I would like to chat with you about your memories of the program and the possible impact it has had on your life.

Before being interviewed, I will ask you to complete a 15-minute on-line or printed survey. Following the survey, I will schedule either an in-person or phone interview, depending on where you live. Your interview will be recorded and you will be able to review and edit your interview transcript, if you choose. Your last name will not be used in my published papers. I will use a pseudonym for you in my writings. All personal information will be destroyed when the research is complete (all contact information will be destroyed).

If you have any questions about this study, please feel free to call me at X or email me at X. I hope you will consider participating in this study. If you are willing, please look at the form on the next page, sign it, and return to me by email or mail. I will call or email you to confirm your participation, share the survey and set up a time for an interview. Thank you for your consideration of being a part of my research.

Warm regards,

[redacted]
Doctoral Student
Antioch University New England

INFORMED CONSENT FORM

Study Title: *Exploring the Lifelong Environmental Influences of Junior Audubon Clubs Participants*

Researcher: Amy Weidensaul, Antioch University New England

- **PURPOSE AND BACKGROUND**

Being a part of my research study, you will share your memories of the Junior Audubon Club program. This will help me to better understand the program and its impact.

- **PROCEDURES**

If you agree to be in the study, you will complete a short survey (15 minutes) and participate in an interview either in person or by phone. The interview will last about 60 to 90 minutes. During the interviews, you will be asked about your experience in the program. The interview will be recorded and the researcher may take notes.

- **RISKS**

The risk in participating in this study is very low. You will be asked questions about being in the program. You can decline to answer any questions for any reason and stop the interview at any time.

- **BENEFITS**

There are no direct benefits for being in this study. However, sharing your memories may help future environmental education programs. I hope you enjoy sharing your childhood experiences with me.

- **EXTENT OF CONFIDENTIALITY**

A pseudonym or first name will be used in any written reports or publications. Data will be destroyed three years after the completion of this study.

- **PARTICIPATION IS VOLUNTARY**

You do not have to be involved in this study and you can stop at any time.

- **QUESTIONS**

If you have any questions about this study, please email or call Amy Weidensaul.

If you have any questions about your rights as a research participant, please contact Dr. Kevin Lyness, Chair of the Antioch University New England Institutional Review Board, [redacted], Provost at Antioch University New England, [redacted].

DOCUMENTATION OF CONSENT

I have read this form and decided that I will participate in this project. I understand that I can withdraw at any time. I have received a copy of this signed form.

Printed Name of Study Participant	**Signature** of Study Participant	Date

Signature of Person Obtaining Consent	Date

Appendix C: Participant Survey

The purpose of this survey is to understand your experience as a past participant in the Junior Audubon Club and to understand to what extent, if any, that participation was influential in your life.

This survey is available online through Survey Monkey or printed. This survey should take approximately 15 minutes to complete. Please answer all of the questions to the best of your ability. Your participation in this survey is greatly appreciated.

Name:
Age:

What town and state did you participate in the Junior Audubon Club?

How many years did you participate in the program?

Approximately how old were you when (or in what year did) you participated in the Junior Audubon Club?

How frequently did the club meet?

- *Weekly*
- *Monthly*
- *Seasonally*
- *Other:* _____

Which activities, if any, do you remember participating in while in the Junior Audubon Club program? Check all that apply.

- Nature exploration
- Field trips

- Building bird houses or habitat projects
- Watching birds
- Coloring bird drawings
- Simulation games (pretending to be animals; acting out being animals)
- Other
- None of the above

Which of the activities you checked above do you feel were the most important elements of Junior Audubon to you? Check all that apply.

- Nature exploration
- Field trips
- Building bird houses or habitat projects
- Watching birds
- Coloring bird drawings
- Simulation games (pretending to be animals; acting out being animals)
- Other
- None of the above

Why were them important to you?

Do you remember receiving any of the following items while participationg in the program? Check all that apply. (Visual prompts included.)

- Audubon bird button
- Junior Audubon Club membership card
- Junior Audubon Club booklets (bird coloring pages, information about birds, puzzles, etc.)
- Bird cards
- Photos

- None of the above
- Other

Do you still have any of those items mentioned above?

- *Yes*
- *No*

If yes, why do you think you kept it for some many years?

How do you think your participation in the Junior Audubon Club program has influenced your life, if at all? If you don't think it influenced you, please explain why not.

Please provide any additional comments here about your experience in the Junior Audubon Club:

What is your gender?

- Male
- Female
- Other

Preferred pronoun to be used?

- She
- He

What is your race or ethnicity? Please check all that apply.

- White

- Hispanic/Latino
- Black/African American
- Native American/American Indian/Alaskan Native
- Asian
- Pacific Islander/Native Hawaiian
- Other
- Decline to answer

What is the highest degree or level of school you have completed?

- No schooling completed
- Nursery school to 8th grade
- Some high school, no diploma
- High school graduate, diploma or the equivalent
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

Environmental Identity Scale (Adapted from Clayton 2003, 2011)

Using a scale from **strongly agree** to **strongly disagree,** please indicate the extent to which each of the following statements describes you:

I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean, etc.).	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Engaging in behaviors that benefit the environment is very important to me.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I think of myself as a part of nature, not separate from it.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
If I had more time or money, I would devote some of it to working for environmental causes.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
When I am upset or stressed, I can feel better by spending some time outdoors “communing with nature”.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Living near nature and wildlife is important to me.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Behaving responsibly toward the earth—living a sustainable lifestyle—is a part of my moral code.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Learning about the natural world should be an important part of every child's upbringing.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**

I feel that I have roots to a particular geographical location that had a significant impact on my development.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
In general, being part of the natural world is not very important part of my self-image.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I have seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I keep mementos from the outdoors, like shells or rocks.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I feel that I receive spiritual sustenance from experiences with nature.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**

Appendix D: Interview Guide

(Additional questions may be added based on the results of the survey)

Name:
Age:
Gender:
Race/Ethnicity:
Type of Interview (phone or in-person):
Date of the Interview:
Circumstances of the Interview: (rushed, interrupted, reflective, etc.)

Interview Prompt:

I am interested in hearing about your experiences in the Junior Audubon Club program. Take a few minutes to think about your time in the program, and some of the most important memories you have of the program. This program no longer exists so your thoughts shared during this interview will not negatively or positively impact the program.

- In approximately what grade were you in and where did you live when you participated in the Junior Audubon Club? Did you live in an urban, suburban or rural area?

- What do you recall when thinking back to your Audubon Club experience? What are some meaningful memories you have from participating in the program?

- What specifics of the Junior Audubon Club program do you remember? Prompts of actual objects and images will be provided for some of the following:
  a. Bird walks
  b. Outdoor exploring
  c. Coloring Pages
  d. Bird Buttons
  e. Participating in conservation projects (planting trees, building bird boxes)
  f. Meetings
  g. Field trips
  h. Adult Club leader
  i. Simulation games (pretending to be animals)
  j. Other club members

- What items, if any, do you still have from the program (buttons, migration maps, membership cards, photos, etc.)

- How would you describe yourself in a few sentences?
- How did this experience affect you? Your environmental identity? If at all.

Follow-up questions (not in a specific order):

- You have mentioned positive experiences you had while participating in the Junior Audubon Club, do you recall negative experiences?
- How did participating in the program spark your interest in birds, if at all? In nature? In conservation?

- How did the program influence your environmental behavior/actions beyond the program? If so, in what way? If not, why do you think it didn't?

- How did you choose to participate in the program? Did your parents require you to?

- Did your friends participate in the club with you? If so, what do you recall doing with friends while in the club? What do you remember about the other club members?

- Have you thought about your experience in this program over the years? Often? How so? At what points in your life have you done so?

- Do you think the experience influenced you as an adult? If so, please explain. If not, why not.

- Do you believe the program has influenced your attitude toward the environment? Please explain. How has that influence varied over the years?

- What else can you tell me about your experiences in Junior Audubon Club and how it has influenced your life in general, and your environmental identity in particular?

Appendix E: Permissions

Environmental Identity Scale Permission

Re: Use of Environmental Identity Scale
1 message

Susan Clayton <SCLAYTON@wooster.edu> Tue, Sep 11, 2018 at 8:29 AM
To: Amy Weidensaul <aweidensaul@antioch.edu>

Dear Amy,

Yes, I'm happy to give you permission. I assume you will cite the original version in your thesis.

I hope your dissertation produces some interesting results; I'd be interested in hearing about them and I hope that you will present them somewhere.

