

An Anishinaabe Ethno-ornithology of Wabaseemoong Independent Nations

by

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Gikendasowin ozhibii'igan mazina'igan

Imaa mazina'iganing ni-gagwe-waabanda'iwe gichi-apiitendaagisiwag ingiwe bineshiwag ga-Anishinaabe-izhitwaawin. Ga-izhi-gikendiman owe ga-izhi-Anishinaabe-izhitwaawin ni-gii-izhitaa zhigwa ni-gii-baabaa-mawadishiwe ishkoni-ganing. Miinawaa niibiwa ni-gii-agandaanan Anishinaabe-mazina'iganan. Ni-gii-gikendaan weweni naanaagagitoonaawaa akiing. Gaa-ni-gii-gikendaan apiitendaagwad zhigwa bineshiwaag dibendaagosiiwag akiing apichii gichi-apiitendaagwad gakina-mino-bimaadiziwin. Owe mazina'igan gaa-gii-ozhibii'amaan niwin minik indizhindaanan: manidoowaadiziwin, anishinaabemowin, andawenjigewin, aanjise-bimaadiziwin ishkoni-ganing.

Apichii ni-gichi-miigwechiwendam owe ginamagawaan ga-izhi-Anishinaabe-izhitwaawin ishkoni-ganing. Gaawiin wiikaa niwaniikesii. Ga-gitchi-ginaategiziiwad omaa gaanada-akiing nin-jitaa chimaaji wiijiwaat Anishinaabeg zhigwa wiidookodaadiwin.

Abstract

This thesis is a study of the Anishinaabe relationship with birds and focuses on the Anishinaabe community of Wabaseemoong Independent Nations (WIN). This relationship with birds is one aspect of an all-encompassing Anishinaabe relationship with the land that forms the basis of traditional culture and continues to inform much Anishinaabe life today. The purpose of this research is to explore the role of birds in historical and contemporary Anishinaabe life with specific reference to traditional cosmology, Anishinaabemowin bird nomenclature, and land-based practices. The research also considers how the community's relationship to birds and to the land has been influenced by some of the greater changes that have occurred in the community over time. As an ethnographic study, this project is rooted in data gathered from interviews conducted during a fieldwork session in the community as well as from document review.

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CHAPTER 1 – INTRODUCTION

The relationship between Anishinaabe people and their physical environment heavily informs many aspects of traditional Anishinaabe worldview and culture. Having traditionally relied upon their surrounding environment to provide them with the necessities of life, the land emerges as a central component of traditional Anishinaabe spirituality, social institutions, language, and identity (Simpson, 2014). Contrary to western notions of a one-sided human dominance of nature, the Anishinaabe traditionally understand themselves to be in a meaningful relationship to many of the features of the natural world and interact with them on both physical and spiritual levels (Hallowell, 1991). Interactions with the land must then be understood in the context of these relationships which are inseparably and elaborately integrated throughout the many aspects of traditional Anishinaabe culture.

Ethnobiology provides an academic discipline to understand cultures in terms of their bio-physical environment (Anderson et al., 2011). Its interdisciplinary approach to research encourages perspectives from anthropology to biology, including their related fields. Ethnobiology has been used to address the holistic knowledge systems of Indigenous people and has explored how traditional land management practices are embedded in Indigenous worldviews (Berkes, 2012). Especially in recent decades, the horizons of the field have been broadened in considering the complexity of relational and experiential based knowledge systems (Ingold, 2000; Miller & Davidson-Hunt, 2013).

Ethno-ornithology is part of the broader field of ethnobiology but with a specific focus on understanding a given society's relationship to birds (Tidemann & Gosler, 2012). As prominent members of the ecosystem, birds stand out distinctly in their symbolic and cosmological relevance to many human societies (Tidemann & Gosler, 2012). Occupying the realm of both the earth and sky, birds are often seen as spiritual messengers who bridge the natural and spirit world in North American Indigenous cultures (Chandler et al., 2017). Subsequently, ethno-ornithology has been particularly receptive to notions of relational research and often seeks to consider the broader significance of birds within the cultural frameworks of Indigenous societies (Chandler et al., 2017).

Research Purpose

This is a study of the relationship between the Anishinaabe people and birds. The role of birds in historical and contemporary Anishinaabe life is examined with specific reference to traditional cosmology, Anishinaabemowin bird nomenclature, and contemporary land-based practices. This research analyzes linguistic, ecological, spiritual and socio-cultural factors that influence how birds are perceived and which determine the ontological space which birds occupy within traditional Anishinaabe thought. Additionally, Anishinaabe ornithological knowledge is considered as it reflects greater processes of change and adaptation in contemporary Indigenous knowledge systems.

Specifically, the research objectives are:

- 1 - To understand how traditional Anishinaabe ornithological knowledge is shaped through stories and cosmology

2 - To create a comprehensive list of Anishinaabemowin bird nomenclature and subsequently explore how the bird nomenclature influences their taxonomy

3 – To understand the contemporary land-based practices involving birds in the community of WIN

Methodology

Considering the significance of a personal introduction in Anishinaabe culture, I would like to state that my name is Zachary Rempel, I do not yet know my clan, and I was born and raised in Winnipeg, Manitoba, Canada, in Treaty 1 territory. A general interest in exploring new cultures, an academic background in Algonquian linguistics, as well as a growing awareness of the history of settler colonialism and racial inequality in my home guided me towards research with Indigenous people in Canada.

As a non-Indigenous researcher, I was required to invest particular thought in my approach to research in an Indigenous context. It is critical for non-Indigenous researchers to maintain an awareness of the history of colonial research that has devalued Indigenous ways of knowing and abused Indigenous knowledge in the past (Smith, 1999). Reo (2019) reminds researchers working in Indigenous communities that respect for the community must be at the centre of the project and guide the research throughout all of its phases. Inspiration for this research was found in accounts of non-Indigenous researchers who have centered the desires of the community at the heart of the research, for example Basso's (1996) work with the western Apache, or Brody's (1983) experience with the Beaver people of north-eastern British Columbia.

The research was undertaken within a social constructivist and pragmatic philosophical approach, using an ethnographic strategy of inquiry (Creswell, 2009). Grounded in a qualitative

research paradigm, the research framework was modeled to be adaptive and remained open to shaping from community members throughout the research process (Nelson, 1991). In this way, methods, data collection and interpretation were continually refined throughout the course of the project.

The main methodological components of this research include document review and semi-structured interviews. Document review serves as the basis for much of the information throughout the thesis. Semi-structured interviews with community members conducted during fieldwork in the fall of 2018 comprises the basis of the fourth and fifth chapters. Participant observation also played a role in the research process as it provided for triangulation of the data and relationship building with community members (Bernard, 2006).

Wabaseemoong Independent Nations

Fieldwork for this research project was carried out in Wabaseemoong Independent Nations (WIN), an Anishinaabe community located in Northwestern Ontario. WIN, usually referred to as “Wabaseemoong”, or commonly “White Dog”, is accessible via road year-round, located within a two-hour drive from the nearby town of Kenora. Traditionally a hunting and trapping culture, the Anishinaabe of WIN today have inherited a society that depended upon their local environment for food, medicine, and general livelihood needs (Hallowell, 1991). This traditional lifestyle was maintained well into the 20th century, and in fact continues to significantly contribute to contemporary values, beliefs, and land-based practices (Kuzivanova, 2016).

Contribution to Knowledge

This research project follows in the footsteps of previous work at the Natural Resource Institute that has operated within a meaningful partnership with Anishinaabe communities (Bolton, 2012; Kuzivanova, 2016; Pengelly, 2011; Shearer, 2008). My research engagement with the community builds upon previous and continuing research undertaken by Dr. Davidson-Hunt in partnership with Mr. Marvin MacDonald of WIN, who at the time was the Traditional Land Use Area Co-ordinator. Ethno-ornithology was selected as a topic that would produce research of mutual interest to the community and the University. Apart from the written thesis, the end result of the research will include a language resource of all the different birds in WIN created by the various community members, assembled by myself.

My research builds upon previous work exploring the socio-cultural, spiritual, and ecological dynamics of the relationship between the Anishinaabe and their physical environment. Ethno-ornithology has not yet been explored in the context of Anishinaabe communities. This research provides a unique opportunity to explore the particular features of the relationships to birds within an interdisciplinary context, considering the place of birds within ontology and worldview. My background in Algonquian linguistics brings a unique aspect to the research as linguistic analysis has often fallen outside the scope of previous ethnobiological studies with the Anishinaabe.

Structure of the Thesis

As a study of the relationship between the Anishinaabe people and birds, this thesis extends its aims beyond documenting bird facts or bird knowledge possessed by Anishinaabe people and rather situates Anishinaabe ornithological knowledge within the context of the Anishinaabe

relationship with the land. Because the Anishinaabe relationship to land runs throughout all aspects of traditional culture, the significance of birds appears throughout all facets of Anishinaabe life including cosmology, language, and land-based practices. Also included in this relationship is an ontological element that concerns how the Anishinaabe come to acquire their bird knowledge. The appearance of birds throughout these aspects of Anishinaabe life then reflects on the relationship to land as it is now practiced and how it has evolved over time.

Following the literature review, the main body of research in this thesis is divided among the third, fourth, fifth and sixth chapters. The third chapter examines the relationship between the Anishinaabe and birds as documented in a selection of texts, and focuses on how this relationship is integrated within a traditional worldview. The role of birds in cosmology is discussed as birds feature prominently throughout Anishinaabe stories, myths, and traditional spirituality. The fourth chapter explores Anishinaabe bird nomenclature as it relates to ornithological knowledge. This chapter relies on data collected during fieldwork in the community of WIN in the fall of 2018. A linguistic analysis of Anishinaabemowin bird names reveals patterns in the naming of birds generally consistent with ethno-ornithological literature and also provides insight into the nature of Anishinaabe folktaxonomy. The fifth chapter discusses the bird-related land-based practices of the Anishinaabe people of WIN and also draws from fieldwork in WIN. This chapter examines contemporary land-based practices of community members as a part of their relationship with the land. Changes in land-based practices over time and changes in local bird populations noticed by community members are also discussed.

The sixth chapter puts Anishinaabe bird knowledge in a broader ontological context and explores how contemporary ornithological knowledge in WIN reflects a greater process of change within Indigenous knowledge systems generally. This final chapter considers the

historical, social, and colonial contexts to Indigenous knowledge that directly affect community members' bird knowledge. I found it difficult to spend time in an Indigenous community and ignore some of the changes in ecological knowledge that have occurred as a result of Indigenous experiences under - *and responses to* - Canadian settler colonialism. Indigenous knowledge cannot be understood in abstract from greater social, political, and economic realities conditioned by the settler colonial state. This chapter attempts to integrate these considerations into the ethnobiological study. A seventh and final chapter concludes the study.

Chapter 2 – Literature review

In this literature review, ethno-ornithology will be situated within the broader context of ethnobiology, as ethno-ornithology occupies a niche in the broader field of ethnobiology. After reviewing historical and contemporary ethnobiology, I will review previous work that has touched on ethno-ornithological work with the Anishinaabe. Subsequently, I will review folkbiology broadly and discuss contemporary approaches to investigating taxonomic systems generally and specifically to the Anishinaabe.

Ethnobiology

Ethnobiology can broadly be defined as the study of the relationships between different societies and the natural world around them (Anderson et al., 2011). The discipline provides a home for those who seek to understand human cultures and traditions in the context of their local biological environment.

Found at the intersection of biology and anthropology, ethnobiology allows for a broad palette of ethno-biological ventures with researchers from relatively diverse backgrounds (Berlin, 1992). While the most well-known of the subfields include ethnobotany and ethnozoology, ethnobiology may also include aspects of linguistics, ecology, pharmacology and archaeology as they relate to humans and the natural world (Anderson et al., 2011).

The depth and complexity of Indigenous communities' ecological knowledge has consistently placed them at the centre of many ethnobiological studies (Anderson et al., 2011). Recognizing the holistic nature of many Indigenous worldviews, the broad methodological base of ethnobiology allows for a multidisciplinary lens to analyze the complex intersection of traditional knowledge, spirituality, and biology found in many Indigenous cultures. Local

biological features, such as plants and animals, frequently play fundamental roles in the identity, culture, and spirituality of many Indigenous peoples (Davis, 2014). The unique relationship which Indigenous groups across the world have with the natural world provide alternate conceptions of the relationships that humans can build within ecological systems.

As a result of drawing from various different disciplines, ethnobiology eludes a particular theoretical framework and does not adhere to a strict methodological standard (Anderson et al., 2011). The interdisciplinary nature of ethnobiology allows for flexibility in terms of methodological norms. Multi-disciplinary approaches to research are especially appropriate when working with Indigenous cultures for which the boundaries between what are perceived as distinct disciplines in a Western sense are often ambiguous or undiscernible (Berkes, 2012). Recognizing the holistic nature of many Indigenous cultures' worldview, the broad methodological base of ethnobiology allows for a multidisciplinary lens to analyze the complex intersection of traditional knowledge, spirituality, and biology found in many Indigenous cultures.

For the purposes of this research, the term *Indigenous knowledge* will be used broadly to describe the general ecological knowledge held by Indigenous people. The term has been used interchangeably with traditional ecological knowledge in the past, defined as “a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment” (Berkes, 2012, p. 7). Some scholars prefer the term *Indigenous knowledge* as the term *tradition* may leave the impression that Indigenous knowledge is archaic or obsolete in the modern world. The term *Indigenous knowledge* more openly embraces the aspects of change and adaptability in Indigenous knowledge (Berkes, 2012;

Toledo, 1992). In the case of this research, it was decided that *Indigenous knowledge* more accurately captures the general knowledge possessed by Indigenous people.

History of Ethnobiology

Over the past century, ethnobiology has undergone a shift in terms of how it is conducted and what it sets out to achieve. Although the stages of development of the field have been categorized variously, all of the different frameworks document the progression of ethnobiology in tandem with a growing recognition of the legitimacies of Indigenous knowledge (Hunn, 2007). In the 19th and early 20th century, ethnobiology, in some contexts termed “economic botany” (Berlin, 1992, p. 6), concerned itself primarily with the documentation of lists of organisms, their names, and uses (C. H. Brown, 1984, p. 2). This procedure was closely linked to the colonial process of exploration and extraction, where Indigenous peoples’ knowledge was mined for technical information and subsequently recorded in western libraries and museums (Geniusz, 2009). Early incarnations of ethnobiology, to a large extent, sought to document plants of utilitarian value, namely food or medicine (Anderson et al., 2011). Over centuries of colonization, the incorporation of various medicinal and crop plants from “primitive” cultures into European societies would revolutionize western science, medicine, and culture (Mann, 2011).

Progressing throughout the second half of the 19th century, ethnobiology began to develop a focus on the systematic psychological and linguistic aspects of ethnobiological knowledge across the world’s cultures and investigate the classification structures of folk taxonomies (Hunn, 2007). Work exploring the universal features of ethnobiological classification throughout human societies provided cornerstones to ethnobiological theory in this

era (Dwyer, 2005). In the 1970s and 1980s, the language of traditional ecological knowledge highlighted the unique aspects of Indigenous peoples' relationship to the physical environment and emphasized legitimacy of traditional resource management strategies (Berkes, 2012; Hunn, 2007). The emergence of ethnoecology in this same period came to situate ethnobiology in an ecological context and illustrate how Indigenous ecological knowledge is practiced actively in a landscape (Hunn, 2007).

The most contemporary stage of ethnobiology is focused around research that provides benefit and meaning to the Indigenous community in question (Anderson et al., 2011). Ethnobiologists have come to understand that information within Indigenous knowledge systems is integrated within traditional ontologies, and that ethnobiological work must operate with respect to these frameworks (Geniusz, 2009). Modern ethnobiology has incorporated a distinctly integrated approach to research, emphasizing interdisciplinary and community-based research strategies, and seeks to ensure that communities have critical input into research practices and outcomes (Alves & Albuquerque, 2018). Ethnobiologists are often critically engaged in the welfare of marginalized Indigenous communities in a global climate with mounting economic and environmental pressures on Indigenous communities (Wyndham et al., 2011).

Contemporary ethnobiology with Indigenous peoples in Canada has increasing relevance in the Canadian geopolitical landscape. Ecological relationships as understood by Indigenous peoples fundamentally affect their interactions with the cultural and geographic landscape (Berkes, 2012). Understanding the intricacies and dynamics of Indigenous worldviews has further implications for the process of reconciliation, conservation and Natural Resource Management generally (Anderson et al., 2011). A growing recognition of the legal rights of Indigenous peoples serves to increase the attention given to such issues (Anderson et al., 2011).

Ethno-ornithology

Ethno-ornithology represents a unique subfield within ethnobiology as birds occupy a distinct space in the animal kingdom and extensive symbolic and utilitarian roles in the cultures of many human societies throughout the world (Tidemann & Gosler, 2012). Ethno-ornithology has been defined broadly as “the complex of inter-relationships between birds, humans and all other living and non-living things, whether in terrestrial or extra-terrestrial spheres or in body or in spirit” (Tidemann & Gosler, 2012, p. 5). Previous studies have showcased the particularly interdisciplinary nature of the field, investigating the place of birds in the traditional ecological knowledge systems of many Indigenous peoples (Si, 2016), the historical linguistics of avian nomenclature (Tidemann & Gosler, 2012), or how birds inform aspects of Indigenous spirituality (Chandler et al., 2017). Relationships between humans and birds have been documented to serve important utilitarian functions in the lives of many different societies. Cormorant fishing has been practiced by many cultures throughout Asia and southeast Asia for centuries (Society, 2016). In Mongolia, the Altaic Kazakh people continue to depend on partnerships with golden eagles to hunt for them (Soma, 2013). Ravens have been known to assist Anishinaabe hunters in northern Canada by indicating the location of bedded moose while in flight (Miller & Davidson-Hunt, 2013).

Recent ethno-ornithological studies have highlighted the pronounced symbolic role of birds in the spirituality and cosmology of many Indigenous cultures (Chandler et al., 2017). Western accounts have often devalued the ornithological knowledge of Indigenous peoples, obscuring their true significance and relevance to Indigenous cultures (Tidemann & Gosler, 2012). In many North American Indigenous cultures, birds carry symbolic value as they are

understood to be the messengers between humans and the supernatural, occupying the realm of both the sky and the earth (Chandler et al., 2017). In recognition of the presence of ducks during the time of creation, the Blackfoot fix mallard bills to their ceremonial pipes (Chandler et al., 2017, p. 23). Dances mimicking the prairie chicken are found in various cultures, originally taught to the Assiniboine by the Cree (Chandler et al., 2017, p. 2). The ceremonial and ornamental use of feathers from a variety of birds maintains its symbolic significance to many Indigenous people to this day (Chandler et al., 2017). The spiritual relationships between human beings and birds manifest themselves distinctly throughout many Indigenous cultures.

Anishinaabe worldview and Ethno-ornithology

Traditionally, the Anishinaabe people perceive themselves as inhabiting a living environment where human beings, “other-than-human persons”, animals, and plants demonstrate meaningful agency and act according to their own volition (Hallowell, 1991). Human beings are understood to be engaged in meaningful relationships with the various living partners in the environment (Miller & Davidson-Hunt, 2013). The relationships between the Anishinaabe and their partners in the ecosystem are defined by a set of responsibilities and obligations to one another which must be carefully managed in accordance with cultural paradigms (Hallowell, 1991). The fulfillment of these responsibilities contributes to *mino-bimaadiziwin*, a traditional Anishinaabe philosophy of well-being, translating roughly as ‘being on the good path of life’ or ‘being alive well’ (Rheault, 1999). In this way, Anishinaabe spirituality is integrated as an underlying feature throughout many other facets of everyday life, expressed through food production, social interactions, healthcare, and in the relationships to the other actors in the environment (Hallowell, 1991).

As prominent members of the boreal forest ecological system, birds have played important nutritional, spiritual and ceremonial roles in many aspects of traditional Anishinaabe life. Many species of birds including ducks, pigeons and partridges were traditionally hunted and eaten by the Anishinaabe (Densmore, 1979). Many birds are featured as leaders in the clan system, the traditional Anishinaabe kinship network, including loon, crane, and bird (Courchene, 2017). Loon and crane are understood to be the co-leaders of all the clans, and the bird clan are generally understood to be spiritualists (Courchene, 2017). Different feathers have been used for various ornamental and ceremonial functions (Densmore, 1979).

Thunderbirds

In traditional Anishinaabe thought, thunder is understood to be caused by *animikiig*, Thunderbirds, who cause thunder when they flap their wings about and lightning when they blink (Hallowell, 1991). In Anishinaabemowin, the phrase “there is thunder” or “it is thundering” is *animikiikaa*, literally, “there are many thunderbirds” (Ningewance, 2004, p. 226). That thunder is believed to originate from avian creatures is reasoned in that thunder arrives usually from the south and coincides seasonally with the return of birds in the spring and their departure in the fall (Hallowell, 1991). Of all the various *Manitou*’s, ‘spirits’, the Thunderbird is regarded as the most revered (Robertson, 2012).

