

Comment dit-on *tchistchimanisi8* en français?

The Translation of Montagnais Ecological Knowledge in Antoine Silvy's

*Dictionnaire montagnais-français* (ca. 1678-1684)

by

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## Introduction

Far from confronting one another across the boundary of nature, both the people who call themselves scientists and the people whom scientists call hunter-gatherers are fellow passengers in this world of ours, who carry on the business of life and, in so doing, develop their capacities and aspirations, within a continuing history of involvement with both human and non-human components of their environments. If we are to develop a thoroughgoing ecological understanding of how real people relate to these environments, and of the sensitivity and skill with which they do so, it is imperative to take this condition of involvement as our point of departure.<sup>1</sup>

-Tim Ingold

Seventeenth-century exchanges between French and Algonkian took place in large part because of successful acts of communication and translation. While much has been written about the material exchanges associated with both the fur trade and the diplomatic and military relationships between Europeans and Amerindians, somewhat less attention has been paid to the extensive exchanges of knowledge. Algonkian peoples educated the French in the flora, fauna, and geography of New France, as well as in the practice of living in the temperate and boreal forests. Close relationships and common experience, enabled by linguistic exchange and synthesis, allowed for the transfer of vast

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<sup>1</sup> Tim Ingold, *The Perception of the Environment: Essays in livelihood, dwelling and skill* (London & New York: Routledge, 2000), 39.

amounts of knowledge and skill.<sup>2</sup> As Richard White writes in *The Middle Ground*, French and Amerindian peoples were able to construct “a common, mutually comprehensible world;” a world built largely on an Amerindian foundation.<sup>3</sup> Unfortunately, the textual evidence of the creation of this new world is highly fragmented and virtually all of European authorship, rendering the attribution of authority and agency problematic. Often, it is unclear whether writing on the natural history and geography of the new world is an act of discovery, or rather one of transcription or translation. An examination of Antoine Silvy’s *Dictionnaire montagnais-français* (ca. 1678-1684) clearly points to an extensive transfer of knowledge and skill from Montagnais teacher to French pupil.<sup>4</sup> Further, authority clearly lies with the Montagnais voice as it communicates an intricate knowledge of the non-human environment rooted firmly in time and space.

Science, and European intellectual traditions more generally, are wedded to the rhetoric of individual discovery. This rhetoric tends to obscure the possibility that European discovery of the new world was built upon the acquisition of indigenous knowledge. As Harold J. Cook has noted of Jacobus Bontius’ work in Indonesia:

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<sup>2</sup> The reference to synthesis refers to the Basque/Algonkian Pidgin languages in use in the sixteenth and seventeenth centuries. See Peter Bakker, “Basque Pidgin Vocabulary in European-Algonquian Trade Contacts,” in William Cowan, ed. *Papers of the Nineteenth Algonquian Conference* (Ottawa: Carleton University Press, 1988).

<sup>3</sup> Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (Cambridge: Cambridge University Press, 1991), ix.

<sup>4</sup> Antoine Silvy, *Dictionnaire montagnais-français*, transcr. Lorenzo Angers, David E. Cooter, and Gérard E. McNulty (Montreal: Presses de l’Université du Québec, 1974). A photographic reproduction of the original can be seen at [http://www.champlain2004.org/html/04/0405\\_full\\_1\\_f.html](http://www.champlain2004.org/html/04/0405_full_1_f.html).

while European authors often represented their observations as unique, personal experiences garnered independently of any help by agents of other knowledge systems, it seems that the most important means for acquiring new information actually involved contact with other people and familiarity with their experiences and accounts.<sup>5</sup>

Seventeenth-century French authors like Pierre Boucher and Louis Nicolas, as well as the authors of the *Jesuit Relations*, wrote descriptively on the non-human environment in New France.<sup>6</sup> While it is clear in these documents that the authors drew upon observation of indigenous practice, the scope of indigenous involvement in educating the French writers is not always clear. For the historian seeking proof of this engagement, linguistic evidence becomes a clear marker of indigenous involvement and authority. Consequently, Silvy's *Dictionnaire* gives us an extraordinary glimpse at the Amerindian contribution to French knowledge of North America as it contains extensive vocabulary dealing with animals, birds, fish, invertebrates, reptiles, and amphibians. Further, it contains observations on behaviour, habitat, anatomy, as well as glimpses of the nature of Montagnais relationships with non-humans. Through the definitions that refer to habitat

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<sup>5</sup> Harold J. Cook, "Global Economies and Local Knowledge in the East Indies: Jacobus Bontius Learns the Facts of Nature," in Londa Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005), 102.

<sup>6</sup> See Pierre Boucher, *Histoire Veritable et Naturelle Des Mœurs et Productions du Pays de la Nouvelle France, Vulgairement dite le Canada* (Paris: Florentin Lambert, 1664); Louis Nicolas, *Histoire naturelle ou la fidelle recherche de tout ce qu'il y a de rare dans les Indes occidentales* (unpublished manuscript, ca. 1677), available online at Gallica, <http://gallica.bnf.fr/ark:/12148/bpt6k109509m>; Reuben Gold Thwaites, ed., *The Jesuit Relations and Allied Documents*, 73 vols. (New York : Pageant Book Co., 1959).

and behaviour, the dictionary suggests that the French acquired far more than an abstract, linguistic knowledge; they suggest the indigenous tutors passed on matters of skill and observation. Finally, the analysis of the entries in the *Dictionnaire* emphasizes the need for indigenous participation in the creation of academic discourse; it is the survival of Montagnais knowledge and language that allows for the examination of this evidence, and points to the necessity of engaging Amerindian communities in the production of common histories.<sup>7</sup>

### **On Words in Algonkian History and Anthropology: Knowledge and Agency**

The postmodern critique, for all its value in exposing cultural bias and illuminating relationships of power in the production of history, has resulted in a

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<sup>7</sup> This is not entirely without complication, as the Amerindian communities may have very different concepts of history, time and space that render the two historical visions incompatible, particularly given the unequal power relationships between the indigenous and non-indigenous communities. With respect to East Cree and Montagnais, see Toby Morantz, "Plunder or Harmony? On Merging European and Native Views of Early Contact," in Germaine Warkentin and Carolyn Podruchny, eds. *Decentering the Renaissance: Canada and Europe in Multidisciplinary Perspective 1500-1700* (Toronto : University of Toronto, 2001), 48-67; and Sylvie Vincent, "Compatibilité apparente, incompatibilité réelle des versions autochtones et occidentales de l'histoire: l'exemple innu," *Recherches Amérindiennes au Québec*, Vol. XXXII, No. 2 (2002), 99-106. At the same time, however, historians are increasingly seeking to bypass biased or one-sided historical accounts from European observers by engaging non-traditional sources and Amerindian communities; this is possible in large part because of the continuation of native knowledge systems, particularly those surrounding language, kinship, and oral tradition. See Heidi Bohaker, "Nindoodemag: The Significance of Algonkian Kinship Networks in the Eastern Great Lakes Region, 1600-1701," *The William and Mary Quarterly*, Vol. 63, No. 1 (Jan., 2006), 23-52.

sustained attack on the communicative value of language.<sup>8</sup> Lost in much of this critique is an appreciation of the integral role language plays in allowing for the social condition of humanity; it can only be by virtue of language's communicative ability that people are able to exist within that constant of human existence, the fact that we must share our experience of this world with others.<sup>9</sup> With this in mind, Silvy's *Dictionnaire montagnais-français* stands as testimony to the ability of language to communicate across both culture and time. Further, the words and phrases found in the dictionary speak to the actions which resulted in the creation of the document: the willing and intentional sharing of action and meaning relating to what is at once both a new and an old world by the Montagnais, and the selective appropriation of these meanings by a willing and receptive European. Even the selection and misunderstanding of meaning, as well as confrontations over meaning, speak to the communication across linguistic barriers that took place in the seventeenth-century. Contrary to those who see language as wholly arbitrary, the language of the *Dictionnaire montagnais-français* is very much rooted in the practice of living in the boreal and temperate forests, as well as along the shores of the St. Lawrence.<sup>10</sup> Here, agency and knowledge intertwine.

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<sup>8</sup> See for an explicit example, Keith Jenkins and Alun Munslow, *The Nature of History Reader* (London and New York: Routledge, 2004), 12, where they write "language is a poor conductor of meaning because of its arbitrary and historicized nature."

<sup>9</sup> My thinking on this comes in large part from Hannah Arendt's *The Human Condition* (Chicago and London: University of Chicago Press, 1958), who writes: "Men in the plural, that is, men in so far as they live and move and act in this world, can experience meaningfulness only because they can talk and make sense to each other and to themselves," 4.

This is not to imply that language is not problematic, or that precision of usage is irrelevant. Indeed, many of the most heated debates in subarctic anthropology and ethnohistory have arisen from attributing too much meaning, or meaning that is far too vague, to language.<sup>11</sup> Notably, the debates in question have their origin in the extraordinary weight given to the language of the European academic tradition. Words like knowledge, science, property, territory, tradition, and spirituality have spawned intense discussion. Too often, Algonkian peoples seem to become proxies for arguments that have their origins in the institutions of academia, and these arguments risk reducing Algonkian peoples to caricatures. The frequent use of terminology and concepts from European academic traditions as universal standards against which to measure the characteristics of Algonkian society also risks creating an aura of inferiority whenever distinction is recognized. This is certainly the case in many of the debates surrounding knowledge and science among those peoples who live in the subarctic regions of North America.

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<sup>10</sup> For a good discussion of the biogeography of Québec see Mireille Desponts, Denis Lehoux, and Louise Gratton, "The Biogeography of Québec," in Jean Gauthier and Yves Aubry, eds., *The Breeding Birds of Quebec* (Montreal: The Province of Quebec Society for the Protection of Birds and the Canadian Wildlife Service, 1996), 19-38. With reference to the ecological regions encountered by the missionaries who worked among the Montagnais, see Figure 10, "Ecological regions (forest regions) – southern Québec," 28. The ecological regions particularly of note are: in the mixed forest zone (9: Balsam fir-yellow birch forest, 10: Balsam fir-white birch or balsam fir-red maple forest) and in the coniferous forest zone (12 & 13: Balsam fir-white birch forest, 14: Balsam fir-black spruce forest, 16: Black spruce-balsam-fir-moss forest, and 17: Black spruce-moss forest).

<sup>11</sup> Perhaps the most notable example is Calvin Martin's *Keepers of the Game: Animal Relationships and the Fur Trade* (Berkeley: University of California Press, 1978), which built an elaborate argument on a very small number of remarks made by Algonkian hunters. For a good discussion of how the interpretations and meanings of a single word can vary, and have a marked impact on historical interpretation, see Mary Black-Rogers, "Varieties of 'Starving': Semantics and Survival in the Subarctic Fur Trade, 1750-1850," *Ethnohistory*, Vol. 33, No. 4 (Autumn, 1986), 353-383.

Knowledge has been an important focus for many anthropologists studying indigenous subarctic societies, who have generally recognized it as a vitally important aspect of Algonkian life in the boreal belt. Robin Ridington, surveying literature on northern Algonkians and Athapaskans, notes, “a complex of knowledge, power, and individualism is a distinctive feature of subarctic adaptation,” and suggests “the social theory of subarctic people themselves has exerted a powerful influence on several generations of anthropologists in formulating their own theories about the individual in society.”<sup>12</sup> For northern hunters, he argues, knowledge lies at the foundation of Algonkian and Athapaskan social organization: “the intelligence of individual human judgement, and the system of cultural intelligence that informs it, thus define a fundamental resource on which all other adaptations depend.”<sup>13</sup> Knowledge, and its responsible application, informs leadership, hunting group formation and mobility over territory, as well as prestige. Importantly, Ridington argues that knowledge stands in for material technology:

In thinking about hunting and gathering people who must move frequently from place to place...technology should be seen as a system of knowledge rather than as an inventory of objects...The essence of hunting and gathering adaptive strategy is to retain, and to be able to act upon, information about the possible relationships between people and the natural environment. When realized, these life-giving relationships are as much the artifacts of hunting

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<sup>12</sup> Robin Ridington, “Knowledge, Power, and the Individual in Subarctic Hunting Societies,” *American Anthropologist*, New Series, Vol. 90, No. 1 (Mar., 1988), 98.

<sup>13</sup> Ridington, “Knowledge, Power, and the Individual,” 107.

and gathering technology as are the material objects that are instrumental in bringing them about.<sup>14</sup>

Seen in this light, an apparent lack of sophisticated material technology can become an important adaptation and strength, rather than a deficiency or absence.<sup>15</sup> This point has perhaps been lost on many Europeans too eager to project their own worship of technology onto seemingly impoverished Amerindians.<sup>16</sup>

Knowledge of the non-human environment, as described by Ridington, is closely tied to individual agency. The ability to act with intent rests upon one's ability to draw upon a store of knowledge and skill gained through experience and exposure to others. The existence of this knowledge, however, is not a given; it must be seen as the result of deliberate interaction with both other humans and non-humans, as well as with the physical environment. As such, knowledge is intensely historical and cultural. Further, it encompasses both linguistic and non-linguistic aspects: words, concepts, and skills.

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<sup>14</sup> Ridington, "Knowledge, Power, and the Individual," 107.

<sup>15</sup> This is not to downplay the effectiveness of aboriginal material technology, including traps, weapons, and the technology required to move effectively on land in winter, and on water in summer. Indeed, canoes and snowshoes were crucial to French success. See Denys Delâge, "L'influence des Amérindiens sur les Canadiens et les Français de la Nouvelle-France," *Lekton*, Vol. 2, No. 2 (Automne, 1992), 110-114.

<sup>16</sup> Indeed, technological determinism has been an important theme in fur trade scholarship going back to at least Harold Innis' *The Fur Trade in Canada: An Introduction to Canadian Economic History* (Toronto: University of Toronto Press, 1999 [1930]). Of course Amerindians desired technology that performed well. The point here is simply that a consideration of the effects of knowledge must qualify the extent to which the adoption of new technologies altered overall Amerindian lifestyles, or caused fundamental shifts in hunting behaviour. For the need to consider existing knowledge alongside the adoption of new technologies, see Robert A. Brightman, "Conservation and Resource Depletion: The Case of the Boreal Forest Algonquians," in Bonnie J. McCay and James M. Acheson, eds., *The Question of the Commons: The Culture and Ecology of Communal Resources* (Tucson: The University of Arizona Press, 1987), 129.

While this may seem self-evident, a number of prominent anthropological assumptions and theories serve to obscure the value of indigenous knowledge, both as a subject of academic consideration and as an entity informing indigenous behaviour.

Donald J. Holly argues that two important conceptual frameworks serve to effectively deny history and culture in the subarctic:

The first imagines history as largely a spatial phenomenon where places like the Subarctic, seemingly distanced from centers of historic change, emerge as culturally, developmentally, and historically backward. The second envisions the subarctic environment as so austere as to deny social histories, culturally mediated adaptations, and human agency.<sup>17</sup>

This denial of human agency, of course, could never be applied to the Europeans who arrived in the sixteenth- and seventeenth-centuries; historical records that detail the deliberate intent behind European action are simply too clear. This asymmetry gives rise to histories of contact and interaction that imply liberation for indigenous peoples from their aboriginal condition. Clearly, the tension between the two approaches cannot be otherwise maintained; as indigenous peoples adapt European technologies, so too must they acquire agency:

It is not until fur traders provided firearms, the security of provisions regularly available at a trading post, and the lure of trade goods that subarctic people emerge in the

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<sup>17</sup> Donald J. Holly, Jr., "Subarctic 'Prehistory' in the Anthropological Imagination," *Arctic Anthropology*, Vol. 39, Nos. 1-2 (2002), 11. Holly illustrates this point nicely, quoting Frank Speck: "...as one proceeds farther from the frontiers of civilization, step by step the native cultures unfold themselves as though in retrospect, terminating among the Eskimo, whose contemporary existence represents in act and thought the behaviour of a man of an early new-stone age," 11.

anthropological literature as actors with the agency and ability to pursue social goals.<sup>18</sup>

Later ecological approaches similarly deny history and agency by portraying peoples as living in timeless equilibrium with their environment; here there is no need for history, agency, or change. Further, ecological studies tend to emphasize subsistence activities at the expense of all other activities, and people become wholly defined by how they work to feed themselves.

Perhaps the most explicit denial of human agency, and the role of knowledge specific to people and place, comes with the application of optimal forager theory to subarctic hunters.<sup>19</sup> The theory itself is built upon assumptions of efficiency, scarcity, marginality, and optimal behaviours that have their origins in classical economic theory via Darwin and evolutionary theory.<sup>20</sup> Hunting behaviour is analyzed according to energy capture, allowing for quantitative calculation and the introduction of testable

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<sup>18</sup> Holly, "Subarctic 'Prehistory' in the Anthropological Imagination," 13.

<sup>19</sup> Bruce Winterhalder has attempted to apply optimal forager theory, a theory that arises out of evolutionary ecology, to analyse the behaviour and foraging success of Cree hunters. See Bruce Winterhalder and Eric Alden Smith, eds., *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses* (Chicago & London: The University of Chicago Press, 1981); A. Theodore Steegmann, Jr., ed., *Boreal Forest Adaptations: The Northern Algonkians* (New York & London: Plenum Press, 1983).

<sup>20</sup> For a critique of optimal foraging theory that illuminates the connections between the theory and economic thought, see Tim Ingold, "The Optimal Forager and Economic Man," in Tim Ingold, *The Perception of the Environment*, 27-39. Classical economic theory, particularly the work of Malthus on scarcity and population, were an important influence on Darwin, see E. Kula, *History of Environmental Economic Thought* (London: Routledge, 1998), 29.

hypotheses.<sup>21</sup> Ostensibly, scholars such as Bruce Winterhalder recognize the importance of skill, knowledge, and observation for hunting success, but this recognition is trivial: the point of optimal foraging theory is to remove variables like history, knowledge, and culture from our understanding of human behaviour.<sup>22</sup> As Robert Brightman points out, the emphasis optimal foraging theory places on “evolutionary time” denies the import of history as it disregards the actual intentions of the foragers, privileging an interpretation which stresses ecological function and design.<sup>23</sup> As with diffusionist anthropologists who saw remote northern peoples as representative of historic Stone Age populations, so too does optimal forager theory seek to spatially step outside of history. As Winterhalder writes:

Hunter-gatherer lifestyles have characterized most of hominid history....The broad qualities shared by foraging populations have had a profound influence on the evolution of hominid morphologies, behavioural capacities, and social formations. As a result, analysis of hunter-gatherer behaviour should play a prominent role in the understanding humans assemble about themselves, and particularly in the development of anthropological knowledge.<sup>24</sup>

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<sup>21</sup> Bruce Winterhalder, “Boreal Foraging Strategies,” in Steegmann, ed., *Boreal Forest Adaptations*, 202-203; Bruce Winterhalder, “Optimal Foraging Strategies and Hunter-Gatherer Research in Anthropology: Theory and Models,” in Winterhalder and Smith, eds., *Hunter-Gatherer Foraging Strategies*, 20-22; Robert Brightman refers to this choice of currency as “caloric reductionism:” see Robert Brightman, *Grateful Prey: Rock Cree Human-Animal Relationships* (Regina: Canadian Plains Research Centre, 2002), 323.