Regards,

Susan Clayton

--

Susan Clayton

Whitmore-Williams Professor and Chair of Psychology

The College of Wooster

discover.wooster.edu/sclayton

From: Amy Weidensaul <aweidensaul@antioch.edu>
Date: Tuesday, September 11, 2018 at 7:54 AM
To: Susan Clayton <SCLAYTON@wooster.edu>
Subject: Re: Use of Environmental Identity Scale
Resent-From: <SCLAYTON@wooster.edu>

Dear Dr. Clayton,

I emailed you last year to ask permission to use an adapted version of your environmental identity scale, which you granted me (thank you again). I was told I need to add some additional language about where

my dissertation will appear to my request. Below is an updated request for permission to use your scale in my dissertation.

I'm a full-time environmental educator, and a student in the environmental studies Ph.D. program at Antioch University New England, where I'm conducting retrospective research to explore past participants' recollections of what was meaningful and memorable about a specific childhood program (the Junior Audubon Club program). My research explores if and how they describe the possible influences of the program on their environmental identity formation and actions. My methods include surveys, in-depth interviews and follow-up questions -- and as part of my initial survey, I'd like to incorporate your environmental identity scale.

I'm writing to seek permission to use a slightly adapted shortened version of your scale. May I have your permission to use this modified version of your scale in my research and printed in my dissertation? My dissertation will appear in 1) Proquest Dissertations and THeses Database (www.proquest.com); 2) Ohiolink Electronic Theses and Dissertations Center (https://etd.ohiolink.edu); 3) AURA (Antioch University Repository and Archive (https://aura.antioch.edu); and a printed hard copy for my files.

Thank you so much. Your work has had significant impact on both my research and my day-to-day work as an environmental educator.

Warm regards,

Amy Weidensaul
XXXXXXXXXXXX

I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean, etc.).	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Engaging in behaviors that benefit the environment is very important to me.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I think of myself as a part of nature, not separate from it.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
If I had more time or money, I would devote some of it to working for environmental causes.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
When I am upset or stressed, I can feel better by spending some time outdoors "communing with nature".	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Living near nature and wildlife is important to me.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Behaving responsibly toward the earth -- living a sustainable lifestyle -- is a part of my moral code.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
Learning about the natural world should be an important part of every child's upbringing.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I feel that I have roots to a particular geographical location that had a significant impact on my development.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
In general, being part of the natural world is not very important part of my self-image.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I have seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**
I keep mementos from the outdoors, like shells or rocks.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**

I feel that I receive spiritual sustenance from experiences with nature.	**Strongly Agree**	**Somewhat Agree**	**Neither agree or disagree**	**Somewhat Disagree**	**Strongly Disagree**

Figures 6, 8, 9 Permissions

RE: Permission to Use Junior Audubon Club materials

1 message

Hoppe, Lynne <lhoppe@audubon.org> Wed, Sep 12, 2018 at 10:51 AM
To: Amy Weidensaul <aweidensaul@antioch.edu>

Hi, Amy.

Thanks for reaching out. And, congratulations on pursuing your doctorate! The images you shared do not appear to be in copyright and you are welcome to use them in your dissertation. Hope all is well.

Best,

Lynne

–

Lynne C. Hoppe

Director, Brand Marketing

212.979.3009

National Audubon Society

225 Varick Street, 7th Floor

New York, NY 10014

www.audubon.org

From: Amy Weidensaul <aweidensaul@antioch.edu>
Sent: Tuesday, September 11, 2018 8:24 PM
To: Hoppe, Lynne <lhoppe@audubon.org>
Subject: Permission to Use Junior Audubon Club materials

Hi Lynne,

I worked for National Audubon for nearly 20 years in Maryland and Pennsylvania state offices. I just left Audubon PA about two months ago for another job in New England. I miss my Audubon family.

I'm writing to ask permission to use some Audubon images in my dissertation. I'm a doctoral student at Antioch University and I'm conducting retrospective research on the Junior Audubon Club program. I'd like to include some images of Audubon materials I've collected over the years. These objects include Junior

Audubon Club bird pin; Junior Audubon newsletters; and Junior Audubon membership cards. Attached are the images of the materials.

There is also one image from Bird Lore (1921) that I scanned and would like to use in my dissertation. I'm writing to seek permission to include the attached images in my dissertation. There will be no commercial use of these images. My dissertation will be published in Proquest (http://www.proquest.com); Ohiolink (https://etd.ohiolink.edu) and AURA: Antioch University Repository and Archive (http://aura.antioch.edu).

I look forward to hearing back from you and thank you for your assistance.

Regards, Amy

--

Amy Weidensaul
XXXXXXXXXXXXXXX
PhD Candidate, Environmental Studies
Antioch University New England
XXXXXXXXXXXXXXX

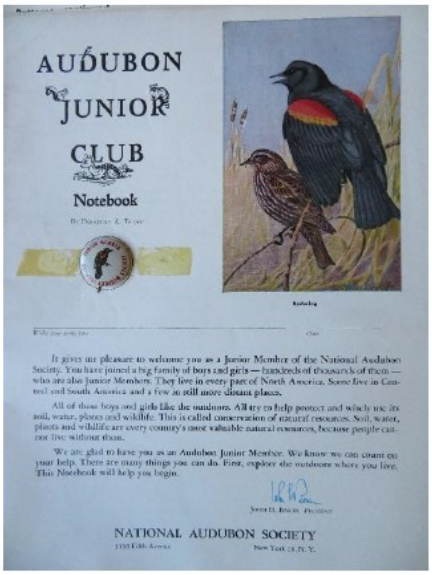

Figure 1 From Bird Lore 1921

Figure 12 Permission

Re: Childhood Scrapbook Photo

1 message

Leigh Altadonna <[redacted]> Tue, Sep 11, 2018 at 8:23 PM
To: Amy Weidensaul <[redacted]>

Amy,

Permission granted! I am looking forward to reading your tome once it is completed!

Leigh
Sent from my iPhone

On Sep 11, 2018, at 8:03 PM, Amy Weidensaul <[redacted]> wrote:

> Dear Leigh,
> I'm a doctoral student at Antioch University conducting retrospective research on the lifelong impact of Junior Audubon Clubs. Thank you for sharing letting your childhood scrapbook with me. I'm writing to request your permission to use the attached photo in my dissertation. I took the photograph of your scrapbook. My dissertation will be published in Proquest (http://www.proquest.com); Ohiolink (https://etd.ohiolink.edu) and AURA: Antioch University Repository and Archive (http://aura.antioch.edu).
> Please let me know if you grant me permission to use the attached image.
> Thank you.
> Regards, Amy
>
> --
> [redacted]
> PhD Candidate, Environmental Studies
> Antioch University New England
> [redacted]
>
> <Leigh's scrapbook.png>

Appendix F: Participant Profiles

Loren

Loren participated in the Junior Audubon Club in 1959 in Decatur, Illinois, when he was about 12 years old. While doing an Internet search on the Junior Audubon Club, I came across a blog entry in which Loren mentioned that he "attended Theodore Roosevelt Junior High School in Decatur, Illinois, and while searching for like-minded individuals, I joined the Junior Audubon Club." I contacted him to ask if he would be willing to participate in my research. He is one of the world's leading cryptozoologists, has written dozens of books and articles and has been featured on several TV shows.

During our email exchange leading up to and following the interview, he shared photos of his Junior Audubon bird button that he has hanging in his kitchen. He emailed me photos of his home filled with bird and nature artwork. Following our interview, he sent me a scan of a photo from his 1959-60 school yearbook of the Junior Audubon Club with him in the front row.

Loren spoke passionately about his homeroom teacher and Junior Audubon Club leader, Mrs. Rutherford. "She was a homeroom teacher, but she was also a science teacher. I remember her as being extremely skilled in drawing, nothing like a [trained] artist or anything like that, but sketches of birds, sketches of insects, different things like that. She liked to do that and encouraged us to do it even if we weren't good artists. It wasn't about the art, it was about remembering the wildlife." Loren spoke about how he thought of her as very old and wise, but also very kind and motherly. "There was a lot of passion and energy in her home room and that's what I really remember, it's almost an esoteric sort of remembrance. Not of her speech patterns or anything, but … she looked very old to me, being very young [myself], of course. She maybe was in her 40s, I remember her gray hair and wrinkles and yet, coming out of this woman was all this passion and it seemed really very inspiring to see somebody that was so old and so learned and yet she could be so passionate about birds and Audubon."