Thunderbirds are an example of “other-than-human persons” who occupy a spiritual space in Anishinaabe ontology but remain physically present enough for physical interaction with humans (Hallowell, 1991). They are occasionally reported to have been seen, whether resting on rocks, or even flying amongst the clouds in a storm (Hallowell, 1991; Smith, 1995). The rocky cliffs at Mt. McKay near Thunder Bay, Ontario, are understood to be a nesting place

for the Thunderbirds and as such the area is treated as sacred by many Anishinaabe (Smith, 1995, p. 80). It is said that particularly violent storms may be caused by misbehaving Thunderbirds who fly too low because of their immaturity or recklessness (Smith, 1995). James Redsky recalls his father responding to such storms by blasting his shotgun into the clouds to warn the thunderbirds away (Smith, 1995, p. 76). As other-than-human beings, the Thunderbirds are engaged in a physical and spiritual relationship to the Anishinaabe people and share a set of mutual obligations as co-existing members in the environment (Hallowell, 1991).

Folkbiology

A key aspect of contemporary ethnobiology is an investigation into the different taxonomic structures that human societies utilize for perceiving the natural world (Anderson et al., 2011; Berkes, 2012). Before examining a people's relationship with the biology around them, it is critical to understand how they perceive their natural world by addressing a core ethnobiological question: "How and in what ways do human societies *view nature*?" (Berlin, 1992, p. 4).

Folkbiology is the gateway to understanding a people's relationship to their natural environment and prerequisite to further study of ethnobiological science (Berkes, 2012). The manner in which human societies interact with the world around them is then firmly rooted through their model of comprehending it (Medin & Atran, 1999).

Throughout the 20th century, documentation of remarkable consistencies among taxonomic systems throughout the different cultures of the world began to produce a comprehensive image of how human societies tend to classify the biology in their environment (Berlin, 1992). A semblance of a universal system of ethnobiological classification emerged out of these observed similarities between folktaxonomic systems as discussed in detail in the works

of Berlin (1992) and Atran (1990). These works sought to investigate the extent to which ethnobiological classification schemes were culturally derived or objectively present in the environment (Berlin, 1992). Ethnobiological classification was found to be largely rooted in the undeniable biophysical reality of nature that confronts all human societies, and that classificatory categories are not just “constructed”, but rather “discerned” (Berlin, 1992, p. 8). Just as a linguist maps out the underlying structure of a language, an ethnobiologist can map out the structure of a society’s subconscious apprehension of the natural world.

Consistently, folkbiologies show a marked correspondence to the western Linnean system of classification (Atran, 1990; Berlin et al., 1973). The Linnean system of classification, unparalleled in its comprehensiveness (Atran, 1990, p. 17), seeks explicitly to be exhaustive in its identification of organisms. It has been developed for a “highly esoteric purpose – the pursuit of knowledge itself” (Ellen & Reason, 1979, p. 19), rather than the more utilitarian functions served by folktaxonomies (Hunn, 1982; N. J. Turner, 1988). In this way, the Linnean system can serve as an “etic grid” (Hunn, 1975, p. 309) to which other folkbiologies can be compared against, almost as a form of ethnobiological methodology (Berkes, 2012, p. 39; Hunn, 1975).

The degree to which folktaxonomies flesh out all of the varieties of organisms in a given environment varies (Berkes, 2012). In some cases, local folk taxonomies precisely distinguish many or most of the species in a given region, to the astonishment of researchers (Berkes, 2012, p. 40). More often, folktaxonomies comprise only a fraction of the existing species in a given environment, simply due to the limitations of human mental capacities and the vastness of nature (Turner 1988, Hunn 1982). It has been observed that there seems to be a rough limit of 500 units that can be mentally retained at a given taxonomic rank (Berlin, 1992; Davidson-Hunt, 2003)

The incongruences between the Linnean system and a given folk classification lead to a phenomenon of over and under differentiation; a society naming more or fewer species than the Linnean system, although usually fewer (Berkes, 2012; Berlin, 1992). Precise explanations for why a society will over and under differentiate are contested; however, the process seems to occur on roughly utilitarian grounds (Berlin et al., 1973; Hunn, 1982). That is to say, it is unsurprising that a society of coastal people living from the ocean will dedicate more vocabulary to fish than to birds (Hunn, 1982). This marks the beginning of a greater debate over why exactly a given society will name or classify the categories that they do, and how classification systems are influenced by cultural value systems (Glover, 2018; Hunn, 1975, 1982; N. J. Turner, 1988).

The predominantly mechanical approach to creating universal principles of folkbiological classification systems has been criticized for neglecting the significance and relevance of the cultural influence on classification (Ellen, 1993; Hunn, 1982). The effort to uncover universal features of human cognition in folkbiologies markedly sets aside the influence of sociocultural processes and worldview on ethnobiological classification. Critiques of the universal taxonomic system proposed by Berlin (1992), or Atran (1990), have pointed out that our preconceived notion of universal classification has imposed upon ethnobiological data and undercut the diversity of worldviews possessed by a planet full of unique human cultures (Dwyer, 2005; Ellen, 1993). While ethnobiologists principally agree on universality at the folk generic or basic rank level, there is no such agreement on the organization of higher order classes or more generally the methodologies of approaching Indigenous taxonomic systems (Davidson-Hunt et al., 2005).

At the heart of Berlin's (1992) model is the notion of perceptual salience, the identification of taxa based on the visual recognition of morphological features of biology.

Subsequent to perceptual salience, cultural salience accounts for the “residual variation” in classification systems after the core connection to the Linnean system has been established (Hunn, 1999, p. 48). The division between cultural salience and perceptual salience, however, has been observed to be less than clear, and a great deal of perceptual salience may be affected by cultural factors (N. J. Turner, 1988). The precise role of cultural salience in classification systems is the subject of an extensive and ongoing academic debate (Begossi & Caires, 2015; Dwyer, 2005). Folktaxonomy has been argued to be a dynamic, interactive process rather than the static abstract system represented by ethnobiologists who seek to uncover cognitive universals (Ellen, 1993; Glover, 2018). An emphasis on visual recognition is rooted firmly in the western scientific approach of visual perception and excludes other worldviews that shape how taxonomic structures can be interpreted. Plainly put, humans do not perceive the world around them independent of socio-cultural contexts.

Relationality and engagement with the natural world

A thorough understanding of the relationship between Indigenous people and nature is inhibited by the framework of Cartesian dualism: the notion of a stark division between mind and body which has underpinned much of Western scientific thinking (Miller & Davidson-Hunt, 2013). It has been highlighted that human experience and emotion stand at the forefront of engagement with nature, and some have argued that science has been too quick to deny the significance of how this experience actively shapes knowledge systems (Ingold, 2000). Inherent in the engagement with nature is the human imagination, which creatively constructs the relationship to the natural world and the associated meanings (Dwyer, 2005). Hallowell writes of the Anishinaabe people that they “live in a meaningful universe enriched by imagination and

symbolic thought not in a world of bare physical objects and events, rocks and water, trees and animals, demographic relationships and kinship ties” (Hallowell, 1991, p. 60). To deny the relevance of worldview on classification also suggests a kind of colonial research which only permits the legitimacy of Indigenous knowledge as provided through a western mouthpiece (Geniusz, 2009).

Efforts to understand folkbiological classification structures in the context of their respective cultures are grounded in the recognition of the profound implications of the holistic ecological ontologies of Indigenous thought (Berkes, 2012). The traditional knowledge that comprises folktaxonomic systems is often embedded within these ontologies and can be troublesome to extract from the integrated whole. In recent decades, ethnoecological studies have pushed to include more holistic approaches to research which highlight the dynamic social and ecological contexts that facilitate people’s interactions with the natural world (Anderson et al., 2011; Dwyer, 2005).

Different frameworks have been developed as tools to better understand Indigenous holistic ontologies. Berkes’ (2012, p.13) *knowledge-practice-belief complex* provides an analytical model for understanding how traditional knowledge is integrated into Indigenous cultures across the world. It is emphasized that Indigenous ecological knowledge and ecological management practices do not exist abstractly but as an inherent feature of social institutions and worldviews (Berkes, 2012). Chandler et al. (2017) refer to the embracing of holistic Indigenous classification systems as “ontological taxonomies” (2017, p. 2), also noting how Indigenous knowledge is integrated as a part of greater social institutions. The notion of ontological taxonomies provides a framework for pluralistic thinking which creates space for considering the interdisciplinary nature of Indigenous ecological knowledge which “lend social and cultural

order to the natural world” (Chandler et al., 2017, p. 2). These frameworks assist in properly appreciating the nuances of Indigenous knowledge systems in their ontological home.

Anishinaabe taxonomy

Previous ethnobotanical studies with the Anishinaabe people have found Berlin’s strict hierarchic model of folktaxonomy to be in some ways incompatible with their traditional holistic understanding of their relationship to the natural world (Davidson-Hunt, 2003; Davidson-Hunt et al., 2005). Although Berlin’s (1992) observations of the basic rank and of shallow hierarchy appear consistent with the Anishinaabe taxonomy, his contention of a rigid taxonomic structure is defied in that Anishinaabe taxa are subject to variability at the higher ranks (Davidson-Hunt et al., 2005). In contrast to Berlin’s model, the Anishinaabe taxonomic system considers that plants may simultaneously be considered to be a member of several different higher order classes, not just a singular one. Davidson-Hunt et al. (2005) found that a given plant could have a variety of names based on functional, utilitarian, or ecological factors. This work draws on Needham’s (1975) analysis of polythetic classification which understands a class in terms of a series of inter-relationships between members rather than a defined set of features which members must share.

For the Anishinaabe people, plant knowledge is highly contextual and exists primarily within an integrated ontology rather than as a cognitive abstract system (Davidson-Hunt et al., 2005). Classification of plants, and more broadly, knowledge of plants, must be understood as a feature of individual relationships held with these plants. Conventionally, Anishinaabe ecological knowledge is not taught independent of social or ecological context and is learned over a lifetime of experience (Davidson-Hunt & Berkes, 2003). The Anishinaabe conception of a taxonomic system prioritizes the importance of lived experience and dreams and manifests itself

in language and traditional stories rather than a hierarchy of classification (Davidson-Hunt, 2003).

These findings are consistent with Black (1977), who found that the individuals of the natural world are subject to variability between categories for the Anishinaabe; “Thus there is overlapping membership in classes that should contrast, and also a sort of movement in and out” (Black, 1977, p. 98). Algonquian linguists have also found the Anishinaabemowin language to defy conventional linguistic paradigms in some ways. For example, the two categories of grammatical gender which are assigned to all nouns, animate and inanimate, appear to be somewhat dependent upon context (Valentine, 2001). Anishinaabemowin speakers have noted how the linguistic paradigms created by academics are not analogous to the language structure as they themselves understand it (Johnston, 2011). Cecil King speaks of his language that “English terms imprison our understanding of our own linguistic concepts” (Valentine, 2001, p. 119). Living and non-living dichotomies assumed by a western Cartesian-based thinking do not properly correspond to how the Anishinaabe perceive and classify the world (Hallowell, 1991; Miller & Davidson-Hunt, 2013; Smith, 1995).

Black (1977) explores perceptual ambiguity as an essential feature of the traditional Anishinaabe identification process. Beings such as other-than-human persons do not exist in a stable form, and may appear as a variety of different shapes and beings to the Anishinaabe (ibid). Hallowell highlights that transformation or metamorphosis “is one of the distinctive generic attributes of persons in Ojibwa thought” (Hallowell, 1991, p. 67). Therefore, to distinguish or evaluate a person in the natural world depends on subjective experience, including experienced phenomena before or after the encounter (ibid). A particular dream, the failure of a hunting trip, or deaths in the community are some examples of experiences that may influence perception of

physical biology (ibid). Hallowell writes that “Outward appearance is only an incidental attribute of being... In outward manifestation neither animal nor human characteristics define categorical differences” (1955, p. 98). Thus, Anishinaabe identification and classification can only be understood in reference to traditional worldview and the existence of other-than-human persons.

To explore the Anishinaabe taxonomic system is to discover what spaces biological features occupy and what form they take within the greater Anishinaabe ontological framework. Rather than abbreviate Anishinaabe ecological knowledge into a rigid cognitive structure, Anishinaabe taxonomy should be understood relationally with respect to language, stories, and traditions. Traditional Indigenous ways of knowing should serve as the medium through which taxonomy is understood.

Language and nomenclature

A fundamental aspect of the taxonomic systems is the nomenclature and the specific linguistic features assigned to describe the biology itself. Organisms such as birds may derive their names from their behaviour, their distinctive features, the sound of their calls, or simply abstractly, and such information can serve as a window into the system of classification (Berlin, 1992; Si, 2016). Analyzing which birds are named and which are unnamed also gives further insight into a society’s relationship with birds (Si, 2016). For the many human societies which do not name every single bird in their environment comprehensively, it can be the case that a variety of small and undistinctive birds are referred to by the same name (Si, 2016).

Investigating Anishinaabe nomenclature reveals the relationships between the physical environment, language, and traditional Anishinaabe philosophy. Anishinaabemowin serves as a means to situate features of the biology within the ontology in that it “maintain[s], however

unconsciously, the concepts, connotations, and classifications embedded in speech that were consonant with the Ojibwa world view” (Hallowell, 1991, p. 60). John Borrows discusses how the Anishinaabemowin word *zaagidiwin*, ‘love’ shares the same root as *zaagiing*, ‘a rivers’ mouth’, as “rivers can be studied to identify analogies which provide standards about how we extend our love to others” (Borrows, 2014). Basil Johnston discusses how the root word *aki*, ‘land’, can be found in many other words such as *akiwenzii*, or ‘old man’, describing one who bends towards or relies upon the earth, or *mashkiki*, ‘medicine’, referring to the healing power or strength of the earth (Johnston, 2011, p. 31). The word *aagim* ‘snowshoe’ is analogous to the tree *aagimaatig*, ‘black ash’, noting the particular kind of tree that snowshoes are traditionally constructed from (Davidson-Hunt et al., 2005, p. 211). Many more examples abound. These etymological relationships come alive in the context of traditional knowledge or cosmological philosophy which illuminate their history and provide an ontological context for the networks of nomenclature. While some of these connections, such as the link between *aki* and *mashkiki*, do not reflect linguistically accurate etymologies, they serve as examples of how Anishinaabemowin itself can serve as a source of wisdom and meaning for Anishinaabe people.

Such a relational interpretation of the role of language in philosophy, while somewhat unconventional by the standards of structural linguistics, is rooted in a body of Indigenous methodological literature and a growing recognition of the interaction between social and ecological systems (Ingold, 2000; Miller & Davidson-Hunt, 2013). Ingold (2000) argues that language is shaped by the history of its use in a cultural context, and therefore “*words gather their meanings from the relational properties of the world itself*” (Ingold, 2000, p. 409).

Indigenous methodological literature highlights the relational role of Indigenous languages and discusses how the features of Indigenous languages actively shape Indigenous worldview

(Goulet & Goulet, 2014; Smith, 1999). Kovach (2009) suggests that the non-binary framework of many Indigenous languages contributes to the lack of binaries as expressed in Indigenous thought. Ethnobiology has embraced some of the more unconventional aspects of linguistics in its multidisciplinary approach to exploring classification systems (Berlin, 1992).

Stories

The primary function of stories in traditional culture is not just to entertain but to convey a moral message or lesson to the listeners and to outline traditional Anishinaabe cosmology (Echlin, 1982). Stories operate as educational tools that describe the nature of the universe according to a cultural framework, and demonstrate proper behaviour and actions in the world (Vecsey, 1983). During story-telling sessions, the youth “learned that kitchi-manitou infused everything and everyone with a Manitou-like attributes and principles that imparted growth, healing character, individuality, and identity” (Johnston, 1995, p. xx). Myths educate children about how to interpret the meaning in dreams, and generally “provided means by which to judge reality” (Vecsey, 1983, p. 93).

A reoccurring character in many traditional stories is Nanabozho, an other-than-human person whose adventures with the plants and animals of the land provide entertaining lessons about the various organisms in the environment (Densmore, 1979). With good humor and deceitfulness, Nanabozho transforms his body into various forms and interacts with the many flora and fauna on the land (Johnston, 1979). Nanabozho is a paradoxically complicated character; human yet spirit, courageous but inept, kind but manipulative. He is ridiculed for his foolishness and laziness, but celebrated for generosity and resourcefulness (Echlin, 1982, p. 163). Countless stories portray his adventures and misadventures across the universe, his

engagement with animals and trees, his role in the creation of the world, the services he performed for different Anishinaabe people. Being a culture hero, “he introduced the Anishnaabeg to fire, death, medicine, food sources, tobacco, hunting techniques, dances, and customs” (Smith, 1995, p. 172). Embedded in the stories of Nanabozho are lessons of life which provide examples of good and bad behaviour on the land and contextualize the origin of the features of the physical environment in narrative (Densmore, 1979).

Decolonizing Research

Historically, Indigenous peoples have often found themselves to be the victims of research rather than meaningful participants within it (Smith, 1999). By narrowly defining ‘science’ according to a western cultural framework, much academic work has contributed to and legitimized the subjugation of Indigenous peoples (Smith, 1999). This has negatively impacted the relationship between researchers and Indigenous peoples, and has resulted in research being viewed as “probably one of the dirtiest words in the Indigenous world’s vocabulary” (Smith, 1999, p. 1).

In recent years, a growing body of literature on decolonizing research has brought attention to the need to produce research which consciously aims to integrate traditional Indigenous knowledge systems into conventional research processes (Goulet & Goulet, 2014; Kovach, 2009; Smith, 1999). Much of this literature highlights the need to acknowledge Indigenous perspectives broadly across our educational, political, and social institutions, and to acknowledge the heavy burden that colonialism has placed on many Indigenous peoples and communities. Decolonizing literature explores the complexities of Indigenous epistemologies and ontologies and dismantles the notion that Indigenous people ‘don’t have research’.

Geniusz (2009) explains what decolonizing Anishinaabe ethnobotanical research means by emphasizing the importance of properly contextualizing traditional plant knowledge within a greater ontological framework. She writes that “being able to make a mat out of the bark of cedar is an important part of *izhitwaawin* [culture], but if we do not know how to properly address the cedar to ask for her physical and spiritual assistance, then we will be missing a key component of *inaadiziwin* [way of being]” (Geniusz, 2009, p. 158). To document solely lists of technical knowledge with no acknowledgement of the culture that houses it is to inflict a kind of ontological violence upon the knowledge. Recognizing the history of colonial research with Indigenous communities, I aim to conduct decolonizing research through an incorporation of Anishinaabe ontology into the core of my research goals. In this way, the tenets of decolonizing research considerably inform my research process.

Chapter 3: Birds in Anishinaabe cosmology

Introduction

Anishinaabe ornithological knowledge, like all other forms of Anishinaabe ecological knowledge, is integrated within a dynamic worldview that celebrates the spirituality and animacy of the natural world (Geniusz, 2009). In this worldview, human beings are engaged in meaningful relationships with their living partners in the environment (Hallowell, 1991). Many ecological features and beings, including birds, display agency in the physical landscape and play significant roles in traditional cosmology. Anishinaabe relationships with birds are expressed symbolically and guide everyday spiritual and material life through which birds and people become intertwined. Here, birds are considered as they are represented in traditional Anishinaabe cosmology through a selection of texts.

This research draws upon ethno-ornithological work that has employed relational research approaches in order to appreciate the intricate relationships Indigenous peoples have created with their surrounding ecologies (Tidemann and Gosler, 2012). Relational ethno-ornithological research acknowledges the agency of birds in the physical landscape and the social character of human-bird interactions (Chandler et al., 2017). Relational approaches to research are relevant in the context of traditional Anishinaabe culture, as traditional Linnean taxonomic structures cannot fully account for the holistic Anishinaabe approach to taxonomy that is resistant to hierarchical classification and is centered around the web of relationships between the Anishinaabe and the features of the natural world (Davidson-Hunt et al., 2005). Anishinaabe interactions with birds in everyday life are influenced by the cosmology that surrounds the birds. Birds shape human behavior by their appearance throughout Anishinaabe cosmology, as shown in various stories and texts.

Three key aspects of birds in Anishinaabe cosmology are highlighted here: the general occurrences of birds in the stories of Nanabozho, the cosmological characteristics of owls, and the role of Thunderbirds. The appearance of birds in Nanabozho stories demonstrates how the Anishinaabe interact with birds on the landscape and learn simultaneously about local biology and ethical behavior on the land. An examination of the role of owls showcases the specific characteristics that individual bird species embody in traditional culture. Finally, the prevalence of Thunderbirds throughout Anishinaabe culture stands out as they are among the most revered of all the spirits in Anishinaabe cosmology.

Methods

This chapter is based on an extensive review of documents to identify texts that reference birds in Anishinaabe cosmology. Personal stories, traditional stories, ethnographies, and other general analyses of beings in Anishinaabe culture and cosmology written by both Indigenous and non-Indigenous authors comprised the basis of the literature review. This research draws upon discussions of stories and their role in traditional ontology as narrative analysis is often featured alongside presentation of stories in texts. Despite the prevalence of birds throughout Anishinaabe literature, this is the first systematic analysis of texts considering Anishinaabe bird symbolism and narrative in symbolic thought.