<sup>22</sup> For a brief discussion of skill, see Winterhalder, “Boreal Foraging Strategies,” 236.

<sup>23</sup> Robert Brightman, *Grateful Prey*, 322.

<sup>24</sup> Eric Alden Smith and Bruce Winterhalder, “New Perspectives on Hunter-Gatherer Socioecology,” in Winterhalder and Smith, eds., *Hunter-Gatherer Foraging Strategies*, 1.

Here, Winterhalder extends the denial of agency that is usually associated with non-human animals to hunter-gatherers.<sup>25</sup> Winterhalder is able to do this, in part, because of commonly held assumptions about the nature of indigenous knowledge.

In the Western academic tradition, the divide between animals and man revolves around important assumptions about the human ability to create knowledge.<sup>26</sup>

Assumptions about this ability further divide “modern” humanity from indigenous peoples, and are central to the teleologies of progress that posit a definitive epistemological shift with the advent of modern science, a shift that leaves many behind. Once again, matters of language and definition become important.

### **Traditional Ecological Knowledge: Problems of Definition**

Since the 1980s, social and natural scientists disenchanted with the oft-apparent failure of academic, scientific resource management have been studying alternative resource management regimes. Much of the resultant literature, as will be the case with

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<sup>25</sup> This is particularly ironic given the tendency of many subarctic indigenous peoples to attribute personal agency to “other-than-human” persons. See A. Irving Hallowell, “Ojibwa Ontology, Behaviour, and World View,” in Stanley Diamond, ed., *Culture in History: Essays in Honor of Paul Rudin* (New York: Columbia University Press, 1960). For discussions of Hallowell’s seminal article, see Tim Ingold, “A circumpolar night’s dream,” in Ingold, *The Perception of the Environment*, 89-110; Kenneth M. Morrison, *The Solidarity of Kin: Ethnohistory, Religious Studies, and the Algonkian-French Religious Encounter* (Albany: State University of New York, 2002), 37-58; Brightman, *Grateful Prey*, 177-85; Paul Nadasdy, *Hunters and Bureaucrats*, 83-94.

<sup>26</sup> Richard Velkley, “Introduction: What is Metaphysics?” in Stanley Rosen, ed., *The Philosopher’s Handbook: Essential Readings from Plato to Kant* (New York: Random House, 2000), 313.

this paper, focuses attention on the traditional ecological knowledge of indigenous peoples. Social scientists and ecologists have described indigenous peoples as highly capable natural resource managers, holding a wealth of environmental knowledge that can be used for the benefit of all.<sup>27</sup> Proponents claim traditional ecological knowledge represents a new paradigm for the science of ecology that will allow ecologists to access a “wellspring of ancient wisdom.”<sup>28</sup> Others see indigenous knowledge as representing the “next revolution in anthropological method,” whereby indigenous communities will become collaborators rather than subjects.<sup>29</sup> Despite this enthusiasm, efforts to define traditional ecological knowledge have given rise to much debate, and, as would be expected, the field is highly politicized.<sup>30</sup> In addition, the temporal depth of traditional ecological knowledge is often unclear, and sometimes idealized, suggesting a need for historical study.

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<sup>27</sup> Here it is important to note that traditional ecological knowledge (TEK) is used to refer to the object of study as defined by academic scholars, and that indigenous peoples may have little involvement in directing the research or defining what TEK is. In this sense, the body of work concerning traditional ecological knowledge is very much the creation of literate academic scholars, and while those interested in TEK generally suggest its use will be empowering for indigenous peoples, others have been highly critical of the impact this body of work has had on indigenous communities. For an influential critique, see Paul Nadasdy, *Hunters and Bureaucrats*.

<sup>28</sup> Fikret Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resource Management* (Philadelphia: Taylor and Francis, 1999), xii & 55. This definition is heavily cited in the literature.

<sup>29</sup> Paul Sillitoe, “The Development of Indigenous Knowledge: A New Applied Anthropology,” *Current Anthropology*, Vol. 39, No. 2 (Apr., 1998), 223.

<sup>30</sup> Even among advocates, there can be considerable difference. See Richard Howitt, *Rethinking Resource Management: Justice, Sustainability and Indigenous Peoples* (London: Routledge, 2001), 35-40.

Fikret Berkes, in *Sacred Ecology: Traditional Ecological Knowledge and Resource Management* (1999), offers what has become for many a standard definition of traditional ecological knowledge:

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.<sup>31</sup>

As such, traditional ecological knowledge is both dynamic and cumulative. To facilitate further study, Berkes proposes a four-part framework for analysis: local knowledge of land and animals, land and resource management systems, social institutions, and world view.<sup>32</sup> Berkes also calls for greater study of social learning, and presents a theory of conditions under which societies might develop a conservation ethic.<sup>33</sup> For historians interested in past harvesting practice, these issues are of vital importance for understanding the social consequences of resource use and the ability of communities to

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<sup>31</sup> Berkes, *Sacred Ecology*, 8. Berkes was one of the earlier proponents of TEK, beginning his work in the 1970s.

<sup>32</sup> Berkes, *Sacred Ecology*, 13.

<sup>33</sup> On social learning (generation and transmission), see Berkes, *Sacred Ecology*, 141, and 95-110. On the conservation ethic see 95 where Berkes hypothesizes “that a conservation ethic can develop if a resource is *important or limiting, predictable and depletable*, and if it is effectively under the control of the social group in question so that the group can reap the benefits of its conservation.” For a further discussion of transmission, see also Fikret Berkes, and Kayo Ohmagari, “Transmission of Indigenous Knowledge and Bush Skills Among the Western James Bay Cree Women of Subarctic Canada,” *Human Ecology*, Vol. 25, No. 2 (1997), 197-222.

respond to environmental feedback. They also represent key areas where contributions might be made by ethnohistorians, particularly those studying past resource crises.<sup>34</sup>

Despite the emphasis on its dynamic character, many investigations of indigenous knowledge rely heavily on fieldwork carried out over a limited time, and thus risk presenting ahistorical analyses of knowledge that favour conservative, rather than dynamic, approaches to tradition.<sup>35</sup> Where an historic approach is attempted, the ethnohistorical technique “upstreaming” is often used, again favouring continuity over abrupt change.<sup>36</sup> While Berkes does not deny the need for an historical perspective, his work seems to emphasize a short-term historical analysis that is somewhat at odds with his repeated emphasis on the temporal depth of traditional ecological knowledge. Indeed, some of his case studies suggest that successful traditional management regimes can develop in a relatively short period of time, leaving one somewhat uneasy with respect to his repeated emphasis on ancient, sacred wisdom.<sup>37</sup> Exactly where culture and worldview fit in to actual management schemes is not always clear.

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<sup>34</sup> Indeed, Berkes argues resource crises are necessary for social learning. See Berkes, *Sacred Ecology*, 160.

<sup>35</sup> To his credit, Berkes recognizes the need for greater study of knowledge generation and transmission and therefore devotes an entire chapter to a case study of “social learning,” see Berkes, *Sacred Ecology*, 141, and 95-110. The definition of tradition favoured in this paper is that given by Kenneth M. Morrison, *The Solidarity of Kin*, 6, where he writes of tradition as “a dynamic consensus about reality.”

<sup>36</sup> Upstreaming involves the use of contemporary ethnographic data to inform historical interpretation. Richard White rightly points to its inevitable bias in favour of cultural continuity. See Richard White, *The Middle Ground*, xiv. At the same time, however, the previously mentioned need to engage indigenous communities and knowledge, crucial to looking beyond European sources, requires a form of “upstreaming.”

<sup>37</sup> See Berkes, *Sacred Ecology*, 129-144.

Given this ambiguity, arguments over the differences between that which is defined as traditional ecological knowledge and that defined as scientific knowledge are important. Anthropologists have long noted common ground between scientific and indigenous thought. Bronislaw Malinowski argued “theoretical laws of knowledge” consistent with scientific practice existed amongst the Melanesians, while Claude Lévi-Strauss’ discussion of the “science of the concrete” noted that the “thirst for objective knowledge is one of the most neglected aspects of the thought of people we call ‘primitive.’”<sup>38</sup> With respect to the recent literature on indigenous knowledge, Arun Agrawal argues against a substantive epistemological difference between indigenous and scientific knowledge, emphasizing the empirical nature of indigenous knowledge. Agrawal observes that efforts to distinguish the two are complicated in part because “philosophers of science have abandoned any serious hope for a satisfactory methodology to distinguish science from non-science.”<sup>39</sup> Likewise, Roy Ellen notes that “the opposition between primitive and civilized thought has fallen under the weight of the evidence, and its surrogates (most recently that between literacy and orality) have

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<sup>38</sup> Bronislaw Malinowski, *Magic, Science and Religion and other Essays* (Garden City: Doubleday & Co., 1954), 34; Claude Lévi-Strauss, *The Savage Mind (La Pensée Sauvage)* (London: Weidenfeld & Nicholson, 1966), 3. See also Catherine S. Fowler and Nancy J. Turner, “Ecological/cosmological knowledge and land management among hunter-gatherers,” Richard B. Lee and Richard Daly, ed., *The Cambridge Encyclopedia of Hunters and Gatherers* (Cambridge: Cambridge University Press, 1999), 419, who note that “hunter gatherer systems of knowing...are analogous to Western science.”

<sup>39</sup> Arun Agrawal, “Dismantling the Divide Between Indigenous and Scientific Knowledge,” *Development and Change*, Vol. 26 (1995), 414 & 424.

similarly been shown to be problematic.”<sup>40</sup> Both Agrawal and Ellen turn common critiques of indigenous knowledge back on Western science, emphasizing the need to understand Western science in terms of the socio-cultural and institutional contexts of its creation.<sup>41</sup> Following these authors, traditional ecological knowledge and scientific knowledge are both based on acute observation, within established traditions, of the natural world; they are two aspects of the same basic human capability.

With respect to the Montagnais, Daniel Clément has attempted to demonstrate that Montagnais knowledge of animals is zoology, built on the same epistemological foundation as academic science. Clément’s focus is almost exclusively on matters of epistemology, noting that as with academic zoology, Montagnais knowledge of animals is based upon observation, comparison, and classification:

Nous prétendons ainsi montrer que la zoologie montagnaise, à la manière de toute science, repose principalement sur une logique concrète réunissant dans un même appréhension de la réalité la raison et l’expérience sensible et que *ses méthodes sont exactement les mêmes* que celles de la zoologie telle que pratiquée dans nos sociétés, à savoir l’observation, la comparaison, et la classification.<sup>42</sup>

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<sup>40</sup> Roy Ellen, “From Ethno-Science to Science, or ‘What the Indigenous Knowledge Debate Tells Us about How Scientists Define Their Project,’” *Journal of Cognition and Culture*, Vol. 4, No. 3 (2004), 411.

<sup>41</sup> Agrawal draws heavily from Paul Feyerabend’s *Against Method* (London: Verso, 1993).

<sup>42</sup> Daniel Clément, *La Zoologie des Montagnais* (Paris: Peeters, 1995), 3 (emphasis added). Notice here that he is contradicting those who, like Feyerabend, Agrawal and Ellen, argue that distinguishing non-science from science extremely difficult.

That the methods are exactly the same is clearly not the case, however, if one pays greater attention to the cultural, spatial, and temporal contexts of the observation, comparison, and classification.<sup>43</sup> As Ralph Bulmer notes,

Ethnozoological data do not exist as a readily separable body of knowledge in traditional societies, where generally no distinction is made like that between science and other systems of knowledge in contemporary culture.<sup>44</sup>

Clément, however, aims only to examine that which is comparable to academic science, clearly established as a benchmark to endow Montagnais knowledge with the same authority:

Le guide d’entrevue a été conçu dans le but de recueillir le maximum de données sur les connaissances zoologiques montagnaises, *susceptibles d’être contrastées avec les aspects décrits par les scientifiques*, et cela conformément à notre intérêt premier qui était – et est toujours – celui de montrer en quoi le savoir et la démarche des Montagnais ont droit au qualificatif de science.<sup>45</sup>

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<sup>43</sup> For an excellent contrast between an indigenous people’s manner of knowing and that of scientists see Paul Nadasdy’s discussion of the Ruby Range Sheep Steering Committee, “Counting Sheep: The Ruby Range Sheep Steering Committee and the Construction of Knowledge,” *Hunters and Bureaucrats*, 147-180. For Nadasdy, the manner in which observation is undertaken is, as well as the time and location, are critical in explaining the differences between the two types of knowledge. Ultimately, the sort of knowledge gained from occasional aerial surveys is very different from that gained on the ground hunting.

<sup>44</sup> As quoted in David Wade Chambers and Richard Gillespie, “Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge,” *Osiris*, 2<sup>nd</sup> Series, Vol. 15, Nature and Empire: Science and the Colonial Enterprise (2000), 237.

<sup>45</sup> Daniel Clément, *La Zoologie des Montagnais* (Paris: Peeters, 1995), 51; see also Paul Nadasdy, *Hunters and Bureaucrats*, 138, where he discusses essentially political struggles over the legitimacy of various facts and theories, where science acquires a key importance because it becomes “*the marker of validity.*”

The problem with using academic science to give legitimacy is twofold: first, Montagnais knowledge will never equal academic science in scale or prestige, and second, any deviation from academic science will be viewed with suspicion. Ultimately, rather than seeking out the distinctive characteristics of Montagnais knowledge that might speak to the weaknesses of academic science, Clément sets up a comparison that would only recognize those distinctive characteristics as irrelevant, or worse, as failures. Of course the Montagnais are in possession of an intricate and detailed knowledge of the animals they live amongst; the goal, however, should not be to judge this knowledge, but rather to use it as a means to better understand both the ecology of the Québec-Labrador peninsula and the shortcomings of academic science as a way of knowing.

For many scholars, however, the equation of scientific and indigenous thought is problematic, and parallel traditions within anthropology challenge the compatibility of scientific and indigenous thought. Paul Nadasdy and Clara Sue Kidwell draw upon the work of Lucien Lévy Bruhl who questions the compatibility of indigenous and scientific worldviews.<sup>46</sup> Nadasdy writes,

this approach to the study of knowledge raises the sphere of incommensurability. If people are embedded in different systems of cultural meaning that possess their own internally defined criteria of validity, then what are the

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<sup>46</sup> See Clara Sue Kidwell, "Native Knowledge in the Americas," *Osiris*, 2<sup>nd</sup> Series, Vol. 1, Historical Writing on American Science (1985), 212. Kidwell also draws on the work of Émile Durkheim, Robert Redfield and E.A. Burt; see also Paul Nadasdy, *Hunters and Bureaucrats*, 62. Nadasdy also cites E. Evans-Pritchard. Lucien Lévy-Bruhl wrote a number of works on the subject, including *Primitive Mentality* (Boston: Beacon Press, 1966 [1922]) and *How Natives Think* (New York: Arno Press, 1973 [1910]).

prospects for communication across the boundaries of different knowledge systems?<sup>47</sup>

Relying on his experience living amongst the Kluane First Nation, Nadasdy argues knowledge encompasses “the entire constellation of values, beliefs, practices, and social relations that surround and give meaning to Kluane people’s subsistence strategies and their relationship to animals.”<sup>48</sup> Traditional ecological knowledge is thus inseparable from the lives of those to whom it belongs; “it’s not really ‘knowledge’ at all, it’s more a way of life.”<sup>49</sup>

Perhaps explaining the discrepancy between the two distinct approaches, Kidwell points out “most work on native science has been concerned only with the results of native observational efforts that are similar to those produced by Western science.”<sup>50</sup> The difference is thus largely one of scope. Not content with those who would simply selectively mine indigenous knowledge for useful tidbits, Kidwell argues, “studies of native science must not only deal with the results of native activities but should acknowledge as well the world views and understandings of native people concerning

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<sup>47</sup> Nadasdy, *Hunters and Bureaucrats*, 62.

<sup>48</sup> Nadasdy, *Hunters and Bureaucrats*, 66.

<sup>49</sup> Nadasdy, *Hunters and Bureaucrats*, 60.

<sup>50</sup> Kidwell, “Native Knowledge in the Americas,” 212. Kidwell was writing before the bulk of the literature on traditional ecological knowledge was produced, but the comment still points out a tension that runs throughout the field. Those who advocate the use of traditional management schemes are always faced with choices regarding which practices to include as plausible, and which to discard. Generally, as with Clément, they choose those that can be justified along scientific lines.

their relationships to the natural world.”<sup>51</sup> Kidwell here raises the need to consider indigenous ontology, a growing concern in recent ethnohistory, anthropology, and religious studies.<sup>52</sup>

Perhaps most significant is Nadasdy’s argument that much of what needs to be considered knowledge is *non-sentential*; it cannot be conveyed linguistically:

non-sentential knowledge...means knowledge that cannot be expressed (without distortion) in the linear form demanded by language....One can tell someone *about* how to do these things, but the only way one can really learn them is by *doing* them.<sup>53</sup>

Much of the actual environmental knowledge vital to success and survival comes from individual practice, imitation, and observation. It is a process the anthropologist Tim Ingold likens to an apprenticeship.<sup>54</sup> Ingold emphasizes the important place of individual learning alongside social learning, noting “it is not possible to separate the sphere of the novice’s involvement with other persons from that of his involvement with the non-human environment.”<sup>55</sup> Ingold concludes,

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<sup>51</sup> Kidwell, “Native Knowledge in the Americas,” 212. In fairness, Berkes and others acknowledge the importance of worldview. They do not, however, generally devote the same sort of critical attention to questions of worldview and ontology as they do to practice.

<sup>52</sup> See for example, Kenneth M. Morrison, *The Solidarity of Kin*, 37-58. Much of the renewed interest can be traced to A. Irving Hallowell’s influential “Ojibwa Ontology, Behaviour, and World View.”

<sup>53</sup> Nadasdy, *Hunters and Bureaucrats*, 98.