Loren spoke often about Mrs. Rutherford's passion and devotion to protecting birds and other wildlife, which she with the students. He said, "Audubon was more than just learning [birds] to me, I remember it was about how to save animals. You don't want to use their feathers and you don't want to put them in your hats. These silly little lines that kind of come through memories, it was more about that than anything else. Although I do remember... we did this whole thing about bird houses. How to make them, where to put them up, and we were trying to save bluebirds. I remember the years … where it was almost like the bluebirds were going to become extinct if it wasn't for the Junior Audubon Club out there saving them. It was different things like that that I really remember."

They learned about birds through lessons and activities. Loren remembers the colorful and informative materials. "I do remember the cards…there were different cards and there [were] different lessons. It wasn't done as lessons; it was very exciting. I do remember colorful materials that were passed out, like cards or flyers. And they were very colorful and they really were a piece of my heart about nature." The students made bluebird nest boxes in shop class and installed them as part of the club. They also went on field trips to the nearby park as well as areas that were a bit further way, like

Spitler Woods, which is about ten miles outside the city and now a state operated natural area. “Mrs. Rutherford took us out there to look for birds that were not extinct yet, like bluebirds. We were all scared to death [they were] going to die out.” He remembers learning both the scientific and common names of all of the birds of Illinois.

Loren spent hours exploring the woods near his home with his brothers. They collected bones and other natural materials, which they brought home and archived. His father, he said, was not supportive of his interests, and was jealous and abusive to him. Because of tensions with his father, “In some ways the Junior Audubon Club was a refuge, it was safe, it encouraged me to study nature.” In the survey he wrote, “It was difficult finding a safe place for my interests. It was a great time with a passionate teacher who loved birds.” He was “like a sponge for everything that I could get from the club.”

Loren's club interacted with the local Decatur Audubon Society. “We would go [to society meetings] and it wasn’t a requirement to be in the club, but she would ask certain [Junior Audubon members if they] would give presentations on birds. And I certainly remember the cardinal and I think I’m the one that did the cardinal. They [Decatur Audubon members] were all very happy and wonderful and just lots of applause.” In our email exchange before the interview, Loren wrote me, “I recall I had one of my first public speaking moments at the downtown regular Audubon Society meeting, giving a talk on, I think, the cardinal.”

Asked about the impact of the Junior Audubon program, Loren said, “I think it certainly set me up for appreciation of small nature conservation clubs. I think it certainly gave me, as I was going into high school and after, having these really wonderful two years in the Junior Audubon to feel like there were other people out there like me. There was lots of hope in conservation and birds. It is interesting wherever I’ve gone and met other museum people or science people, it’s always nice to talk to people who are birders because there’s a common thread there, even though I don’t particularly identify myself as a birder. It’s funny, a lot of other people do, because whenever I go out I’m looking up, not just down. I think that legacy is certainly inside of me in a very positive way.”

The day after our interview, Loren emailed me, “I know it may not sound like the Junior Audubon Club made much of an impact on my life in museum curating, writing and cryptozoology. But I certainly think it was fundamentally inspirational and reinforcing to my love of nature, natural historical preservation, and early wildlife appreciation education.”

Sarah

Sarah participated in a Junior Audubon Club in 1948, when she was in sixth grade at the Sunset School in Carmel, California. I found Sarah through an Internet search that led me to the biographies of the Big Sur Land Trust's board of directors. Sarah’s short bio listed, in addition to many career successes, that she participated in a Junior Audubon Club formed by a teacher at the school, and concluded, “Sarah has enjoyed birding ever since. She has birded in 20 different countries.”

The club met on Saturdays a couple times a month, Sarah told me. She recalls about 16 students in the club, and she remains friends with a few of them, including one with whom she goes on bird-watching trips. “One of the guys in the club, who was in my class, later he and his wife and I traveled to Belize to bird and to Ecuador to bird. So it was fun—we started off knowing each other since kindergarten and then much later we birded. You know, 60 years later, we bird together and it’s a fun thing.”

What was most memorable to Sarah of being in the club was time spent outside, looking at birds. “Quite a few Saturday mornings, we’d go to this local river or down by the beach or whatever. You know, even at the high school would have been a great spot. Then one summer they did arrange, I think was about a 10-day trip to Sequoia National Park, not just to bird, but we [did a back] pack trip on horseback into the mountains. It was a neat outdoorsy experience that was geared toward wildlife, not just birds... One of those neat experiences.” Sarah spoke quite a bit about that specific trip and how memorable it was for her. “I can remember having him [Mr. Blee, the club leader] point out a vireo and I can remember that very well. It was so exciting to see it. It was a really special experience …We were old enough—we were in seventh grade, so about 12 to 13. It was a great experience with a couple of responsible leaders…It was a very exciting challenge.”

Sarah spoke about her club leader, Mr. Blee, and how he was a role model for her. She said these type of programs need a “dynamic leader, someone who can attract the kids.” An active birder today, she said the Junior Audubon Club was when her passion for bird watching began. “I think once I joined the Audubon Club is when I got interested in birds. I mean I think I [had] looked at nature and I looked at animals, but I learned about birds when I was in the Junior Audubon Club. I learned that there were different kinds of birds and that [they] eat differently and have different beaks. That was interesting and I wouldn’t have paid much attention to that if I hadn’t been in a Junior Audubon Club… If you can teach simple stuff, the right stuff, it makes the whole thing more interesting.” Sarah recalled having her Roger Tory Peterson field guide. She said, “I still have it with little notes written in it. I think most of [the time in the club] was outdoors, and I did write in a few little things. It’s interesting to look at that old, old book.”

When I asked her why she mentioned being in the club in her bio, she said, “I think because I find birds really fascinating, once I started learning about [them]. I remember the club, it was really fun. Plus, we did that wonderful pack trip, which was very special. Someone had to organize it, my parents would have never gone on something like that. It wasn’t like my family was interested. If I hadn’t had Junior Audubon than I wouldn’t have been interested, maybe later I would have started birding as an adult because I was attracted to birds. But it wasn’t as though anyone else in my family was interested. I know I was lucky that I was in Junior Audubon.”

Barry

Barry participated in the Junior Audubon Club in 1954 in Toronto, Canada, when he was approximately 10 years old. I found Barry through an Internet search that led me to his website's biography, noting that he was the president of his Junior Audubon Club as a child in the early 1950s. Barry is bird artist whose work has appeared in numerous books, journals, magazines and other publications.

Barry participated in the Junior Audubon Club as part of his school day. He recalled the importance of the materials that he received as part of the club. Barry said, “They [Audubon] produced child-friendly materials. I do remember a whole series of little [bird] cards. That was very important to me because in those days we didn’t have Internet. In those days most of the bird books hadn’t been written. I can’t tell you how thirsty I was for all that kind of information, both pre-teen and through my teens and I guess really in a way up to the present.” Barry spoke about the bird cards that he received as part of the club, which had artwork of a bird on one side and information about that species on the other. Barry said, “Those cards were incredibly important to me because they had pictures of birds either that I might go out and see or, better

yet, because I was interested in what I didn't know, the western birds. Birds that I would only see if I went out West. I remember I cherished those [Audubon materials]. All that stuff really meant a great deal to me."

Barry was interested in birds from a very early age, before he was involved in the Junior Audubon Club. He shared stories of watching and learning about birds with his grandparents. He was interested in art, especially bird art, from a very early age, too. He recalled getting a coloring book with animals when he was very young, and he still has some of his bird artwork from when he was six or seven year sold.

In addition to the materials, Barry also remembered receiving the Junior Audubon Club bird button, which he still has. When I asked him why he kept he said, "I certainly didn't discard it. It was actually pinned to a sheet of paper, which was one of the Audubon materials." In the survey he said he kept it because of nostalgia, but during the interview he said he kept it because, "I'm not a nostalgic person. I just think that, it's like a …milestone. Its more than just a good reminder of a good period and a good time. I mean there isn't the sadness attached to it that there is attached to many of your childhood memories when you remember somebody fondly. It's bittersweet. But there's no such thing there because it was part of a continuum. So I don't mourn the passing, I rejoice in the development."

In the survey he wrote: "I had a burning, intense, all-consuming interest in birds and nature, and in a very real sense I feel Junior Audubon legitimized that interest, made it seem important. That materials inspired me to go out into the field. The Allan Brooks artwork inspired my own burgeoning interest. I was made president of the club for my calls and that was the only time I was in any such position." Barry said he didn't really like school when he was a child; he was very interested in nature as opposed to what was being taught in the classroom. He said an exception was the Junior Audubon Club, which he thoroughly enjoyed. That, he said, was where he "was allowed to shine."