This work is one component of a research project carried out in partnership with the Anishinaabe community of Wabaseemoong Independent Nations (WIN) in north-western Ontario. The project emerged out of an on-going collaboration between Dr. Davidson-Hunt of the Natural Resources Institute, University of Manitoba, and Marvin McDonald, the Traditional Land Use Area coordinator for WIN. Fieldwork in the community exploring the linguistic and

practical aspects of Anishinaabe ornithological knowledge complements this research. One of the aims of this research is to present the community with an overview of Anishinaabe bird knowledge as documented in texts.

Learning from Nanabozho

Traditional stories, especially the tales of Nanabozho the culture hero, showcase the relationship between Anishinaabe and birds. Nanabozho stories are principally concerned with his interactions with the flora, fauna, and spirits of the natural world. As prominent members of the ecosystem, birds are commonly featured in various capacities throughout his adventures. It is often the case that “small animals and birds offer Nanabozho advice when he is in trouble – but only after he has shown enough respect to listen to them or offer something in return” (Echlin, 1982, p. 161). Because stories embody educational and moral components of Anishinaabe life, interactions between Nanabozho and the birds express the Anishinaabe relationship with birds generally (Smith, 1995, p. 175). The failures and successes in his adventures function as lessons and teachings for the Anishinaabe, as Nanabozho exemplifies both correct and incorrect ways of interacting with the environment (ibid).

Nanabozho stories frequently depict him on the move, looking for food or shelter, similar to a traditional Anishinaabe lifestyle (Echlin, 1982). He often hatches a scheme to collect food, misusing his supernatural talents instead of investing in a proper hunting effort (ibid). He commonly encounters an animal and requests that they share and exploit their abilities to produce food for him. After the animal proceeds to share their power with Nanabozho under certain conditions, Nanabozho inevitably breaks these conditions, letting his greed and foolishness get the better of him (ibid). When his ridiculous plans don’t work out as expected,

Nanabozho is left hungry and must beg for food from his neighbors (Johnston, 1995, p. 80). On the occasions when he does use his gifts properly and fulfils his obligations to his neighbors, all parties are mutually rewarded. Two primary ideas are produced from these stories, that “power must be respected and used correctly” and that “disobedience will cause the loss of power” (Echlin, 1982, p. 159). Traditional values of cooperation and respect are emphasized through the actions of Nanabozho.

Birds as Teachers

In one story, Nanabozho asks the heron to help him catch fish. The heron agrees on the condition that Nanabozho take only what he and his family need in order to ensure there be enough fish the next time as well (Johnston, 1995). “Nanabozho assured Heron that he would respect the laws and practices governing the taking of fish and promised to exercise proper respect of the fish” (Johnston, 1995, p. 89). Nanabozho proceeds to ignore the warning of the heron and extract an enormous amount of fish from the lake. His overconfidence and ignorance of the lesson from the heron results in the loss of his sizeable catch and subsequent ridicule from his home community. In another story, Nanabozho tries to imitate the woodpecker by securing a bone to his nose and smashing his head into a tree. While the woodpecker enjoys success with this technique, Nanabozho fails spectacularly and must subsequently go home empty handed (Coleman et al., 1971, p. 75).

Throughout the numerous Nanabozho stories that depict his interactions with birds, Nanabozho demonstrates the importance of respecting and listening to even the most seemingly insignificant beings in the world. Anishinaabe people listening to these stories learn that a lack of respect for their own gifts and the gifts of the natural world will have negative repercussions

(Echlin, 1982). The notion of taking only the minimum of what you need from the environment, for example, is a reoccurring theme in many Nanabozho stories and comprises a fundamental aspect of respecting your relationships in the world (Echlin, 1982; Johnston, 1995). These stories also demonstrate the agency of the various beings in the environment: Birds are not voiceless objects, but exhibit volition, reason, wisdom, and sharing.

Birds as Helpers and Messengers

The Anishinaabe artist Angecone writes that the bird is the “bearer of messages for the Anishnawbek, because it can fly in the air, walk on the land, swim on the water, and dive underwater, going where we cannot” (Pomedli, 2014, p. 108). In the creation story, Nanabozho asks the Kingfisher for guidance in the midst of an epic struggle with the underwater Manitou (spirit), the *mishibizhii*. Smith (1995) explains that it is significant that the Kingfisher is asked for guidance because they are both common enemies of the underwater spirits. In this case, Nanabozho wisely listens to the advice given by the Kingfisher and proceeds to reward the Kingfisher for his aid. Nanabozho grants him beautiful plumage and a sharp bill for ease of fishing. “Truly, always with ease will the Kingfisher obtain the little fishes; for with tiny spears was the Kingfisher provided” (Smith, 1995, p. 162). It is suggested that the assistance given to Nanabozho by various birds represents advice given from the Manitous of the upper realms (Smith, 1995, p. 179). It is noted that other birds, such as the raven, also offer crucial assistance to Nanabozho in times of need (Smith, 1995). These stories emphasize the interdependence between birds and the Anishinaabe.

Birds as food

Birds are often featured in the adventures of Nanabozho as food. The classic tale of “Nanabozho and the shut-eye dance” illustrates a story of a hungry Nanabozho who charms a group of ducks and waterfowl into dancing for him with their eyes shut. Once they begin dancing, Nanabozho sneaks up on the birds and slits their throats until one of the birds opens his eyes and sounds the alarm (Bloomfield & Nichols, 1991; Smith, 1995). Nanabozho stories frequently depict Nanabozho hunting ducks, waterfowl and other birds for sustenance (Reid, 1963, p. 19).

That Nanabozho is both friendly with and also kills various birds reflects the paradox in the Anishinaabe relationship to birds. On one hand, the birds are respected as teachers and messengers, and on the other they are killed and consumed as an important food source. Nanabozho’s lack of emotion as he kills the ducks reflects this attitude: just moments before slaughtering them for food, he is friendly with the ducks, inviting them to a dance in which they willingly participate. In the story of Nanabozho and the woodpecker, the woodpecker makes a passing remark to his children, telling them “don’t go near him” (Coleman et al., 1971, p. 75). The woodpecker knows of Nanabozho’s devious nature and understands that at any moment their friendship could turn into a predator-prey relationship.

The behavior of Nanabozho in these stories reflects an understanding of the natural food cycle for the Anishinaabe. The full diversity of gifts that birds bring to the Anishinaabe are acknowledged in that they are appreciated not just as teachers or messengers, but also as food. The paradox of consuming and respecting wildlife is evident in many Indigenous cultures that hold the highest respect for the beings of the natural world while also engaging in hunting for nourishment. Nadasdy (2004) explains this paradox by framing it in terms of a reciprocal

relationship understood between the Indigenous peoples and the animals, where the animals are understood to be offering themselves to the hunter. Human obligations in this relationship include giving appropriate offerings as well as maintaining a proper attitude towards the animals that give themselves to the hunters (Overholt & Callicott, 1982). Nanabozho stories demonstrate that respect for a bird or an animal does not prohibit the act of killing it for food.

Gookooko'oo, the owl

To explore how bird characteristics manifest themselves specifically in the cosmology of the Anishinaabe, we examine one bird in detail; *Gookooko'oo*, the owl. Owls are frequently portrayed with negative connotations because it is widely known that owl imagery has been used to scare children and owls are generally associated with death and illness (Pomedli, 2014). A closer look at owl characteristics in Anishinaabe cosmology reveals a more nuanced perception of owls, where they are understood to help guide the spirits of humans who passed on, and also assumed the role of teachers and healers, as well as providing guidance to the Anishinaabe (Geniusz, 2008). The Anishinaabe term *Gookooko'oo* does not refer to a specific species of owl, and is instead used as a general term (ibid).

Across many Anishinaabe communities, stories of owls snatching ill-mannered children were told to prevent children from misbehaving (Densmore, 1979). Geniusz (2008) reports how many Anishinaabe informants recall being scolded as children and warned that if they did not listen to their elders, an owl would come and take them away. Owl-snatching stories would be enacted in terrifying and dramatic performances to frighten children into proper behavior, sometimes enhanced with the use of owl masks (Pomedli, 2014). These stories served a practical

purpose, as it could often be the case that keeping children silent was a matter of life and death (Densmore 1979).

Certain owl stories encourage parents not to be negligent and misuse the stories and terrify children to unnecessary ends. Parents who are careless towards their children are cautioned that an owl may come and snatch their children from them (Smith, 1995, p. 41). A commonly told story across Anishinaabe communities describes a mother who places a child outside of her house to scare the child. The child is then abducted by owls and the mother learns never to terrify her children again. The child is subsequently brought back to the community many years later after having been safely cared for by owls (Geniusz, 2008). Owl stories serve educational, entertainment, and functional roles in traditional Anishinaabe narratives.

Geniusz (2008) notes that owls are often misunderstood as harbingers of death and sickness in traditional Anishinaabe culture. Although it is commonly believed that any appearance of owls on the landscape is ominous, a close analysis of owl stories reveals “it is not Gookooko’oo, but beings who disguise themselves as gookooko’oog, who are actually bringing misfortune in these instances” (Geniusz, 2008, p. 250). That beings can disguise themselves like owls is a feature of metamorphosis as expressed in traditional Anishinaabe thought, where beings and spirits may readily change their shape in the environment (Black, 1977). What may appear as a common owl may in fact be a being or a spirit disguised as an owl, sent by a malicious actor. In traditional culture, owl skins can be dried, hollowed, and stuffed with medicine, and sent to others to curse them (Densmore, 1979, p. 114). In this way, owls function as messengers and are not malicious agents themselves. Geniusz (2008, p. 251) shares a story to demonstrate that the spirit of the owl itself is not inherently ominous:

When humans use Gookooko'oo for malevolent purposes, often a living animal is not even involved. Whipple remembers hearing what she thought was a gookooko'oo at night when she was staying with her uncle. The family brought a medicine man to the house, and he said that someone was jealous of her uncle because he was "well off." The being they heard was bad medicine, which this person had sent. The medicine man had a young man shoot the gookooko'oo. Whipple was just a child at the time, and neither she nor any other children were allowed to see the gookooko'oo. Those who did see it said that when they opened the being they saw that it was just skin filled with medicine. She concludes, "that wasn't a real owl."¹

Like many other birds in traditional Anishinaabe thought, owls are a guiding presence and positively contribute to Anishinaabe life. As a prominent bird in the natural world, owls are sources of knowledge and provide lessons and messages to the Anishinaabe. Many Anishinaabe stories document owls coming to the aid of Anishinaabe in need. Stuffed or dried owls are occasionally present during healing lodges as guardians or supervisors of the ceremony (Pomedli, 2014, p. 102). The owl is also a reoccurring character in traditional stories who provides guidance to Nanabozho in his struggle against evil spirits (Barnouw, 1977, p. 140). Various traditional stories highlight the role of owl as a guardian spirit and a protector of beings in the ecosystem (Geniusz, 2008). Norval Morrisseau portrays the owl in his artwork as a guardian who watches over the other beings in the world, writing that "The all-seeing owl can warn of approaching danger; it is a protector" (Sinclair & Pollock, 1979, p. 133). Their calls in

¹ Geniusz capitalizes Gookooko'oo only when referring to "the spirit who represents all owls" (Geniusz, 2008, p. 241)

the night guide deceased spirits to find their spirit trail (Geniusz, 2008). Owls are birds of warning, often of preventable circumstances, which is why being attentive to the call of the owl is very important (Geniusz, 2008).

Many of the interpretations of the owl in traditional Anishinaabe cosmology are shared by various Indigenous cultures across North America. Various cultures of the Missouri river valley document how the owl is regarded as a healer, a warrior, a witch, and/or a guardian spirit (Chandler et al., 2017). Traditional stories told by the Crow people depict the owl as a shapeshifter whose physical form embodies ghosts and spirits of the dead (Chandler et al., 2017, p. 44). Hidatsa informants recall how stories of owls were used to frighten misbehaving children (ibid). The Arikara creation story depicts owls as having potent healing abilities and being embraced by the Arikara Owl society in healing ceremonies (ibid). Collecting owl stories from Indigenous cultures across the continent, Wilson (1950) documents how various Indigenous communities have a nuanced appreciation of owls as beneficial yet ominous beings.

The characteristics of owls within traditional Anishinaabe cosmology are explored in remarkable detail throughout various Anishinaabe texts. Although owls are often mischaracterized as bringing evil by their mere presence, a closer analysis of owls in Anishinaabe texts reveals the many positive contributions of owls within Anishinaabe cosmology and the ways in which malevolent beings manipulate the owl for nefarious purposes (Geniusz, 2008).

While it may be the case that these characteristics are exceptionally detailed relative to other birds, it shows the potential degree to which bird characteristics can be articulated in Anishinaabe cosmology. If the cosmological characteristics of the owl are so extensively outlined in the documentary record, it is likely that the characteristics of various other birds are

also expressed in great detail. Needless to say, the documentary record only reflects one fragment of an enormous corpus of Anishinaabe oral texts. Stories are told frequently and at length in everyday life, in some cases taking place over the course of days (Smith, 1995). This suggests that the stories that outline the characteristics of owls and other birds in the documentary record are likely to be the tip of the iceberg.

Thunderbirds

Thunderbirds hold a special place among birds within Anishinaabe cosmology as the most powerful Manitou who produce lightning when they blink and thunder when they flap their wings (Hallowell, 1991). Their appearance in the sky is acknowledged and respected through ritual, prayer, and ceremonial offering of tobacco. Anishinaabe literature is full of stories outlining the key role Thunderbirds play in Anishinaabe cosmology.

Thunderbirds embody the holistic worldview embraced by many Indigenous peoples in which spirituality and ecology are understood to be integrated. One can imagine how the visceral effects of a thunderstorm would manifest themselves within the cosmology of a such a worldview. Smith (1995, p. 74) writes that “if you ask an Ojibwe, ‘is the Thunder the storm, or is it a bird? Can we see the Thunderers or are they invisible?’ he is likely to reply, ‘yes, yes, yes, and yes’ for the various appearances of Thunderers are elaborations rather than contradictions.” To consider the Thunderbirds from a traditional Anishinaabe perspective is to leave behind western binary categories of living vs non-living or animate vs inanimate, as these categories inhibit a full understanding of the Thunderbirds’ significance.

The connection between thunderstorms and avian beings may be explained by the fact that thunderstorms arrive most frequently from the south and coincide with the seasonal arrival

and departure of migratory birds in the spring and fall (Hallowell, 1991). Hallowell remarks on the high degree of correlation between the frequency of thunderstorms in the meteorological record and the migration patterns of birds (ibid). Like birds of prey, Thunderbirds are at home in the skies and strike down upon the earth to hunt (Smith, 1995). Different types of Thunderbirds are acknowledged for their different voices, movements and mannerisms, just as birds are. Hallowell (1991) describes how particularly violent and dangerous thunderstorms are said to be caused by young or immature Thunderbirds who have yet to learn how to properly respect their Anishinaabe neighbors (Hallowell, 1991).

Anishinaabemowin etymology reveals that to speak about Thunder or the Thunderers is one and the same; *Animikiikaa*, “there is thunder” or “it is thundering” literally translates to “there are many thunderbirds”(Ningewance, 2004, p. 226). Thunderbirds may also be called *binesiwag*, *bawaaganaa*, or in some cases *aadisookaanaa*, depending on the form they take and one’s relationship to them (Smith, 1995). Jenness (1935) records 12 different names of Thunderbirds, describing the nature of the storm or the movements of the Thunderbirds. These examples show how language expresses ontology and how much attention is given to the description of Thunderbird.

Thunderbirds are known to build their nests on the edge of high cliffs and escarpments, where earth’s energies are exposed (Pomedli, 2014). These *animikiig-wazoswan*, Thunderbird nests, are revered as sacred places where tobacco may be offered or powwows take place (Smith, 1995). Only a select few cliffs are known to house Thunderbird nests, and they can be identified by a great circle of rocks. Morrisseau writes of the stone nests that they “are still seen in some parts of Ontario. One is located in Manitoba, another in the Deer Lake area in the wilderness north of Red Lake” (Morrisseau, 1965, p. 5). The rocky cliffs near Thunder Bay Ontario are

known to be Thunderbird nests; the city itself was renamed in the 1970s in recognition of the local importance of the *animikiig*.

As the most important of the Manitou, Thunderbirds are the focus of many traditional stories. In the Anishinaabe universe, Thunderbirds are portrayed as being engaged in incessant conflict with the *mishibizhii*, underwater spirits which appear in the form of giant serpents (Smith, 1995). The Thunderbirds and the *mishibizhii* exist in balance with one another, not in a simple dichotomy between good and evil, or light versus dark. Thunderbirds occasionally attack and cause damage to the Anishinaabe, and sometimes the *mishibizhii* are depended upon by the Anishinaabe for their medicine (Smith, 1995). Their eternal struggle is often portrayed in a circular fashion to signify this balance between them. This is consistent with Indigenous ontologies that feature dynamic, circular, and fluid thought as opposed to traditional western binaries (Little Bear, 2012). While Thunderbirds are frequently depicted as destroying the *mishibizhii*, they always return and are never fully eradicated (Smith, 1995). Morrisseau (1965, p. 16) explains how it is culturally inappropriate to kill snakes because of their connection to the *mishibizhii*: “if a snake is killed it must not be laid on its back to show its belly to the sky, because this angers the thunderbirds and foretells a thunderstorm, when they would cast lightning upon the snake.”

Thunderbirds as Other-Than-Human Persons

The relationship between the Anishinaabe and Thunderbirds can be understood in the context of relationships with other-than-human persons. In traditional Anishinaabe ontology, many living things are viewed as non-human persons, a category that includes the sun, moon, Thunderbirds, some spirits, some animals, etc. (Black, 1977). As other-than-human persons,

Thunderbirds are listened to and interacted with. Many stories told by Anishinaabe people reveal how Thunderbirds have occasionally been seen flying about the clouds in a storm or even resting among the rocks (Hallowell, 1991; Smith, 1995). Morrisseau (1965, p. 5) recalls a story of how two young boys climbed to the top of a nest to catch a glimpse of them: “when they got to the top they saw two big newly hatched birds who were still hairy and whose eyes blinked light like flashes of lightning. The frightened boys ran down the hill and told what they had seen”.

Beyond the act of witnessing Thunderbirds, it is more accurate to say that Thunderbirds are experienced by the Anishinaabe. A story from Manitoulin island in Ontario describes a community member running outside during a storm and blasting his shotgun into the air to warn away recklessly low-flying Thunderbirds (Smith, 1995). Offerings of tobacco are made either by way of sacred pipes, placed in the stove, or offered on the ground or water, and had the potential effect of deterring storms from the area (Morrisseau, 1965, p. 4). Meetings with the Thunderbirds can end in fatalities if they are not respected properly and no offering is made (Smith, 1995, p. 71). Thunderclaps can be understood as a speech act on behalf of the Thunderbirds who may request an offering or a prayer (Hallowell, 1991).

Stories which describe encounters between the Anishinaabe and Thunderbirds reveal great similarities between Anishinaabe and Thunderbird life (Smith, 1995, p. 83). They both hunt for their sustenance, live in communities with one another, and generally share similar social structures (Morrisseau, 1965). Enough similarities are shared that some stories recount intermarriage between the Thunderbirds and the Anishinaabe (ibid).

The famous Anishinaabe artist Norval Morrisseau features Thunderbirds extensively throughout his work, in various settings and formats (Sinclair & Pollock, 1979). One particular series of paintings, ‘Man changing into Thunderbird’, depicts a man in transformation into a

Thunderbird from one panel to the next (Phillips, 2006, p. 137). The painting illustrates a traditional story about a man who chases a Thunderbird woman into the skies and proceeds to change into a Thunderbird in order to be with her (Morrisseau, 1965). The series highlights the congruency between the spiritual and the avian through metamorphosis in traditional Anishinaabe thought. Morrisseau states that one of his artistic goals is to “bring together and promote the ultimate harmony of the physical and the spiritual world” (Sinclair & Pollock, 1979, p. 7).

Some Thunderbird stories illustrate how the Anishinaabe perceive settler European engagement with the natural world to be mechanical and devoid of spirituality. Morrisseau (1965, p. 6) recounts a story shared by an Anishinaabe elder when “the white men took off for the thunderclouds on a plane and when they got up there they shot at the thunderbirds, took only the heads, put them in huge pots and the juice of the heads was turned into electric power.” Another story describes white settlers building a giant metal snake in order to deceive the Thunderbirds and harness their electrical power as they attack the structure (ibid). A story from Manitoulin Island notes how when eagles would show themselves after an invocation at a powwow, white settlers would be quick to label it as being a “coincidence”, and dismiss the significance of the event (Smith, 1995). Clearly, the meaning of natural phenomena manifests itself much differently in Anishinaabe than white settler worldview.

Thunderbirds play significant roles in the cosmologies of many different Indigenous societies, including the Mandan, Arikara, Dakota, and Blackfoot people (Chandler et al., 2017). In many of these societies, Thunderbirds are portrayed in material culture as eagles or other raptors, produce thunder and lightning from their movements amongst the clouds, and are engaged in an eternal struggle with water spirits (Chandler et al., 2017). Montagnais people

reported to missionaries that the sound of thunder is caused by Thunderbirds making an effort to vomit forth the giant serpents they had been eating (Pomedli, 2014, p. 198). Coleman et al. (1971, p. 103) note that Thunderbirds are found throughout many Indigenous cultures across North America. While many general features of Thunderbirds may be similar across Indigenous cultures, they exist within the cosmologies of individual communities and Nations in their own distinct ways (Smith, 1995).