<sup>54</sup> Tim Ingold, “The Optimal Forager and Economic Man,” in Phillippe Descola and Gísli Pálsson, eds., *Nature and Society: Anthropological Perspectives* (London: Routledge, 1996), 39.

<sup>55</sup> Ingold, “The Optimal Forager and Economic Man,” 40. Ingold further observes that what is happening is “not a transmission of representations, but an education of attention.”

In short, a technique such as interstice foraging is not passed on as part of any systematic body of cultural representations; it is rather inculcated in each successive generation through a process of development, in the course of novices' practical involvement with the constituents of their environment – under the guidance of more experienced mentors – in the conduct of everyday tasks.<sup>56</sup>

As with Berkes' traditional ecological knowledge, Ingold's foraging technique is both dynamic and cumulative. Further, while he emphasizes the social context within which individual learning takes place, his discussion suggests an extension of that social realm to include non-human members; Ingold's novice learns not only through an engagement with more experienced members of the community, but also through a direct engagement with the physical environment and its flora and fauna.

For the purposes of the historian interested in historic resource harvesting and management, Ingold and Nadasdy's approach points to the need for fine-grained historical studies that attempt to understand the interaction of individual actors with the larger social group, as well as their interaction with *specific* landscapes.<sup>57</sup> Given the

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<sup>56</sup> Ingold, "The Optimal Forager and Economic Man," 41.

<sup>57</sup> Knowledge of specific landscapes is vital to peoples whose primary adaptation to resource fluctuation was mobility. See Nadasdy, *Hunters and Bureaucrats*, 39-41, for a discussion of how restricted access to the Kluane National Park led to a loss of specific knowledge of landscape inside of one generation. Keith Basso argues that "ethnographic inquiry into cultural constructions of geographical realities is at best weakly developed," and that greater attention is needed to understand how people *know* their landscapes. See Keith H. Basso, "Wisdom Sits in Places: Notes on a Western Apache Landscape," in Steven Feld and Keith Basso, eds., *Senses of Place* (Santa Fe: School of American research Press, 1996), 53. Basso draws upon Heidegger's concept of *dwelling*, which emphasises the "multiple 'lived relationships' that people maintain with places," whereby space acquires meaning, 54. Tim Ingold, "Hunting and Gathering as Ways of Perceiving the Environment," in Roy Ellen and Katsuyoshi Fukui, eds., *Redefining Nature: Ecology, Culture, and Domestication* (Oxford: Berg, 1996), 144, also emphasises the concept of dwelling as key to understanding how people incorporate a landscape's features "into a pattern of everyday activities," such that it becomes home. The important point here is that ecological knowledge

important place of both knowledge and the individual in subarctic Amerindian societies, histories must be able to address the role this knowledge plays within the social networks making up these societies.<sup>58</sup> Elizabeth Brumfiel insists that the treatment of whole populations as units of analysis, common amongst those who adopt an ecological perspective, ignores the internal negotiations undertaken by “social agents pursuing their goals under both ecological and social constraints.”<sup>59</sup> For our purposes, these must be seen to include those constraints imposed by the specific knowledge of landscape.

Those who are interested in mining traditional ecological knowledge for new approaches relevant to adaptive management, or for advice on specific management regimes, can perhaps afford to adopt the simpler approach to defining indigenous knowledge; there is certainly a wealth of empirical observation held by indigenous peoples that can be incorporated into Western management regimes. Ethnohistorians, however, should be wary of any definition of knowledge that does not take full account of the social, cultural, and cognitive contexts of its creation and dissemination. As

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involves various levels of understanding, including, at its most specific, intimate understandings of specific places.

<sup>58</sup> On the importance of individual autonomy in Algonkian and Athapaskan society, see Robin Ridington, “Knowledge, Power, and the Individual in Subarctic Hunting Societies.”

<sup>59</sup> Elizabeth M. Brumfiel, “Distinguished Lecture in Archaeology: Breaking and Entering the Ecosystem – Gender, Class, and Faction Steal the Show,” *American Anthropologist*, New Series, Vol. 94, No. 3 (Sep., 1992), 551. Brumfiel is directing her critique at ecosystem theory’s “insistence upon whole populations and whole behavioural systems as the units of analysis.” Unfortunately, ethnohistorians and environmental historians often tend to treat indigenous societies in an overly monolithic fashion. A notable exception is Richard White’s discussion of the internal politics of the Choctaw, Pawnee, and Navajo nations in *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983), 69-146.

Nadasdy skilfully points out, both history and an understanding of power are key to understanding the dynamic nature of knowledge; “precisely how knowledge is produced, legitimated, marginalized, and/or eliminated depends on historical factors and can only be determined empirically.”<sup>60</sup>

### **Towards A More Inclusive History of Science**

Nadasdy’s reminder that relations of power must be included in any account of knowledge production points to the need to consider academic science and indigenous knowledge, not in isolation, but rather in terms of the relationship that exists between them. His discussion of the Ruby Ridge Sheep Steering Committee does just that, critically examining the attempts to integrate the two forms of knowledge.<sup>61</sup> Recent attempts to incorporate traditional ecological knowledge into resource management structures like the Ruby Ridge Sheep Steering Committee, however, do not mark the beginning of an association between the two forms of knowledge; they are instead merely the latest instance in a long association. On the Québec-Labrador peninsula this association goes back to the sixteenth century.

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<sup>60</sup> Nadasdy, *Hunters and Bureacrats*, 11.

<sup>61</sup> Nadasdy, “Knowledge Integration in Practice: The Case of the Ruby Ridge Sheep Steering Committee,” *Hunters and Bureaucrats*, 181-221.

Historians of colonial science are recognizing the need to investigate the historic appropriation of indigenous knowledge by European science. As Roy MacLeod notes in his introduction to *Nature and Empire*,

there still has to come better understanding, among both colonial historians and historians of science, of what practitioners on the ground have known for generations: that ever since Europeans first engaged the world *outrémer*, the traffic of ideas and institutions has always been reciprocal.<sup>62</sup>

Accompanying this emphasis on encounter and exchange is a retreat from purely epistemological definitions of science.<sup>63</sup> Following Bruno Latour's emphasis on the networks that allow for the creation of science, and at the same time generate its utility, historians of colonial science are increasingly emphasizing place and context in the creation, use, and exchange of knowledge.<sup>64</sup>

David Wade Chambers and Richard Gillespie address the question of locality in the history of science, arguing that modern science can best be understood as a "polycentric communications network."<sup>65</sup> Approaching science in this way suggests the

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<sup>62</sup> Roy MacLeod, "Introduction," *Osiris*, 2<sup>nd</sup> Series, Vol. 15, *Nature and Empire: Science and the Colonial Enterprise* (2000), 8.

<sup>63</sup> See MacLeod, "Introduction," 8, where he writes that "such easy categories are now giving way to more complex readings of colonial science – no longer merely a phase, but rather a space, a complex of legacies, a combination of motives, and a role in the discourse of development."

<sup>64</sup> Bruno Latour, *Science in Action: How to follow scientists and engineers through society* (Cambridge: Harvard University Press, 1987). See also Paul Nadasdy's brief discussion of Latour, *Hunters and Bureaucrats*, 138-141.

<sup>65</sup> Chambers and Gillespie, "Locality in the History of Science," 223.

need to better understand the “place of knowledge,” leading the authors to propose two key concepts: locality and vectors of assemblage. Localities, they write, mark the intersection of history, environment, language, and culture.”<sup>66</sup> Further,

geographic boundaries are only one of the possible desiderata in defining a case study. Localities may be bounded by tangibles, such as socioeconomic circumstances, legalities, colonizing forces, topographies, and technologies; and by abstractions, such as beliefs about time, space, and progress.<sup>67</sup>

Vectors of assemblage, on the other hand, speak to the dynamic nature of science, encompassing “elements of process and of accumulation: the historical emplacement of the institutional and physical framework of science.”<sup>68</sup> For intellectual traditions that lie outside of Western academia, the analysis of vectors of assemblage may involve matters of tradition, spirituality, and political and socio-economic organization.<sup>69</sup> Whereas histories of science built exclusively on epistemological foundations have tended to write of the spread of science to the colonies as a history in which European rationality was dispensed to indigenous populations, histories that pay attention to both locality and assemblage suggest independent knowledge traditions capable of interaction, exchange,

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<sup>66</sup> Chambers and Gillespie, “Locality in the History of Science,” 228.

<sup>67</sup> Chambers and Gillespie, “Locality in the History of Science,” 228.

<sup>68</sup> Chambers and Gillespie, “Locality in the History of Science,” 229.

<sup>69</sup> The authors quote David Turnbull’s definition of assemblage as an “amalgam of places, bodies, voices, skills, practices, technical devices, theories, social strategies and collective work that together constitute technoscientific knowledge/practices,” Chambers and Gillespie, “Locality in the History of Science,” 230.

and possibly even conflict. Seen in this light, the continued existence of indigenous knowledge reflects its continued importance and relevance to indigenous life.

Scholars have increasingly sought to elaborate on the role of indigenous knowledge in colonial history. In particular, the codification and appropriation of local knowledges that took place in the Early Modern Period era suggests a high degree of respect for indigenous knowledge in the sixteenth- and seventeenth-centuries; respect that had largely disappeared by the nineteenth century when traditional knowledge was commonly dismissed as superstition.<sup>70</sup> Londa Schiebinger and Claudia Swan note that this codification targeted not only indigenous knowledge in the colonies, but that of “indigenous” Europeans as well.<sup>71</sup> The provenance of the knowledge being codified, however, was often obscured and respect did not always translate into overt recognition. Harold J. Cook, writing on Jacobus Bontius’ work in the seventeenth-century Dutch East Indies, notes that the author’s accounts were “written on top of erasures,” as Bontius “reinscribed conversations with local people in the language of commensurate matters of fact.”<sup>72</sup> In addition, Cook suggests Bontius was highly selective in his appropriation of local knowledge, preferring the concrete:

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<sup>70</sup> Londa Schiebinger and Claudia Swan, “Introduction,” in Schiebinger and Swan, eds., *Colonial Botany*, 12. It is interesting to note that indigenous knowledge has once again become a focus of study in the late twentieth century, in part because some think it may yet again inform gaps in academic science (particularly ecology and resource management).

<sup>71</sup> Schiebinger and Swan, “Introduction,” 11.

<sup>72</sup> Cook, *Global Economics and Local Knowledge in the East Indies*, 102. Bontius published works on natural history, disease, and medicine.

foreign nouns, adjectives, and verbs that were tangible – simple morphologies that address the five senses rather than the mind’s eye – were valued because they were readily transferable, while he ignored, misunderstood, or dismissed as superstition local interpretations of them.<sup>73</sup>

What were once seen as acts of discovery thus become acts of selective appropriation and translation. In this way, Bontius was able to filter local knowledge, and render it accessible to other Europeans, and thus exchangeable.<sup>74</sup> This exchange value depended on it being knowledge that was no longer a way of life. Consequently, understanding the networks capable of accessing indigenous peoples, and importantly, learning their languages, is crucial to our understanding of the early modern constructions and transformations of knowledge.<sup>75</sup>

A number of historians have pointed out the important role played by missionaries in the early colonial science, precisely because of their ability to access indigenous communities.<sup>76</sup> As Steven J. Harris notes, the Jesuit practice of

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<sup>73</sup> Cook, *Global Economics and Local Knowledge in the East Indies*, 117.

<sup>74</sup> This is very much in keeping with Bruno Latour’s ideas on science, whereby information is made comparable, and collected in “centres of calculation.” See Bruno Latour, “Chapter 6: Centres of Calculation,” *Science in Action*, 215-257. Swan and Schiebinger note that this occurred with respect to gender as well: behind much of the knowledge presented by European men are women, indigenous and European. In this way, European men claim, and become vectors for, the knowledge of indigenous peoples and women, Schiebinger and Swan, “Introduction,” 10-11.

<sup>75</sup> James E. McClellan, III and François Regourd, “The Colonial Machine: French Science and Colonization in the Ancien Regime,” *Osiris*, 2<sup>nd</sup> Series, Vol. 15, *Nature and Empire: Science and the Colonial Enterprise* (2000), 44.

<sup>76</sup> Steven J. Harris, “Jesuit Scientific Activity in the Overseas Missions, 1540-1773,” *Isis*, Vol. 96, No. 1 (Mar., 2005), 75; on the role of Jesuits in the broader history of the French colonial scientific apparatus, see MacLellan and Regourd, “The Colonial Machine.”

long term residency, care in learning languages, attention to customs, and the desire to win the trust of indigenous peoples – these were the distinguishing characteristics of the society’s mission strategy that made its missionaries especially adept at cross-cultural intimacy.<sup>77</sup>

As with Bontius, however, it is important to note that the Jesuits filtered indigenous knowledge, dividing the natural from supernatural - the latter was given wholly over to the Christian god.<sup>78</sup>

With respect to the French colonies in Canada, historians have focussed primarily on the transfer to Europeans of Amerindian medicinal knowledge, subsistence practice and related technologies, and geographic knowledge. For most authors, these topics are dealt with in passing, with a few examples offered to illustrate the general point. Alfred G. Bailey notes a number of areas in which Algonkian peoples passed on knowledge and skill to the French, arguing that as the French “lacked the special knowledge which was required to exploit the resources of a closed environment, they were compelled to seek support from the indigenous population.”<sup>79</sup> Cornelius Jaenen discusses the battles over

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<sup>77</sup> Harris, “Jesuit Scientific Activity in the Overseas Missions,” 76.

<sup>78</sup> Harris, “Jesuit Scientific Activity in the Overseas Missions,” 75. Here, the division between natural and supernatural is defined by Jesuit thought – a number of scholars have questioned the applicability of this division to Algonkian thought, see Kenneth M. Morrison, *The Solidarity of Kin*, 37-58.

<sup>79</sup> Alfred G. Bailey, *The Conflict of European and Eastern Algonkian Cultures* (Toronto: University of Toronto Press, 1969 [1937]), 117. On the Algonkian influence on the French, see “Chapter 10: The Effect of Contact on the French,” 117-125; on Algonkian medical knowledge, see “Chapter 7: Disease and Treatment,” 75-83; on the exchange of material culture, see “Chapter 5: The Displacement of Materials,” 46-65; on the importance of Algonkian geographical knowledge and trade routes, see “Chapter 4: The Eastern Algonkians and the Balance of Power,” 26-45. Note that the chapters on material and political matters are much longer than the others. See also Bruce Trigger, *Natives and Newcomers: Canada’s “Heroic Age” Reconsidered* (Kingston and Montreal: McGill-Queen’s University Press, 1985), 298, who concludes that intent (agency) must be recognized with respect to this assistance: “if Europeans

education that took place in seventeenth-century New France, noting that the French had little success convincing Algonkians of the value of European instruction, while the appeal of an Algonkian education drew a much larger number of French youth.<sup>80</sup> He quotes the Swedish naturalist Peter Kalm, who noted, “there are likewise examples of some Frenchmen going amongst the Indians and following their mode of life. There is on the contrary scarcely one instance of an Indian adopting the European customs.”<sup>81</sup> Denys Delâge, in an article whose sole purpose is to assess the Amerindian influence on the French and Canadians, discusses the Amerindian contribution to European geographical knowledge, hunting and fishing skills, and knowledge of medicinal plants.<sup>82</sup> Recently, Allan Greer has explored the “two-way exchange of medical knowledge” that occurred between Amerindians and French missionaries, suggesting that the differences between the two cultures have generally been exaggerated.<sup>83</sup> In particular, Greer details a greater

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had gained a toehold in Canada, it was because a substantial number of native peoples wished them to do so.”

<sup>80</sup> Cornelius J. Jaenen, *Friend and Foe: Aspects of French-Amerindian Cultural Contact in the Sixteenth and Seventeenth Centuries* (Toronto: McClelland and Stewart, 1976), 184. On the failure of the French use of education as a means of assimilation, see 165-171; see also Alain Beaulieu, “Réduire et Instruire: Deux Aspects de la Politique Missionnaire des Jésuites Face aux Amérindiens Nomades (1632-1642),” *Recherches Amérindiennes au Québec*, Vol. XVII, Nos. 1-2 (1987), 139-154, for a more detailed discussion of the French use of education (and sedentarization) as a deliberate strategy to assimilate nomadic Algonkians. The ultimate failure forced the French to adopt Algonkian habits in their missionary pursuits: the roving missions (*missions volantes*).

<sup>81</sup> Jaenen, *Friend and Foe*, 185.

<sup>82</sup> Delâge, “L’influence des Amérindiens.” On geography see 105-110; on hunting and fishing see 117-121; on medicinal plant use see 121-128; on non-medicinal plant use see 128-136.

<sup>83</sup> Allan Greer, “The Exchange of Medical Knowledge between Natives and Jesuits in New France,” in Luis Millones Figueroa and Domingo Ledezma, eds., *El saber de los jesuitas, historias naturales y el Nuevo Mundo* (Madrid: Iberoamericana, 2005), 136-137.

Amerindian acceptance of European medicinal practice than most of the previously mentioned authors; the Huron and Montagnais incorporated European foods, medications and medicinal practice into the body of their respective medical practices.<sup>84</sup>

All of these studies, however, are surveys; the problem is stated, and then examples are given from across a broad spectrum of people and places to illustrate indigenous agency. Somewhat ironically, Amerindians seem to exist as proxies, this time in academic arguments over the recognition of their own historical agency. In many cases, these discussions tend to reflect the fragmented and episodic nature of the *Jesuit Relations*, and can have difficulty relating the sustained, intimate nature of the contact and exchange that took place between specific Amerindians and Europeans.<sup>85</sup> Some recent scholarship has tended towards more detailed, local, examinations of these historical relationships.<sup>86</sup> Unfortunately, the nature of the evidence still must anchor many of these discussions in specific French personalities, texts, or actions, while the

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<sup>84</sup> Allan Greer, “The Exchange of Medical Knowledge between Natives and Jesuits,” 140-143. In particular, Greer’s discussion of bleeding is at odds with the other authors. Greer, unlike the others who generally point to Amerindian disapproval, notes that bleeding may have been found among the Montagnais prior to contact with the French, and if not was later adopted by them, 142.

<sup>85</sup> This certainly becomes evident when one thinks in terms of personalities – the level of detail with respect to the Jesuit missionaries, versus the scarcity of information available on *specific* Amerindian individuals, illustrates the disparities that seem to have their origins in the sources.