Barry mentioned several times in the interview and survey that the club validated his interested in nature and birds. He shared with me that he didn't have many, if any, friends who were interested in the same thing. He said, "[The club] was the one time in one place where my interest was taken seriously within the context of, you know, what was socially the norm, if you will. In other words, the teachers were all in favor of studying animals and birds and wildlife and nature. And normally that didn't get covered, or if it did [it was] in a very sort of superficial and not necessarily accurate way. And so the kids...there was hardly anyone else interested in all that…they weren't mean about it. The interest just wasn't there."

When I asked Barry about the impact of the program, he said, "For me, as a child, I know [that] the one thing it did do, it provided a sense of legitimacy, a validation for my inherent interest. So, all the things that I've done with my life in terms of natural history and the environment and being a bird artist and a writer—I wrote a nature column for the Toronto *Star* for 25 years—all of those things probably would have happened even if I hadn't had the experience. But how much better it was for me as a child, and how much happier I was, and how much just more productive in pushing me ahead further that I did have it."

When I first emailed Barry to see if he would be willing to be interviewed, he replied, "I was the president of the Junior Audubon "branch" in our classroom, back in the early 1950s, in the Toronto, Ontario region (North Preparatory School, Forest Hill Village, now part of the City of Toronto), and while my memory is dim, I do remember the wonderful series of cards, beautifully packaged, that featured paintings of birds mostly by Allan Brooks, but also some by Roger Tory Peterson. I still have them, in fact. I was already besotted with all things related to

natural history generally, and birds in particular, but I also always wanted to be a bird artist. They [Audubon] produced a lot of other materials, of course, including a small pin I still have somewhere, various pamphlets, and, of course, the Audubon bird call, which I also ordered." In the survey, he wrote, "Junior Audubon made my journey all that more interesting, fun and exciting when I was a child, ever so eager to know all I could birds and nature. I think my experience as a member of Junior Audubon was a positive force in leading me to a life that has, at least to some degree, been exactly as I wanted it to be."

Bart

Bart participated in Junior Audubon Club in 1940 in Pittsburgh, Pennsylvania, when he was in fifth grade. His Junior Audubon Club was part of his art class at Shady Side Academy, a private school for boys. I met Bart at the National Audubon Society convention in Utah in July 2017. During the opening ceremony, with more than 500 people in the room, the speaker asked that people stand if they have been a member or employee of Audubon for 10 year, 20 years, 30 years, 40 years and so on. Bart was one of two people who stood up when more than 60 years was called. Bart then went up to the microphone and explained to the crowd that his mother had been a lifelong member of Audubon, starting in 1911 when the organization was still called the National Association of Audubon Societies. He said that his membership began in 1940 as a result of being a Junior Audubon Club member, and that he has remained involved with the organization for more than 70 years. Immediately following the ceremony, I found Bart and asked him I could interview, which he enthusiastically agreed to. We chatted at the convention, but decided it would be best to find a time to have an uninterrupted conversation over the phone. Within two weeks following the convention, we spoke for nearly an hour on the phone.

Bart has had a lifelong connection to the Audubon Society, starting with his mother's involvement in Audubon Society of Western Pennsylvania, the local chapter in Pittsburgh. He said, "I remember…seeing a bunch of little old ladies in tennis shoes and funny-looking hats come trooping through our farm there [in Pittsburgh] early in the morning. And that was the local Audubon Society from western Pennsylvania, I suppose, on a birding trip." Bart talked about his mother always having bird feeders up so she could watch the birds and how his "father liked all that stuff." He explained that he inherited some of that farm from his parents, and later donated the land to Powdermill Nature Reserve, the environmental research center of Carnegie Museum of Natural History, which has been dedicated to its mission of research, education, and conservation for more than 50 years.

Bart spoke quite a bit about his club leader, May Williams, who was the art teacher at his school. The Junior Audubon Club was part of art class and he had vivid memories of receiving "little four-page folders with a colored painting of a bird on the front. It was before the days of Roger Tory Peterson so it was probably Arthur Allen or somebody like that who did the paintings. And then there was a description of the bird and its habitat and behavior and all that. And then a black-and-white outline, on which you were supposed to try and duplicate or imitate the colored paintings on the front with color pencils." He jokingly recalled that, "I did very well with cardinals [and] indigo buntings because each one was all one color."

Bart remembered his button, which he no longer has due to several moves early in his life when in the Navy. He said, "We had little buttons that we could wear if we wanted to and put on a cap or hat. This was before the days when everybody had buttons all over everything, but Audubon was kind of a pioneer with that."

He reconnected with Audubon when he moved to Casper, Wyoming, as a young married adult, and became active in the local, newly formed Audubon chapter. Due to Bart's passion for birds, he got involved in a case that helped to eventually get DDT banned. Bart's home freezer became the secret storage place for a dozen dead bald eagles that had been illegally poisoned with thallium sulfate by ranchers. The eagles were poisoned because they were assumed to be killing sheep. This caused a national outrage and the case helped lead to the ban of DDT and restrictions on the use of chemical compounds like thallium sulfate.

Being involved in this high-profile case led him to become very involved in several large initiatives in the region. Bart eventually was asked to serve on the National Audubon Society board of trustees. He laughed while telling me, "I served on the national board for 12 years. And they gimmicked me by making me a vice president so I could spend an extra term. I've just sort of stayed involved on and off in the local chapter. They made me a board member emeritus." At the age of 87, he serves on the board of Audubon Rockies, the regional office of National Audubon Society. Bart has had a long history with Audubon Society and a real passion for the mission. After explaining his involvement with the organizations over the decades, he ends by telling me it "all started with May Williams and Junior Audubon."

When I asked him if participating in the program had an impact on him, he said, "I think it did, but I already had a lot of impact from my parents. So how you balance the two, I don't know. They complimented each other." Bart spoke about the materials and learning the birds as important, including coloring the pages, which enabled him to learn what the birds looked like. He said he remembers it decades later because "[we] were actually doing something so that sticks in your memory. It wasn't just reading about it, you actually then had to try and color the picture yourself." He talked about how he would learn about a bird from May Williams, color it in in the Audubon materials and then see the bird in the wild and be able to identify it. It opened his eyes to what was outside his house or school. His passion for birds continue to this day, 77 years after coloring that cardinal in the Junior Audubon Club newsletters.

Bill

Bill participated in Junior Audubon Club in New Jersey in 1950 when he was in the fifth grade. I was introduced to Bill by a colleague who works for Audubon. She met him at a social event and when he found out she worked for Audubon, he started to tell her about being a Junior Audubon Club member as a child and that he still had his button more than 50 years later. The next day, he emailed her a photo of his button.

I met Bill at his home in Pennsylvania. We sat at his kitchen table and drank tea out of mugs that had birds all over them. His kitchen was hung with bird-themed artwork (including the dishes) and outside of his picture window were many bird feeders. Before we started the interview, his wife laughed about how she has been hearing about Mrs. Cadmus and Junior Audubon Club since they started dating more than 50 years ago.

When I contacted Bill to see if he would be willing to participate in my research he responded enthusiastically. "We had a venerable fifth grade teacher—Estelle B. Cadmus—who had successions of fifth graders become Junior Audubon members and fulfill a birding project," he wrote. "As I shared with Ruth, mine was tracking a family of barn swallows that my father allowed to nest in our garage, from nesting to the fledglings taking flight. I have no idea how long Mrs. Cadmus was doing this when I came of age in 1950 (she retired in 1952). Although I never became a committed 'birder,' I've kept track of new sightings over the decades and been a

consistent feeder, waterer and provider of a few shelters. The long and the short of it is that Estelle B. Cadmus (what a neat name!) made a life-long impact on this then-ten-year-old. [I] never pass by a cedar waxwing, barn swallow or wren vocalizing without thinking of her. Although I have kept the pin, I have long since lost any of the printed material that went with the program. What a coup that would be to still have that!"

Bill's Junior Audubon Club was part of the school day and his teacher/club leader was Mrs. Cadmus. He spoke affectionately about the impact she had on him. "She was like a quintessential 19th century teacher, gray hair in a bun kind of thing and very practical clothes and practical shoes and all that sort of thing. She got so excited about things like this bird project."