Conclusion

Anishinaabe bird knowledge cannot be understood in isolation from an elaborate and expansive cosmology in which the ecological and spiritual roles of birds have become intertwined. Bird narratives from personal and traditional stories, ethnographies, and even artwork highlight the distinct cosmological characteristics embodied by individual birds as teachers, messengers, and helpers, and also demonstrate traditional values of respect, cooperation, and interdependence. What appear to be binary oppositions found in many Anishinaabe bird narratives are expressions of complexity and variation in the Anishinaabe relationship with birds. Examples include owls, who are both respected for their positive contributions to Anishinaabe life and also feared as they potentially serve as vessels for malicious spirits, or other birds who are respected for the wisdom they share, but also hunted for food. Finally, the prevalence of Thunderbirds as a cosmological and physical phenomenon throughout texts shows how ecological phenomenon are understood as communication with spirits through the lens of cosmology. This review of birds within Anishinaabe texts illustrates a holistic set of relationships that bring together the symbolic and the material and as Chandler et al. (2017) emphasize the importance of a relational ethnoornithology that takes a holistic approach to bird knowledges.

Chapter 4 – Bird Nomenclature in Wabaseemoong Independent Nations

Introduction

Community members of Wabaseemoong Independent Nations (WIN) identify roughly 140 different species of birds that reside in or around the WIN area. Because many people in the community continue to speak Anishinaabemowin as a primary language, the Anishinaabemowin names for these birds are known and used regularly. Sixty-three unique Anishinaabemowin bird names are understood to apply to roughly 126 of the local bird species, as many of the names are applied to more than one individual species. Many of these bird names correspond with Anishinaabemowin bird names documented throughout literature, and some of the names are unique to the dialect of WIN. The Anishinaabemowin names of these birds comprise one aspect of Anishinaabe ornithological knowledge and more importantly inform their relationship to birds generally.

This chapter includes a linguistic analysis of Anishinaabemowin bird nomenclature with specific reference to the bird names used by the community members of WIN. The nature of Anishinaabemowin bird nomenclature explored in this chapter primarily lends insight into two main aspects of Anishinaabe ethno-ornithology. Firstly, the role of sound symbolism in Anishinaabemowin bird names is explored. The majority of Anishinaabemowin bird names share highly similar phonetic patterns in their final syllable that distinguish them as bird names. This phonetic pattern is attributed to the phenomenon of sound symbolism, found commonly throughout many systems of bird nomenclatures around the world. Secondly, the distribution of Anishinaabemowin bird names throughout the local bird species reflects the nature of

Anishinaabe folktaxonomy and ethno-biological classification. In Anishinaabemowin, birds are often named according to their utilitarian function as well as the size of the bird. The data presented here lends support to Hunn's (1982) argument that emphasizes the utilitarian function in ethnobiological classification.

Methods

Fourteen community members from WIN were interviewed with specific regard to their ornithological knowledge throughout the course of fieldwork in the fall and winter of 2018. Participants were chosen with help from the research partner and traditional land use area coordinator in the community, Marvin MacDonald, and also intuitively identified after months spent in the community. The participants ranged in age from approximately 50 to approximately 80 years old, though most were towards the older end of this range. The majority (12/14) of the participants were men. The bias towards male participants was not intentional, and reflected the fact that most people who were recommended as suitable interviewees happened to be men. All of the participants had lived in or around the community for virtually their entire lives. Ideally, interviews would have been conducted in group settings in order to evaluate the social aspect of bird naming; however, this was not logistically feasible, and interviews were simply conducted on an individual basis.

All participants spoke both Anishinaabemowin and English fluently. Generally, Anishinaabemowin is the preferred language for the older generation and is usually spoken with each other. Code-switching between the two languages happens frequently throughout speech as most speakers of Anishinaabemowin are comfortable moving back and forth between both

languages. English is the main language used among the younger generation, although many younger people can understand Anishinaabemowin well.

The interviews were semi-structured, and consisted of both specific and open-ended questions. Specific information that was sought included the Anishinaabe language names, and locations of where the bird could be commonly found. Following these questions, the questions were left relatively open in order to let the participant guide the conversation towards what they felt was most important or interesting. This was a productive interview strategy as it led to new and unpredictable topics, gave participants greater control over the research process, and led to trends emerging out of participants' responses. Any general information regarding the bird was considered of interest.

Interviews were structured around a list of birds local to the community that was created according to the *Atlas of the Breeding Birds of Ontario* (Cadman et al., 1987). The atlas divides the regions of Ontario into blocks of 100 square kilometers and indicates the likelihood of each species' presence in the block based on empirical data from field observations from 1981 to 1985. The list for this study was created based on any birds which were listed as "confirmed" or "probable" in the block including the community of WIN. Following the creation of the list, the advice of a local birder was sought to verify that the list included all of the birds that may plausibly appear in the region. This was an important step as there are species of birds known to community members that do not breed in the area. Notable additions include the Trumpeter Swan (*Cygnus buccinator*) and the Northern Goshawk (*Accipiter gentilis*), which were initially judged to be unlikely to appear in the region but were included after it was noticed that several local lakes were named after these species.

During interviews, the list was presented to participants in the form of a PowerPoint presentation. Each slide included the English name for the bird and several images of the bird, including drawn images and pictures. These images depicted the birds in both male and female forms, both still and in flight, and in various molting seasons. The Cornell Lab of Birds online database (Cornell Lab of Ornithology, 2018), and also the Sibley Birds mobile phone application (Sibley Guides, 2019) provided a wide range of appropriate images to select from. The Sibley app was also available during the interviews as it included a database all of the songs and calls of the birds on the list. In some cases, bird calls and songs were played for participants, as birds are sometimes identified more easily from their calls than their appearance. Additionally, a short video clip of birds in their natural habitat accompanied some of the images.

Although exotic to the region, the chicken (*Gallus gallus domesticus*) was also included in the list as it is commonly known in popular culture and also as a common food item. Despite being beyond the focus of the study, there was a possibility that this bird was referred to by an Anishinaabemowin name, and that this name may be indicative of the naming processes for community members. The Chicken was consistently named *Baaka'aakwaan* not only by community members but also throughout literature. Also included in the list was a common species of bat, which was not referred to as a bird by participants.

There are a number of resources that document Anishinaabe bird names, including several Anishinaabemowin dictionaries (Nichols, 1995; Ningewance, 2004; “the Ojibwe People’s dictionary,” 2015) and several other general Anishinaabe language resources (Clark (Naawigiizis) & Gresczyk (Gwayakogaabo), n.d.; Cooke, 1884; Valentine, 2001). These sources were consulted cautiously, bearing in mind that the lists are not comprehensive and often name only a handful of the most prominent birds. Also, these lists sometimes do not clarify whether

they are based on a specific community, person, or region. There is a substantial amount of regional variation in terms of pronunciation and nomenclature across the continuum of the Anishinaabe language, which leads to inconsistencies among different Anishinaabe vocabularies (Valentine, 2001). These Anishinaabemowin bird lists are further complicated by a lack of a coherent Anishinaabe orthography, as Anishinaabemowin spelling is often left to the writers' discretion. Nonetheless, these sources proved to be of use to this research project. There is a general consensus regarding the names of the most prominent birds throughout the various resources, including in the data from WIN. These lists were consulted as a guide in cases where bird names were not provided consistently by community members.

Occasionally, lists from Anishinaabe language resources conflicted with each other and/or data from the community. This was particularly the case with the less common birds. Examples include the American Robin (*Turdus migratorius*), listed across Anishinaabe language resources as *Opichi* or *Apichi*. Community members in WIN, however, consistently used the term *Miskwaagiganesi* to describe Robins, and were unfamiliar with the term listed in the language resources. Whereas all language resources refer to the Ruffed Grouse (*Bonasa umbellus*) as *Bine*, community members in WIN consistently referred to the species as *Bashke*. Allan MacDonald (interview, Nov. 13, 2018) expressed that this term is an example of the WIN regional dialect, and explains that "... some people call them *Bine*, but us people in Whitedog call it *Bashke*, and people like from Shoal Lake, they call them *Bine*, and when you say *Bashke*..., they laugh at us". The term *Bine* was recognized as an alternative name by participants but was never listed as a primary name.

Basis of Recognition

It was not possible to precisely verify the number of bird taxa recognized by the participants in the study. Rather than assigning each individual bird on the list a simple positive or negative recognition by community members, it would be more accurate to say that there was a scale of recognition, with many being certainly recognized, others being confirmed to have not been seen, and others having plausible recognition.

Precise verification of bird recognition by community members was not possible for two reasons. In some cases, participants were simply undecided whether they had indeed seen a bird or not, and were unwilling to state a definitive positive or negative recognition. Secondly, it was sometimes the case that a bird was identified at a generic, but not species level. This means that there is no way to verify how many species within the genera could be accurately said to be recognized by participants. For example, there was approximated to be four species of Swallows living in the vicinity of the community according the *Atlas of the Breeding Birds of Ontario*. While Swallows were generically referred to as *Zhaashaawanibiise*, individual species of Swallow went unnamed as participants were unsure of or uninterested in identification at the species level. It may be the case that there are more or fewer species of Swallows that actually reside in the vicinity of the community, but such a detail was not of particular interest to participants. The 20 species of Warbler approximated to reside around the community region presented an even more challenging task, as all Warblers are small songbirds and many have some yellow colouration. Participants usually settled on referring to these birds generically as *Ozaawibineshi* “yellow bird” or *Bineshiins* “small bird”. Previous Anishinaabe bird lists have documented the same pattern of naming small songbirds, indicating that an indifference to particular Warbler species is an inherent feature of the Anishinaabe nomenclature system, rather

than due to the forgetfulness of participants. Cooke (1884, p. 244) explains that the Anishinaabe “would also apply the same name to all the Warblers which have much yellow, thinking that they are all one and the same species”. This kind of ambiguity in Anishinaabe ornithological nomenclature must be embraced in such an ethno-ornithological study (Si, 2016) and is discussed in more detail in a later paragraph.

Some bird species were recognized by participants despite being exotic to the region. Birds such as the Rock Pigeon (*Columba livia*) and the Chicken were named by participants despite that they are generally not found within the WIN area. All of this being considered, the following is a list of grades of recognition (Table 1):

Table 1: Grades of recognition of local birds

Grade of Recognition	Description of grade	Number of birds
Confirmed as recognized	These species either possessed a unique name, or, were positively identified by at least 3 participants	75
Partially recognized	Participants were unsure if they had seen these birds before	12
Identified at a generic level	These birds were identified as belonging to a generic category	49
		Total: 136

Basis of Acceptability

The acceptability of elicited Anishinaabe bird names was determined by the “reliability and consistency” of answers, a criterion borrowed from an ethno-ornithology of the Solega people (Si, 2016, p. 99). A lexical label was judged to be ‘consistent’ if shared by at least three participants. A lexical label was judged to be ‘reliable’ if it was either “accompanied by accurate information regarding the bird’s behavior, ecology or appearance” (Si, 2016, p. 99), or was

verified by an Anishinaabe language resource list. For example, the name for Wood Duck (*Aix sponsa*), *Mitigishib*, was accepted as legitimate despite being mentioned by only one person because the name was accompanied by a lengthy description of the habitat of the duck. The participant described how the *Mitigishib* nests in trees, which is quite unusual duck behaviour, and pointed out that this name directly translates to ‘tree duck’.

Anishinaabe language resource lists were consulted to verify if a bird name was legitimate if used inconsistently by participants. Some examples include the word for the Anishinaabe name for the Rock Pigeon, *Omiimii*. Although this name was offered by only one participant from the community, it was accepted as legitimate because it is used consistently throughout the Anishinaabe language resources. The Northern Flicker (*Colaptes auratus*), a species of woodpecker, was named by only two community members as *Mooningwane*, which corresponded with the term found in the Clark & Gresczyk (n.d.) language guide. The Red-headed Woodpecker (*Melanerpes erythrocephalus*) was referred to by two community members as *Meme*, a term confirmed by several Anishinaabe language resources (Clark (Naawigiizis) & Gresczyk (Gwayakogaabo), n.d.; Nichols, 1995).

Sound symbolism in Anishinaabemowin bird nomenclature

This analysis of Anishinaabe bird nomenclature reveals systemic phonetic patterns in the final syllable of many of the bird names. In 47 of 63 names, the final syllable contains a high energy sibilant fricative (i.e. ‘s’, ‘z’, ‘sh’, and ‘zh’, or respectively [s], [z], [ʃ], and [ʒ] in the International Phonetic Alphabet) and a mid to high vowel (i.e. ‘e’, ‘i’, and ‘ii’, or respectively [e], [ɪ], and [i] in the International Phonetic Alphabet) (Table 2). A full list of Anishinaabemowin bird names is included in Appendix 1.

Table 2: Final syllable of bird names in Anishinaabemowin

Final syllable	Number of bird names with the final syllable
-she	2
-se	5
-zi	2
-si	3
-shi	1
-zii	1
-sii	1
-shii	6
-jii	1
-iish	2
-is	1
-shib	6
-iins	2
-ens	3

There are a number of different explanations for this pattern. Firstly, various Anishinaabe dictionaries (Nichols, 1995; “the Ojibwe People’s dictionary,” 2015) describe the word-forming suffix *-se* meaning “bird”. The example of “rooster” is included in these sources, translating directly as “male bird”, *Naabese* (Nichols, 1995). Five bird names from WIN bird nomenclature have this suffix. Additionally, there are three cases where the term *Bineshii*, “bird”, is included as part of the bird name, and an additional three cases where a variation of the term *Bineshii* is included as a part of the name. Although the full term is not included in these cases, participants were clear that the ending still conveyed the meaning of the word for bird. For example, one participant clearly explained that the term *Miskwaagiganesi*, meaning American Robin, translates clearly as “red-chested bird”. Another example includes the suffix *-shib*, which clearly translates as a suffix meaning “duck”. This suffix is used commonly and accounts for 6 of the endings. Finally, some bird names include the diminutive suffix *-iins* or *-ens*.

Table 3: Meaning of individual suffixes

Suffix	Meaning
-se	suffix meaning ‘bird’
-bineshii	bineshii is the word for ‘small bird’
-shib	suffix roughly meaning ‘duck’
-iins/-ens	forms of the diminutive

Table 4: Bird names ending in “bird suffix”–se

English bird term	Anishinaabemowin term
Great blue Heron	<i>Mooshka’ose</i>
Wild Turkey	<i>Mizise</i>
Ruby-Throated Hummingbird	<i>Nenookaase</i>
Woodpecker	<i>Baapaase</i>
Nuthatch	<i>Atatigoise</i>

Table 5: Bird names ending in –bineshii or –nechii/ -neshii/ - nesi

English bird term	Anishinaabemowin bird term
Sora	<i>Moosebineshii</i>
Yellow Bird (warbler)	<i>Ozaawibineshii</i>
Pine Grosbeak	<i>Biboonebineshii</i>
Sparrow	<i>Gakaashkinejii</i>
Chickadee	<i>Gijigaaneshiin</i>
American Robin	<i>Miskwaagiganesi</i>

These suffixes are obligatory and fundamental to the meaning of the name. Without the suffix, the name will either be meaningless, ungrammatical, or will refer to a separate entity. Examples include *Baapaase*, the generic term for woodpecker, where *Baapaa-* has no meaning as an independent element. *Mizise*, Wild Turkey (*Meleagris gallopavo*), literally means “big bird”, *mis-* being a prefix meaning “big”, which cannot stand alone. And *Moosebineshii*, or Sora (*Porzana carolina*), literally means “bug bird”, a reference to its primary diet. *Moose* has a distinct meaning as an individual noun: “bug”.

Sound Symbolism

The phonetic variation among the final syllables of bird names is too broad to attribute to a single suffix */-se/* or the term *bineshii*. It cannot be accurately claimed that all the different combinations of a sibilant fricative followed by a mid to high front vowel constitute a single suffix. Moreover, in many bird names, it is not clear that the final syllable is a suffix at all, and rather is part of the word stem.

An explanation of this phonetic pattern involves sound symbolism in bird nomenclature, an ethnobiological phenomenon which has been widely documented throughout Indigenous societies (Hunn, 2008). Berlin (1992) explains that the phonetics employed in creating words and vocabularies are not fully arbitrary, as “the semantic resources of language are productively employed in what might be called the metaphorical mapping of the ethnobiological landscape” (Berlin, 1992, p. 259). What follows is a description of four linguistic features that contribute to an understanding of the phonetic similarities in the final syllable of Anishinaabe bird names.

1 – Universal sound symbolism

It has long been observed that the phonetic features assigned to words are not entirely arbitrary, and in some cases are related to the qualities associated with the entity the word represents (Jespersen, 1933). With specific regard to ethnoornithological nomenclature, a variety of languages have been shown to disproportionately display segments of high acoustic frequency in vowels and consonants (Berlin, 1992). This includes the front vowels [i],[ɪ], and [e], and also the high energy sibilant fricatives [s], [z], and [ʃ] that appear predominantly in the final syllable of Anishinaabemowin bird names. In his analysis of bird names in the Huambisa language, Berlin

(1992, pp. 238, 241) asks the question “what is so birdlike about [i]...?”, and comments that the phonetics employed in Huambisa bird nomenclature inherently display “angular avian agility”.

Berlin (1992) goes on to document the results of experiments that shows how participants can distinguish bird and fish names in completely foreign languages with greater than chance accuracy. High front vowels such as [i] and [ɪ] are examples of high acoustic frequency phonetics that “connote quick and rapid motion (i.e. “birdness”)", whereas names for other animals are more likely to have low frequency acoustic segments (Berlin, 1992, p. 249). It is also pointed out that a common pattern of size-sound symbolism demonstrates that smaller items often are named with higher quality vowels. Because many birds, especially songbirds, are quite small, they are more often named with higher quality vowels.

2 - Onomatopoeia

The prevalence of high frequency phonetic features in Anishinaabe names can be partially explained by simple onomatopoeia; many bird names consist of vocal imitations of the birds' songs or calls. Onomatopoeia is a widely reported feature of many bird nomenclature inventories across many languages, including in the Anishinaabe language (Berlin & O'Neill, 1981; Valentine, 2001, p. 508). It follows that onomatopoetic bird names involve high-frequency phonetics because bird calls are generally very high in pitch.

There are several explanations for the unusual prominence of onomatopoeia in bird names. Birds are often heard before they are visually identified, meaning their vocalizations may play an increased role in taxonomic classification (Hunn, 2008, p. 111). This corresponds to the fact that it is the songbirds whose names are disproportionately more onomatopoeic than other larger or more visually distinct birds (Berlin, 1992). Berlin and O'Neill (1981) speculate that the

onomatopoetic naming of birds may simplify the considerable challenge of memorizing a significant ornithological vocabulary. Bird names may feature onomatopoeia more frequently than other animals because “the distribution of [onomatopoeic] terms closely parallels the distributions of highly developed auditory signaling behavior among animal forms” (Hunn, 1977, pp. 82–83).

Onomatopoeic bird names frequently comprise roughly 30-50% of a bird nomenclature inventory (Berlin & O’Neill, 1981). In Anishinaabemowin, ten of sixty-three bird names (15%) are confirmed to be onomatopoeic with an addition seven being questionably onomatopoeic (in total, 26%) (Table 6). These two categories were ascertained by this author after going through each bird name individually and listening through their respective calls. In some cases, it was clear that the name was derived from the calls and these names were labelled “confirmed”. In the cases where it was unclear but plausible that the name was onomatopoeic, the terms were labelled “potentially onomatopoeic”.

Table 6: Onomatopoetic bird names in Anishinaabemowin

Confirmed onomatopoetic bird names		Potentially onomatopoetic bird names	
English name	Anishinaabemowin name	English name	Anishinaabemowin name
Hawk	<i>Cha’iins</i>	Golden Eagle	<i>Ginew</i>
Hawk	<i>Gekek</i>	Merlin	<i>Piipiigiisens</i>
Sandpiper	<i>Chiichiiskshii</i>	Rock Pigeon	<i>Omiimii</i>
Large Owl	<i>Googoogo’oo</i>	Kingfisher	<i>Ogiishkimanisii</i>
Nighthawk	<i>Beshk</i>	Swallow	<i>Zhaashaawanibiise</i>
Flycatcher	<i>Wiiwiish</i>	Sparrow	<i>Gakaashkinejii</i>
Gray Jay	<i>Gwiingwiishi</i>	Red-Winged Blackbird	<i>Chakano</i>
Raven	<i>Gaagaagi</i>		
Chickadee	<i>Gijigaaneshiin</i>		
Chicken	<i>Baaka’aakwaan</i>		

3 - Diminutives

Related to the phenomenon of sound symbolism is the frequency of diminutive forms in Anishinaabe bird names. Five recorded bird names featured the diminutive suffix *-iins*. Furthermore, there are also bird names that exist in both WIN and other dialects of Anishinaabemowin, differing only in that the WIN forms did not include the diminutive. This indicates that the diminutive may be added to the form without changing the intended meaning of the bird name.