<sup>86</sup> For example, see Conrad E. Heidenreich, “The Beginning of French Exploration Out of the St Lawrence Valley: Motives, Methods, and Changing Attitudes towards Native People,” in Warkentin and Podruchny, eds., *Decentring the Renaissance*, 236-251; Lynn Berry, “The Delights of Nature in this New World: A Seventeenth-century Canadian View of the Environment,” in Warkentin and Podruchny, eds., *Decentring the Renaissance*, 223-235. Berry’s article focuses primarily on Pierre Boucher, while Heidenreich discusses efforts by Cartier and Champlain to acquire indigenous geographic knowledge.

Amerindians remain generalized, obscure archetypes. Placing indigenous knowledge on the historical landscape, or mapping vectors of assemblage that include specific Amerindian communities and personalities remains a daunting, if not impossible, task. While many of the phrases in Silvy's *Dictionnaire* speak to the intimacy of the shared existence between missionary and Montagnais, and the clear intent of the Montagnais in educating the missionary, the survival of the book itself ensures that the historians' gaze will remain firmly fixed on Silvy himself.

### **Antoine Silvy and his *Dictionnaire* on the Historical Landscape**

Antoine Silvy's *Dictionnaire montagnais-français* conveys an intimacy not often found in descriptions of contact between French and Amerindian peoples. For Silvy, missionary work, with the language study that it entailed, clearly relied on communication rooted in the daily rhythms of Amerindian life.<sup>87</sup> Phrases like *patche*, *tchipatche m8s8* (““venez les originaux’, disent les enfants, le matin, riant”) and *ni chag8tabat8nan* (“nous nous entre-regardons à qui se fera rire”) speak to the intimate and personal elements of cultural contact oft forgotten in the grand debates that have garnered

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<sup>87</sup> Margaret J. Leahey notes that the missionary Jean de Brébeuf's study of Huron was exemplary precisely because he engaged in “real dialogue” and was able to adapt to Huron ways of doing things. See her discussion of Brébeuf, Margaret J. Leahey, ““Comment peut un muet prescher l'évangile?” Jesuit Missionaries and the Native Languages of New France,” *French Historical Studies*, Vol. 19, No. 1 (Spring, 1995), 112-124.

so much attention in ethnohistory.<sup>88</sup> Collectively, the entries in the dictionary form a very human portrait of life among the Montagnais in the late seventeenth century. As one would expect, many of the phrases speak to an extensive knowledge of the flora, fauna, and geography of the Quebec-Labrador peninsula; importantly, they clearly demonstrate that in most cases authority lies with the Montagnais informants, and further, that these Montagnais were actively educating the Jesuit brother.<sup>89</sup>

Silvy's act of appropriation, the transcription and translation of the dictionary itself, obscures the spatial and temporal context in which the knowledge and language are rooted. There are no personalities in the *Dictionnaire*; while the knowledge remains, the people have been erased. That said, the entries still manage to speak to the connections that spanned the Quebec-Labrador peninsula and the southern shore of the St. Laurent. References are made to other Amerindian peoples, including Gaspésiens, Huron, Iroquois, Abénaqui, Algonquin de la Petite Nation, as well as to Montagnais and "ceux du Tadoussac."<sup>90</sup> In addition, Silvy lists animal species that span the peninsula, from Polar Bears (*Ursus maritimus*) and Ptarmigan (*Lagopus sp.*) in the north to the Passenger Pigeon (*Ectopistes migratorius*) and the Wild Turkey (*Meleagris gallopavo*) in the

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<sup>88</sup> Silvy, *Dictionnaire*, 119 & 25; the 8 is used by Angers, Cooter, and McNulty to represent an "omicron surmonté de l'upsilon grec." The letter's phonetic pronunciation is given by the authors as [o], except when it precedes another vowel when it is sounded as [w], see David Eaton Cooter and Jean-Paul Simard, "Avant-Propos," in Silvy, *Dictionnaire*, xix & xxii.

<sup>89</sup> For complete word lists, see the appendices. Authority is clearly seen in the large number of words for which Silvy has difficulty, or is unable, to supply a specific translation (for example the large number of entries followed by *espèce d'*).

<sup>90</sup> Silvy, *Dictionnaire*, 11, 61, 89, 97, 100, 89, & 112 respectively. See Appendix 10.

south.<sup>91</sup> Finally, there are references to the mobility that was so important to survival in the subarctic environment.<sup>92</sup>

The existence of networks that spanned the entire Quebec-Labrador peninsula is becoming more evident as archaeologists pay greater attention to exchange and mobility in the prehistoric and protohistoric periods.<sup>93</sup> Prior to the arrival of Europeans lithic materials were exchanged across the peninsula and throughout the Northeast, and later, European trade goods spread far inland along trade routes ensuring that, for many, contact first took place through material culture.<sup>94</sup> Perhaps less obvious, however, is the use of networks to acquire and disseminate knowledge. José Mailhot, studying contemporary and historic relationships among the Innu of Quebec and Labrador, has examined the relationship between mobility, knowledge, and kinship.<sup>95</sup> Although

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<sup>91</sup> Silvy, *Dictionnaire*, 97, 101, 75, & 72 respectively; also see the appendices.

<sup>92</sup> For example, *ni mamen8gan* (“je demeure souvent en même lieu”) and *ni mamen8ganan* (“nous demeurons ça et là”), Silvy, *Dictionnaire*, 65.

<sup>93</sup> Moira McCaffrey, “The Cultural Landscape of the Protohistoric Period in the Eastern Subarctic,” unpublished manuscript, April 19, 2005. See also the work of Laurier Turgeon on sixteenth century contact between Amerindians and Europeans: Laurier Turgeon, “The Tale of the Kettle: Odyssey of an Intercultural Object,” *Ethnohistory*, Vol. 44, No. 1 (Winter, 1997), 1-29 (especially his discussion of the spread of copper along pre-existing trade routes, 7-9); Laurier Turgeon, “Perles, parures et regimes de valeurs en France et en Amérique du Nord, vers 1500-1650,” *Recherches Amérindiennes au Québec*, Vol. XXXV, No. 2 (2005), 75-86.

<sup>94</sup> Moira McCaffrey, “The Cultural Landscape of the Protohistoric Period,” Fig. 5. McCaffrey focuses on the exchange of lithic materials and notes that one, Ramah chert from the Labrador coast, was found across the Northeast and into New England. The others examined in McCaffrey’s paper include Labrador Trough cherts, Mistassini quartzite, Nastapoka chert, and Hudson Bay Lowland chert. These also travelled far from their source along prehistoric trade routes.

<sup>95</sup> José Mailhot, “Territorial Mobility and the Montagnais-Naskapi of Labrador,” in Charles A. Bishop and Toby Morantz, eds., “A Qui Appartient Le Castor?” 92-107; José Mailhot, *The People of Sheshatshit: In the Land of the Innu* (St. John’s: ISER, 1997), 130-164.

individuals may seem attached to specific hunting territories, kinship structures encourage a great deal of travel between territories; she notes “the Sheshatshit people place a high value on an extensive knowledge of the land, and mobility is an integral part of their land use.”<sup>96</sup> Notably, the possibilities for movement rely on the use of elaborate kinship structures, and thus, as Mailhot points out, “mobility can be described only in reference to social relations which determine the distribution of individuals over the territory.”<sup>97</sup> Silvy’s *Dictionnaire* documents the vocabulary that accompanied these relationships, including kinship terminology, and references to mobility and exogamy, but is unable to document how these relationships played a role in generating the knowledge that Silvy drew upon.<sup>98</sup>

While Silvy details a large number of geographical terms that could refer to specific places, the recognizable places in the dictionary are those that are frequented and defined by Europeans. Places like *šabistiššiak* (“Québec”), *kašasiparit* (“Saut-de-

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<sup>96</sup> Mailhot, *The People of Sheshatshit*, 133.

<sup>97</sup> Mailhot, *The People of Sheshatshit*, 101.

<sup>98</sup> See Appendix 9 for the kinship terminology. Two phrases suggest the practice of exogamy: *ni nahatchichiššin* (“je suis mariée hors du pays, en autre nation”); *nahahiskšeu* (femme étrangère mariée en ce pays”), Silvy, *Dictionnaire*, 82. These entries are significant, as they tend to counter arguments that accuse ethnohistorians of projecting behaviour onto historic peoples via the dogmatic application of anthropological theory. For such a denial, see Nelson-Martin Dawson, “Réplique à Rémi Savard – Les anthropologues et le mythe des peuples primitifs,” *Le Devoir*, 4 Décembre, 2002, who writes : “Quant à l'exogamie, elle illustre l'approche théorique d'une discipline qui force la réalité à adopter les contours de ses cadres conceptuels. La preuve que les Indiens du prétendu Nitassinam pratiquaient ce régime matrimonial avant l'arrivée des Blancs n'existe pas encore. Pour soutenir une telle thèse, il faut de l'observation in situ, comme l'ont pratiquée les ethnologues qui étudiaient des peuples dits primitifs.” While the entries in Silvy’s *Dictionnaire* do not predate contact, Dawson no doubt realizes that he is setting an impossible standard.

Montmorency”), *pitchitaδisek* (“le Saguenay”), and *metaberδtin* (“Les Trois Rivières”) acquire specific meaning only because the places have been named and given meaning by Europeans; other geographic designations that may refer to specific places are muted.<sup>99</sup> In this manner, *δtatδhδganeu* (“rencontre de 3 rivières à la prairie de la montagne”), *kamikδagachik* (“rivière au sable rouge”), and *minisabiskδ* (“grande île de rocher”) lose the meaning that referenced a specific place, if indeed they had it in the first place, and become purely descriptive.<sup>100</sup> While this is admittedly speculative, it does nonetheless serve to highlight the difficulty of placing the knowledge presented in Silvy’s *Dictionnaire*; there are six entries that have been linked to European place names by Silvy and one hundred and fourteen descriptive geographic terms that may or may not have carried more specific meaning in the context of seventeenth-century Montagnais knowledge of territory.<sup>101</sup> Bruno Latour’s model of science implies not only concentration in centres of calculation, but also the generation of utility within the system; scientific facts are not universally meaningful, but rather, have meaning precisely because of the manner in which they can be used within the structures and institutions of

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<sup>99</sup> Silvy, *Dictionnaire*, 97, 101, 128, & 71.

<sup>100</sup> Silvy, *Dictionnaire*, 114, 74, & 75. One entry illustrates this difficulty nicely: *michiministikδ* (“l’île d’Orleans, grande île”), 73. The first definition, because of a European name, is specific. The second, while it may also have been used specifically to refer to the same island, comes across as merely descriptive; without the European name, we would know little. This is clearly an area where further engagement with Montagnais communities in the region is needed.

<sup>101</sup> There are two entries that has been translated in the published edition, one by Silvy’s contemporary Bonaventure Fabvre and the other by the editors, bringing the number of European place names to eight, see *manipichteδichagan* (“[F: Escoumains]”) and *kaδachapistetchiδak* (“[\* Rivière du Sault-au-Mouton]”), Silvy, *Dictionnaire*, 67 & 98. See Appendix 8 for the one hundred and ten terms.

science.<sup>102</sup> Meaning can be lost, however, should these structures and institutions be inaccessible; in this manner, the Montagnais geographic terminology in Silvy's *Dictionnaire* loses meaning and utility when stripped of its relevant social and cultural context. Indigenous localities are thus obscured, and the exchanges that informed Antoine Silvy's knowledge of the territory may be invisible three hundred years later.

What is known of the context surrounding Silvy's *Dictionnaire montagnais-français* comes from the records of Silvy's time in the missions to the Saguenay region. Father Antoine Silvy was born in Aix-en-Provence in 1638 and arrived at Quebec in 1673, just prior to his thirty-fifth birthday.<sup>103</sup> Following four years working with Father Claude Allouez in the missions to the Ottawas, he was assigned to work with Father François de Crespieul in the missions of the Saguenay region. In particular, Antoine Silvy took up residence at the Résidence Saint-Charles de Métabetchouan, on Lac Saint-Jean in 1678 and proceeded to travel throughout the region, among the Montagnais,

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<sup>102</sup> Latour, *Science in Action*, 119-121.

<sup>103</sup> For a brief biographical sketch, see Victor Tremblay, "Silvy, Antoine," *Dictionary of Canadian Biography Online* (Toronto/Québec: University of Toronto/Université Laval, 2000), <http://www.biographi.ca/EN/ShowBio.asp?BioId=35224&query=silvy>.

Mistassinis, and Papinachois, until 1684.<sup>104</sup> It is likely during this time, and these travels, that he compiled much of the dictionary.<sup>105</sup>

Unlike the movements of the Amerindians, the travels of Silvy in the region can be discerned with a reasonable level of detail. *Le Second Régistre de Tadoussac* (1668-1700) details many of the travels of Antoine Silvy as he baptised, married and buried Amerindians.<sup>106</sup> For example, October 16, 1678, finds him at *Peok8agamy* (Lac Saint-Jean); May 16, 1679, finds him at *Lacum Quinogaming* (Lac Kénogami), while October 4, 1678 sees him at *Cheg8timy* (Chicoutimi).<sup>107</sup> Further, the *Régistre* places Silvy in contact with thirty-five individuals, who appear and disappear from historical view as sacraments are administered. Occasional references to occurrences *in sylvis* do little more than emphasize how little is known about the happenings beyond the gaze of the missionaries.<sup>108</sup>

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<sup>104</sup> Although Cooter and Simard consider 1684-1690 to be Silvy's "période hudsonnienne" (on Hudson Bay), there is one reference to Silvy in *Le Second Régistre* that suggests he was at *Fluvium Siakichi8an* (Rivière Ouiatchouane) in 1688. See Léonidas LaRouche, ed., *Le Second Régistre de Tadoussac, 1668-1700* (Montreal : Les Presses de l'Université du Québec, 1972).

<sup>105</sup> Cooter and Simard, "Avant-Propos," xiii-xiv. Cooter and Simard also suggest that Silvy may have relied on already an existing dictionary for some information, as well as on Crespieul, "un maître de la langue Montagnaise," "Avant-Propos," xvi & xiv.

<sup>106</sup> LaRouche, ed., *Le Second Régistre de Tadoussac*.

<sup>107</sup> LaRouche, ed., *Le Second Régistre de Tadoussac*, 30, 31 & 117.

<sup>108</sup> See for example, the brief notices of deaths *in sylvis*: "*In sylvis obiit Carola 8eki8abanok8e*," *Le Second Régistre de Tadoussac*, 117. The Register does raise the intriguing possibility of tracing family movements across territory through involvement with the missionaries at various locations. Unfortunately, this is somewhat beyond the scope of this paper, and the list associated with Antoine Silvy himself is somewhat limited.

Throughout, the asymmetry of the historical evidence is emphasized; localities and vectors of assemblage can be suggested and theorized amongst Amerindians with little specificity, while on the Jesuit side we have a much greater level of detail. Silvy's dictionary, following his death, or perhaps his retirement, became part of a body of linguistic work that was collected and used by later Catholic scholars.<sup>109</sup> Much of the indigenous knowledge that was very much needed by Europeans in the sixteenth- and seventeenth-centuries may appear commonplace to later generations of scholars, or may be deeply engrained as European "discovery." The invisibility, or lack of understanding, associated with the institutions and structures that generate and transmit indigenous knowledge only further the lack of appreciation for that knowledge itself. In this way, the recognition of knowledge is very much tied to the recognition of surrounding institutions and structures. The contributions made by Silvy are easily recognizable; those of an anonymous collective that is visible only when they interact with the French is less so.

### **Translating the Non-Human World: Ecological Knowledge in the *Dictionnaire***

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<sup>109</sup> See H. Christoph Wolfart, "The Beginnings of Algonquian Lexicography," *Proceeding of the American Philosophical Society*, Vol. 132, No. 1 (Mar., 1988), 120, where he notes that a number of early manuscripts, "formed the working library of the 'Indian Language School' at Lac des Deux Montagnes (near Montréal) whose continuous tradition of linguistic scholarship ranges from the middle of the seventeenth century right into the present."

Silvy's dictionary, unlike the other early dictionaries of Montagnais, appears to have been compiled for personal use, as an *aide-memoire*.<sup>110</sup> The book is small enough to have been carried by the missionary on his person, and seems to have been exposed to rain or melting snow suggesting it accompanied the missionary on his travels.<sup>111</sup> The *Dictionnaire montagnais français* contains approximately seven thousand five hundred entries, and as Montagnais is a polysynthetic language, many of the words are equivalent to phrases in French.<sup>112</sup> As such, the entries in the *Dictionnaire* are often descriptive. Although not in strict alphabetical order, it is organized roughly along alphabetical lines, most likely to facilitate its use as an *aide-memoire*. As such, the contents are not grouped thematically, and it is difficult to surmise the context or the ordering of the discussions that gave rise to the entries in the *Dictionnaire*. The information to be discussed in this paper, that relating to flora and fauna, is scattered throughout the book. In this respect, each entry is a discrete fragment, devoid of any organization on Silvy's part save the rough alphabetization.

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<sup>110</sup> The two other early Montagnais dictionaries are Bonaventure Fabvre's *Racines Montagnaises*, transcr. Lorenzo Angers and Gerald McNulty (Québec: Presses de l'Université Laval, 1970 [1695]); and Pierre Michel Laure's *Apparat français-montagnais*, Ed., David Cooter (Montreal: Presses de l'Université du Québec, 1988 [1726]).

<sup>111</sup> Cooter and Simard, "Avant-Propos," ix.

<sup>112</sup> Polysynthetic languages are those in which words are composed of a number of morphemes. The Jesuits had been aware of polysynthetic language since Jean de Brebeuf's study of the Huron language. See Margaret J. Leahey, "Comment peut un muet prescher l'évangile?" 122. That Silvy was aware of this aspect of Montagnais is clear. He includes a number of affixes in his dictionary, defining them with the Latin qualifier *in compositione* or *in comp.* See for example, his entries *me8*, *ma8* ("*in comp.* envoyer, aller") or *nita* ("*in compositione significat* puissance, pouvoir"), in Silvy, *Dictionnaire*, 71 & 94.

The personal and utilitarian nature of the book explains much about the contents; there is little space given over to translating biblical terminology, the entries are often abbreviated, and there is relatively little condescension towards the Montagnais way of life.<sup>113</sup> Consequently, the contents are very much geared towards the practicalities of life among the Montagnais, and a significant number of flora and fauna are found in the dictionary. Included are large numbers of mammals, birds, fish, as well as lesser numbers of reptiles, amphibians, and insects.<sup>114</sup> There is also an extensive vocabulary that describes animal anatomy, behaviour, habitat, and hunting and fishing techniques and technology. These entries suggest that for Silvy and other missionaries, particularly given the existence of the phrases referencing animal behaviour, the missionary undertaking involved an education in attentiveness - one that is perhaps reminiscent of Tim Ingold's discussion of the acquisition of skills surrounding foraging techniques. Additionally, the inclusion of old world flora, fauna, and disease point to the ongoing Columbian Exchange and the fact that the Montagnais, too, were coming to terms with significant changes in their environment.