Bill's most prominent memory about the club, besides Mrs. Cadmus, was his bird project. "We had to learn about birds and bird habitats and bird feeding and all that good stuff. And then in the spring we had to have a project," he said. "So my project was to keep notes, track the activities of a family of barn swallows that had just conscripted my father's garage. Every morning and again in the afternoon, I would take a folding chair and I would sit in the driveway and I would watch." He laughed while recalling this repetitive activity and how proud he was of his project. Laughing, he said, "Just about every day, I'd get my folding chair, sit and watch, log the activity. The end of the day, again the folding chair and log the activity. We had our written reports to give and I was one of the smallest kids in the class, so of anybody I would have been ridiculed making my report, I'd have been an easy target. But no, we just all went along with the program."

Bill talked about his grandmother being an artist and her interest in birds. During the interview, he got up in the middle of talking about his grandmother to grab a book off the shelf and returned with her bird book. Inside it was a child's drawing of a scarlet tanager—Bill's drawing from when he was in Junior Audubon Club. When I asked about his interest in birds, he said, "Because I spent a lot of time with my grandparents, [who lived] in the same town, I knew that birds flew and ate insects and seeds and stuff. I don't know if anybody had bird feeders back in the 1950s. I didn't. Birds were on their own, but there were a lot of fields. We had a victory garden when I was growing up so lots of birds."

He has remained interested in watching birds since he was ten years old. He said, "I can't think of any time since then, from the fifth grade program, not being interested in birds and curious [about them], especially if there was one I saw that I didn't know."

As noted earlier, he still has Junior Audubon Club button and was able to easily find it to send a photo to my coworker after meeting her. When I asked him why he kept the button decades later, he said, "I kept two buttons from my youth-- signal maintainer [his grandfather worked for the railroad as a signal maintainer] and my Junior Audubon." He said he kept them both "because they were important activities, memories for me."

I asked Bill if he thinks the program had an impact on him and he nodded his head, saying yes. "I think when Mrs. Cadmus had us pull out our folding chairs and quietly sit unmoving, watching our barn swallows coming and going and doing their thing, I think consciously or subconsciously that's working on your powers to concentrate and focus," he said. "And to sit and just concentrate on something because you don't want to miss it as you may not get a rerun." In the survey, he wrote participating the club "put structure to my curiosity about the birds in our area. [It] spurred an interest in becoming familiar with an ever-greater number of species. I never become a serious birder, but have always provided food, water and housing for the birds in my yards and did keep a log of sightings when I remembered to do so." He recalled wonderful memories of Mrs. Cadmus, that she was "stern and formidable, but everything about

her was like, oh, this is kind of cool." He said the activities were like nothing else he did in elementary school. "She brought that, she nurtured it and so her natural enthusiasm, if you're gonna be infected, you were infected." Bill was definitely infected and remains passionate about birds and finds great joy in watching them. "I was glad I was bitten [by the bug for nature and birds] in 1950 because, although not all consuming, it has certainly been a source of an ongoing enjoyment."

Steve

Steve participated in Junior Audubon Club in Manhattan, New York, when he was in fifth grade in 1943. Steve has been involved in Audubon and other bird conservation organizations throughout his life, including serving on the Connecticut Audubon Society's board of trustees. I found him because he responded to a request that I posted in one of the birding newsletters, and later met him at his home in Connecticut—a house filled with bird art from around the world, including many John James Audubon prints. We sat in his office, which was overflowing from flooring to ceiling with bird and other natural history books and photos of him birding or fishing or hiking. I could immediately tell that he had a strong connection to the natural world and a real interest in birds.

Steve could not remember a formal club with meetings. He said he was "not sure there was a formal club, but a teacher took three of us [who were] interested in birds on trips and gave us [Audubon] materials. In my time the button had an eastern bluebird on it." He later said, "I remember distinctly a button with a bluebird on it with a light blue background." He does not still have his button, but remembers it well.

In addition to the button, he recalled the bird cards and other printed materials that he received as part of the program. "The thing I remember most distinctively, and the thing that was most significant …. [was] packs of cards with bird pictures on them. Not just the Arm & Hammer Fuertes cards, but a bigger set that I think came through Audubon. [They were] postcard size. Alan Brooks did a lot of them and we used to use those to test [each other]. We learned all the birds and used those to test our identification skills. I remember that. But the thing I remember most distinctively and I wish I could see it again, was an eight and a half by eleven sheet that listed the numbered species of hawks along the left and it was done like the silhouettes in the Peterson field guide. And it showed [them] by size and showed their different prey. It was terrific."

In the survey, Steve mentioned the Audubon materials and spoke about them several times throughout our interview. Referring to the hawk silhouette sheet, he said, "It was really interesting. I think that kind of thing that would spark your interest in conservation. It was scientific, and was illustrative and it was interesting."

Steve spoke about his club leader and teacher, Bertha Claire. "I remember a lot about her," he said. "She was very interested in birding. The school had a cabinet, six or eight feet high with shelves in it with stuffed birds. And we used to go up there and look at the birds and look at the cards to identify the birds and then we used to go birding in Central Park. I remember her taking us. She was a teacher and she was a tutor." He later said, "She certainly encouraged the interest [in birds] and everything else. She was very supportive."

Steve remember the other children in the club. "There was a guy who subsequently was a serious birder who became president of New York Audubon Society." He recalled going birding as child both part of the club and on his own. "We used to go birding on the subway. We

went all over on the subway and the Staten Island ferry and various places like that." They even went to the National Audubon Society headquarters. At that time the offices were located across from Central Park so the children would go birding in the park and then cross the street to the Audubon offices. "They [Audubon] had a store on the ground floor that had books and artwork and a couple of old ladies who had nothing to do and they would talk to us about birds."

When he was a teenager, after Junior Audubon Club, he got involved in the Linnaean Society, the world's oldest active biological society. At that time the top scientists from the American Museum of Natural History and other well-known biologists were members. You had to be at least 15 years old to be elected as a member, so it was an elite group and not easy to join. Steve talked about how his involvement in the Linnaean Society had an enormous impact on his life and lifelong interest in birds.

When I asked him about his parents' interest in natural history and more specifically birds, he said, "My parents had absolutely no interest in birds whatsoever. They were city people. We lived in an apartment on the 19th floor. They had no interest at all, but they were perfectly supportive." Steve talked about his father serving in the war and having binoculars issued to him from the government, which he let Steve use to go bird watching.

When Steve was only 16 years old, he ended up getting a summer job at Patuxent Wildlife Research Refuge, which is a biological research facility in Maryland run then by the U.S. Fish and Wildlife Service. He spent that summer an assistant to Chandler Robbins, a legendary ornithologist and co-author of *Birds of North America: A Guide to Field Identification*. When I asked Steve why he enjoys watching birds, he replied that "birdwatching is an analytical sport. And it intellectually challenging and it's something that is easier than chess, but harder than checkers. So it's fun."

Wayne

Wayne participated in the Junior Audubon Club in 1955 when he was in fifth grade in Wellesley, Massachusetts. Wayne works for the Massachusetts Audubon Society and I met him at his office on a Friday afternoon. An author, educator and conservationist, he has spent more than 35 years conducting birding workshops, writing about birds and leading trips from Madagascar to the Arctic. He is currently the director of the Important Bird Areas Program for Mass Audubon, where he has been working for decades.

His interest in birds started at a very young age. Wayne recalled that when he was quite young and very sick with pneumatic fever, his neighbor came over to his house and read to him. "She gave me a set of the Audubon [bird] cards, the large flash cards and I was fascinated with these. We'd go through the pictures and I would gradually learn the names of them. As I recall, the best I can recall—and my mother who's still living at 96—she would attribute my seminal interest in birds to those flash cards and the fact that this woman gave them to me when I was ill." Wayne's passion for birds continues to this day.

When I asked Wayne if he would be interested in participating in my research, he responded enthusiastically. "The short version of my experience is that my fifth-grade teacher, Mrs. Doughty, was the one who introduced my class to the club," he wrote. "I recall she handed out small brochure-like publications with some colored, I believe, images of birds on it. These may well have been Fuertes, Brooks, or Peterson paintings, but I honestly can't recall. This was followed by some discussion in class, and we elected officers. I do remember that I was elected president, because it was common knowledge among my classmates that I was a 'bird nut'! She

was a wonderful teacher and most supportive of my interests. I do have vivid recollections of what I just described."

Wayne spoke about his friend, Dick, who was also very interested in nature, especially birds. He said, "I met Dick around fourth grade and then fifth grade along came Junior Audubon Club. He and I both were already deep into keeping track of birds [by that time]. I already had the *Birds of America* by T. Gilbert Pearson and the little blue Herbert Zim guide to birds. We basically memorized that. I mean not only could we tell you what page things were on, but like on the sparrows, where they'd be three species, [we could tell you] the sequence."