Table 7: Anishinaabemowin bird names that end in a diminutive suffix

Anishinaabemowin bird name	English name
<i>Mooshka'osiins</i>	American Bittern
<i>Waabishibens</i>	Bufflehead
<i>Ozhaawashkonebiisibens</i>	Green winged teal
<i>Ozhaawashkonebiisibens²</i>	Blue winged teal
<i>Cha'iins</i>	Hawk
<i>Piipiigiisens</i>	Merlin/Kestrel

² Participants referred to both species of teal with the same name. This likely corresponds to the fact that blue and green are not distinguished as colour terms in Anishinaabemowin, and are both referred to with the prefix *ozhaawashko-* (“the Ojibwe People’s dictionary,” 2015)

Table 8: WIN Anishinaabemowin bird names that possess diminutive suffixes in other dialects

WIN Anishinaabemowin bird name	Corresponding name in eastern dialects (Valentine, 2001)
<i>Nenookaase</i>	<i>Nenookaashiins</i> (Valentine, 2001, p. 495) (Odawa dialect)
<i>Zhaashaawanibiise</i>	<i>Zhaashaawnibiishens</i> (Valentine, 2001, p. 498) (Eastern Ojibwe dialect)
<i>Diindiisi</i>	<i>Diindiisiinh</i> (Valentine, 2001, p. 498) (Odawa dialect)

A potential explanation for the prevalence of [s] and [ʃ] sounds in Anishinaabe bird names may be explained by diminutive consonant sound symbolism in Anishinaabemowin, where [s] often becomes [ʃ] as a result of diminutivization (Pentland, 1974). It is noted that this linguistic process happens inconsistently in the Anishinaabe language as well as a variety of other Algonquian languages (ibid).

4 - Paradigm uniformity

Paradigm uniformity, sometimes called paradigm levelling, describes a common linguistic process in which words in a given paradigm, or set of related linguistic forms, will undergo phonetic change in order to be more like each other (Steriade, 2000). Although the term is usually used in the context of historical linguistics to describe phonological changes over time, some have adapted the term in application to lexical semantics (Kiparsky, 2008). Kiparsky (2008, p. 4) describes the process as a “drift like spread through the lexicon, by which it extends a phonological process context by context, and within each new context item by item”.

In other words, when Anishinaabemowin speakers are engaged in the process of bird name coinage, there is a likelihood that the new bird names will be created to conform within a

pre-existing paradigm of bird names. For the Anishinaabemowin language, this pattern consists of a final syllable that has sibilants and front vowels. This may be a conscious or unconscious process that gives bird names a semblance of consistency or regularity as a category.

Outlined here are various linguistic features of sound symbolism that individually and collectively inform Anishinaabe bird nomenclature. Sound symbolism accounts for the prevalence of a common phonetic pattern in the endings of many bird names. Perhaps the most definitive observation to be made from such a linguistic analysis is that these linguistic features do not operate independently from one another, and collectively contribute to a sense of “bird-ness” in the nomenclature.

Reduplication

Of the 63 bird names, 21 (roughly 2/3rds) feature reduplication, a linguistic feature that describes the repetition of all or part of the word. A prominent example of this is the word for woodpecker, *Baapaase*. In Anishinaabemowin, like many other Algonquian languages, reduplication is typically used to either denote an ongoing action or an action that happens intermittently (Valentine, 2001). It is clear from this data that onomatopoeia and reduplication work hand in hand with each other, as the repetitive nature of bird calls mandates that onomatopoeic bird name coinage will involve repetition of syllables. This is consistent with data on ornithological lexical labels, where onomatopoeia is often associated with reduplication (Berlin, 1992).

Reduplication in bird names has been noted in Anishinaabemowin (Valentine, 2001) and also its ancestor language, Proto-Algonquian (Cowan, 1972). In both cases, a clear correlation between reduplication and bird names specifically is noted, as the authors acknowledge that reduplication is not used in such a way for any other animal. Cowan (1972) speculates whether

reduplication in Proto-Algonquian had a “further function in forming specifically bird names” in addition to and distinct from its linguistic functions, and questions the semantic force of reduplication in other Algonquian languages as well. In the case of Anishinaabemowin, Valentine (2001, p. 509) highlights that “in the case of bird names... the process [of reduplication] is so common that it must be deliberate”.

Mononomials

Twenty-one of the 63 bird names appear without the distinct ‘bird-like’ phonetic characteristics in the final syllable, and are therefore labelled mononomial. The term monomial is used to describe names that do not fit into the standard binomial framework found pervasive throughout nomenclature systems (Berlin, 1992, p. 117). The mononomial bird names found in Anishinaabemowin generally correspond with Berlin’s (1992) proposition that mononomially designated taxa will likely be of pronounced cultural significance as these birds are disproportionately among the largest, most prominent, most common, or in other words, the most perceptually salient in the Anishinaabe inventory. Some exceptions apply to this rule, as there are culturally significant birds which are not mononomial, for example the Bald Eagle and the mallard.

Table 9: Mononomial bird names in Anishinaabemowin

English Name	Anishinaabemowin Name
Common Loon	<i>Maang</i>
American Pelican	<i>Zhage</i>
Canada Goose	<i>Nika</i>
Snow Goose	<i>We 'we</i>
Merganser	<i>Anzig</i>
Turkey Vulture	<i>Wiinaange</i>
Osprey	<i>Bijigigwane</i>
Golden Eagle	<i>Ginew</i>
Goshawk	<i>Gekek</i>
Ruffed Grouse	<i>Bashke</i>
Sandhill Crane	<i>Ojjaak</i>
Herring Gull	<i>Gayaashk</i>
Rock Dove	<i>Omiimi</i>
Owl	<i>Gokooko 'oo</i>
Northern Flicker	<i>Mooningone</i>
Red-headed woodpecker	<i>Meme</i>
American Crow	<i>Aandeg</i>
Common Raven	<i>Gaagaagi</i>
Red-winged Blackbird	<i>Chakano</i>
Common Grackle	<i>Siginaat</i>
Chicken	<i>Baaka 'aakwaan</i>

Perceptual Salience in Anishinaabe ornithological nomenclature

Fundamental to ethnobiological classification is perceptual salience, the mental process which allows human beings to subdivide the world into discrete perceivable entities (Berlin, 1992). One of the central debates within ethnobiological classification concerns the extent to which perceptual salience is culturally or biologically derived (Berlin, 1992). Hunn (1982) points out that while perception of the environment is clearly rooted in physical biology, the mental organization of this biology is significantly influenced by a variety of cultural factors. The interaction between perceptual and cultural salience is complex and in some ways they overlap with each other (Hunn, 1999). The main questions that arise from the linguistic analysis of Anishinaabemowin bird names directly concern the nature of Anishinaabe perceptual salience:

Why do some birds receive names and others not? What distinctive features of birds influence their likelihood of receiving an Anishinaabemowin name?

Data from Anishinaabemowin bird nomenclature illuminates the ways in which cultural factors affect ethnobiological classification. The distribution of Anishinaabemowin bird names is dependent on two primary factors: the size and utilitarian function of the bird. Generally speaking, the likelihood of receiving an Anishinaabemowin bird name is proportional to the size of the bird. Not only are smaller birds less likely to receive a name, they are more likely to receive only a generic name if they are named at all. This is consistent with literature on the size factor in classification (Hunn, 1999). Some exceptions to this rule are the hawks, which receive only the generic name *Gekek* or *Cha'iins*, despite being relatively large in comparison to songbirds. Participants consistently referred to the various species of owls that may reside around the community not by their individual titles but generally according to their size; larger owls were referred to as *Gookoogo'oo*, and smaller ones as *Gaakaabishiinh*. This same process has been observed in the naming of owls in other societies (Si, 2016, p. 112).

It is also clear that utilitarian factors play a role in the distribution of Anishinaabemowin bird names. The quality of a bird's meat is implicated in its nomenclature. The suffix *-shib* applies specifically to dabbling ducks that consume a primarily plant based diet rather than fish based diet. Ducks that consume primarily vegetation are considered a higher quality in terms of consumption. This indicates that birds are treated variously in the system of nomenclature based on their utility as a food source. Furthermore, the size of birds directly corresponds to their utility as a food source, as the smaller birds have less meat to offer. Cooke notes of the Anishinaabe of Minnesota that "The small birds of summer seem to the Indian beneath his notice, and when

asked the name, the answer not uncommonly is, "Why do you want to know its name? It isn't good to eat." (1884, p. 242).

Of all the ducks, the mallard is clearly considered to be the prototype of ducks, both through comments made throughout interviews, and also in terms of its nomenclature. The Anishinaabemowin term for mallard, *Ininshib*, translates to "ordinary duck", which distinguishes it as a superordinate generic or the prototype of the ducks (Bloomfield, 1946). This is consistent with Berlin's note that generic prototypes are consistently represented as the "'real', 'original', 'genuine', 'best looking', or 'ideal type'" (1992, p. 110).

Embracing variability in Anishinaabemowin bird nomenclature

Variability throughout systems of nomenclature presents challenges to ethnobiologists who seek to create rigid and definitive lists and tables of biological inventories found in Indigenous lexicons. Inevitably, any framework that is created to establish a set of general principles of ethnobiological nomenclature becomes upset by the sheer diversity in applications of language to the natural world (Ellen, 1993). It has been argued that the imposition of western classificatory frameworks on Indigenous systems of knowledge distort this Indigenous knowledge into a framework that is more academically comfortable for western thinkers (Dwyer, 2005). This has led many ethnobiologists to create frameworks that account for inherent variabilities expressed in the many systems of nomenclature around the world (Ellen, 1993).

Undertaking ethnobiological work with the Wola people in Papua New Guinea, Sillitoe writes how the extreme variability and inconsistencies displayed in classification schemes "embarrass" cognitive schemes based upon rigid hierarchical classification structures (2002, p. 1162). Sillitoe (2002) explains that the documentation of one single list of nomenclature would

be inherently inaccurate as it is inconsistent with the consensus based and egalitarian Wola relationship with the natural world. Likewise, Si (2016) writes of the Solega people in Indonesia that “bird naming in Solega is not a straightforward affair, and that it would be naïve to assume that there is a lexicon of universally accepted, ‘correct’ bird names in the language, simply waiting to be elicited” (Si, 2016, p. 132). The production of bird nomenclature is a social and consensus based process, without any standardized and objective set of names. It is noted that the lack of definitive lists is attributed to the nature of non-industrial societies that do not maintain an authoritative body on standardized naming conventions and generally value oral over written culture (Si, 2016).

Many examples from Anishinaabe ornithological data support an understanding of inherent variability in ornithological nomenclature. Despite the fact that the Anishinaabe have maintained - and continue to maintain - intimate relationships with their surrounding ecology, it is clear that assigning distinct names for each individual avian creature is beyond their interest. This is especially the case for the smallest of birds, who generally receive less attention in terms of nomenclature than their larger relatives. The name of the smallest of birds in the vicinity was often not known precisely many community members showed little interest in identifying smaller bird species.

Variability in Anishinaabe ornithological nomenclature is also noted by Cooke (1884), who presents ethno-ornithological observations of the Anishinaabe of White Earth, Minnesota, some 140 years ago. It is remarkable how many of Cooke’s observations on Anishinaabe bird nomenclature remain consistent with those assembled here from WIN, separated by a considerable distance and time. Just as the data from WIN suggests, Cooke notes that Anishinaabe of White Earth apply the names of small birds “very loosely”, and that they

“consider that when to a small winged animal they have given the name ‘bird,’ they have done their whole duty” (Cooke, 1884, p. 242). It is mentioned that among the most “loosely applied” names in Cooke’s study are the owls and hawks specifically, just as in the data from WIN suggests.

While the bird information presented in this document appears in a cohesive list-based form, it would be inaccurate to suggest that the list of bird names assembled here comprises a definitive list of the abstract mental lexicon of Anishinaabemowin bird names. It must be acknowledged that the lists produced in this document likely present more of a cohesive image of bird nomenclature than exists in the minds of Anishinaabe people.

Conclusion

This chapter has considered the Anishinaabemowin bird nomenclature used by the community of WIN with respect to literature on ethnobiological classification and folktaxonomy. Included is a linguistic analysis that explores how aspects of the Anishinaabe classification system are embedded into the structure of Anishinaabemowin. The primary example of this is the tendency for Anishinaabe speakers to include high energy fricatives and mid to high vowels in the final syllable of most bird names. The latter tendency occurs systematically throughout the language, especially with the smaller birds, and is consistent with the similar phonetic patterns observed throughout systems of bird nomenclatures from around the world. Additionally, the distribution of Anishinaabemowin bird terminology across local birds reflects on the nature of Anishinaabe folktaxonomy and contributes to an ethnobiological discussion concerning the manner in which human societies classify and organize their natural environment. Data from Anishinaabemowin nomenclature lends support to arguments made by Hunn (1982), who emphasizes the

significance of cultural salience in ethnobiological classification. The variability and flexibility inherent in Anishinaabemowin bird name data reminds readers that Indigenous knowledge does not always fit neatly into pre-existing theoretical paradigms established by western ethnobiologists.

Chapter 5 - Birds and Anishinaabe land-based practices

Introduction

A variety of birds, including ducks, geese, and partridges, are hunted in significant numbers by the community members of WIN. Bird hunting trips are made on a regular basis in the spring and the fall, and bird meat is eaten regularly. Throughout interviews with community members, birds were often identified primarily in terms of their relevance to hunting, or described by their quality of edibility. Descriptions of birds were often accompanied by amusing anecdotes of experiences in the bush and memories of past hunting trips. Many of the participants were raised in an era when traditional foods constituted the vast majority of their diet, and the community depended heavily on hunting to provide food for their families. Although much has changed over the years in terms of dependency on local foods, bird hunting remains an important part of community life for many people.

Land-based practices such as hunting once solely provided for the foundation of community life in many Anishinaabe communities and continue to be significant element of life in WIN today. Hunting has been described as a “hidden economy” (Brody, 1983, p. 212) in some Indigenous communities, frequently overlooked and undervalued not only in terms of the quantity and quality of nutrition provided, but also its social and even spiritual implications for community members. For many communities, the consumption of traditional foods from hunting continues to have many implications including for identity, spirituality, and sovereignty to this day (Nadasdy, 2004). Recent work with Anishinaabe communities, including the community of WIN, document how socio-cultural values remain intertwined with land-based activities despite the significant changes that have occurred over time (Kuzivanova, 2016). Although hunting no longer contributes the bulk of the diet in WIN, it still has a pronounced role in community life.

This chapter will explore contemporary land-based practices in the community of WIN with specific reference to birds and bird hunting. Firstly, I will discuss how community members discuss local birds in terms of their quality of edibility and how some of these standards have evolved over time. Practical aspects of land-based practices will also be discussed, including bird hunting, egg collecting, and engagement with birds as pets. Finally, I will discuss some of the changes in local bird populations that have been noticed by community members over time.

Methods

Interviews conducted with fourteen individual community members in from WIN comprise the primary data for this chapter. Participants were interviewed with specific regard to their ornithological knowledge throughout the course of fieldwork in the fall and winter of 2018 and were chosen with help from the research partner and traditional land use area coordinator in the community, Marvin MacDonald. The participants ranged in age from approximately 50 to approximately 80 years old, the majority of them were men. Some of the participants had worked extensively on the land as trappers, fishing guides, or in other capacities, and all were involved in fishing or hunting land-based activities to various extents.

Interviews with participants were semi-structured and focused around community members' knowledge of the local birds. The semi-structured nature of the questions allowed for room for participants to digress and go into detail about aspects of their ornithological knowledge which they felt was most important. Consistently, land-based practices involving birds was a preferred topic of discussion and was commented upon eagerly.

Bird Edibility Classes in WIN

Community members in WIN divide the local birds into roughly three categories with respect to their edibility and consumption. The first includes birds that are consumed on a regular basis and whose meat is considered to be of the highest quality. Prime examples of category members include the mallard, Bufflehead, Goldeneye, lesser Scaup, Canada Goose, and Ruffed Grouse. Upon recognizing images of such birds, participants would frequently comment that these birds are “good-eating”. What makes these birds of a higher quality is the substantial volume of meat per bird, the tenderness of the meat, and the flavour. Another way to put this is that these birds are large enough to merit hunting effort, do not taste strongly of fish, and aren’t required to be cooked for an excessive period of time.

Although found only rarely around the community, species such as the Trumpeter Swan and the Wild Turkey may have been included in this primary category in the past when they appeared in more significant numbers and were hunted on a regular basis. Some participants remember a time when Swans were plentiful in the lakes around the community and were hunted in large numbers. Some community members also surmised that Wild Turkeys would make for good-eating as well, as they are large in size, and also used to be found in much higher numbers around the community.

The most highly valued bird for consumption as food is the mallard, referred to as “the main meal” (I. Scott, interview, Nov. 22, 2018), or “the best one” (J. Hunter, interview, Dec. 03, 2018). The mallard is perhaps the most common duck in the landscape around WIN and is the prototype of a “good-eating” bird. Other birds and waterfowl were frequently discussed in reference to the mallard as being either similar or dissimilar to the mallard. Larry MacDonald mentions the mallard as the “most common food”, and that “those are the ones [people] go after”

(interview, Dec. 04, 2018). As discussed earlier, the mallard is also considered to be a prototypical duck in terms of its nomenclature.

The second category of birds includes “second-choice”³ birds that are preferably not consumed and therefore not hunted regularly. Examples include the cormorant, loons, herons, sandpipers, and mergansers. These birds contain either an unsubstantial volume of meat, taste poorly, and/or must be cooked for a long time.

Many community members expressed how they were uninterested in hunting birds that have very little meat on their bones, or do not taste good. Birds that eat a predominantly fish-based diet can be found in this category, as it makes their flesh both smell and taste undesirably “fishy”. The meat of many of these birds is also tough, and needs to be boiled for extensive amounts of time to be rendered edible. The best example of this is the loon, which is universally known for its tough meat, and must be boiled for a minimum of several hours before being eaten. Tony Henry shares a common joke that “some people have used the example that when you're boiling [the loon] you can put a rock in it and when the rock is cooked then the bird is too” (interview, Nov. 27, 2018). Another participant shared that he is uncomfortable sharing meat with exceptionally tough and chewy ligaments to the small children in his household as it could be a choking hazard. Birds in this category may share more than one of these qualities that render them undesirable for consumption.

Finally, there are some birds which are avoided because they are scavengers. The best example of a scavenger is the vulture, which is commonly known to feast on carcasses and is not eaten for this reason. The Anishinaabemowin term for Turkey Vulture, *Wiinaange*, roughly

³ Diamond found that community members of a Pacific island tribe refer to a certain category of foods as to be eaten only in emergencies when the staple foods are unavailable. It is only in rare circumstances that storms decimate food stocks to such an extreme degree that the community has no other option than to consume foods in this category, which he terms “second-choice” foods (Diamond, 2013, p. 220)

translates to “dirty bird”. One community member mentioned that seagulls are avoided for this same purpose (L. MacDonald, interview, Dec. 04, 2018). Several community members even expressed distaste for eating bear meat, as there is concern that the bear is potentially scavenging from undesirable sources in the forest.

Other birds are not consumed because of their spiritual value (G. Cameron, interview, Dec. 07, 2018). Traditional Anishinaabe cosmology forbids community members from eating their clan animal, that is, the animal that represents their own kinship network. A variety of the local birds are known to be a part of the clan system, most notable the loon and the eagle. Some birds are not consumed because they are regarded as sacred creatures. Different participants gave mixed responses regarding the acceptability of consuming bald eagle meat, and it was unclear how strictly this was understood by different community members. Certain participants also discouraged eating the robin, which the documentary record shows was traditionally avoided as a food in many communities (Bloomfield & Nichols, 1991).

Changes in edibility classes

There have been significant changes in which birds are eaten on a regular basis in the community over the past number of decades. Many of the second-choice birds today are remembered by many participants to have been eaten on a regular basis in earlier times. Birds such as cormorants, loons, or various kinds of ducks were said to have been enjoyed frequently by their parents’ generation and even by themselves as children. Virtually all of the participants articulated at some point during interviews that the Anishinaabe people used to eat virtually anything that was edible in the environment, including most varieties of edible birds. Different community members explained that “...back in the old days, [people killed many birds] and

whatever, whatever they can get their hands on” (G. Bunting, interview, Nov. 20, 2018), or “a long time ago before white man come pretty well natives they eat anything eh” (T. Land, interview, Dec. 04, 2018), or “us people eat anything! ... just like you guys will eat anything from the store” (M. Kent, interview, Nov. 23, 2018). The comparison to the store is notable as it suggests the grocery store and the land as being analogous food sources. When asked if they had eaten certain second-choice birds, participants frequently used the conditional “I must have eaten that” or “I would have eaten that” in their responses. Despite not being able to precisely remember the various animals consumed in their youth, they were certain that these birds were standard food items in earlier times, and that it was almost guaranteed that such creatures would constitute staples in their childhood diets.