The *Dictionnaire montagnais-français* contains approximately seventy-nine entries that refer to different plants, fruits, and trees; one hundred and eighty-five entries

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<sup>113</sup> This is especially true when compared to Laure's *Apparat Français-montagnais*. Laure includes vocabulary that can only be explained by a need to translate biblical stories (see for examples his translation of donkey, an animal he notes "ils n'en ont point d'idée," 47, and his inclusion of a phrase relating Jonas' swallowing by a whale, 352), and repeatedly includes instructions on the need to ridicule Montagnais religious beliefs (see for example his definition for "esprit follet," where he notes "les sauvages sont sujet à en voir beaucoup; moquez-vous d'eux," 411).

<sup>114</sup> See appendices.

for different animal species; four hundred and thirty-seven observations on various aspects of these plant and animal species; one hundred and fourteen entries that deal with habitat and geography; and finally, some two hundred and twenty-three entries that relate to anatomy.<sup>115</sup> Of the one hundred and eighty-five potential animal species, thirty are mammals, eighty-two are birds, twenty-nine are fish or edible aquatic invertebrates, twenty are invertebrates, and fourteen are reptiles and amphibians. The ability of the missionary to definitively translate the entry into French is greatest with the mammals, fish, and invertebrates, although he sometimes equates an American species with a similar or related Eurasian species.<sup>116</sup> On the other hand, many of the entries for birds, reptiles, and amphibians are translated in a very general manner.<sup>117</sup> Finally, the composition of the lists suggests that the species included are those that are most intimately linked to Montagnais hunting and gathering practice, and subsequently, that the nature of missionary work among the Montagnais must have entailed detailed observation and discussion of those plants and animals routinely used and observed.

### *Classification and Taxonomy*

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<sup>115</sup> These figures should all be seen as approximate, as there can be ambiguity, and there may be multiple entries for the same species. See the appendices for the lists.

<sup>116</sup> See, for example, the entry for *k8ik8chatche8* which he translates as “blaireau,” Silvy, *Dictionnaire*, 61; here the Wolverine (*Gulo gulo*) is translated as a Badger (*Meles meles*). Another example is his translation of *kachakarau* as “étourneau” (starling), a bird not to arrive in North America for close on another two hundred years.

<sup>117</sup> See, for example, the bird list where there is a large number of entries that are simply translated as “espèce d’oiseau”.

There are very few entries that detail Montagnais taxonomy or classification, although the existence of classification is suggested. *Ni michetδrinikaten* (“j’en nomme plusieurs, sous un même nom, v.g. oiseau”), *iatisiδ mistik* (“ce bois est d’un autre espèce”), and *egδ espitakδraδeak* (“elle est bien comme cela, de cette espèce”) all imply that classification of flora and fauna may have been the subject of overt discussion.<sup>118</sup> Further, there are definitions that are explicit in their taxonomic meaning, such as *aδesis* (“animal, bête terrestre”), *manitδchich* (“bestioles, comme des fourmis, etc...”), and *names* (“poisson”).<sup>119</sup> There are also definitions that imply classification, such as *misδi* (“queue d’animal terrestre”), which is clearly distinguished from *δsδi* (“queue [d’animal]”).<sup>120</sup> At other times, the structure of the words themselves betrays a sort of classification, although it is never mentioned in the missionary’s definitions; such is the case with fruit and nut-bearing tree and plant species that end with the suffix *-agachi*, or with the whales that end in *-megδ* meaning “fish.”<sup>121</sup> At other times, Silvy seems to

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<sup>118</sup> Silvy, *Dictionnaire*, 72, 36, & 32. This, of course, is reinforced by the extensive species lists included in the dictionary, see the Appendices.

<sup>119</sup> Silvy, *Dictionnaire*, 15, 67, & 83.

<sup>120</sup> Silvy, *Dictionnaire*, 78 & 113.

<sup>121</sup> For example, see Silvy, *Dictionnaire*, 21: *atitetamina* (“petit fruit violet”) and *atitetaminagachi* (“l’arbre qui les porte”). See Appendix 5 for other examples. Daniel Clément translates the suffix *-akashī* as “plante à fruits,” Daniel Clément, *L’Ethnobotanique Montagnaise de Mingan* (Québec : Centre d’études nordiques, 1990), 94. On whales, see Clément, *La Zoologie des Montagnais*, 541 & 554, where he notes that the suffix *-mekʰ* means fish. In this respect, Montagnais taxonomy agreed with that of seventeenth century European natural historians who also tended to classify whales as fish, see Nancy Senior, “Of Whales and Savages. Reflections on Translating Louis Nicolas’ *Histoire naturelle des Indes occidentales*,” *Meta*, Vol. XLIX, No. 3 (2004), 465.

import the language of European classification to define the animal and plant vocabulary, as when he defines *mikδaihau* as “poisson, espèce de carpe.”<sup>122</sup>

The explicit taxonomic terms tend to reinforce observations made by anthropologists that have studied contemporary Montagnais knowledge of animals.<sup>123</sup> Serge Bouchard and José Mailhot, in their seminal “Structure du Lexique: Les Animaux Indiens,” suggest that the Montagnais classification of animals begins with a clear distinction between domesticated animals of European origin, associated with white people, and all other animals, considered “Indian” animals.<sup>124</sup> The former is limited to two entries in the Dictionnaire, *kδkδch* (“pourceau”) and *kachatchichich* (“chat”).<sup>125</sup> Among the Montagnais of Mingan, according to Bouchard and Mailhot, only the latter “Indian” animals are subject to detailed classification, and they are broken down into six super-generic classes of animal: *awe.hi.h* (four legged animals), *missip* (waterfowl), *pine.hi.h* (birds), *name.h* (fish), *ha.čime.w* (insect), and *mantu.h* (animals with malevolent power).<sup>126</sup> While the taxonomic system is never mapped out in Silvy’s *Dictionnaire*, it includes all but *missip*. *Aδesis* (“animal, bête terrestre”), *pirechich* (“petit oiseau”),

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<sup>122</sup> Silvy, *Dictionnaire*, 74.

<sup>123</sup> The two most important discussions of Montagnais taxonomy and classification are Serge Bouchard and José Mailhot, “Structure du Lexique: Les Animaux Indiens,” *Recherches Amérindiennes au Québec*, Vol. 3, No. 1-2 (1973), 39-67; and Clément, *La Zoologie des Montagnais*.

<sup>124</sup> Bouchard and Mailhot, “Structure du Lexique,” 39.

<sup>125</sup> Silvy, *Dictionnaire*, 61 & 43.

<sup>126</sup> Bouchard and Mailhot, “Structure du Lexique,” 41.

*names* (“poisson”), *satchimeu* (“maringouin”), and *manit8chich* (“bestioles, comme des fourmis, etc...”) are present, although the last two have been defined by Silvy in a somewhat different manner.<sup>127</sup> With respect to waterfowl, Silvy offers a generic term for duck: *irinichip* (“canard”).<sup>128</sup> While it is difficult to gauge the extent to which Silvy may have mastered any Montagnais classificatory system, the number of the species listed in the dictionary, as well as the classificatory terms, suggest that he encountered it.

### *Mammals*<sup>129</sup>

Of the fauna found in the *Dictionnaire*, the mammals are translated with the greatest degree of certainty, no doubt reflecting their visibility and the central role they played in Montagnais life. The mammals included in Silvy’s *Dictionnaire* are those that featured prominently in Montagnais subsistence and trading practice, and the list is comparable with those presented in Louis Nicolas’ *Histoire Naturelle* and Pierre Boucher’s *Histoire Veritable et Naturelle*. Large terrestrial mammals are treated in detail, and four terms relating to varieties of deer are included: *attik8* (“cerf”), *irinatik8*

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<sup>127</sup> Silvy, *Dictionnaire*, 15, 134, 83, 143, & 67. Here, most of the definitions in the *Dictionnaire* could fill a classificatory role, although Silvy seems to attribute a more restrictive meaning to *satchimeu* than do Bouchard and Mailhot. Silvy’s definition of *satchimeu* is in line, however, with those of Fabvre (1695), Laure (1726), and McNulty et Basile (1981); see Clément, “Tableau 37: Traductions des Appellations de Certaines Catégories Taxonomiques Montagnaises,” *La Zoologie des Montagnais*, 433.

<sup>128</sup> Silvy, *Dictionnaire*, 38. Clément defines *inniship* as “canard, sarcelle en gén.; canard noir,” *La Zoologie des Montagnais*, 531.

<sup>129</sup> For the purposes of this paper, standard academic taxonomies will be used to outline a discussion of the dictionary’s contents. This is done primarily to avoid confusion, or an inappropriate characterization of historic and indigenous paradigms that are at best only partially described in the academic literature.

(“caribou”), *chaḡastechḡ* (“espèce de cerf”), and *mḡsḡ* (“orignal”).<sup>130</sup> *Chaḡastechḡ*, treated in an uncertain manner by Silvy, refers to the White-tailed Deer (*Odocoileus virginianus*).<sup>131</sup> The inclusion of Caribou, Moose, and White-tailed Deer together speaks to the diversity of ecological niches represented in the *Dictionnaire*.

Also included are large predators, including the wolverine, *kḡikḡchatcheḡ* (“blaireau”), as well as *mahikan* (“loup”), *maskḡ* (“ours”), and *ḡabaskḡ* (“ours blanc”); here again, the inclusion of *ḡabaskḡ*, the Polar Bear (*Ursus maritimus*), speaks to the broad geographic scale referenced in the dictionary.<sup>132</sup> Further, Silvy includes a reasonably comprehensive list of furbearers and other small game: the entries *amiskḡ* (“castor”), *chikakḡ* (“bête puante”), *kakḡ* (“porc-épic”), *makatchechiḡ* (“renard noir”), *nikik* (“loutre”), *ḡabichtanich* (“fouire, martre”), *ḡabḡch* (“lièvre”), *ḡatchask* (“rat musqué”), *ḡinaskḡ* (“siffleur”), *ḡtchekḡ* (“enfant du diable”), and *sikḡsiḡ* (“hermine”) speak to the diversity of species exploited for both food and trade.<sup>133</sup>

The remaining mammals, small terrestrial species and marine species, are treated in less detail, with only four entries for marine mammals and another four for small terrestrial species. There are two closely related words for seal, *atchikḡ* (“loup marin”)

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<sup>130</sup> Silvy, *Dictionnaire*, 22, 25, & 81. Clément, *La Zoologie des Montagnais*, 528, notes that *atik<sup>u</sup>* can refer to *cervidae* in general, or caribou in particular. Here, Silvy seems to give it a general definition while applying a more specific meaning to *irinatikḡ*.

<sup>131</sup> See Clément, *La Zoologie des Montagnais*, 554, for the entry *uāshḡsheshu* (“cerf de Virginie”).

<sup>132</sup> Silvy, *Dictionnaire*, 61, 63, 68, & 97. Notably, wild cats are not included.

<sup>133</sup> Silvy, *Dictionnaire*, 14, 28, 44, 64, 91, 97, 98, 99, 107, 113, & 145. See the appendices for English and scientific translations.

and *ashkhik8* (“loup-marin”), with neither referring to a particular species.<sup>134</sup> Similarly, *michtameg8* (“baleine”) refers to whales in general.<sup>135</sup> Only *m8s8meg8* (“marsouin blanc”) relates to a particular species, the Beluga (*Delphinapterus leucas*).<sup>136</sup> With respect to small terrestrial species, Silvy defines *anackata8e8* (“écureuil”) and *8apik8chich* (“souris”) in general terms, while *chamaskata8e8* (“écureuil volant”) and *k8ak8ak8ch* (“écureuil suisse”) are specific.<sup>137</sup>

Of the thirty entries for mammal species, the translations of *k8k8chatche8* (“blaireau”) and *8tchek8* (“enfant du diable”) are problematic; twentieth-century Montagnais usage, as well as that from historic sources, clearly identifies the former as Wolverine (*Gulo gulo*) and the later as a Fisher (*Martes pennanti*).<sup>138</sup> Silvy, however, translates the first by equating a “new world” species (wolverine) with perhaps a more familiar “old world” one (badger).<sup>139</sup> He translates the second in an ambiguous manner,

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<sup>134</sup> Silvy, *Dictionnaire*, 12, 18.

<sup>135</sup> Silvy, *Dictionnaire*, 73.

<sup>136</sup> Silvy, *Dictionnaire*, 81.

<sup>137</sup> Silvy, *Dictionnaire*, 12, 18, 73, & 81. Clément, *La Zoologie des Montagnais*, 527, notes that *anukutshâsh* (“écureuil en gén.; écureuil roux”) can be a general term for squirrels, but also notes it may refer specifically to the Red Squirrel (*Tamiasciurus hudsonicus*). This is an example of polysemy (a word having multiple meanings, in this case a generic and a specific meaning); see the discussion on polysemy in the section dealing with Silvy’s translation of bird names.

<sup>138</sup> Silvy, *Dictionnaire*, 61 & 113; Laure, *Apparat français-montagnais*, 154, 350, & 597; Clément, *La Zoologie des Montagnais*, 537 & 557.

<sup>139</sup> Although the Wolverine is circumpolar, its range in Eurasia is far removed from Silvy’s France, and thus makes Silvy’s introduction to the Wolverine an event exclusive to his experience of the “new world.”

using a term generally used for one of two other species, Wolverine or Striped Skunk (*Mephitis mephitis*).<sup>140</sup> There are three other definitions that agree with other historic dictionaries, but seem not to be represented in twentieth-century lexicons; these are *chamaskata8e8* (“écureuil volant”), *k8ak8ak8ch* (“écureuil, suisse”), and *m8s8meg8* (“marsouin blanc”).<sup>141</sup>

As one would expect, observations on the habits and uses of terrestrial mammals figure prominently in the *Dictionnaire*. Among the entries that relate to flora and fauna, the relative importance of the various mammal species quickly becomes apparent; they dominate the entries numerically, and unlike most of the entries that relate to non-mammals, they deal with particular species. Among the mammals, five species are dominant: beaver (*amisk8*), dogs (*attim8*), porcupine (*kak8*), bear (*mask8*) and moose (*m8s8*).<sup>142</sup> These entries contain observations on the ecology of the animals, dealing with sex and age, behaviour, habitat, seasonality, and movement over space. They also detail important aspects of the human/animal relationship, relating hunting techniques and technologies, use in artistic production, and commodification. Finally, there are a few hints at the religious and social nature of the interaction between the Montagnais and

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<sup>140</sup> See Laure, *Apparat français-montagnais*, 154 & 350, for more common translations of wolverine: “carcajou” and “enfant du diable.” “Enfant du diable” is and was used to refer to the Striped Skunk as well, see Thwaites, *Jesuit Relations*, Vol. 67, 343 n. 48. Silvy refers to the Striped Skunk as “bête puante,” Silvy, *Dictionnaire*, 28.

<sup>141</sup> Silvy, *Dictionnaire*, 25, 60, & 81. *M8s8meg8* translates literally as “moose fish.”

<sup>142</sup> See the appendices for the lists broken down by species. Of the 437 entries that reference some flora or fauna, one 180 deal with these five species.

their prey. Taken together, the entries suggest that the Jesuit missionary was exposed to a wide range of the skills necessary for life in the temperate and boreal forests. Perhaps most significant to the current discussion, the entries suggest that Antone Silvy not only acquired Montagnais knowledge of plants and animals, but also, that through his engagement and travel among the Montagnais, he most likely acquired some of the skills necessary to encounter, observe, and engage the flora and fauna himself.<sup>143</sup>

This intimate observation is borne out by much of the vocabulary relating to the Beaver (*amisk8*). Terms like *amisk8ar8* (“queue de castor”), *napemisk8kan* (“os de castor male”), and *atchemisk8* (“femelle de castor pleine”) detail anatomy and sex, while *patimisk8ets* (“castor de 3 ou 4 ans”) suggests an awareness of age.<sup>144</sup> There are a number of entries that relate direct observation of behaviour, including *8ka8itik8e8ets* (“les castors abattent du bois”), *kapastaten amisk8* (“le castor ramasse de la terre”), *nichisi8 amisk8* (“le castor fait une cabane pour lui seule”) and *tataba8eu amisk8* (“le castor demeure au fond de l’eau”).<sup>145</sup> A personal intimacy is conveyed by a number of entries that describe the beaver’s action in a personal manner, as “he;” *piragata8eu* (“il abat un arbre pour le manger”) and *tchimata8e8* (“il ronge un arbre”) are examples of this personal treatment.<sup>146</sup> In addition, entries speak to aggression between beavers, as does

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<sup>143</sup> Here we are reminded of Tim Ingold’s discussion of enskilment.

<sup>144</sup> Silvy, *Dictionnaire*, 14, 85, 7, & 126.

<sup>145</sup> Silvy, *Dictionnaire*, 45, 45, & 152.

<sup>146</sup> Silvy, *Dictionnaire*, 134 & 154.

*ḡaḡitchichisiḡ attai* (“la peau de castor est trouée de la dent d’un autre”); to the behaviour of the animal in winter: *ḡsagahateu* (“il sort de sa cabane pour aller sous la glace”); and to the fact that the rodent sharpens its teeth: *ḡaḡespḡtau* (“il aiguise ses dents, v.g. le castor”).<sup>147</sup> There is also vocabulary that relates to the hunting of beavers, including *nitechḡachtagan* (“ma hache à rompre la cabane à castor”), and *ni nipeskamaḡan* (“je chasse la nuit au castor, sous la glace”).<sup>148</sup> The latter is one of a number of definitions that describe winter hunting and behaviour of beavers. Finally, end uses reveal themselves, both in terms of food, as with *ḡsigamiskḡai* (“castor fumée”), and in terms of commodification, as with *ni nimatahiḡan* (“je porte tes castors, ta merchandise en traite”).<sup>149</sup> These entries represent a relatively insignificant group of observations when considered in terms of the body of knowledge Montagnais hunters would have possessed with respect to the beaver. They are, however, significant in that their presence in the dictionary suggests a broad conversation between missionary and Montagnais on the habits and life cycle of the beaver.

The entries relating to other mammals also convey an intimate observation of animal behaviour. With respect to bear (*maskḡ*), *agḡminen maskḡ* (“l’ours monte sur l’arbre pour manger des fruits”) and *papastineu michtigḡai* (“il serre l’arbre en montant, v.g. l’ours”) display a knowledge of the animal’s behaviour and food; further, they

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<sup>147</sup> Silvy, *Dictionnaire*, 100, 112, & 100.