Wayne spoke about the many adult mentors he had throughout his youth. He spoke fondly of his Junior Audubon Club leader and teacher, Mrs. Doughty. He also talked about many adults who took him under their wing to share their passion of birds with him, including a high school teacher who was very influential. "I was lucky because there was a teacher, a guy named Douglas Sans, who was a fabulous teacher and he turned on multiple generations of young people to natural history. He was just amazing," Wayne said. Mr. Sans would take several kids on weekend trips to Martha's Vineyard or the Pine Barrens in New Jersey. "When I was in the ninth grade, he was the senior nature counselor at an overnight camp. A Fresh Air Camp, it was the Salvation Army Camp that was in Sharon, which is where our Moose Hill Mass Audubon Sanctuary is. He would hand-pick several of his better students of that school year to come and be junior nature counselors at Camp Wonderland, where he was the head nature counselor. There were about six of us and we were living together and it was like going to camp yourself, only you were actually getting paid some modest [amount]. Plus, you got a chance to follow him around and you were working with inner city kids and it was awesome."

Wayne talked about how fortunate he was to grow up in Wellesley and to be nurtured by so many wonderful and talented people. His town not only had lots of birds, but it also had a strong community of birders and naturalists. I asked him about his parents and he said, "My father was a professor at Babson College. He was an accounting professor. My mother, neither one of them had the slightest interest in natural history. It was like they spawned two mutant children, but they were incredibly supportive of my sister's interest in horses throughout her life [and] my interest in natural history and birds throughout mine."

When I asked Wayne about his memories of participating in the club, he talked about his teacher, Mrs. Doughty; receiving the button with a great egret on it; and the many wonderful materials that were produced by Audubon. He also said, "There was an election of officers and I remember that I was elected the president." He talked about going home for lunch and bird watching on his way back to school. "Dick and I…we walked from the school to where we lived. It wasn't right around the corner, but I mean it wasn't miles and miles. But it meant that we went through the woods, over the esker, down around the edge of the pond and home. Great birding. Sometimes we would be late coming back in the afternoon, for the afternoon session. I remember Mrs. Doughty, to her credit I have to say and she was wonderful. She was a nice teacher. She appreciated what we were doing and she would make us give a quick report to the class of what we'd seen. She was always interested and supportive. She would sometimes ask us, even if it was just one-on-one, 'Have you boys seen anything interesting this week or today?'' Wayne wrote in his survey that the club "was important because it reinforced my already existing interest."

Wayne has had a lifelong passion for birds—and not just a passion, but a career dedicated to birds. He was a classroom science teacher for 18 years, then started working for the Massachusetts Audubon Society. He said, "I will say that Mass Audubon was always very much

a part of my existence, even when I wasn't working for them." When I asked him why he likes birds so much he said, "If I take the long view, why do I love birds? Really its more than just about birds…almost going through life, most of the people, either the people that have meant the most to me or have influenced me the most, they're the people that have an interest in birds and shared an interest in birds or natural history. There was a connectivity."

Stefan

Stefan participated in the Junior Audubon Club in 1958 when he was eight years old in the Bay area of California. While doing an Internet search for Junior Audubon Club, I found an article written in the Western Art and Architecture website about Stefan, who is an accomplished bird sculptor. The article talked about Stefan's lifelong interest in both art and birds and his involvement in a Junior Audubon Club when he was in fifth grade. After reading the article, I contacted him and asked if he would be willing to be interviewed. He responded almost immediately to my email and we arranged a time to speak on the phone.

Stefan has been interested in birds from a very early age. "I came into this world thoroughly fascinated with birds. My very first childhood memories—I think I was around four then, if I can remember back—was about birds. It was neighbor's chickens specifically, but I was totally fascinated with birds," he admits. His mother saw his passion and started a Junior Audubon Club for her son and a small group of children in 1958.

Stefan spoke about how wonderful both of his parents were, especially his mother. "I was a very fortunate person to have been born to two wonderful parents, [including] a mother who was a three-dimensional artist and her main focus was floral arrangements. She really taught me about the delicate balance with nature in regard to art. She was smart enough to figure out what her son was interested in and nurtured that." Starting a Junior Audubon Club was just one example of how she nurtured his interest in birds.

The Junior Audubon Club had about five children in it. Stefan remembers three of the students who were in the club and remains in touch with one of them. "I remember she [his mother, the club leader] received information and materials from the Audubon Society and of course went on from that." The meetings were monthly and held at his house. He lived in a rural area and "the kids were ferried from town, the ones that were part of it. My mother would take us out and we'd walk around the area. There's a nice hiking area there. The coastal hills in California are wonderful. I remember that and talking about the birds."

"It was a really wonderful time of my life and just thinking about that brings me back to just a really cool space in time. I went on to spend my entire life not straying from my focus on birds." He said, "I had this insatiable appetite to be around birds. Live ones, dead ones, and I was always raising orphaned ones. It's absolutely been a lifetime and still do." When he was about 12 years old, he bought his first taxidermy book and began to study the craft. But not being a hunter or having a family who hunted, it was challenging to find birds on which to practice taxidermy. Stefan said, "My father was always bringing home different creatures he found on the road for me to practice on. And I spent a lot of hours searching for dead birds along the beach." Within four years, he had perfected the art of taxidermy. "By age 16, I was teaching it to adults through night school classes. By age 18, I opened a full-functioning taxidermy business, which I kept for 53 years." More than 10 years ago, he began to focus on sculpture, which he said lasts longer than taxidermy. "Taxidermy is three dimensional form. The medium in which you're working with is skin and feathers, but you still have to see the form. I ended up sculpting forms for other

taxidermists, creating a line of bird forms that represented the anatomy underneath the feathers." Switching to sculpture was "a natural progression. It's a natural step." His sculptures can be found in wildlife art festivals and in high-end art galleries all over the country.

"I'm all about birds. Birds just really pretty much provided me a wonderful life. I'm one of those few that have never strayed from my passion. The Junior Audubon Club was just the very beginning of it. I can't say that it influenced me to take interest to birds because I already had that, but it certainly did nurture and nourish my interest. It just brings a smile to my face when I think about it," he said.

David

David participated in Junior Audubon Club in Waukesha, Wisconsin, a rural town about 20 miles outside of Milwaukee. He is a university professor and found my request to speak with people who participated in Junior Audubon in one of the bird listserves. "I participated in Junior Audubon in the late 1950s," he wrote. "In fact, I still have the materials sent to me at that time. Attached are copies of a few of the pages from the two booklets I received, the Nature Program Guide (for Advisers) and the "Our Country - Let's Explore It" activity booklet, both with 1956 copyright. Aside from my parents, my primary mentor was a family friend, Florence Retzer. My introduction to the natural world as a child took place largely at Florence's home and property, a former farmstead where she and her husband had carried out "restoration ecology" (long before it was known as such), beginning in the 1940s. I and my brothers spent countless hours there, exploring the woods, fields, marshes, pond, and stream, observing and identifying a wide variety of plants and animals, and assisting in the restoration work by, for instance, planting trees. The profound influences that those early activities, including Junior Audubon and Florence's mentorship had on my subsequent life can't be overestimated, and led to my becoming a botanist and plant ecologist. (I dedicated my dissertation to her memory, and I've been on the faculty here at CSU for the past 35 years.) Additionally, Florence's passion for the land continues to touch the lives of children today. When she passed away in 1973, she donated her property to Waukesha County, Wisconsin to establish what is now the Retzer Nature Center."

David had a unique experience in Junior Audubon Club. He was only five or six years old when he participated in the program, which is much younger than others that I spoke to. He also was in the club with his brothers and his club leader was a friend of the family. As he mentioned in his initial email to me, he still has the materials that he received while in the club, including the button and the education materials, which he keeps in his office at the university and scanned copies of which he emailed me.

David spoke passionately and lovingly about his club leader, Florence Retzer. Her husband had passed away a few years before Junior Audubon Club formed, he said. She was retired from a career of writing and researching for *Fortune* magazine. Florence, "was my mentor, along with my parents, in getting me interested in things in the natural world. I explored her property and some of this resonated with me, even back when I was five [years old]." Later in the interview he said "she was the first person outside my family, aunts and uncles, who would talk to me as though I wasn't just a snotty little kid. She'd engage me in discussions of things and ask my opinion on things. The time I spent with her was just wonderful. I can't say enough about how strong an influence she had on me." He remained in contact with Florence throughout his life. In college, he took care of her property during the summer and was able to return to some of the special places he had explored as a young child.