The reason for the shift in eating preferences appears to be relatively straightforward: depending exclusively on the boreal forest for nourishment, one learns to appreciate whatever edible foodstuffs are available. Elder Michaud explains; “when I was young I eat everything... we were kind of poor”, and that “we were hungry though, we like everything” (interview, Nov. 11, 2018). As both grocery stores and the funds required to access them became increasingly available over the years, community members could afford to avoid eating the smaller, more rubbery, or more unpleasant tasting birds. Nonetheless, many community members fondly remember eating such foods and continue to eat them occasionally. Elder Michaud explains that as some second-choice birds were eaten less and less, “I still like it though” (interview, Nov. 11, 2018). When identifying edible bird species, participants sometimes expressed interest in eating birds they had never tried before, just to see what they would taste like.

Land-based practices

Bird hunting is conducted in the spring, when birds return from their migration, and in the fall, when they are preparing for their upcoming migration. Bird hunting is not done in the summer because this is when the birds are raising their young and are molting. One participant commented how birds were less tasty in this time, and that when he tried eating a duck in mid-summer once it tasted very rubbery (G. Cameron, interview, Dec. 07, 2018).

Many participants did not know of specific reasons why it was not conducted in the summer, and simply expressed that it was simply not how it was done in the community. Some birds are seen only in the spring and fall when they pass through the community to their breeding grounds, for example snow geese, who are seen from a distance as they fly overhead.

Ducks are hunted either by waiting behind a blind or by stalking them in a boat. The hunting party may install a series of blinds and strategically place them in the flight path of the escaping ducks. This way they can control their flight pattern of the ducks and maximize shooting opportunities. Marvin MacDonald explains that “a family here they'll set one up, another one on the other way, and one in the middle, and then they shoot- he shoots at some ducks, they fly, he'll shoot 'em, they'll fly, he'll shoot em, and then back and forth” (interview, Oct. 30, 2018). Another option is for some members of the hunting party to sit behind the blind, then other members will scare and chase the ducks into the direction of the blind.

The preferred hunting option is to stalk the birds in a boat and shoot them with a shotgun; “that's the modern way I guess, driving around in a boat” (L. MacDonald, interview, Dec. 04, 2018). By scaring them in a particular direction, the hunter can effectively herd a group of birds together. Elder Michaud explains how “you sneak on to them, it's the best way, you can herd them, then sneak on to them, that's the best way” (interview, Nov. 11, 2018). The strategy of

sneaking up on the ducks varies depending on if the ducks are feeding in a rice field or are sitting on open water. A rice field makes sightlines of the ducks more difficult, but also allows for more cover for hunters to stalk them, and may allow more shooting opportunities. Some participants explained that during the fall hunting season, ducks can become so fattened that they have trouble escaping the boat. These participants chuckled as they recalled instances when they could simply strike down the fattened ducks with a boat paddle. The inability of ducks to fly strongly in the fall may also be related to the fact that they may still be moulting during this time.

Some participants described how duck hunting used to be accomplished in the past. Early in the morning, while it was still dark, ducks were stalked in canoes. This was done because ducks are reluctant to fly in the dark for risk of crashing into the bush, particularly when there is a fog on the lake, making for easier targets. Tom Land explains that “we natives used to go in there early in the morning before the sun come up, those one they can't fly at night some of them and the geese you-know they have to go down...” (interview, Dec. 04, 2018).

Ducks are prepared by plucking them, then singeing or burning off the remaining feathers from the skin, then gutting them. If the hunter is not interested in the leg or shoulder meat of the bird, then an incision is made and the breast meat is sliced out without any plucking or singeing. Traditionally, meat is boiled or roasted on a spit over a fire. Now, meat is still frequently boiled into hearty soups, but is also baked or fried. Sometimes, exceptionally tough cuts of meat may be put through a meat grinder in order to better tenderize it. Much of what is hunted is also stored in freezers over the winter; however, some community members remember their parents creating storage chambers out of willow branches and canvas for duck carcasses to winter in (T. Land, interview, Dec. 04, 2018). In some cases, notable bird feathers are plucked and shared with other

community members who are interested in creating crafts and artwork with them (G. Cameron, interview, Dec. 07, 2018).

Egg collecting

Many participants shared memories of collecting bird eggs in their youth. Various species of duck and also seagull eggs were harvested in the spring time for consumption. The timing of the egg search needed to be precise, before chick development renders the egg inedible. Participants described how duck nests are well disguised in the bush and require a keen eye to find them amongst the brush. It was noted how the ducks sit incredibly still in their nests, and only evacuate once a human comes within inches of disturbing them. Once captured, eggs were floated to determine if they were edible or not. If the egg is buoyant, then it is discarded, but if it sinks, it is kept. Some experienced egg harvesters could identify edible eggs just by sight, and would in this way avoid handling eggs unnecessarily. Parents guarding their nests may very well challenge the egg harvesters by harassing and intimidating them. This was especially the case with collecting seagull eggs, found in nests among the rocky ledges at the lake side. Many participants expressed how they enjoyed the flavour of the eggs as children and compared the flavour to regular chicken eggs. Eggs were traditionally boiled as the standard method of preparation. Participants reported that such egg collecting is not undertaken by community members any longer, presumably because of their replacement by cheaply available chicken eggs from grocery stores.

Birds as Pets

While discussing the various birds around the community, some community members discussed how certain birds were kept as kinds of pets; not quite domesticated, but friendly enough to spend prolonged time with humans. While very few participants mentioned this only briefly, it occurred just often enough to merit some reflection.

One participant recalled how he had witnessed a community member climbing up a tree in an attempt to capture its eggs and raise an osprey as a pet (G. Cameron, interview, Dec. 07, 2018). This was not necessarily a traditional practice, and not undertaken for any particular reason other than the fact that it was noteworthy to have a bird of prey around as a friendly neighbour. Glen explained how “it’s kind of cool when you have a bird perching at your doorstep, knowing that you raised it and he’s coming back” (interview, Dec. 07, 2018). This was done relatively commonly with crows, who “come to you and they sit on your arm”. Crows can even be kept in boxes overnight, and require regular feeding. These birds do not stay for their lifetime, and inevitably decide to leave and find a new home after some time (G. Cameron, interview, Dec. 07, 2018).

Another participant explained how as a child, a particular red-winged hawk would visit him by perching on his arm (A. MacDonald, interview, Nov. 13, 2018). He would feed the bird fish, and it would linger around until it had decided to leave. “She would come gliding from the field from a top of the hill she would wait there and come gliding and eat, come and eat, she was, really good pet...” (A. MacDonald, interview, Nov. 13, 2018). Allan mentioned that there is no word in the Anishinaabe language that roughly corresponds with pet, that it was just a “friendly hawk”.

In a community where people maintain close relationships with the local animals in the environment, it is easy to understand why it may be considered socially valuable to maintain a close association with a bird. People in the community are keen to notice their animal neighbours, and speak commonly about the various wildlife that has been spotted lately around the bush or along the road. Having an unusual animal companion may be considered impressive by some community members, and certainly an exceptional occurrence.

Bird population changes in WIN

Community members in WIN observe that there have been changes in bird population over their lifetime. Certain species of birds are documented to appear more or less frequently than at some point in the past. Participants' comments on the nature of bird changes in the region remained relatively general without specific quantitative details provided. Nonetheless, there was consistency throughout the statements of noticed bird population changes. The perceived changes in the local bird populations reflect community members' perception of greater environmental changes and ecological degradation.

Data collected from individual community members in WIN is difficult to compare with current western ornithological data primarily because of the difference in spatial scales. Western ornithological databases generally are not geographically specific enough to address patterns in an area as small as WIN territory (Cadman et al., 1987). Generally, migratory birds reside over enormous tracks of land, and general population increases or decreases may or may not correspond with the perceptions of individual communities operating within a relatively limited geographically setting. Increases or decreases on a local scale may reflect local ecological changes, but may have no bearing on general population numbers.

Table 10: Description of bird population changes by WIN community members

Bird	Explanation of Change
Osprey	Many community members report that there are less Osprey around the community now than there has been in the past
Wild Turkey	Consistently, community members explained how Turkeys used to be common around the community, but that they are now rarely seen.
Bald Eagle	Some community members observed that Bald eagles are far more common now than they have been in the past. G. Cameron explains about collecting bald eagle feathers: “once upon a time yeah, people would have to go travel far to go get 'em, or get other people to go and ah, get feathers for them ah... but now they're coming back” (interview, Dec. 07, 2018)
Northern Goshawk	Many community members report that there are fewer Goshawks around now than there used to be. Large cliffs around the local ‘Goshawk Lake’, known to be a place where goshawks nest, were flooded out from construction of the lake. This may contribute to the local goshawk decline.
Trumpeter Swan	Consistently, community members observed that Swans were once plentiful in the region, particularly in the nearby “Swan Lake”. After a significant decline when no Swans could be found for several decades, they have been making a resurgence in the area over the past 6 years or so.
American White Pelican	Some community members pointed out that pelicans are now more plentiful in the region than they have been in the past

When asked about their understanding of why a bird population has increased or decreased over time, participants were not consistent in their explanations but expressed a general sense that a certain measure of ecosystem degradation has occurred. Mercury contamination, flooding caused by the local hydroelectric dams, and overhunting are understood

to be the primary drivers of this degradation and were listed as the potential factors that could explain a change in bird population.

In the 1960's and 1970's, industrial mercury pollution into the Waabigoons river system poisoned much of the local ecology, severely impacting the land-based practices of the community. Community members were told to refrain from eating a variety of country foods which contained toxic quantities of mercury. This mercury contamination remains a legitimate concern for many community members, many of whom suffer from health problems as a direct result. Similarly, two hydroelectric dams installed in the 1950s have also had enormous effects on the local ecology and therefore the land-based practices of the community such as hunting and fishing. Some of the participants pointed out how the reduction in wild rice fields caused by the extreme hydrological shift from the dams has negatively impacted many species of waterfowl that feed on the wild rice. Following the dam installation, duck, geese and swan populations became attracted to the rice fields located inconveniently far away from the community.

While unable to articulate precise explanations for the change in bird populations, community members' understanding of local bird population changes reflect a general sense that the environment is not as healthy as it once was. Many community members remember drinking straight from the lakes and rivers around the community when they were younger. Today, local water is unsafe for consumption, and all drinking water is imported from the local town. Discussing why he believes why there has been a decline in the local Osprey population, John Hunter states that "maybe something kills them... it's the air or something... that's what happens nowadays" (interview, Dec. 03, 2018). Changes in bird populations are surmised to have resulted from general environmental degradation that has taken place around the community.

Conclusion

Although community members do not rely on land-based practices to sustain themselves in the same way as previous generations have, the harvesting of local birds continues to contribute to the local diet and more importantly remains an significant aspect of their relationship to the land. Throughout interviews, community members consistently referred to birds in terms of their value as food. Community members also consistently articulated how they have experienced change in their interactions with these birds over time. Some of these changes included the changes in preferred local birds for consumption, changes in how land-based practices were carried out practically, and changes noticed in the bird population over time. In some cases, changes in land-based practices were significant, such as the fact that egg-collecting is simply not practiced anymore, or that some birds that used to be eaten regularly are not consumed anymore. Community members continue to maintain a depth of knowledge about local birds but do not depend on the bird harvest to the same degree as was once practiced.

Chapter 6 - The Jagged Edge: Ethno-ornithology and contemporary Indigenous knowledge

“Partly because of empire, all cultures are involved in one another; none is single and pure, all are hybrid, heterogenous, extraordinarily differentiated, and unmonolithic”.

- Edward Said, Culture and Imperialism (1993, p. xxv)

Introduction

Sitting next to me in the elders’ room of the community centre, John Hunter is speaking about the various birds that appear on the laptop before us. As I click through the images, he offers the Anishinaabemowin bird name and a variety of other bird-related knowledge to me. He speaks slowly with a strong Ojibwe accent to his English, occasionally injecting Anishinaabemowin words into his sentences. His comments on individual birds often digress into hilarious stories of past hunting trips or anecdotes about community life, and at several points throughout our conversation he begins to describe some of the changes that have occurred in the community over his lifetime. John grew up in an era when there was no road to the local town and the English language was rarely heard. Speaking on a tangent, he begins to explain how the progress experienced in the community can be understood as a series of steps on a staircase: “[you used to] use a canoe and paddle around, and the motors came in after, then things were beginning to change eh, just like you're going upstairs, one step at a time” (interview, Dec. 03, 2018).

Changes in community life were consistently referenced by community members throughout their discussions of birds and local ornithological knowledge. Because Anishinaabe bird knowledge emerges as one aspect of their relationship with the land, and because engagement with the land has undergone changes over time, it follows that the Anishinaabe relationship with birds has changed alongside their relationship to land. To gain a full understanding of Anishinaabe relationship with birds, it is important to understand the changes in

the relationship to land and how these changes have affected their knowledge. These observations raise a question about the ontology Anishinaabe bird knowledge: how have community members in WIN come to acquire their knowledge about birds?

This chapter offers a background of the contemporary Anishinaabe relationship with birds by situating contemporary Indigenous knowledge in a historical and social context. Indigenous science, Canadian history, and cultural adaptation are discussed as they relate to contemporary Indigenous knowledge. Outlining the context of contemporary Indigenous knowledge serves as a means to make sense of both the ornithological data collected in the community, the contemporary Anishinaabe relationship to birds embodied by community members in WIN, and also my experiences learning about Indigenous life generally.

Indigenous science

I began fieldwork in WIN with the understanding that the community members would express their ornithological knowledge according to a different framework of knowing than the western model of science I was familiar with. A thorough review of literature on Indigenous knowledge as well as an Indigenous-led class on Indigenous methodologies before fieldwork had challenged me to broaden my understanding of science and consider the unique ways in which Indigenous people approach knowledge production. I began my research journey aware of the history of colonial researchers who failed to understand that the real value of Indigenous knowledge was not simply in the technical environmental information they possessed, but rather in the process of integrating ecological knowledge into holistic worldviews (Geniusz, 2009). I was eager to consider Indigenous ways of knowing and respect the knowledge that was shared with me by situating it properly within its ontological home.

Both Indigenous and non-Indigenous authors alike perceive Indigenous knowledge to be rooted in an epistemological and ontological foundation distinct from its western counterpart (Berkes, 2012; Cajete, 2000; Little Bear, 2012). Indigenous knowledge has been characterized by a focus on a recognition of the “spiritual and livingness” of the natural world and a holistic approach to knowledge creation (Little Bear, 2012). Cajete (2000, p. 64) writes that native science “is not based on rational thought alone but incorporates to the fullest degree all aspects of interactions of ‘human in and of nature,’ that is, the knowledge and truth gained from interaction of body, mind soul, and spirit with all aspects of nature”. Indigenous knowledge is thus rooted in experience and participation with the natural world (Cajete, 2000). Unlike western scientific methodologies, Indigenous thought is not characterized by a linear understanding of time or an embrace of binary thought, but rather “views the world from chaos underneath order” (Little Bear, 2012, p. 522). A holistic approach to knowledge creation recognizes the animism in all the things of the world and by implication accepts the equality among creation (Little Bear, 2012). The verb-oriented nature of Indigenous languages often embodies a focus on process, movement, and relationships, rather than the static noun-based orientation of European languages (Kovach, 2009; Little Bear, 2012).

Anishinaabe people themselves have written extensively about the nature of Anishinaabe worldview and the Anishinaabe approach to knowledge production. Traditional Anishinaabe worldview is fundamentally centred around maintaining a web of healthy relationships with all of creation, including the spirit world, one’s ancestors and descendants, and especially the land: the birds, the water, and natural world in the most general sense (McGregor, 2013). Engaging in these relationships is referred to by the Anishinaabe term *mino-bimaadiziwin*, roughly translated as ‘being on the good path of life’, which describes the way to carry out a healthy and balanced

life (Rheault, 1999). Not only does Anishinaabe ecological knowledge emerge out of this web of relationships; the relationships themselves are heavily informed by Anishinaabe experience on the land. John Borrows (2014) describes how Anishinaabe social values and behaviours are shaped by observing “the behaviour of the sun, moon, stars, winds, waves, trees, birds, animals, and other natural phenomenon”. In short, Anishinaabe ecological knowledge *is* Anishinaabe knowledge.

My familiarity with the theoretical foundations of Anishinaabe knowledge provided the context for many of the interactions with community members and for much of the information that was shared with me. Many comments made during interviews could only be properly understood according to a framework of traditional Anishinaabe knowledge. Yet it was occasionally the case that the ornithological knowledge of community members did not fully correspond with a traditional framework of Indigenous knowledge. Listening to John Hunter describe owls, I was surprised to hear him compare them to American airplanes: “...how they fly, just like that ah, airplanes that they make in the states, that are the black- the black, I don't know what you call that, that jet” (interview, Dec. 03, 2018). After a momentary confusion, I asked if he was referring to stealth fighter jets used by the American military, as sometimes featured in action movies or television shows. This was a clear reference to the fact that owls, unlike other birds, possess specialized feathers lining the edges of their wings that allow them to fly in complete silence. He confirmed, explaining that “the way they sound you don't hear that noise, same with this one here” (interview, Dec. 03, 2018).

While these instances occurred relatively infrequently, it was puzzling to periodically hear community members explain their knowledge in a western frame of reference rather than an explicitly Indigenous one, or reveal the origin of a piece of ecological knowledge as from a

distinctly western source. While it could be reasoned that community members were adjusting their explanations for the benefit of the non-Indigenous researcher, it was nonetheless the case that they had an available bank of western thought from which to draw. I became confused as to how to consistently place the ecological knowledge that was shared with me into an Anishinaabe framework of knowledge.

It became evident that the references to distinctly non-Indigenous sources of knowledge made by community members reflected broader changes in ecological knowledge that have occurred as a result of settler colonialism and western contact. Indigenous methodological literature makes this clear by emphasizing that discussions of colonialism are never far from discussions of Indigenous knowledge, and that the keepers of Indigenous knowledge have been forced to respond to the variety of colonial pressures on Indigenous life (Simpson, 2014). Furthermore, the historical and social contexts of Anishinaabe knowledge became relevant as I began to appreciate the profound changes in community life that have occurred in WIN over the past number of decades. Devastation of traditional lands from hydroelectric dam construction, the creation of an all-seasons road into the community, as well as attendance of residential schools are all examples of dramatic social and ecological changes that have affected the ecological knowledge of community members to some degree.

A review of Indigenous methodologies and Indigenous history in Canada make it clear that the dynamics of contemporary Indigenous knowledge cannot be understood in isolation from settler colonial processes that have affected virtually every aspect of Indigenous life in Canada. As such, a discussion of the impact of colonialism on Indigenous knowledge became an important part of contextualizing the data I had collected in the community. I began to consider my research on Anishinaabe ornithological knowledge as a kind of case study of Anishinaabe

ecological knowledge and how it could serve as an example of the effects of settler colonialism on Indigenous knowledge in a general sense.

Settler colonialism in Canada

The introduction of European technology, goods, and peoples has fundamentally affected the trajectory of Indigenous life in North America. Long before the dominion of Canada claimed Indigenous peoples under its jurisdiction, contact with European settlers began to radically alter the economic and ecological environments they found themselves in (Dashuk, 2013). The fur trade, which extended the global economy deep into the heart of the continent by the 17th century, revolutionized material culture in Indigenous communities across the continent (Bishop, 1974; Nadasdy, 2004). In some cases, Indigenous communities re-oriented their entire economies around new opportunities provided through the new global trade (Ray, 1993). Hallowell (1991, p. 17) writes that “the technological changes, the redistribution of the aboriginal population, and intergroup influences which occurred during the fur trade period can scarcely be overemphasized in terms of their cultural consequence”. At the same time, epidemics caused by foreign European pathogens decimated Indigenous populations throughout the continent, shook the foundations of Indigenous life, and exacerbated the redrawing of territorial boundaries (Dashuk, 2013). Although the Indigenous population of North America had been continuously adapting to ever changing ecological, economic, and social conditions for their entire existence, European contact and subsequent settlement produced significant shifts in Indigenous lifestyle.

The federalization of Canada in 1867 introduced sweeping changes for Indigenous life in the form of assimilatory policies that sought explicitly to destroy Indigenous culture. Massive

demographic shifts in western Canada following confederation saw Indigenous people suddenly become minorities in their homelands (Dunn, 2017). Simultaneously, the signing of treaties and ghettoization of Indigenous peoples on reservations represented a deliberate effort on behalf of the Canadian government to geographically, socially and politically marginalize Indigenous peoples for the establishment of a white settler nation state (Dashuk, 2013). Residential schools, a product of collaboration between the Canadian government and the church, sought to purge Indigenous children of their native culture through re-education and deprivation of contact with their families and communities (Truth and Reconciliation Commission, 2015). The Indian act of 1876 criminalized many elements of Indigenous life, undermined Indigenous political structures, and legalized the subjugation of Indigenous people under the Canadian government (ibid). The concerted effort to destroy Indigenous culture has led to the assertion that the sum of Indigenous policies enacted by the Canadian government can be defined by the term “cultural genocide” (ibid).

In an article contemplating the relationship between colonialism and genocide, Wolfe (2006) distinguishes settler colonialism from other forms of imperialism by noting its inherent “eliminary” nature. While other forms of imperialism seek to exploit the Indigenous population, settler colonialism is predicated upon the elimination of the Indigenous inhabitants to clear space for new settler occupation (Wolfe, 2006). Canada’s historical treatment of Indigenous peoples is consistent with the logic of elimination and can accurately be characterized as a systematic attempt to eliminate Indigenous people as social, political, and cultural entities. Any discussion of Indigenous worldviews, culture, or general life in Canada must bear in mind the framework of settler colonialism; its impact on Indigenous life cannot be ignored.