<sup>148</sup> Silvy, *Dictionnaire*, 31 & 92.

<sup>149</sup> Silvy, *Dictionnaire*, 112 & 92.

establish the sort of observations of habitat that would allow for tracking.<sup>150</sup> Moose (*mδsδ*) are also the subject of an extensive vocabulary, again including observations that relate to the skills required for tracking the animals. *δichtimiδai* (“lieu marqué de l’original, bois rongé, etc...”), *ni michkδchkaman* (“je trouve la piste de l’original”), and *nit’amaman* (“je le fais fuire, en parlant, v.g. l’original”) suggest Silvy was directly exposed to the sorts of observations and skills needed to hunt.<sup>151</sup> Similarly, *δassataδeu* (“bois rongé de porc-épic”), set against similar observations relating to moose and beaver, suggests that the missionary may have learned to differentiate between the signs left by various animals, a skill that would no doubt draw upon knowledge of habitat, food, and behaviour.<sup>152</sup> An education of this sort is further suggested by a number of observations relating to animals in general: *δsiskamanan* (“le lieu où il a couché, mangé”), *δichtimiδ* (“il marque le lieu par ses pas”), and *ni kassδtahδan* (“je me cache, v.g. du gibier”) all reinforce the sense that hunting and observational skills were the subject of conversation between Montagnais and missionary.<sup>153</sup>

Phrases noting the breeding of various mammal species suggest an awareness of the temporality and behaviour surrounding reproduction. Entries like *aδematachkδek* (“les ours sont en chaleur”), *pineskδ* (“l’ours fait ses petits”), and *pineapδchiδ* (“le lièvre

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<sup>150</sup> Silvy, *Dictionnaire*, 11 & 126.

<sup>151</sup> Silvy, *Dictionnaire*, 106, 78, & 14.

<sup>152</sup> Silvy, *Dictionnaire*, 101.

<sup>153</sup> Silvy, *Dictionnaire*, 103, 106, & 46. These are but a sampling of a larger body of entries in Silvy’s *Dictionnaire*. For the complete list of this sort of vocabulary, see Appendix 7.

fait ses petits”) clearly document the observation of reproductive cycles among mammals.<sup>154</sup> Reproduction is also reflected in vocabulary relating to pregnancy and fetuses; *atchitchitik* (“embryon de cerf”) and *atches8* (“elle est pleine, la femelle d’original”) both display an anatomical knowledge of reproduction.<sup>155</sup> Finally, an awareness of sex exists in many of the entries on the various animal species; *isk8esk8e8* (“ourse”), *nape8* (“castor male”), and *m8stisk8e8* (“femelle d’original”) testify to this.<sup>156</sup>

The utility of the various mammal species is also relayed in the *Dictionnaire montagnais-français*. The use of animal products for food and skin is ubiquitous; entries such as *ni g8task8an* (“je goûte, je tâte de l’ours”), *ni nitchik8eg8pikan* (“je fais un robe de loutre”), and *ni kassi8atchinan astik8oian* (“j’essuie la graisse d’une, peau de loup-marin”) detail the utility of many of the species included by Silvy.<sup>157</sup> Another entry, *tchides8 kak8a* (“le porc-épic vesse, siffle en rôtissant”), describes the cooking of game.<sup>158</sup> There is also a sizeable vocabulary relating to the use of dogs. Among others, *ni kitimahau attim8* (“je rends le chien paresseux”) and *k8ech k8ech* (“se dit pour appeler les chiens”) speak to the training of the animals, while *kikin8ia8eu* (“le chien sent la bête”) and *m8s8sti8 attim8* (“le chien est bon à l’original”) describe their participation in

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<sup>154</sup> Silvy, *Dictionnaire*, 16, 136, & 136. References to reproduction among non-mammals will be dealt with later.

<sup>155</sup> Silvy, *Dictionnaire*, 20 & 7.

<sup>156</sup> Silvy, *Dictionnaire*, 39, 85, & 81.

<sup>157</sup> Silvy, *Dictionnaire*, 34, 91, & 46.

<sup>158</sup> Silvy, *Dictionnaire*, 155.

the hunt.<sup>159</sup> Perhaps less noted in many discussions of historic animal use, however, is the use of animal parts in artistic production. *Mikδasigan* (“queue de cerf teinte en rouge”), *tisiδek* (“ils prennent teinture, les brins de porc-épic”), and *akopabeδ matatas* (“la robe est bordée de porc-épic”) are offered as observations on artistic life among the Montagnais.<sup>160</sup>

Taken individually, these observations may seem trivial, and do little to further the study of either Montagnais ecological knowledge or the ecology of the mammals of the Québec-Labrador Peninsula. Seen collectively, however, they testify to the existence of an extensive and detailed conversation between the missionary and his Montagnais hosts on the subject of the non-human world. This conversation incorporated an appreciation of animal behaviour and habitat that was unusual for Europeans in the seventeenth-century.<sup>161</sup> While many have written on the exploitation of terrestrial mammals in the seventeenth century, Silvy’s *Dictionnaire* demonstrates that narratives of depletion and exploitation do not suffice; the French, by virtue of their Algonkian hosts, were being educated in the fauna of the Canadian colony. The scope of this education, however, extended beyond those mammals that feature heavily in historical writing on

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<sup>159</sup> Silvy, *Dictionnaire*, 58, 58, 53, & 81. There is only one reference to dogs interacting with an animal outside of moose: *segahδgδ attimδ* (“le chien en est piqué”), 142, referring to an encounter with a Porcupine (*Erithizon dorsatum*).

<sup>160</sup> Silvy, *Dictionnaire*, 74, 158, & 13. See Appendix 7 of terminology relating to the Porcupine (*kakδ*) for other vocabulary relating to the decorative use of quills.

<sup>161</sup> Berry, “The Delights of Nature,” 227.

the fur trade to incorporate the other fauna of the temperate and boreal forests: birds, reptiles and amphibians, and insects.

### *Birds*

The *Dictionnaire montagnais-français* has eighty-two entries that refer to a type of bird, and a further thirty three observations on bird behaviour, anatomy, and hunting technique. The vocabulary relating to birds further emphasizes the breadth of the exchange of ecological knowledge between Silvy and the Montagnais, and highlights the challenges that faced Silvy as he sought to translate a foreign world. The eighty-two entries represent a more comprehensive treatment of avian biodiversity than is discussed in Pierre Boucher's *Histoire naturelle et véritable* or Louis Nicolas' *Histoire Naturelle*. Indeed, Silvy's compilation is comparable in scope to, and often greater than, other seventeenth-century treatises on bird life in North America.<sup>162</sup> The bird list also highlights the continued importance of Montagnais language and ecological knowledge in engaging the history of cultural contact and knowledge exchange; Silvy was unable to accurately translate many of the bird species and it is only through modern Montagnais

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<sup>162</sup> On early ornithological work in New France, see Jean Paquin, "History of Ornithology, The Development of ornithology in Québec: from its origins until 1960," in Gauthier and Aubry, *The Breeding Birds of Québec*, 5-6. On the English colonies in North America, see Kevin R. McNamara, "The Feathered Scribe: The Discourses of American Ornithology before 1800," *The William and Mary Quarterly*, 3<sup>rd</sup> Ser., Vol. 47, No. 2 (Apr., 1990), 210-234. McNamara notes that Thomas Hariot's list of eighty-six birds (1588) "far exceeds any list produced in New England during the next hundred years," 219.

lexicons that the historian is able to uncover much of what Silvy's *Dictionnaire* has to offer.

Silvy's difficulty in translating the bird species is apparent at first glance. Of the eighty two entries, thirty one are translated simply as "espèce d'oiseau," "espèce de canard," or some other similar variant.<sup>163</sup> Many of these birds can be identified through the Montagnais word; for example, Silvy's *tchistchimanisiδ* ("espèce d'oiseau") clearly refers to the Belted Kingfisher (*Ceryle alcyon*), *chiischiminsuu* in modern East Cree, Southern dialect.<sup>164</sup> Others are more difficult and have yet to be identified, in part because the collection and construction of *Innu-aimun*, East Cree, and *Attikamekw* lexicons is ongoing, and no doubt in part because of historic language change and species extinction.

Some of the entries in the *Dictionnaire* effectively translate the specific meaning. Entries like *ahassδ* ("corneille"), *kakatchiδ* ("corbeau"), and *michiheδ* ("coq d'Inde") accurately convey specific meaning; the first refers to the American Crow (*Corvus brachyrhynchos*), the second the Common Raven (*Corvus corax*) and the third the Wild Turkey (*Meleagris gallopavo*).<sup>165</sup> With respect to the first example, *ahassδ*, it is probable that Silvy was drawing on awareness of a familiar Eurasian species to correctly designate

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<sup>163</sup> See Appendix 1. Other variants include "espèce de plongeon," and "espèce de plongeur."

<sup>164</sup> Ella Neeposh et al., eds., *East James Bay Cree Dictionary (electronic version)*, *Southern Dialect* (Chisasibi: Cree School Board, 2004). See the Appendix 1 for other examples.

<sup>165</sup> Silvy, *Dictionnaire*, 11, 44, & 72; Clément, *La Zoologie des Montagnais*, 527, 532; "Unpublished Betsiamites Innu Bird Names List," entry: *mishileu*, *mishineu* ("dinde").

an endemic American bird species. This is also the case with entries like *mimi8* (“tourterelle”), which likely referred to the Passenger Pigeon (*Ectopistes migratorius*).<sup>166</sup> At times, this type of translation leads him astray, as it does when he translates *kachakarau* as “étourneau” (starling); European Starlings (*Sturnus vulgaris*) would not arrive in North America until 1890, reaching Québec in 1917.<sup>167</sup>

Silvy translates many of the other entries in a generic manner, where the bird is noted to be a “chat-huant” (owl), a “pique-bois” (woodpecker), or a “grue” (crane). At times, as with *papachteu* (“pique bois”), *tcheachk8* (“mauve [goéland]”), and *pire8* (“perdrix”), the generic nature of the translation appears to be appropriate in that the Montagnais words also carry generic meaning.<sup>168</sup> At other times, a general definition obscures a more specific meaning, as is the case with Silvy’s translation of *8abigarau* as “duc, oiseau;” the translation is general, meaning owl or bird, while the word is specific to the Snowy Owl (*Nyctea Scandiaca*).<sup>169</sup> To further confuse the matter, many of the

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<sup>166</sup> Silvy, *Dictionnaire*, 75. Today, the term *umimiu* refers to the Rock Dove (*Columba livia*), or possibly the Mourning Dove (*Zenaida macroura*). The Mourning Dove’s range did not extend into what is now Québec in the seventeenth-century. The Rock Dove was introduced by the French in the early seventeenth century, but most likely was found only locally around French settlements. See Hélène Lévesque, “Rock Dove,” in Gauthier and Aubry, *Breeding Birds of Québec*, 572-573; Jean Paquin, “Mourning Dove,” in Gauthier and Aubry, *Breeding Birds of Québec*, 577; and Michel Gosselin and Michel Robert, “Passenger Pigeon,” in Gauthier and Aubry, *Breeding Birds of Québec*, 1158-1159.

<sup>167</sup> Silvy, *Dictionnaire*, 43; Richard C. Cotter, Derin Henderson, and Michael Spencer, “European Starling,” in Gauthier and Aubry, *Breeding Birds of Québec*, 829. *Kachakarau* may be an historic variant of *ishâtshâkânui*, which Clément identifies as referring to both the Rusty Blackbird (*Euphagus carolinus*) or the Common Grackle (*Quiscalus quiscula*); see Clément, *La Zoologie des Montagnais*, 550.

<sup>168</sup> Silvy, *Dictionnaire*, 121, 47, & 134. “Goéland” (Gull), inside the square brackets, is a notation made by the editors of the published edition to clarify the meaning of Silvy’s “mauve.”

<sup>169</sup> Silvy, *Dictionnaire*, 97.

words given general definitions by Silvy are polysemic; that is, they may in fact carry both generic and specific meanings. In these cases, Silvy's translation often tends to accurately convey the general meaning while obscuring the more specific meaning.<sup>170</sup> For example, Silvy translates *mδak* as "huard," conveying the generic taxonomic meaning, loon, but obscuring its specific meaning, Common Loon (*Gavia immer*).<sup>171</sup> Similarly, Silvy's translations of *irinichip* ("canard"), *mitchisiδ* ("aigle"), *niska* ("outarde"), and *δapireδ* ("perdrix blanche") do not convey the specific meanings that accompany those general meanings that he correctly conveys.<sup>172</sup> Unfortunately, it is impossible to discern whether he was aware of the polysemy but was unable to translate species that had yet to be named in French; or conversely, whether he was attempting to offer a specific definition, again for a species that had yet to have a specific French name.<sup>173</sup> In either case, Silvy's translation appears to have stripped a layer of meaning from the Montagnais term.

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<sup>170</sup> For a discussion of this occurrence in Montagnais taxonomy, see Bouchard and Mailhot's discussion of "la polysémie," in "Structure du Lexique," 45-47. Polysemy refers to a word having multiple meanings.

<sup>171</sup> Silvy, *Dictionnaire*, 79. See Bouchard and Mailhot, "Structure du Lexique," 45, and Clément, *La Zoologie des Montagnais*, 543, for discussion of the polysemy associated with the term muâk<sup>u</sup>.

<sup>172</sup> Silvy, *Dictionnaire*, 38, 74, 94, & 101. Respectively, they may refer to either duck (general) and Black Duck (*Anas rubripes*); eagle (general) and Bald Eagle (*Haliaeetus leucocephalus*) or Golden Eagle (*Aquila chrysaetos*); goose (general) or Canada Goose (*Branta canadensis*); and ptarmigan (general) or Willow Ptarmigan (*Lagopus lagopus*). See Appendix 1 for the references from which these translations were drawn.

<sup>173</sup> Even in the descriptive treatises, there is a tendency to use only generic names for birds yet to be classified by European science. See for example, Pierre Boucher, *Histoire véritable et naturelle*, 68-73.

With other bird species, Silvy offers a brief description in place of a specific or generic term. The description may describe the anatomy or coloration of the bird, or refer to another comparable bird; he does this when he defines *achimδak* (“plongeon à long bec”), *agδahigan* (“canard au bec rouge”), and *aihaδeδ* (“espèce d’oiseau, comme une sarcelle”).<sup>174</sup> Again, through the use of Montagnais lexicons one is able to supply more specific meanings; with respect to the previous examples, these are Red Throated Loon (*Gavia stellata*), Surf Scoter (*Melanitta perspicillata*), and Long-tailed Duck (*Clangula hyemalis*).<sup>175</sup> In one case, Silvy appears to enter the same species twice, with different definitions. He defines *agδsameseδ* as “oiseau semblable à l’aigle,” and *akδsameteδ* as “oiseau;” both likely refer to the Osprey (*Pandion haliaetus*), *akushamesheu* in modern Betsiamites dialect.<sup>176</sup> As with the generic terms above, the descriptive definitions can also obscure the presence of polysemy, leaving it again unclear what sense of the word Silvy was attempting to translate. This is the case with his translation of *δsigδ* (“plongeon à long bec armé de dents”); Clément suggests the modern Mingan variant, *ûshuk<sup>h</sup>*, can refer to either merganser (generic), or the specific

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Of course this is also the case with mammals, but does less to obscure historical meaning because the number of species is so much smaller (for example, identifying

<sup>174</sup> Silvy, *Dictionnaire*, 7, 9, & 11.

<sup>175</sup> Clément, *La Zoologie des Montagnais*, 527 (Red Throated Loon) & 530 (Long-tailed Duck), and Neeposh et al., eds., *East James Bay Cree Dictionary*, entry for *akwaahikan* (Surf Scoter Duck).

<sup>176</sup> Silvy, *Dictionnaire*, 9 & 13; Lynn Drapeau, *Dictionnaire Montagnais-français* (Sillery: Presses de l’Université du Québec, 1991).

Red-Breasted Merganser (*Mergus serrator*).<sup>177</sup> Again, the Montagnais word carries the authoritative meaning, although the descriptive entries do provide evidence of keen and accurate observation of the bird life encountered. This keen observation is especially evident in those definitions where he draws attention to the colour of a bird's legs or bill, as he does with the entries *minahik8* ("canard noir aux pieds rouges") and the previously mentioned *ag8ahigan* ("canard au bec rouge").<sup>178</sup>

In the *Dictionnaire*, Silvy's selection of birds seems to favour game species, again suggesting his observation was closely linked to his experiences with Montagnais hunting practice. Of the eighty two entries, at least thirty are game birds.<sup>179</sup> Other birds that are included tend to be those that are conspicuous, like woodpeckers, hummingbirds, owls and other birds of prey, and the *corvidae* (crow family).<sup>180</sup> Songbirds are virtually absent from Silvy's list; *chachak8anipechich* ("espèce d'oiseau"), likely referring to one or more species of swallow, the aforementioned *kachakarau* ("étourneau") and *mimi8* ("tourterelle"), *8aberik8chich* ("petits oiseaux blancs"), and *tchatchakarau* ("espèce

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<sup>177</sup> Silvy, *Dictionnaire*, 112; Clément, *La Zoologie des Montagnais*, 556.

<sup>178</sup> Silvy, *Dictionnaire*, 75 & 10.

<sup>179</sup> The presence of fourteen entries that do not seem to be represented in modern Montagnais lexicons means this is a very conservative estimate. Game birds here refers to terrestrial species, like grouse and ptarmigan, as well as waterfowl.