"My brothers and I would explore her property, which was woods. It had ponds. It had marshland, plants of all kinds." David talked about the materials he received and the activities that Florence would do with the boys. The materials included booklets titled, "Let's Explore the Pond" and Let's Explore the Marsh." The activities, "they just piqued my interest, and kind of supplemented the informal activities that I was doing with Florence Retzer and with my parents as well at that time."

Her property is now a county park. "She donated her property to Waukesha County when she passed away and it had become the focal point for the county's environmental program." David visits the property whenever he is in Wisconsin. Many trees have been planted on the property in memory of David's loved ones, including Florence Retzer.

David talked about the impact that spending time with Mrs. Retzer, and the activities that they did together with his brothers, had on his personal growth and professional career. "It was kind of a combination of things. I think [Junior Audubon Club] fed into the immersion in nature that I was getting at the time. And it broadened my interests and broadened not just my interests, but my knowledge base. Seeing things about natural areas that were different from where I was also really, really intrigued me." He spoke about learning about mountains through the Junior Audubon Club materials, but not seeing mountains until he was in college and making connections years later between what he learned when he was five and what he was experiencing first-hand in the mountains. He talked about "exploring the pond, making a dip scoop. We went out to the pond with a sieve and we'd collect tadpoles and find what else was in there. The thrill of exploration was just heightened and the broadening of my awareness of the world was also heightened by the materials that we received."

David talked about building bird feeders and bird nest boxes and installing them on the Retzer property. "I and my brothers built a bird feeder that we gave to her and she put it on her deck area with a big window in front of it. She had binoculars there, an old pair of binoculars that we'd use. I have those now—when she died, she left them to me, which is pretty special." He shared stories of finding and identifying plants with Florence. He had special places on her property that he and his brothers called their "hideouts." "I have really vivid memories of things like going out there in the spring and finding bloodroot and trillium flowering. And even breaking the bloodroot and painting our faces like Indians….It was wonderful exploration for a youngster that really laid the grounding for my interests in what became my professional career."

His parents were very supportive of his interests and encouraged his love for nature. Both of his parents were scientists; his father was a soil scientist and his mother was a chemist. They nurtured David's interests in the sciences and made the connection between Florence and David.

When I asked him why he still has his button and why he keeps the Junior Audubon booklets on his bookshelf in his office, he replied simply, "because they were formative to me and bring back wonderful memories." He went on to say that the Junior Audubon Club "helped lay the grounding for what became my professional interests and life work." He knows many experiences and people helped to shape him and influence his career path. When reflecting on the impact of the program he said, "Junior Audubon was a tiny component of this, but an important one with the that things that opened up for me and led to a greater respect for it [nature]."

Nancy

Nancy participated in Junior Audubon Club in Plainfield, Connecticut in 1941 when she was about six or seven years old. In 2014, Nancy received the President's Award from New Hampshire Audubon for her dedication and lifelong commitment to Audubon's mission of connecting people with nature. In her acceptance remarks, she mentioned that she had been a Junior Audubon Club member as a child and has been connected to the organization, in multiple states, since childhood. I found her by contacting New Hampshire Audubon, which referred her to me. I spoke to her by phone on a Sunday afternoon during a snowstorm.

Nancy has been involved with New Hampshire Audubon for many years and has volunteered with its education programs and in its gift store, among many other tasks. In addition to her involvement in New Hampshire, when she and her family lived in Massachusetts they were involved with the Massachusetts Audubon Society and spent a lot of time at Stony Brook Wildlife Sanctuary. She shared stories of bringing her children there for programs, family picnics and walks in the woods. She has been interested in birds since her childhood and has had a strong connection to nature throughout her entire life.

Nancy received the Junior Audubon Club materials at her home and participated in the program with her mother. She had vivid memories of the materials that she received. "I remember I got a picture, an actual picture of the bird, and I'm sure it was a painting, a lithograph or something. Then you had one with the same picture, but it was just an outline in black and white. Then there was a folder that came with it." She talked about coloring in the outline drawing to learn how to identify the birds. She also remembered receiving the bird cards, which she still has today. "We ended up collecting the cards….I remember little four-by-four [inch] cards and on the back it told a story about the birds and how to identify the birds. I thought it was great because you were looking at different birds. My family would point different things out to me. Now I'm more aware of the markings of the birds. It seems to me that in elementary school age, I would look for birds, listen for birds and try to identify them." She talked about how she learned about the birds through the materials and her mother's guidance, and about the cards having information about the birds – what they ate, where they lived and their field marks. "I remember looking forward to it coming each month. I really can remember that was something I was receiving in the mail. That was very special."

Nancy spoke lovingly about her family and their love for nature, especially her mother. Her mother was "very much interested in birds and nature…I remember planting a garden according to attracting certain birds. It was always the Baltimore oriole. I remember the Baltimore oriole and actually finding it. That sticks out in my mind." She later said, "I feel I was so blessed when I was young to be exposed to nature by my mother." When I asked her about the impact of the materials and the program, she replied, "I think it certainly reinforced what my mother was trying to do, by having a family member that was excited about when I got a mailing and I'd get excited." Toward the end of the interview she said, "I think being exposed and actually seeing them, having a picture, the thing was mailed to me and then to be able to go out with my family and actually see the bird. I mean, that's quite an experience."

Joe

Joe participated in Junior Audubon Club in a town outside of Philadelphia, Pennsylvania in 1960 when he was in approximately sixth grade. I first met Joe at the 100th anniversary of

Wyncote Audubon Society (formerly called Wyncote Bird Club) where he shared stories about his involvement in Junior Audubon Club and the Audubon chapter as child and teenager. Joe is an ornithologist and professor in Puerto Rico. Due to the distance, we used Skype to conduct the interview.

Joe had an unusual involvement in Junior Audubon Club. He started his own club, which met in his basement of his house with other children from his neighborhood. There was not an adult club leader, but instead a group of similarly aged children who formed their own club and used the materials as a framework. In the survey he wrote, "Meetings were down in our basement where I had a small museum and hung up the Audubon bird posters, which we reviewed in our meetings. However, we did a lot of field trips."

Joe spoke about how important the Audubon materials were, especially the bird posters, which they used to learn how to identify birds. "Some [of the posters] were the summer birds, winter birds, maybe fall. They were big posters with a lot of different species. I set up a little den in the basement, or a museum, and all the walls were covered with those posters. In our early meeting, there were a couple of neighborhood kids, two girls and my brother. I know in the early meetings we used to review birds that were on those posters. That is how we learned them. That was important."

Several times throughout the interview he talked about his basement, which he converted into a museum. "We had old bird nests. Maybe a snake skin or two and an old turtle shell. Our bird nest collection grew. Then we, of course, got some nests that were donated to us. My parents, once we moved to another place, wanted to get rid of some of those bird nests. A lot of them ended up at Briar Bush." (Briar Bush was the Griscom family home in Wyncote. Mrs. Griscom welcomed many children and families to her property to learn about birds and nature. The property later became a nature center, which it remains today.)

Joe talked about his parents supporting and encouraging his interest in nature. "My father knew the Griscoms at Briar Bush. I was exceptional in that regard and they knew about Audubon, the Audubon Society, and they knew about some of the early players in the Audubon Society. I did have an unusual background in that regards."

In both his written survey and interview, Joe talked mentioned the materials that he received through the Junior Audubon Club, including posters and the bird cards. "I did collect a lot of those bird cards and started memorizing birds from that, but then we spent a lot of time getting out in the field." When I asked him why he kept the materials he said, "I am not good at throwing things out, especially stuff that related to natural history, ecology, biology and ornithology." He remembers receiving and wearing his Junior Audubon button. "[Junior Audubon Club] provided me with resources to learn about animals at a young age when nature educational resources were limited to me. It stimulated my interest to learn more about natural history and to want to continue exploring nature and get out into natural areas."

Getting out and exploring natural areas was an important club activity "One of the saving graces was we had a patch of woodland that we spent a lot of time going through. [We] crawled all over that wood patch. We knew it. When I was up last September we stopped by to see Leigh [a fellow club member] and then we went …. to the woodland. We went in there and wandered all over and looked at it and we remembered trees. I remember finding certain trees and they're still there. The oaks were still there and the tulip poplars were still there and the beeches were still there. They were a little bigger, a little more storm damage." The property, now owned by the township, is a park so everyone can enjoy it.