As a rule, there has been Indigenous resistance to settler colonialism (Said, 1993). This resistance has manifested itself variably across the spectrum of contact with European settlers, sometimes expressed through acts of violent struggle, but often not (ibid). Since the foundational element of settler colonialism is the elimination of Indigenous peoples, even the general existence of Indigenous people defies the goals of settler colonialism (Wolfe, 2006). Simpson writes how her Anishinaabe ancestors expressed resistance by holding on to their culture, traditions, language, and even more generally “by simply surviving and being alive” (2011, p. 15). In this way, resistance has permeated throughout Indigenous life in the colonial period. Despite the concerted effort on behalf of the Canadian government, traditional Indigenous culture has not been eliminated in Canada.

An acknowledgement of the various successes of Indigenous resistance throughout Canadian history complicates the straightforward narrative of settler colonial dominance over Indigenous people. Without overlooking the suffering inflicted upon many Indigenous communities by the Canadian government, historians have dispelled notions of passive Indigenous subjugation and documented how active Indigenous resistance has succeeded in maintaining Indigenous culture and identity in Canada (Brownlie & Kelm, 1994). It has been pointed out how language of colonial discourse can ignore the many Indigenous communities who continue to live out traditional livelihoods and operate within traditional Indigenous worldviews today (Brody, 1983; Nadasdy, 2004). It is for these reasons that Dashuk writes “the sheer force of colonial discourse makes it a blunt tool of analysis” (2013, p. xv). Thus, a balance must be observed in this discussion: too heavy a focus on Indigenous agency would obscure the negative impact of settler colonialism; too heavy a focus on Indigenous subjugation would deny

that Indigenous people have acted within a certain capacity to shape their own affairs (Brownlie & Kelm, 1994).

Disparate worldviews

The disparate ways in which Indigenous and western societies have carved out a life for themselves on this planet have produced worldviews that contrast each other in many ways. Beyond material or social differences in the two societies, their conceptions of one's role in the universe and their approach to managing relationships with their surrounding environments differ significantly.

As a result of being brought into the fold of Canadian society, Indigenous people have been forced to contend with western thought in their own lives to varying degrees and in various ways. Today, while explicitly assimilatory policies of the past have been renounced by the Canadian government, Indigenous people often find themselves struggling against the legacies of these policies and face challenges in their assertion of Indigenous rights and practices in a variety of fields (Galloway, 2019). Canadian institutions are frequently ill-equipped to consider traditional Indigenous approaches to healthcare, education, or resource management, to name a few. Although progress has been made in terms of recognizing the legitimacy of Indigenous culture and worldviews in Canada, Indigenous peoples are often required to reconcile their Indigenous values and practices with the colonial legal, political, and social frameworks they find themselves in.

Indigenous authors' reflections on the nature of conflict between western and Indigenous methodologies often describe western thought in quite visceral terms, almost as a burden on Indigenous consciousness. Geniusz discusses her Indigenous research methodology as one that

deliberately purges itself from western influence because Indigenous researchers “have reasons different from non-Native researchers for conducting research on our culture, language, and history” (2008, p. 243). Comparing and contrasting western and Indigenous research methodologies, Kovach (2009) struggles to reconcile Indigenous methodologies with any other pre-existing western research paradigm as Indigenous methodologies stem from unique “tribal epistemologies”. Other Indigenous authors have documented the power imbalance between Indigenous communities and western research institutions and discuss how western research methodologies have been historically hostile to Indigenous voices (Simpson, 2014; Smith, 1999). Leroy Little Bear (2014, p. 229) discusses the nature of Indigenous worldviews in the context of a colonial assault on Indigenous thought:

Colonization left a heritage of *jagged worldviews* among Indigenous peoples. They no longer had an aboriginal worldview, nor did they adopt a Eurocentric worldview. Their consciousness became a random puzzle, a jigsaw puzzle that each person has to attempt to understand. Many collective views of the world competed for control of their behaviour, and since none was dominant, modern Aboriginal people had to make guesses or choices about everything. Aboriginal consciousness became a site of overlapping contentious, fragmented, competing desire and values. (emphasis added)

Edges

Our understanding of how Indigenous people reconcile western and Indigenous thought can be supplemented by a discussion of “cultural edges” as considered by Turner, Davidson-Hunt, and O’Flaherty (2003). Indigenous societies have in many cases maintained symbiotic relationships

with their surrounding communities to mutually benefit from “exchanges and transferences of many types of goods, technologies, and knowledge” (ibid, 452). Rather than a physical space, an edge in this sense describes a process of interaction, a form of relationship that is maintained over a long period of sustained contact (ibid). It is highlighted how edges can act as a measure of resource security as they facilitate the diversification of cultural and natural resources (ibid). Edges are both social and economic in nature and are in many cases institutionalized within the societies (ibid).

The contrasting “jagged worldviews” described by Leroy Little Bear (2014) and the “cultural edges” described by Turner, Davidson-Hunt, and O’Flaherty (2003) can be understood as related phenomenon that will here be referred to as the *jagged edge*. The jagged edge provides a means to understand the various ways in which Indigenous thought, worldviews, and knowledge have been influenced by western contact. It seeks to describe the immense, historical, and *unique* cultural edge that exists between Indigenous and western peoples in a Canadian context.

The jagged edge is set apart from other edges described by Turner et al. (2003) because of the inherent power imbalance created by the eliminatory nature of settler colonialism. What distinguishes the jagged edge as unique is that many western influences were not voluntarily accepted into Indigenous life but rather forced in through settler colonial processes. Any cultural interchange between Indigenous peoples and European settlers in Canada must be considered within a settler colonial framework. To suggest that Indigenous peoples have deliberately participated in settler colonialism for their own benefit would be disingenuous and historically inaccurate. To suggest that Indigenous people have in a general sense borrowed “goods, technologies, and knowledge” from the various cultures they have contact with would be to

suggest that Indigenous societies function in the same way that all other human societies do. Despite being subject to systematic subjugation and marginalization by Canadian institutions, Indigenous peoples have not been without agency, and have historically embraced new technologies and ideas into their own cultural frameworks (Dashuk, 2013; N. J. ; Turner et al., 2003).

Cultural change and adaptation is by no means a recent phenomenon in Indigenous communities. Technological changes, while particularly rapid over the past number of decades, correspond with a greater process of change that has been ongoing throughout history (N. J. ; Turner et al., 2003). Written almost a century ago, Hallowell's famous ethnography of the Berens River Ojibwa depicts an Anishinaabe people who were amidst a process of change and transition. Hallowell notes that "the Indians of the Dominion, through treaties and acts of parliament, increasingly became involved in two sociocultural systems" (1991, p. 37). Brown (1987) emphasizes how Hallowell's work with the Berens River Anishinaabe depended heavily upon the contribution of Chief William Berens, who travelled and worked extensively throughout Manitoba, spoke "excellent English" according to Berens, and had manifold experiences interacting with western society. While helping to illuminate the nuances of traditional Anishinaabe thought to Hallowell, Berens was by no means ignorant of the western world, and neither were many Anishinaabe leaders at the time (ibid). Brown (1987, p. 24) shares how

it used to be common to assume that people who were separated to a degree from their traditional culture, and hence were living between or among cultures in changing conditions, would be stressed and maladapted marginals, symptomatic of the vanishing native. The case of William Berens, along with a growing

literature on other native or mixed-descent people in similar circumstances [...] and a variety of leadership examples from current history, would suggest that no such global assumption can be made.

The jagged edge in WIN

Leroy Little Bear's (2014) description of Indigenous "jagged worldviews" struck a chord with my experiences in the community and resonated as an appropriate way to consider both my data and the contemporary nature of Indigenous knowledge. His account of Indigenous thought in Canada suggests a narrative of a people who are in a sense culturally bilingual, in a process of flux in between two worldviews, and in a constant state of navigation between two potentially competing knowledge systems.

While land-based practices continue to be an important part of community life, the people of Wabaseemoong Independent Nations know of the world beyond their community. Their knowledge is not confined to the bush that surrounds their houses or the Wabaseemoong Traditional Land Use Area. Trips into the local town of Kenora are made regularly, by some on a daily basis. Many community members have children, grandchildren or other relatives living across Canada or in other countries. Many community members have had the opportunity to travel across the world. They are aware of popular culture as much as any community with internet or television access.

Some Anishinaabe authors refer to the confluence of western and Indigenous thought in their own lives very explicitly. Two distinct approaches to comprehending spirituality are acknowledged by Norval Morrisseau, the great Anishinaabe artist:

I am intelligent, I understand how the Christian religion came to be, how the Catholic church was the only church established by Christ, and how it separated at the reformation when a new Christian faith sprang up. On the other hand, I know about my ancestral beliefs, their rights and wrongs, and I respect both teachings as sacred (Morrisseau, 1965, p. 106).

This quote shows how he clearly maintains two distinct value systems, as if they were two rivers flowing parallel to each other in his consciousness. In a semi-autobiographical novel about a young man from Wabaseemoong grappling with his Anishinaabe identity, Richard Wagamese (2011, p. 4) writes that it

kinda seemed like the rest of the country got swept up in the white-man's progress sooner'n us. But it's been only 'bout fifty years that things really started to change around here and maybe even lots less since the young people really started feelin' that lost kinda feelin'. *Now they gotta choose between worlds.* (emphasis added)

In conversations with community members in WIN, it was sometimes the case that they referred explicitly to simultaneous management of two worldviews. Discussions regarding the various interpretations of thunderstorms reflect this:

I know what happens to produce that thunder, like the hot and cold air coming together, and I know all that too, and yet I have this other ah, belief, that- and I try to see how they come together (T. Henry, interview, Nov. 27, 2018)

This comment directly describes a conscious reconciliation of two contrasting ways of understanding a phenomenon. Smith (1995, p. 73) notes that many of the Anishinaabe informants with whom she spoke shared the same appreciation of both western and Indigenous narratives describing the creation of thunderstorms. Other community members in WIN shared

similar stories about their experiences. One community member I spoke with shared a memory of when she was sat down as a child and asked by her parents if moving forward in life she wanted to embrace a traditional Indigenous or a western lifestyle. After brief consideration, she replied “both!”, to which they agreed.

More commonly, the management of two sociocultural systems is not actively considered but is expressed somewhat subconsciously. Community members do not possess an intuitive sense of the root origin of every piece of knowledge in their mental inventory. Often it was unambiguously clear that shared information was not derived from a traditional Indigenous source. Here it was only my understanding of popular culture references that allowed me to identify the source of the information, which went unacknowledged by the participant. By this I mean there were no sharp distinctions made in the presentation of the information, no qualifications or disclaimers preceding the statement to acknowledge a change in the legitimacy of the knowledge. When the source of a piece of information seemed ambiguous, the participant would not bother to clarify the precise source of the knowledge. This demonstrates that community members do not categorically discriminate between traditional or non-traditional sources of ecological information. It is noteworthy to mention that this information was shared indoors and in the context of individual interviews with a non-Indigenous person. Had the sharing taken place while out on the land, community members may have highlighted different aspects of their knowledge.

In the case that a piece of knowledge could be clearly established to be from a distinctly non-Indigenous source, it could usually be attributed to information learned from either television, experiences travelling outside of the community, or from other miscellaneous sources. The internet was never clearly referenced by participants, most likely because most of the

participants were from the older generation and do not use the internet as frequently as younger generations do. The following examples demonstrate how various community members possess a dynamic set of ecological knowledge from this variety of sources.

Occasionally, participants commented on ecological knowledge clearly learned from the television, a piece of technology which is fairly ubiquitous throughout homes in the community and enjoyed by people of all ages. John Hunters' previously referenced comparison of owls to stealth fighter jets falls distinctly into this category. George Bunting (interview, Nov. 20, 2018) demonstrated his knowledge of the various birds that are hunted in southern Ontario because he consistently watches hunting programs from the region. Bunting went on to explain the migratory range of bald eagles based on a film he had seen about it (interview, Nov. 20, 2018). Tom Land (interview, Dec. 04, 2018) expressed concern about ducks covered in crude oil that needed to be cleaned with "Sunlight [soap]", a clear reference to a popular detergent advertisement.

Many community members spend a considerable amount of time commuting on the highway, as is frequently the case in rural communities. While travelling, they remain perceptive of the flora and fauna in the new environment. Despite the fact that the sharp-tailed grouse prefers the prairies and is not frequently found in the boreal community of WIN, some participants were familiar with the bird and explained that they had seen it when driving through the prairie provinces. When asked about the northern harrier which also resides in the grasslands, John Hunter (interview, Dec. 03, 2018) mentioned they may be found "where they hang around Saskatchewan or like ah, along the farms, where the clear area...". Glen Cameron (interview, Dec. 07, 2018) explained that while red-tailed hawks are not commonly around the community, they are regularly seen while in North Dakota, which he learned on an American road trip with

his family. Glen also commented on how destructive the cormorant population is to many species of fish, which he mentioned is a sentiment shared with him by the Mohawk people in Quebec.

Ornithological knowledge deriving from western influence is also acquired through general western contact. Marvin MacDonald (interview, Oct 30, 2018) expressed how he occasionally refers to the Ontario Ministry of Natural Resources (OMNR) to identify a bird species. He shared a story of when he saw a rare Golden Eagle around the community, and called the OMNR to confirm the sighting. He was told that it was most likely a young bald eagle, which are often mistaken for golden eagles. This opinion was taken into account, and his identification was reconsidered. Other stories from participants included learning about local birds from a bird guide books, or purchasing hummingbird feeders from the local hardware store to enjoy the presence of birds in their backyards.

Cultural exchange and adaptation

The aim of this chapter is not to undercut the unique properties of Indigenous thought but rather to situate the Indigenous knowledge that was shared with me in a historical context that recognizes the ongoing and active Indigenous response to dramatic ecological, economic, and social changes over the past number of centuries. An important aspect of this historical context is recognizing the diversity and adaptability of the nature of culture in and of itself. It is not the case that the various cultures of the world can be defined cleanly and individually, then sorted into neat boxes. This model of thinking is accompanied by a belief that cross-contamination between cultures is undesirable, that to add from one to the other would be to cheapen or lessen its brand. To have Indigenous and western thought opposed to each other in such a Manichean

dichotomy is a precise embodiment of traditional western thinking: creating objective categories of culture which stand independently from and opposed to one another. Considering the emphasis on process and relationships as embodied in Indigenous methodologies helped me to re-evaluate my instinctive embrace of binary thinking and contributed to a more nuanced appreciation of the nature of culture.

A more accurate conception of a cultural framework refrains from binary categorization and acknowledges the complexities in the relationships between cultures. Edward Said suggests that to envision cultures as being distinct “watertight compartments... does damage to their variety, their diversity, their sheer complexity of elements, their radical hybridity” (1998). By its nature, culture is not stable and permanent, but in a state of constant change or process. The various cultures of the world are not best understood in isolation from each other, but rather in relationship to each other. The process of defining what is and is not included in a culture, or even what is precisely meant by the term ‘culture’, is an activity fraught with personal subjectivity (Said, 1993). Bearing this in mind, the jagged edge does not seek to create a new definition of an Indigenous culture but rather the opposite; it acknowledges that Indigenous cultures are defined variously by various Indigenous peoples, each according to their own judgement. The jagged edge explores how Indigenous communities have maintained their Indigeneity throughout their integration into the fabric of modern Canadian life.

The notion of a cultural edge as defined by Turner et al. (2003) is a formal extension of the widely observable phenomenon that human societies are engaged in a constant process of borrowing various elements from one other. Throughout the history of humanity, there are countless examples of how societies have developed through the adoption of new ideas and technologies from their neighbours (Diamond, 1998; Wright, 2004). Influences between the

various cultures of the globe have increased especially over the past 500 years since the processes of global imperialism have brought the world closer together (Said, 1993). Indigenous cultures across the globe have not been exempt from these processes.

Final thoughts

Ethnobiologists focused on documenting Indigenous knowledge according to preconceived notions of Indigeneity may not capture the full diversity of ecological knowledge present in Indigenous communities. Knowledge that is distinctly traditional - that is to say, learned in dreams, passed down throughout generations from time immemorial, or embedded in stories and language – remains at the core of Indigenous knowledge, however, may not encapsulate the totality of Indigenous knowledge possessed by a community. WIN is an example of an Indigenous community that is increasingly less isolated from mainstream Canadian culture, and as a result of this, community members have integrated knowledge from non-traditional sources into their mental inventories. This acceptance of new knowledge sources is both a continuation of a centuries-long process of borrowing and learning from their adjacent cultures, and also a result of forced assimilation enforced by a settler colonial state. In a sense, the community is adapting to a new digital environment where ecological knowledge is available from a diverse array of sources. Like many Indigenous communities presently and throughout history, the community of WIN are engaged with technological and ideological innovation while simultaneously maintaining their own culture and traditions as they see fit.

Chapter 7: Conclusions

The purpose of this thesis was to explore the relationship between the Anishinaabe people and birds. The term *relationship* is used here specifically as this research project was rooted in the understanding that Indigenous ecological knowledge exists primarily within a dynamic worldview that celebrates the agency and spirituality of all living beings in the natural world (Geniusz, 2009). While the documentation of Anishinaabe bird knowledge itself was an important part of the research, the focus of the project was to investigate the processes of how ornithological knowledge is integrated within Anishinaabe worldview. Individual pieces (e.g. classification) of Anishinaabe bird knowledge comprise only one aspect of the Anishinaabe relationship with birds. This ethno-ornithology serves as an example of how a specific subset of Anishinaabe knowledge is integrated within traditional worldview on a larger scale, almost as a case study of the Anishinaabe relationship to the land in general through the lens of birds.

A research approach oriented around process and relationships was adopted in response to a body of Indigenous methodological literature that emphasizes the significance of relationships in Indigenous thought (Kovach, 2009; Little Bear, 2012; Smith, 1999). Indigenous authors, including many Anishinaabe authors, have highlighted the holistic nature of Indigenous knowledge in which worldview, culture, and language are intertwined with one another (Borrows, 2014; Geniusz, 2009; Simpson, 2014). Anishinaabe ecological knowledge does not exist in a static and abstract form, but rather as an element of a relationship with the land in a dynamic Anishinaabe ontology (McGregor, 2013). Maintaining this relational approach to research, this thesis explored the role of birds across various elements of Anishinaabe culture including cosmology, language, and land-based practices.

Main findings and discussion

Birds in Anishinaabe cosmology

The findings pertaining to the first objective include an exploration of the role of birds in traditional Anishinaabe cosmology. This chapter of the thesis relies upon a substantial body of literature created mostly by Anishinaabe authors, artists, and elders to build an understanding of the ways in which birds appear throughout Anishinaabe cosmology. Personal and traditional stories, academic work, and artwork contribute to a diverse array of textual sources that provide a background of traditional knowledge in which Anishinaabe ornithological knowledge finds itself.

In a traditional Anishinaabe worldview, various bird species embody distinct cosmological characteristics, roles, and behaviors and communicate in both physical and spiritual manifestations. Throughout Anishinaabe stories, including the tales of Nanabozho the culture hero, birds appear frequently as messengers, helpers, or teachers who give advice and lend their aid to Anishinaabe in need. These stories emphasize the reciprocal nature of the Anishinaabe relationship with birds and demonstrate traditional values of cooperation, reciprocity and interdependence. Analyses of both owls and Thunderbirds serve as examples of the role of birds in cosmology as they are featured prominently throughout the textual record and highlight the distinct role of birds within a traditional Anishinaabe ontology.

Bird Nomenclature in Wabaseemoong Independent Nations

Interviews with individual community members in the community of WIN produced a comprehensive set of Anishinaabemowin bird names. These names were analyzed with respect to their linguistic structure as well as Anishinaabe folk taxonomy. The majority of these bird

names were found to share a similar phonetic pattern in their final syllable. While this word ending is significantly informed by the Anishinaabe bird suffix ‘-se’, and also the Anishinaabe term for bird, *bineshii*, the range of variability expressed in this ending is such that it cannot plausibly be considered a proper suffix in and of itself. It was found that pervasive sound symbolism throughout Anishinaabe bird nomenclature accounts for the prominence of this bird ending. Linguistic features such as onomatopoeia, reduplication, and paradigm uniformity work in tandem to strongly inform the creation of Anishinaabe bird names.

Birds and Anishinaabe Land-based practices

This chapter explores the past and present land-based practices in the community of WIN involving birds. Although not depended upon to the same degree as in the past, birds are still hunted regularly in the community and contribute to the local diet. Community members active on the land remember many of the changes in hunting practices throughout their lifetimes, and also have noticed shifts in some bird populations over the years. An analysis of these changes reveals how community members maintain an intimate connection with the land despite that they are not fully dependent upon the land as they once were.