<sup>180</sup> See the Appendix 1. Woodpeckers mentioned include *meme8*, *papachteu*, and *papag8tchite8*; the hummingbird included is *r8r8kas8*; owls and birds of prey include *ag8samese8*, *ak8samete8*, *hohomisi8*, *kakabichi8*, *8abigarau*, *pipunasti8*, and possibly *pip8nireu*; corvids include *ahass8*, *kakatchi8*, *8ikatchan*, and possibly *misk8abitch* and *titisi8*.

d’oiseau”) are the only specific non-corvid songbirds listed.<sup>181</sup> Possibly, the only reference to warblers, highly vocal summer residents, is *δisδaδaspikau* (“espèce d’oiseau”), likely referring to some sort of “yellow bird.”<sup>182</sup>

Silvy includes thirty-three phrases that relate observations on bird anatomy, behaviour, reproduction, and hunting technique. Again, these reinforce the notion that Antoine Silvy’s work among the Montagnais entailed extensive discussion about the non-human world, as well as the opportunity to undertake informed, and possibly guided, observation. A significant number of these observations relate to reproduction, most likely because of the importance of gathering eggs for food and the vocal and visible nature of many of the activities that surround nest building, territorial defense, and the raising of young by birds. The entries *itδechiδ* (“il chante, v.g. l’oiseau”), *δatchichtδnitcheδ* (“il fait le nid”), *aδimatchihaδiδek* (“ils font leurs petits, les oiseaux s’accouplent”), *pineaδeu* (“l’oiseau pond”), *δatchichtδnapiδ* (“il est dans son nid”), *piratchaniδichiδ δaδa* (“oeufs couvés”), and *pachkaδesiδ* (“l’oiseau est éclos”) briefly describe the major reproductive activities undertaken by birds during the spring and summer breeding season.<sup>183</sup> There are also particular references to duck eggs, *chichipaδau* (“oeuf de canard”), and partridge (grouse) eggs, *pireδau* (“oeuf de

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<sup>181</sup> Silvy, *Dictionnaire*, 24, 43, 75, 97, & 154; see the Appendix 1 for translations. Again, given the number of undetermined entries, there could very well be a few more.

<sup>182</sup> Silvy, *Dictionnaire*, 57; Clément, *La Zoologie des Montagnais*, 555, where he notes the morpheme *uîshâu-* means yellow.

<sup>183</sup> Silvy, *Dictionnaire*, 42, 99, 15, 136, 99, 134, & 117.

perdrix”).<sup>184</sup> Other seasonal occurrences are noted; *pachkδ* (“il mue, v.g. l’oiseau”) speaks to the annual molt, possibly of waterfowl, while *eapitamatchiδetan* (“eau, fleuve pleine de canes”) may speak to the gatherings that occur during migration.<sup>185</sup>

The aim here has not been to attempt to assess seventeenth century Montagnais knowledge of avian ecology. The general observations reveal little about the depth of Montagnais knowledge; nor do they provide for anything more than a relatively superficial examination of the role this knowledge played in informing Montagnais life. They do, however, speak to the communication that took place between the French missionaries and their hosts. Silvy is able to provide Montagnais names of bird species, and observations about avian behaviour in the Montagnais language, only because, at some point in time, the Montagnais took the Jesuits into their confidence. Further, close contact with Montagnais life allowed for observation of the natural world; Silvy’s keen observation and accurate description of bird species was no doubt possible in large part because of his travels and experiences living among the Montagnais.

#### *Fish and Edible Aquatic Invertebrates*

Silvy’s translation of the Montagnais vocabulary relating to fish and edible aquatic invertebrates displays a far greater certainty than did his efforts with respect to birds. The *Dictionnaire* includes twenty five entries that refer to a type of fish, and three

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<sup>184</sup> Silvy, *Dictionnaire*, 27 & 134.

<sup>185</sup> Silvy, *Dictionnaire*, 117 & 31.

that reference aquatic invertebrates; for all of these Silvy is able to provide at least a generic translation.<sup>186</sup> Many of the species of fish included are trans-Atlantic, and thus already familiar to many Europeans. Given that commercial fishing provided the impetus for much of the European presence on the eastern seaboard of North America, it is not surprising that marine species would be well known. In addition, fish provided Europeans with an important food source. As such, it is little surprise to see the principal food species like *anaδichiδ* (“morue”), *δchachδamegδ* (“truite saumonée, saumon”), *nameδ* (“gros esturgeon”), and *pimisδ* (“anguille”) correctly identified.<sup>187</sup> Many of these marine species are trans-Atlantic, or have close relatives in European coastal waters, as is the case with all of the aforementioned food species.<sup>188</sup> Holarctic freshwater fish species are also included; *kinδcheδ* (“brochet”) refers to the Northern Pike (*Esox lucius*), a fish found in Eurasia and North America.<sup>189</sup> Other freshwater species have close European relatives, and thus allow for comparative identifications on the part of the missionary; *aδatisiδ* (“poisson semblable à la barbue”), *astaδeu* (“poisson court, comme la perche”),

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<sup>186</sup> See the Appendix 2.

<sup>187</sup> Silvy, *Dictionnaire*, 14, 25, 83, 135.

<sup>188</sup> Another somewhat less obvious example is *nataδabistinagan* (“loche, poisson”). Both Clément and the compilers of the “Unpublished Betsiamites Innu Fish Names List,” suggest modern variants on this word may refer to Rock Eel (“siguouine de roche,” “anguille de roche,” *Pholis gunnellus*), a trans-atlantic species. See Clément, *La Zoologie des Montagnais*, 544; Drapeau, *Dictionnaire Montagnais-français*, entry for *natuapissinakan*; Makushok, V.M., “Pholididae,” in P.J.P Whitehead et al., eds., *Fishes of the Northeastern Atlantic and the Mediterranean*, Vol. 3 (Paris: UNESCO, 1986), 1124-1125.

<sup>189</sup> Silvy, *Dictionnaire*, 53; E.J. Crossman, “Taxonomy and Distribution,” in J.F. Craig, ed., *Pike biology and exploration* (London: Chapman and Hall, 1996), 1-11.

and *kikank8e8* (“poisson grand comme une carpe”) all suggest a comparison by Silvy with already familiar Eurasian species.<sup>190</sup> The aquatic invertebrates *atchatche8* (“grosse écrouele”) and *ka8atchi8* (“oursin, châtaigne de mer”) are both distinctive and seem to pose little problem to Silvy, who may have been exposed to similar species in Europe.<sup>191</sup> His inclusion of these species, American Lobster (*Homarus americanus*) and Sea Urchins (Class *Echinoidea*) respectively, suggests that the Montagnais may have gathered them for food. Finally, Silvy includes a generic term for shellfish: *essai* (“coquille”); Clément’s translation of the modern Mingan variant of this term suggests Silvy was correct in applying a general meaning to the term.<sup>192</sup>

The composition of the species list suggests Silvy was exposed to both marine and freshwater fishing among the Montagnais. The *Dictionnaire* also includes thirty-two additional entries that speak to the Montagnais use of fish, as well as describing fish anatomy, behaviour, reproduction, and fishing techniques. Most of the entries relate to the use of fish for food; words like *achichkames* (“poisson frais”) and *achinames* (“poisson puant”) describe the state of the fish, while others, like *namestak* (“poisson fumé”), *pas8 pimiss8* (“anguille sèche”), and *askames* (“poisson non-boucané, frais ou salé”) detail different methods of preparing and preserving fish.<sup>193</sup> Silvy also mentions

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<sup>190</sup> Silvy, *Dictionnaire*, 15, 19, & 52.

<sup>191</sup> Silvy, *Dictionnaire*, 6 & 45.

<sup>192</sup> Silvy, *Dictionnaire*, 31; Clément, *La Zoologie des Montagnais*, 531.

<sup>193</sup> Silvy, *Dictionnaire*, 7, 7, 83, 125, & 8. Note the presence of both Amerindian (smoked and dries) and European methods (salted) of preserving fish.

the use of fish for making glue, with the entry *nameskδi* (“colle de poisson”).<sup>194</sup> A number of entries describe fishing technique, or related technologies are also included; *ni δasδan* (“je peche au harpon, j’éclaire avec le flambeau les pêcheurs”), *ni pitchibδraganikan* (“je pêche à la nasse”), and *ni pipδnichin* (“je pêche sous la glace”) describe fishing techniques that also provide insight into the time of day, season, and technology involved.<sup>195</sup>

Of greater significance to the goal of placing indigenous ecological knowledge, however, is the inclusion of a number of entries that detail fish behaviour and reproduction. Silvy’s entries *agδabδgδ names* (“le poisson territ avec la marée”), *amiδets namessets* (“les poissons sont en troupe, frayent ensemble”), and *assipariδetch* (“ils sont en bande, les poissons”) point to both the intimate observation of non-human behaviour and discussion between French and Montagnais about that behaviour.<sup>196</sup> *Agδabδgδ names* (“le poisson territ avec la marée”) also suggests an important event in the reproductive cycle of many fish species, spawning. The awareness of the reproduction of fish is further suggested by the entry *pineiakδ* (“le poisson est éclos de l’oeuf”).<sup>197</sup>

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<sup>194</sup> Silvy, *Dictionnaire*, 83.

<sup>195</sup> Silvy, *Dictionnaire*, 102, 128, & 134. See the Appendix 7 for further vocabulary that relates to fishing technology and technique.

<sup>196</sup> Silvy, *Dictionnaire*, 10, 14, & 19.

<sup>197</sup> Silvy, *Dictionnaire*, 136.

*Reptiles and Amphibians*

The *Dictionnaire montagnais-français* includes seven Montagnais terms for snakes, three for frogs, one for turtles, and another three for lizards. With respect to these entries, Silvy's translations fail to convey any sort of specific meaning. The entries for snakes, *aïasatsisiδ*, *anitδitinebikδ*, *chichigδeδ*, *kδtcheδitδnebikδ*, and *namepirechich* are all translated simply as "espèce de couleuvre," while *kinebigδ* is translated as "couleuvre" and *kinebitchitchiδ* is translated as "espèce de petite couleuvre."<sup>198</sup> The frog vocabulary is much the same, with *arik* defined simply as "grenouille," *δisδanaskδanigδechich* as "espèce de grenouille," and *teteδ* as "espèce de grosse grenouille."<sup>199</sup> With respect to the remaining vocabulary, *mistinakδ* is translated as "tortue," while *kitiskatakδ* and *δtchichkatatau* are defined simply as "lézard."<sup>200</sup> The only definition that attempts to convey any sort of detail is that for *kiskatatakδ*, which Silvy defines with the somewhat improbable definition "grand lézard écaillé."<sup>201</sup> Indeed, with the last three definitions it is probable that Silvy confuses lizards with salamanders; this is suggested by Clément's translation of *utshîshkatâtâku* as a "sorte de

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<sup>198</sup> Silvy, *Dictionnaire*, 9, 14, 27, 61, 83, 53, & 53.

<sup>199</sup> Silvy, *Dictionnaire*, 17, 108, & 157.

<sup>200</sup> Silvy, *Dictionnaire*, 58 & 109.

<sup>201</sup> Silvy, *Dictionnaire*, 56.

salamandre.”<sup>202</sup> With respect to Silvy’s “grand lézard écaillé,” one can only speculate that he was either mistaken, or was possibly referring to the Five-lined Skink (*Eumeces fasciatus*), a reptile found today in Vermont and Southern Ontario.<sup>203</sup>

While Silvy’s translations do little to suggest any specific meaning, an analysis of the Montagnais vocabulary suggests the identity of four of the entries; again, a greater degree of authority lies in the Montagnais voice. From Clément, it can be suggested that *anik* (“crapaud d’Amérique”), *teteu* (“grenouille léopard, grenouille verte”), *utshishkatâtaku* (“sorte de salamandre”), and *atshinepeku* (“couleuvre en gén.; couleuvre rayée”) point to the presence of the American Toad (*Bufo americanus*), the Northern Leopard Frog (*Rana pipiens*) and the Green Frog (*Rana clamitans*), and the Common Garter Snake (*Thamnophis sirtalis*) in the *Dictionnaire*.<sup>204</sup>

On the one hand, the number of entries for reptiles and amphibians is small in comparison to those for mammals, birds, and fish. In addition, the presence of only one descriptive term, *titipahim8* (“il se roule, se tortille, v.g. serpent”), indicates that they most likely were not the subject of extensive discussion. On the other hand, the number

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<sup>202</sup> Clément, *La Zoologie des Montagnais*, 557. Of course, should this observation apply to Silvy’s translation of *kiskatatak8* as “grand lézard écaillé,” Silvy’s description becomes patently dishonest as salamanders lack scales.

<sup>203</sup> There is no evidence for the Five-lined Skink, other than taking Silvy at his word with respect to scales. If, however, one credits his observation as accurate, then it could suggest that the Skink was once present in what is now Quebec. On the current range of the Five-lined Skink in the northeastern United States and southern Ontario, see E. Vanwormer, “*Eumeces fasciatus*,” *Animal Diversity Web* (online), at [http://animaldiversity.ummz.umich.edu/site/accounts/information/Eumeces\\_fasciatus.html](http://animaldiversity.ummz.umich.edu/site/accounts/information/Eumeces_fasciatus.html).

<sup>204</sup> Clément, *La Zoologie des Montagnais*, 526, 550, 557, & 529.

of entries also suggests that their presence in the *Dictionnaire* may not be insignificant. Given the low biodiversity in the region, it is still possible that the Silvy's entries represent a significant portion of the reptiles and amphibians in the region; this is particularly true of the snakes: Silvy's seven entries equals in number those found breeding in twentieth-century Quebec.<sup>205</sup> Further, the mere suggestion of an exchange of knowledge surrounding reptiles and amphibians is important in that it emphasizes the scope of the exchange of ecological knowledge between the Montagnais and the French in the seventeenth-century.

### *Invertebrates*

Silvy includes twenty two entries for different invertebrate types; in addition, a further ten entries relate to invertebrates. Three of these entries have already been mentioned in the above discussion on fish and edible aquatic invertebrates and will not be discussed further here. The remaining nineteen entries include flying insects, worms and larvae, spiders, ants, and parasites and pests. Further, the entries include a reference to an important taxonomic category, *manit8chich* ("bestioles, comme des fourmis, etc..."), although Silvy's definition of this category likely obscures the significance placed upon these creatures by the Montagnais.

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<sup>205</sup> See J.R. Bider and S. Matte, *The Atlas of Amphibians and Reptiles of Quebec* (Québec: St. Lawrence Valley Natural History Society and the Ministère de l'environnement et de la faune, 1996).

Silvy has little difficulty translating most of the vocabulary; words like *amδ* (“abeille, guêpe”), *erigδ* (“fourmis”), *kδach* (“sauterelle”), and *piskδerigδ* (“araignée”) are clear in their translation, no doubt a result of the ubiquitous nature of these invertebrates.<sup>206</sup> *δaδachtesiδ* (“mouche luisante”), the firefly, is also included.<sup>207</sup> Other entries relate to pests and parasites that clearly were a source of much discomfort for the missionary and his Montagnais hosts: together, *agakδiek* (“sangsue”), *ikδa* (“pou”), *michikδ* and *papikδ* (“puce”), *pikδchau* (“moussiquille”) and *satchimeu* (“maringouin”) speak to many of the invertebrate parasites and pests encountered in the temperate and boreal forests.<sup>208</sup> Much of the vocabulary that accompanies the list of insect types refers to the problem of parasites: four entries refer to having fleas or lice, while *nδ michigδmachan* (“j’ai la peau marqué des puces”) describes the consequences of fleas on one’s appearance.<sup>209</sup> With respect to mosquitoes, the entry *ni δaspaδamigδnanak satchimeδek* (“les maringouins nous empêchent de dormir”) describes the difficulty

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<sup>206</sup> Silvy, *Dictionnaire*, 14, 31, 59, & 135. See Appendix 3 for complete list.

<sup>207</sup> Silvy, *Dictionnaire*, 100.

<sup>208</sup> Silvy, *Dictionnaire*, 9, 37, 72, 123, & 143. See Appendix 3 for English and Scientific translations (where possible).

<sup>209</sup> See the Appendix 7 for the list of words that are translated “j’ai des...;” Silvy, *Dictionnaire*, 73.

sleeping during mosquito season, while *ni pisaman* (“je fume les maringouins”) describes a method of repelling the insects.<sup>210</sup>

Some of Silvy’s entries display a sensibility to insect habitat, reproduction, as well as their place in the forested ecosystem. *amδactchichton* (“ruche”) refers to a beehive while *pinateu* (“elle est assise, posée, v.g. la mouche”) describes a sitting fly.<sup>211</sup> Interestingly, Silvy’s entry for the Montagnais word for maggot, *δskδeu* (“grosses mouches noires sur la chair; *item* les vers engendrées par ces mouches”), links maggots and the “large black flies” that gather on flesh, demonstrating an awareness of insect metamorphosis and reproduction.<sup>212</sup> The definition for *mδteu* (“gros ver qui ronge le bois”) describes the habitat and food of the invertebrate in question.<sup>213</sup>

Again, Silvy’s translations may obscure polysemic meaning; Silvy defines *erigδ* (“fourmis”) in a more specific manner than do contemporary anthropologists who suggest that the Mingan variant, *enuku* refers to ants and spiders generally.<sup>214</sup> Bouchard and Mailhot suggest *še.čime.w*, a variant of Silvy’s *satchimeu*, is a taxonomic category referring to insects, a level of meaning missing from Silvy’s definition simply as

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<sup>210</sup> Silvy, *Dictionnaire*, 102 & 134. It is possible Silvy’s definition for *ni pisaman* ignores the use of a certain plant to smoke the mosquitoes; see Neeposh et al., eds., *East James Bay Cree Dictionary*, entry for *pishimaan*, which they define as “grass burnt to keep the flies away.”

<sup>211</sup> Silvy, *Dictionnaire*, 14 & 136.

<sup>212</sup> Silvy, *Dictionnaire*, 113.

<sup>213</sup> Silvy, *Dictionnaire*, 81. Silvy’s definition is interesting, clearly implying a large worm. The modern East Cree (Southern Dialect) variant, *muuhteu*, refers to a termite; see Neeposh et al., eds., *East James Bay Cree Dictionary*, entry for *muuhteu*.

<sup>214</sup> Clément, *La Zoologie des Montagnais*, 530.

“maringouin.”<sup>215</sup> Similarly, Silvy appears to equate *michikδ* and *papikδ*, defining them both as “puce;” further, he translates three distinct phrases, *nδ michigδmin*, *n'δpapikδmin*, and *ni papechkδachan*, in an identical manner as “j'ai des puces.”<sup>216</sup> Clément and Bouchard and Mailhot suggest that the two words *mîshuku* and *pâpuku* are distinct, defining them as the Dog Flea (*Trichodectes canis*) and the Bedbug (*Cimex lectularius*) respectively.<sup>217</sup>

Silvy's treatment of the taxonomic category *manitδchich* (“bestioles, comme des fourmis, etc...”) may also ignore a layer of meaning that endows small creatures with power as malevolent spirits.<sup>218</sup> Bouchard and Mailhot argue that the term *mantu.š* refers to an animal “à pouvoir maléfique;” the category can include not only invertebrates, but reptiles and rodents, and is defined not by the usual attributes that govern classification, but rather by the “hierarchic classification of malevolent power.”<sup>219</sup> Of course it is impossible to know whether Silvy failed to grasp this meaning, omitted the designation on purpose, recognized but ignored it, or whether the Montagnais themselves were

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<sup>215</sup> Bouchard and Mailhot, “Structure du Lexique,” 49. Within this grouping, they translate “maringouin” as *ka.ka.nika.te.t*.