In addition to exploring on their own, the Junior Audubon Club members also became involved with the local bird club, which later became the Wyncote Audubon Society. “There were times when we became more active in the Wyncote Bird Club, where we had adults and then also because they drove and could take us out to these places or other places we had adult supervision and support," he said. "We had a neighbor who was a member, who was happy to take us to the meetings. I would get invited along and my parents felt that was fine. They had lectures, illustrated lectures, at night. Of course, we just ate that up. Then they would have field trips, which in fact we always felt they never had enough field trips.”

Joe has been interested in birds for his entire life and has spent his career studying them. When I asked him about his interest in birds, he said, “A lot of it at that age may have been escapism. I was basically introverted. I remember sitting in the back of the class with my Peterson field guide [in] an English literature class. Well, English literature didn’t hold my attention, but that Peterson field guide really held my attention. It was a way to escape. What turned me around as a student was making the connection that there was more of this bird stuff to learn and this natural history stuff. You could actually become a biologist.”

In addition to having his eyes opened to career possibilities, he also talked about the importance of social acceptance. Throughout the interview he shared stories of birding adventures during his youth with close friends, who remain his close friends today. The social connections through birds and Junior Audubon Club were critical to Joe. “[Junior Audubon] also reassured me that having an interest in natural history was a good thing to do, especially at an age when most peers my age would tease me or ridicule me for having an interest in nature or birds. Also it facilitated meeting others my age who had similar interest. The Junior Audubon Club was one of the earlier formal organizations, along with Scouting, that encouraged nature exploration and increased my knowledge and interest that led on to completing degrees in biology, ecology, and a satisfying career as a research wildlife biologist.” Later in the interview he mentioned again the importance of social acceptance. “When you’re a kid at that age and you’re excited by all of this, your peer group is not. You’re sort of embarrassed to admit to anybody that you have those interests. All of sudden when you find some other kids your age who have those same interests, it's fantastic. That little Audubon group did that.”

Dur

Dur not only participated in a Junior Audubon Club when he was a child, but he also started a club with his students when he became a teacher. Dur was a member of a Junior Audubon when he was in the fourth grade in 1932 in Hingham, Massachusetts. Later as a teacher in Connecticut he started a second club.

I’ve known Dur for many years because he has long been connected to the National Audubon Society as a staff member, board member and a volunteer for several projects across the country. Dur was the director of the Greenwich Audubon Center in Connecticut, the Hog Island Audubon Camp in Maine, and was vice president of education for National Audubon. He has remained involved with Audubon programs throughout his lifetime, even to this day when he is in his 90s.

Dur participated in the Junior Audubon through school, and remembers receiving the materials, learning about the birds and coloring them in. He also remembered reading the stories in the leaflets to learn more about the birds and their habitat. Dur said he received a bird button, but lost it in his many moves as a child and adult. When I asked him if he was interested in nature and birds at an early age, he said, “Yes, I was. My dad was cutting grass and I was

collecting the clippings and tried to make bird nests out of them and put them in trees. Of course, I was very disappointed that the wind blew them down and no birds came. And Mother picked that up and began to show me birds ... she had Frank Chapman's book and several other books that had bird information in it and that's where I really got started." The following year they moved to Massachusetts and Dur joined the Junior Audubon Club.

I asked Dur if he had friends when he was in elementary school who were interested in birds and nature. "Not particularly, I was sort of a loner in that respect," he said. Later he shared stories of friends that he went birding with when he was in boarding school in his early teenage years, and he recalled field trips with his headmaster's brother who was a graduate student at Yale. Dur joined his friend from school on these trips and the three of them would explore the woods in town to see what birds they could find.

Throughout Dur's teenaged years, he had the remarkable opportunity to meet many well-known naturalists, some of whom became his mentors. When he was 16, he met Earl Poole, then the director of the Reading (PA) Museum who was a well-known wildlife artist, sculptor, author, and naturalist. Dur ended up spending three weeks working alongside Poole and others, cataloging a large collection of hummingbirds from South America. Dur and his friend, Phil, also met the directors of both the American Museum of Natural History and National Audubon Society. Both men took the boys out to lunch, introduced them to staff and took them under their wings. Dur ended up working for the National Audubon Society while his friend Phil became the director of the Kansas University's Natural History Museum.

When Dur turned 18, he went into the Army, following which he went to college and got a teaching job in Connecticut. He spoke affectionately about the Junior Audubon club that he ran. "We did programs, we built bird houses put them around in the school [yard]. We had a fairly good-sized campus and we had a good-sized pond, which was a hockey rink during the winter. I remember spending a lot of time documenting tree swallows who seemed to use the houses more than any other. The kids enjoyed that a lot. They kept notes and records of what went on." He laughed while recalling one incident during a baseball game. "We had discovered a killdeer nest on the third base line about 15 feet behind the third base and the kids, they'd made a cage of hardware cloth. It was open on one side, which faced away from the third base so the birds could come in from the back and incubate, which they did and we kept records of that. And during this particular baseball game, one of the youngsters, one of our kids, was playing third base. He saw the birds hatching and yelled to us. The game stopped and we explained what was going on to the other team and they got terribly interested and we all sat around and watched the killdeer hatch, at least one killdeer egg hatched. It took a long time obviously, but that was pretty exciting experience for our kids as well as the kids from the other school, which was great."

Dur had other stories from his time leading a Junior Audubon Club, illustrating the importance that the program and exposure to nature had on some of his students. He kept in touch with many of his students for years and continued to mentor them beyond elementary school. Dur talked about the importance of multiple experiences he had throughout life and opportunities that expanded his love for nature and birds. He said Junior Audubon had an impact on him. "I think it was a cumulative thing, the earlier experiences in the club and then I went to a small boarding school in Connecticut" where he connected with his headmaster's brother, who supported and encouraged his interest in birds. He had many other mentors throughout his lifetime that supported him and validated his interests, which also became his lifelong career with Audubon.

Betty

Betty was a Junior Audubon Club member in Chicago, Illinois, in approximately 1960 when she was in fifth grade. Betty saw my post seeking former Junior Audubon Club members in a newsletter in her local library—probably a bird club newsletter, although she wasn't sure. She emailed me and wrote, "I would be happy to share my memories with you if you are still collecting them. I have very happy memories of my club experience."

During the interview Betty said, "I remember the Audubon Club very well. It was not through school. I recall it was on a Saturday and it was in a wonderful old house. I grew up in Chicago in an old historic neighborhood, and there [were] a lot of beautiful old kind of executives houses of the early 20th century. The leader was Miss Doyle." Betty remembered the club meeting in this beautiful historic house, which sat on the top of a hill. The club meet in an upstairs room, which Betty called a tower room, which became their classroom. She had many memories of her club leader, whom she described as "a little different. She wasn't like our mother. Thinking back now, (she was) kind of like a proto-hippy. Her hair was kind of long, she wore ... artistic clothes. Not like our mothers looked. It introduced me to something different from what I was used to."

The club was made up of a group of children about the same age as Betty, who recalled doing learning, interactive activities, and making things. Betty said that Miss Doyle "had a way of making [science and nature] interesting to us. I liked the classes. It was fun and interesting. I remember she really wanted us to be interested and she wanted us to understand."

Betty's family were not interested in nature, she said. "We were not, definitely not, outdoor people. We never went camping. We didn't go anywhere like that." In the survey, when asked if the program had an impact, she wrote, "More friendly feelings about science and authoritative woman science leader." During the interview, reflecting on the program, she said, "I think being introduced to something that was really kind of foreign in my own life, I think it makes you see that you can have a place in being interested in something like that. Something like that was for you. If it wasn't for other people, you could have that as part of your life too. I think it is really helpful to have that other, it is not school, it is not church, it is something else. Another way to relate to people. Another place to have friends."

Appendix G: Environmental Identity Scale Results

	Aver. Score
I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean, etc.).	4.42
Engaging in behaviors that benefit the environment is very important to me.	4.64
I think of myself as a part of nature, not separate from it.	4.86
If I had more time or money, I would devote some of it to working for environmental causes.	4.57
When I am upset or stressed, I can feel better by spending some time outdoors "communing with nature".	4.43
Living near nature and wildlife is important to me.	4.57
Behaving responsibly toward the earth—living a sustainable lifestyle—is a part of my moral code.	4.64
Learning about the natural world should be an important part of every child's upbringing.	5
I feel that I have roots to a particular geographical location that had a significant impact on my development.	4.36
In general, being part of the natural world is not very important part of my self-image.	4.71
I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.	5
I have seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.	3.71
I keep mementos from the outdoors, like shells or rocks.	4.64
I feel that I receive spiritual sustenance from experiences with nature.	3.64