The Jagged Edge

Ornithological data shared by community members in WIN reflects a process of change and adaptation in Indigenous knowledge systems over time. The relationship maintained with local birds around the community is firmly rooted in traditional ways of knowing while also supplemented with aspects of knowledge borrowed from non-Indigenous sources. This borrowing is a result of a long history of contact with Euro-Canadian peoples and reflects both

the effects of Canadian settler-colonialism as well as a long-standing pattern of adaptation throughout Indigenous cultures. It is remarked upon that community members from WIN as well as prominent Anishinaabe authors and thinkers routinely refer to their own navigation throughout competing Indigenous and western worldviews in their minds, and this navigation is apparent throughout ornithological data shared by WIN community members.

Study Limitations and Scope

In concluding this thesis, it is important to acknowledge the scope of the research and some of the research limitations. The majority of the research data was gathered from interviews conducted with community members of WIN during one fieldwork season in the fall and winter of 2018. Unfortunately, logistical constraints of the fieldwork did not allow for data collection while physically out on the land, observing bird species in their natural habitat. Different elements of community members' ornithological knowledge may have been elicited in a different physical environment, for example on a transect walk around the community in the summer when the birds are chirping. Other elements of ornithological knowledge may also have been elicited if interviews were carried out in group settings, which logistical constraints of fieldwork again did not permit. In this sense, direct observational data of Anishinaabe ornithological relationships was limited.

I attempted to remedy these limitations by using all of the technological advantages I had at my disposal. Images, pictures, bird song and call recordings, as well as videos were relied upon during interviews to present participants with the most realistic depiction of the birds as possible. Additionally, applying semi-structured interviews as an open-ended research technique

allowed for community members to guide the conversations towards whatever topic they felt was most significant.

Finally, I would like to note that these observations were made as an outsider to the community from a non-Indigenous perspective. Notwithstanding my best efforts to familiarize myself with Anishinaabe culture through copious reading and diligent listening, the comments and conclusions made in this thesis remain those of a non-Indigenous researcher. I would like to make clear that sovereignty of the knowledge assembled here remains in the hands of the community of WIN and especially the community members generous enough to share their knowledge throughout the research process.

Future directions of research

Future implications of this research may involve considering the dissemination of traditional knowledge among younger generations. The knowledge shared by community members for this project mostly reflects their upbringing in a traditional environment relatively isolated from mainstream Euro-Canadian culture. Many participants were of the older generation and were raised in an era when the community depended upon harvesting from their local environment in a more intensive degree. Today, youth members in WIN embrace a much different approach to traditional knowledge as participants in the mainstream Canadian education system. Future directions of research may involve integrating the youth and younger generations into the dissemination of Indigenous knowledge throughout the community, or exploring how traditional knowledge can be included in the contemporary education system today. Other projects considering youth involvement in the maintenance of traditional land-based practices suggest

that there is active interest by many community members in engaging in such programming (Kuzivanova, 2016).

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APPENDIX 1

A list of the Anishinaabemowin bird names of Wabaseemoong Independent Nations (WIN)

Notes: If the Anishinaabemowin name is unlisted, it is because the species was recognized by participants but not confidently identified. Bracketed names are alternative or colloquial terms for the same species used by community members.

The order of the list is based on the order of birds listed in the *Atlas of the Breeding Birds of Ontario* (Cadman et al., 1987).

Anishinaabemowin name	English name	Scientific Name
<i>Maang</i>	Common Loon	<i>Gavia immer</i>
<i>Zhingibis</i>	Red-necked Grebe	<i>Podiceps grisegena</i>
<i>Waabizii</i>	Trumpeter Swan	<i>Cygnus buccinator</i>
<i>Zhage</i>	American White Pelican	<i>Pelecanus erythrorhynchos</i>
<i>Nika</i>	Canada Goose	<i>Branta canadensis</i>
<i>Gaagaagiishib</i>	Double-crested Cormorant	<i>Phalacrocorax auritus</i>
<i>We 'we</i>	Snow Goose	<i>Chen caerulescens</i>
<i>Mooshka 'osi</i>	Great Blue Heron	<i>Ardea herodias</i>
<i>Mooshka 'osiins</i>	American Bittern	<i>Botaurus lentiginosus</i>
	Snowy Egret	<i>Egretta thula</i>
<i>Anzig</i>	Common Merganser	<i>Mergus merganser</i>
<i>Anzig</i>	Hooded Merganser	<i>Lophodytes cucullatus</i>
Zhiizhib	Duck	
<i>Ininishib</i>	Mallard	<i>Anas platyrhynchos</i>
<i>Gokooshib</i>	Common Goldeneye	<i>Bucephala clangula</i>
<i>Waabishibens</i>	Bufflehead	<i>Bucephala albeola</i>
<i>Mitigishib</i>	Wood Duck	<i>Aix sponsa</i>
<i>Makadeshib</i>	American Black Duck	<i>Anas rubripes</i>
<i>Dagwaagishib</i>	Lesser Scaup (Blue-bill)	<i>Aythya affinis</i>
<i>Ozhaawashkonebiisibens</i>	Blue-winged Teal	<i>Anas discors</i>
<i>Ozhaawashkonebiisibens</i>	Green-winged Teal	<i>Anas crecca</i>
	Northern Pintail	<i>Anas acuta</i>
	Northern Shoveler	<i>Anas clypeata</i>
	Ring-necked Duck	<i>Aythya collaris</i>
<i>Wiinaange</i>	Turkey Vulture	<i>Cathartes aura</i>
<i>Migizi</i>	Bald Eagle	<i>Haliaeetus leucocephalus</i>
<i>Ginew</i>	Golden Eagle	
<i>Cha 'iins*</i>	Broad-winged Hawk	<i>Buteo platypterus</i>
<i>Gekek*</i>	Red-tailed Hawk	<i>Buteo jamaicensis</i>

<i>Gekek*</i>	Northern Goshawk	<i>Accipiter gentilis</i>
<i>Bijigigwane</i>	Osprey	<i>Pandion haliaetus</i>
	Northern Harrier	<i>Circus cyaneus</i>
<i>Bibiigiwezens</i>	American Kestrel	<i>Falco sparverius</i>
<i>Bibiigiwezens</i>	Merlin	<i>Falco columbarius</i>
<i>Bashke (Bine**)</i>	Ruffed Grouse	<i>Bonasa umbellus</i>
<i>Mashkodese</i>	Spruce Grouse (Spruce Hen)	<i>Dendragapus canadensis</i>
<i>Mizise</i>	Wild Turkey	<i>Meleagris gallopavo</i>
<i>Moosebineshii</i>	Sora	<i>Porzana carolina</i>
<i>Ojijaak</i>	Sandhill Crane	<i>Grus Canadensis</i>
	Killdeer	<i>Charadrius vociferous</i>
<i>Jiichiishkishii</i>	Solitary Sandpiper	<i>Tringa solitaria</i>
<i>Jiichiishkishii</i>	Spotted Sandpiper	<i>Actitis macularia</i>
	Common Snipe	<i>Gallinago gallinago</i>
	American Woodcock	<i>Scolopax minor</i>
<i>Gayaashk</i>	Herring Gull	<i>Larus argentatus</i>
<i>Gayaashkoons</i>	Common Tern	<i>Sterna hirundo</i>
<i>Omiimii</i>	Rock Dove	<i>Columba livia</i>
	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
<i>Gookooko'oo</i>	Great Horned Owl	<i>Bubo virginianus</i>
<i>Gookooko'oo</i>	Great Gray Owl	<i>Strix nebulosi</i>
<i>Gaakaabishiinh</i>	Barred Owl	<i>Strix varia</i>
<i>Gaakaabishiinh</i>	Boreal Owl	<i>Aegolius funereus</i>
<i>Gaakaabishiinh</i>	Northern Saw-whet Owl	<i>Aegolius acadicus</i>
<i>Beshk</i>	Common Nighthawk	<i>Chordeiles minor</i>
	Whip-poor-will	<i>Caprimulgus vociferous</i>
<i>Nenookaase</i>	Ruby-throated Hummingbird	<i>Archilochus colubris</i>
<i>Ogiishkimanisii</i>	Belted Kingfisher	<i>Ceryle alcyon</i>
Baapaase	Woodpecker	
<i>Baapaase</i>	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
<i>Baapaase</i>	Downy Woodpecker	<i>Picoides pubescens</i>
<i>Baapaase</i>	Hairy Woodpecker	<i>Picoides villosus</i>
<i>Mooningwane</i>	Northern Flicker	<i>Colaptes auratus</i>
<i>Gitchi-baapaase</i>	Pileated Woodpecker	<i>Dryocopus pileatus</i>
<i>Meme</i>	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Wiiwiish	Flycatcher	
<i>Wiiwiish</i>	Olive-sided Flycatcher	<i>Contopus borealis</i>
<i>Wiiwiish</i>	Eastern Wood-Pewee	<i>Contopus virens</i>
<i>Wiiwiish</i>	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>

Wiiwiish	Least Flycatcher	<i>Empidonax minimus</i>
Wiiwiish	Eastern Phoebe	<i>Sayornis phoebe</i>
Wiiwiish	Eastern Kingbird	<i>Tyrannus tyrannus</i>
Zhaashaawanibiisi	Swallow	
Zhaashaawanibiisi	Tree Swallow	<i>Tachycineta bicolor</i>
Zhaashaawanibiisi	Bank Swallow	<i>Riparia riparia</i>
Zhaashaawanibiisi	Cliff Swallow	<i>Hirundo pyrrhonota</i>
Zhaashaawanibiisi	Barn Swallow	<i>Hirundo rustica</i>
Gwiingwiishi	Gray Jay	<i>Perisoreus Canadensis</i>
Diindiisi	Blue Jay	<i>Cyanocitta cristata</i>
Aandeg	American Crow	<i>Corvus brachyrhynchos</i>
Gaagaagi	Common Raven	<i>Corvus corax</i>
Gijigaaneshiinh	Chickadee	
Gijigaaneshiinh	Black-capped chickadee	<i>Parus atricapillus</i>
Gijigaaneshiinh	Boreal Chickadee	<i>Parus hudsonicus</i>
Atatigoise	Nuthatch	
Atatigoise	Red-breasted Nuthatch	<i>Sitta canadensis</i>
Atatigoise	White-breasted Nuthatch	<i>Sitta carolinensis</i>
Aanak	Wren	
Aanak	House Wren	<i>Troglodytes aedon</i>
Aanak	Winter Wren	<i>Troglodytes troglodytes</i>
Aanak	Golden-crowned Kinglet	<i>Regulus satrapa</i>
Aanak	Ruby-crowned Kinglet	<i>Regulus calendula</i>
	Swainson's Thrush	<i>Catharus ustulatus</i>
	Hermit Thrush	<i>Catharus guttatus</i>
Miskwaagiganeshii**	American Robin	<i>Turdus migratorius</i>
	Gray Catbird	<i>Dumetella carolinensis</i>
	Brown Thrasher	<i>Toxostoma rufum</i>
Waabinagozi	Cedar Waxwing	<i>Bombycilla cedrorum</i>
	European Starling	<i>Sturnus vulgaris</i>
Ozaawibineshii/Bineshiins	Warblers	
Ozaawibineshii/Bineshiins	Tennessee Warbler	<i>Vermivora peregrine</i>
Ozaawibineshii/Bineshiins	Nashville Warbler	<i>Vermivora ruficapilla</i>
Ozaawibineshii/Bineshiins	Yellow Warbler	<i>Dendroica petechial</i>
Ozaawibineshii/Bineshiins	Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>
Ozaawibineshii/Bineshiins	Magnolia Warbler	<i>Dendroica magnolia</i>

<i>Ozaawibineshii/Bineshiins</i>	Cape May Warbler	<i>Dendroica tigrina</i>
<i>Ozaawibineshii/Bineshiins</i>	Yellow-rumped Warbler	<i>Dendroica coronata</i>
<i>Ozaawibineshii/Bineshiins</i>	Black-throated Green Warbler	<i>Dendroica virens</i>
<i>Ozaawibineshii/Bineshiins</i>	Blackburnian Warbler	<i>Dendroica fusca</i>
<i>Ozaawibineshii/Bineshiins</i>	Pine Warbler	<i>Dendroica pinus</i>
<i>Ozaawibineshii/Bineshiins</i>	Palm Warbler	<i>Dendroica palmarum</i>
<i>Ozaawibineshii/Bineshiins</i>	Black-and-white Warbler	<i>Mniotilta varia</i>
<i>Ozaawibineshii/Bineshiins</i>	American Redstart	<i>Setophaga ruticilla</i>
<i>Ozaawibineshii/Bineshiins</i>	Ovenbird	<i>Seiurus aurocapillus</i>
<i>Ozaawibineshii/Bineshiins</i>	Northern Waterthrush	<i>Seiurus noveboracensis</i>
<i>Ozaawibineshii/Bineshiins</i>	Connecticut Warbler	<i>Oporornis agilis</i>
<i>Ozaawibineshii/Bineshiins</i>	Mourning Warbler	<i>Oporornis philadelphia</i>
<i>Ozaawibineshii/Bineshiins</i>	Common Yellowthroat	<i>Geothlypis trichas</i>
<i>Ozaawibineshii/Bineshiins</i>	Wilson's Warbler	<i>Wilsonia pusilla</i>
<i>Ozaawibineshii/Bineshiins</i>	Canada Warbler	<i>Wilsonia Canadensis</i>
	Scarlet Tanager	<i>Piranga olivacea</i>
<i>Oshiigwiishe</i>	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
	Indigo Bunting	<i>Passerina cyanea</i>
<i>Gakaashkinejii</i>	Sparrow	
<i>Gakaashkinejii</i>	Chipping Sparrow	<i>Spizella passerine</i>
<i>Gakaashkinejii</i>	Clay-colored Sparrow	<i>Spizella pallida</i>
<i>Gakaashkinejii</i>	Vesper Sparrow	<i>Poocetes gramineus</i>
<i>Gakaashkinejii</i>	Savannah Sparrow	<i>Passerculus sandwichensis</i>
<i>Gakaashkinejii</i>	Song Sparrow	<i>Melospiza melodia</i>
<i>Gakaashkinejii</i>	Lincoln's Sparrow	<i>Melospiza lincolni</i>
<i>Gakaashkinejii</i>	Swamp Sparrow	<i>Melospiza georgiana</i>
<i>Gakaashkinejii</i>	White-throated Sparrow	<i>Zonotrichia albicollis</i>
<i>Baatezhiiwiish</i>	Dark-eyed Junco	<i>Junco hyemalis</i>
<i>Chakano</i>	Red-winged Blackbird	<i>Agelaius phoeniceus</i>
	Western Meadowlark	<i>Sturnella neglecta</i>
<i>Asiginaak</i>	Rusty Blackbird	<i>Euphagus carolinus</i>
	Common Grackle	<i>Quiscalus quiscula</i>
	Purple Finch	<i>Carpodacus purpureus</i>
	American Goldfinch	<i>Carduelis tristis</i>

<i>Oshiigwiishe</i>	Evening Grosbeak	<i>Coccothraustes vespertinus</i>
<i>Baaka'aakwaan</i>	Chicken	

* The generally accepted Anishinaabemowin term for Hawk is *Gekek*. In WIN, the term *Cha'iins* is also used interchangeably with *Gekek*. The Northern Goshawk was consistently called *Gekek*.

***Bashke* is the local name for the Ruffed Grouse. Most Anishinaabe communities will use *Bine*. *Miskwaagiganesi* is the local name for the American Robin. Most Anishinaabemowin language resources list *Apichi* as the standard Anishinaabe term.

Appendix 2

 UNIVERSITY OF MANITOBA Research Ethics and Compliance		Human Ethics 208-194 Dafoe Road Winnipeg, MB Canada R3T 2N2 Phone +204-474-7122 Email: humanethics@umanitoba.ca
EST. 1877 PROTOCOL APPROVAL		
TO:	Zachary Rempel Principal Investigator	(Advisor: Iain Davidson-Hunt)
FROM:	Julia Witt, Chair Joint-Faculty Research Ethics Board (JFREB)	
Re:	Protocol J2018:066 (HS22145) An Anishinaabe Ethno-ornithology of Wabaseemoong Independent Nations	
Effective: October 16, 2018		Expiry: October 16, 2019
Joint-Faculty Research Ethics Board (JFREB) has reviewed and approved the above research. JFREB is constituted and operates in accordance with the current <i>Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans</i>. This approval is subject to the following conditions: 1. Approval is granted only for the research and purposes described in the application. 2. Any modification to the research must be submitted to JFREB for approval before implementation. 3. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible. 4. This approval is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date. 5. A Study Closure form must be submitted to JFREB when the research is complete or terminated. 6. The University of Manitoba may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba <i>Ethics of Research Involving Humans</i>.		
Funded Protocols: - Please mail/e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.		

Appendix 3 – Sample letter of consent for interviews



UNIVERSITY
OF MANITOBA

NATURAL RESOURCES INSTITUTE

220-70 Dysart Road, Winnipeg, MB Canada R3T 2M6
General Office: 204-474-8373
Fax: 204-261-0038

Research Project Title: An Anishinaabe Ethno-ornithology of Wabaseemoong Independent Nations

Principal Investigator: Zachary Rempel, University of Manitoba.

Research Supervisor: Dr. Iain Davidson-Hunt, University of Manitoba

Wabaseemoong Independent Nations Community Resource Information Officer and

Research partner: Mr. Marvin McDonald

Funder: Social Science and Humanities Research Council (SSHRC)

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Project Summary: My name is Zachary Rempel and I'm a student at the University of Manitoba, and I am inviting you to participate in a research project on traditional bird knowledge in the community of Wabaseemoong Independent Nations (WIN).

WIN can use the knowledge generated by this research in which ever manner they deem fit.

Your participation includes:

Participating in a semi-structured interview in which you will be asked about Anishinaabemowin names for local birds as well as some information regarding traditional knowledge about some specific birds. The time commitment will be one session of around 1 to 2 hours.

Participating in a focus group where some of the data gathered in the interviews will gone over again to ensure that it is all correct. It will take around 3 hours.

How data will be recorded:

I will be taking notes, and, if you agree, I would also like to audio-record all interviews. Please state below whether you agree to be audio-recorded:

I agree to be audio-recorded: Yes: ____ No: ____

Even if you check "Yes" here, you can still ask for the audio recorder to be turned off at certain moments.

Anonymity, Confidentiality, and Data Security:

Interviews will take place in a private setting.

Your real name will not be used in the final document. You will be given a list of ten pseudonyms to choose from. Any identifiers will be removed from your information and your information will be coded to protect your identity (i.e. given a numbered I.D.). The key linking you to your information will be kept separate from the data in an electronic file that is password protected. Only I and my research adviser (Dr. Davidson-Hunt) will have access to the real names of interviewees and access to the information file. Your personal information and the key linking you to your information will be deleted beyond recovery by December 2020.

Feedback: Any quotes or information from your interview will be provided to you for review before that data is used in my thesis and/or publications. You will have the opportunity to review information that has been shared and remove any information you may no longer feel comfortable with. Please provide an email address or mailing address I can send your transcript to:

Email/Mailing address: _____

Potential Risks: The risks from taking part in this study are minimal.

While your real name will not be included in the final document, there is a potential risk that some people more familiar with the organization may still be able to identify you.

You are free to choose to not answer a question or even stop the interview altogether should you feel uncomfortable.

What will be done with the data: The data collected through this research will be shared with the community of Wabaseemoong through a final report and will be used in developing Anishinaabe language resources for the community. It will support Anishinaabe teachings in the language and may be used in future work on WIN Traditional Land Use Area management. Data collected will also be used in a University of Manitoba Master's Thesis, for academic papers, and conference presentations.

Please check this box if you would like to receive a 1-3 page summary of the entire study's results once they are available

(around two months after the completion of data collection):

☐

Benefits: The project will contribute to developing community resources for youth to learn about Anishinaabe bird knowledge and support development of Anishinaabe teachings in the Anishinaabe language. The data will contribute to a community resource about traditional bird knowledge. By participating you would be helping to increase understanding of traditional land knowledge in the Treaty #3 region.

Compensation: Community members will be given an honorarium for participating in the research consistent with WIN standard for the amount of time involved.

Questions or Concerns: If you have any questions about this study, contact Dr. Iain Davidson-Hunt (Thesis Advisor, information at top of form) or Mr. Marvin McDonald (Research Partner, information at top of form). In addition, if you have any questions as to your rights as a research participant, please contact the Human Ethics Coordinator at humanethics@umanitoba.ca or 204-474-7122 at the University of Manitoba. You can also contact the principal researcher Zachary Rempel (information at top of form).

Voluntary Participation/Withdrawal: Your participation in this research study is strictly voluntary. At any time you can leave the study and have any information you have contributed to the research returned back to you, up until the thesis is submitted (expected to be Jan 2019). If you choose to withdraw, please inform the principal researcher, Zachary Rempel, in person or by email or phone (information at top of form).

Consent to participate:

I have read all of the pages of this consent form and have been given an opportunity to ask questions about this study. Answers to such questions (if any) were satisfactory. I am eighteen years of age or older and freely and without reservation give my consent to serve as a participant in this study.

Participant's Name: _____ **Date:** _____

Participant's Signature: _____ **Date:** _____

Researcher's Signature: _____ **Date:** _____

Consent for use of name: If you are interested in having your real name appear on the record of research, please indicate so by checking this box. By not checking the box your statements will be registered under a pseudo name.

I give consent for the research data to show my name: ☐

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.