<sup>216</sup> Silvy, *Dictionnaire*, 72, 111, & 123.

<sup>217</sup> Clément, *La Zoologie des Montagnais*, 542 & 546; Bouchard and Mailhot, “Structure du Lexique,” 50. The inclusion of clearly different phrases in the *Dictionnaire* also suggests a distinct meaning not conveyed by the identical translations.

<sup>218</sup> See Bouchard and Mailhot, “Structure du Lexique,” 48-55; Clément, *La Zoologie des Montagnais*, 433, Tableau 37.

<sup>219</sup> Bouchard and Mailhot, “Structure du Lexique,” 48. The translation is mine.

reluctant to discuss these creatures or this designation.<sup>220</sup> Silvy may have simply incorporated the term into an already existing European paradigm, or inherited his interpretation of the term from other French missionaries working among the Montagnais. The suggestions of partial understanding, both in terms of polysemy and the taxonomic category *manit&chich*, suggest that the authoritative voice is that of the Montagnais.

Regardless of any possible confusion, however, the inclusion of invertebrates yet again demonstrates the scope of conversation taking place between the Montagnais and the French missionaries. The observations, though few in number, also point to an acute observation, and sets Antoine Silvy apart from many of his contemporaries. Pierre Boucher includes no discussion of insects in his *Histoire Veritable et Naturelle*, while Louis Nicolas penned only a short discussion entitled “Des insectes volans.”<sup>221</sup>

### *Flora and Habitat*

The *Dictionnaire montagnais-français* contains seventy nine entries that refer to varieties of trees, plants, and fruit; in addition, the book contains another one hundred and eighteen entries that describe the flora, speak to their use by the Montagnais, and finally,

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<sup>220</sup> This reluctance was noted by Bouchard and Mailhot. See “Structure du Lexique,” 48-50. It is somewhat unlikely that Silvy would have recognized it but not included it, as he included a number of entries he clearly disapproved of. See the entries in the dictionary that are marked *f* or *foedum*, often translated in latin; they are generally sexual and clearly distasteful for the Missionary.

<sup>221</sup> See Louis Nicolas, *Traitté des animaux a quatre pieds qui se trouvent dans les Indes occidentales et Amerique septentrionale* (unpublished, circa. 1677), 154.

demonstrate a knowledge of important aspects of the natural history of the flora in question. Again, the volume of information in the *Dictionnaire* exceeds that in those contemporary works by Boucher and Nicolas. However, there is little overt discussion of the medicinal use of plants, a subject of great interest to many who study the exchange of botanical knowledge in the seventeenth century. The book does, however, include a number of plant and tree species that are used medicinally by the Montagnais.

Silvy has little difficulty translating the vocabulary for many of the most common trees. These entries, defined generically, include *atchimask8* (“frêne”), *ap8iask* (“érable”), *at8spi* (“aulne, arbre”), *machitchich* (“cèdre”), *michtik8minagachi* (“chêne, arbre”), and *8achk8ai* (“bouleau”).<sup>222</sup> With respect to spruce trees, a differentiation is clearly needed where generic definitions will not reproduce the needed level of detail; here, entries are translated with descriptions of the tree in question. *Minahig8* (“pin à menus brins”) and *sesegatak8* (“espèce d’arbre, pin piquant”) respectively refer to the White Spruce (*Picea glauca*) and Black Spruce (*Picea mariana*).<sup>223</sup> Other prominent species are defined in terms of their use; his translation of the word for Balsam Fir (*Abies balsamea*), *irinachit*, is “sapin à faire une litière.”<sup>224</sup> Finally, a number of fruit trees are

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<sup>222</sup> Silvy, *Dictionnaire*, 12, 17, 22, 63, 73, & 98. In English the trees are, respectively, Ash, Maple, Alder, Cedar, Oak, and Birch.

<sup>223</sup> Silvy, *Dictionnaire*, 75 & 144. Oddly, Silvy also defines *minahigu* simply as “sapin,” 63, a definition that applies a generic definition to word that likely refers to a specific tree. Here the use of words like “pin” and “sapin” appear to confuse different types of conifers; the Montagnais terms, however, clarify this confusion.

<sup>224</sup> Silvy, *Dictionnaire*, 38.

translated with certainty, including *kaδachiminanagachi* (“cerisier”), *δabaminagachi* (“pommier”), and *patchesaniminagachi* (“prunier”).<sup>225</sup> Here the Montagnais use of the suffix *-agachi* to indicate a fruit bearing tree or bush is apparent. Also, *δabaminagachi* points to the Montagnais incorporation of a European fruit tree into the Montagnais classificatory system.

Similarly, a number of common shrubs and plants are also translated with ease in the *Dictionnaire*, including the berries and berry producing plants *arδaskaniminagachi* (“framboisier”), *kiratchitchichteminagachi* (“rosier”), *tatagδagδminets* (“mûres”), and *δtehimin* (“fraise”).<sup>226</sup> Other accurately translated plants and shrubs demonstrate the exchanges that were taking place between Europe and America with respect to plant life. Entries like *essapi* (“chanvre”), the previously mentioned *δabamin* (“pomme”), and *chigaδichiδ* (“oignon, ail”) speak to the introduction of European plants and their translation into Montagnais language and life.<sup>227</sup> Other entries can be ambiguous, as native species co-existed beside European relatives in the seventeenth century; this ambiguity is only enhanced by Silvy’s generic translations, including *chδmin* (“raisin”)

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<sup>225</sup> Silvy, *Dictionnaire*, 45, 101, & 119. Silvy also includes the definitions for the fruit: *kaδachiminan*, *δabamin*, and *patchesaniminets*.

<sup>226</sup> Silvy, *Dictionnaire*, 18, 55, & 115. Note that the suffix *-agachi* can refer to trees, as is the case with the Apple (*Malus domestica*), or with much smaller fruit bearing plants like Raspberry (*Rubus idaeus*). Note also that the Montagnais define the Rose (*Rosa sp.*) in relation to its fruit (as indicated by *-agachi*), rather than for its flowers.

<sup>227</sup> Silvy, *Dictionnaire*, 31, 101, & 27.

and *chδminagachia* (“vigne, cep de vigne”), and *sahiδ* and *taskarδemin* (both “fève”).<sup>228</sup> Silvy’s translation of *δskateabi* (“racines à manger, naveaux”) and *nipi* (“feuilles, choux”) speak to the adoption of new meanings by older words; in these cases words referring to indigenous roots and leaves come to refer to introduced European foodstuffs as well: “turnip” and “cabbage.”<sup>229</sup> Finally, the *Dictionnaire* includes a number of indigenous plants, some translated generically by Silvy, as is the case with *massan* (“orties”), and *passegan* (“roseau”).<sup>230</sup> Other indigenous entries are likely translated with ease by Silvy because of their increasing co-option by European agriculture: *mentamin* (“blé d’Inde”) and *δacichkδetδ* (“potiron”) are examples.<sup>231</sup> There are three entries for different kinds of tobacco, *kichtemau* (“pétun”), *irinibakδ* (“pétun sauvage”), and *δatchechkδbak* (“pétun des Isles”) suggesting no doubt indigenous and imported varieties.<sup>232</sup>

With respect to other trees and shrubs, however, Silvy is clearly confronted by an inability to translate. The *Dictionnaire* includes ten entries where the translation is

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<sup>228</sup> Silvy, *Dictionnaire*, 29, 142, & 148.

<sup>229</sup> Silvy, *Dictionnaire*, 113 & 93. This is an interesting example of polysemy resulting from the “Columbian Exchange.”

<sup>230</sup> Silvy, *Dictionnaire*, 68 & 124.

<sup>231</sup> Silvy, *Dictionnaire*, 69, 103, & 51.

<sup>232</sup> Silvy, *Dictionnaire*, 51, 38, & 99.

simply “espèce d’arbre.”<sup>233</sup> Among these ten are prominent tree and shrub species that are used for medicine, food, and construction; Silvy includes, but cannot translate, *ḡatchinau*, *atḡminagachi*, and *astiminagachi*, likely the Eastern Larch (*Larix laricina*), the Mountain Juneberry (*Amelanchier bartramiana*), and the Crowberry (*Empetrum nigrum*) respectively.<sup>234</sup> Other plant, tree, and fruit names are translated with descriptive phrases; these descriptions can be physical, or, in one instance, can draw upon ecological relationships the plant or tree has with other species. Examples of the former include *atitetamina* (“petit fruit violet”), *chaḡemin* (“petit fruit de terre”), and *mirabakḡn* (“mousse des arbres”).<sup>235</sup> The example of the latter is *atchenapḡanaskḡ* (“petit fruit qui mange l’élan”), which Silvy describes as the “small fruit eaten by elk.”<sup>236</sup> The Montagnais names may also carry descriptive names that describe ecological relationships, although they are often lost in Silvy’s translation. For example, *kakḡminagachi* (“épinés d’arbres; noisetiers”), most likely an unspecified Hazelnut, is clearly associated with the North American Porcupine (*Erethizon dorsatum*), *kakḡ*, in its

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<sup>233</sup> See Appendix 5. Silvy’s use of the term “arbre” seems to apply to plants that we, today, would most likely not call trees. For example, he translates *astiminagachi* as “espèce d’arbre,” 19. The likely translation is Crowberry (*Empetrum nigrum*) (Clément gives the word as *ashtshîminânakashî*), a plant that is a low shrub. Further, Clément suggests that the prefix *ashtshî-* means “terre” and that the word literally means “la plante à fruits de terre,” again suggesting a plant we would not usually describe as a tree; see Clément, *L’Ethnobotanique Montagnaise de Mingan*, 95.

<sup>234</sup> Silvy, *Dictionnaire*, 99, 21, & 19.

<sup>235</sup> Silvy, *Dictionnaire*, 21, 25, & 76. The entries likely refer to Chokecherries (*Prunus virginiana*), American Beech (*Fagus grandifolia*), and Old Man’s Beard (*Usnea sp.*).

<sup>236</sup> Silvy, *Dictionnaire*, 20. The definition most likely refers to Moose (*Alces alces*).

Montagnais name.<sup>237</sup> Here, a layer of meaning is lost when Silvy attempts to translate by defining an American tree in terms of its European relatives.

Silvy includes a number of observations that relate to the life cycle of plants and trees, or simply describe flora in its environment. Silvy also relates a number of entries that describe the gathering and use of plants, fruit, and trees. Although subarctic peoples are primarily written of as hunters, and indeed do rely primarily on animals for food, these entries are a potent reminder that the Montagnais drew upon an extensive botanical knowledge to inform their use of plants, fruits, and trees, and further that flora was a subject of discussion with the French. Entries like *ak8tar8 g8n* (“le neige pend aux arbres”), *kisipask8t8* (“les arbres bruissent, sifflent, en se frottant”), and *na8atisek mistig8ek* (“les arbres croissant au milieu des monts, des rochers”) vividly describe the experience of trees in the forests of Canada.<sup>238</sup> Also included are a number of observations that detail the life cycle and reproduction of plants and trees; *aniska8ask8ti8* (“il est nouveau, l’arbre”), *michtani8i michtig8* (“l’arbre est en sève”), *satchipagau* (“les arbres bourgeonnent”), *8chtitagau* (“bois neuf qui passe” [pousse]), *pinasti8* (“les feuilles tombent”), and *8achtecti8 nipia* (“la feuille jaunait, reluit”) suggest that the seasonal and reproductive cycles of trees were the subject of observation and conversation.<sup>239</sup>

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<sup>237</sup> The translation would appear to be *kak8-* (Porcupine) *min-* (fruit, berry) *agachi* (tree that bears fruit). For the meaning of the plant-related lexemes, see Clément, *L’Ethnobotanique Montagnaise de Mingan*, 93-108.

<sup>238</sup> Silvy, *Dictionnaire*, 13, 56, & 85.

<sup>239</sup> Silvy, *Dictionnaire*, 14, 73, 104, 136, & 98.

Similarly, *atis* (“il est mûr”), *atitebak* (“fleurs déjà épanouies”), *satchik* (“cela vient, pousse la terre”), *satchipagan asti* (“la terre reverdit”), and *satchiparisi* (“il fleurit”) describe reproductive and seasonal occurrences among fruit and flower bearing plants.<sup>240</sup>

The bulk of the entries relating to flora speak to the utilitarian relationship between plants and people and a number of uses are illustrated, including the use of plants for food, for construction, and for medicine. Further, there is a vocabulary relating to the anatomy of trees and plants that no doubt facilitated discussions about use. For example, *sratcheck* (“toute écorce d’arbre”), *michtanaratchesk* (“pellicule d’arbre, 2e écorce”), *michtan* (“sève d’arbre”), and *pitchi* (“brai”) suggest conversation between missionaries and Montagnais that relied on an informed knowledge of tree anatomy; notably, the association between *michtan*, sap, and *michtanaratchesk*, inner bark, suggests an awareness of the association between sap transport and the inner bark, an awareness that speaks to a knowledge of anatomical function.<sup>241</sup> With respect to plant and tree use, use for food, fire, and construction are predominant; references to collecting fruit, like *ni natamiss* (“je vais chercher des fruits”), to the use of nuts, like *ni paskahen patchen* (“je casse, j’ouvre un noix”), to the collection of pitch, like *papesk* (“pin

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<sup>240</sup> Silvy, *Dictionnaire*, 21, 21, 143, 143, & 143. See Appendix 7 for further entries. There is also a further vocabulary, perhaps resulting from missionary instruction, or time spent at Sillery, that describes grain (blé). For examples, see the Appendix 7.

<sup>241</sup> Silvy, *Dictionnaire*, 112, 73, 73, & 130; for a brief description of tree anatomy, including the composition and role of bark, see Neil A. Campbell and Jane B. Reece, *Biology, Sixth Edition* (San Francisco: Benjamin Cummings, 2002), 737.

portant du brai clair aux coupures”), and to the collection of bark, like *ni papagδnaskδeïan* (“j’ enlève de l’écorce d’un arbre”), speak to the variety of materials that were used.<sup>242</sup>

With respect to fruit and nuts, the knowledge of the flora is evident in the composition of the list of plants and trees used; there are fifteen species of plant and tree that end in *-agachi*, suggesting the prominence of the fruits and nuts they bear in the Montagnais awareness of the species in question. Horticultural species are also included, with entries like *chigaδichiδ* (“oignon, ail”), *mentamin* (“blé d’inde”), and *δacichkδetδ* (“potiron”).<sup>243</sup> Additionally, entries that describe the actions involved in gathering fruit are included, like *ni maδisδn* (“je cueille des fruits”) and *ni pananaδiδan* (“je sépare les feuilles des fruits”).<sup>244</sup>

A number of uses for bark are noted, and there are a number of entries that describe the harvesting of bark. *Ni nataδachtebakδeïan* (“je vais à l’écorce pour cabaner”) notes the use of birch bark in the construction of shelter, while *δachδaganaskδe* (“écorce à faire flambeau”) speaks to its use for torches, and *δachigδai* (“écorce à faire canot”) points to its importance in canoe construction.<sup>245</sup> Silvy also notes the bark of a coniferous tree is used to make a salve for burns, *papagδeratchemak*

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<sup>242</sup> Silvy, *Dictionnaire*, 87, 117, 123, & 122.

<sup>243</sup> Silvy, *Dictionnaire*, 27, 69, & 103. See the Appendix 5 for further examples.

<sup>244</sup> Silvy, *Dictionnaire*, 67 & 121.

<sup>245</sup> Silvy, *Dictionnaire*, 87, 98, & 103.

(“onguent d’écorce de pin à flacons, contre la brûlure”).<sup>246</sup> Finally, the use of bark in the construction of *ouragan* is noted: *8ragak8ai* (“écorce à ouragan”).

Aside from the burn remedy, there are no specific references to medicinal remedies in the *Dictionnaire*. There is one reference to gathering for medicinal purposes, *ni nata8inat8k8nan* (“je vais chercher pour faire de l’onguent, de la médecine”), and a number of references to the use of medicine.<sup>247</sup> That said, the Montagnais used many of the plant and tree species included in the *Dictionnaire* for medicinal purposes; in his work on the ethnobotany of the Montagnais, Clément notes medicinal uses for *at8minagachi* (Mountain Juneberry), *at8spi* (Speckled Alder), *irinachit* (Balsam Fir), *machitchich* (Eastern White Cedar), *minahig8* (White Spruce), *8achk8ai* (Paper Birch), *8atchinau* (Eastern Larch), and *sesegatak8* (Black Spruce).<sup>248</sup> The extent to which Silvy absorbed any of the medicinal uses of these plants is unfortunately unknown, but after four years of intimate contact one would expect he was exposed to at least the remedies for common ailments.

The vocabulary relating to the flora of the Québec-Labrador Peninsula suggests participation by Silvy, as many of the entries describe action. Entries like *ni matchisk8m* (“tenant la branche, j’arrache tous les brins”) and *ni matchisk8naman* (“j’amasse du petit

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<sup>246</sup> Silvy, *Dictionnaire*, 121.

<sup>247</sup> Silvy, *Dictionnaire*, 87. See 138 for a telling reference to medicine, perhaps describing its inability to deal with European disease: *p8r8magan nat8k8r8n* (“la médecine ne fait rien”).

<sup>248</sup> Clément, *L’Ethnobotanique Montagnaise de Mingan*, 96, 96, 96, 101, 102, 106, 106, & 107. This list must be partial, given the incomplete identification of many of the entries in the *Dictionnaire*.

bois, du menu sapin”) speak to participation, a participation that led to an increasing familiarity with the flora of the “new world” for the missionary from Provence.<sup>249</sup> This knowledge of flora would surely have also given rise to some sense of different habitat types, and this is supported by the inclusion in the *Dictionnaire* of vocabulary that suggests Montagnais classifications of habitat.

In his discussion of Montagnais classification of habitat, Daniel Clément suggests that the Montagnais recognize three principal ecological zones: *nûshimit*, the back country, *uînipekut*, the coast, and *shîpekut*, the sea.<sup>250</sup> Antoine Silvy, in his travels among the Montagnais, Papinachois, and Mistassini, spent time near all three, and includes vocabulary relating to all three in the dictionary. The *Dictionnaire montagnais-français* contains one hundred and fourteen terms that describe geographic features or habitat types. Of these, the majority describe *nûshimit*, with a lesser number relating to *uînipekut*, and very few pertaining to *shîpekut*.<sup>251</sup> This distribution likely reflects the fact that Silvy spent most of his time inland, and may also reflect the relative importance of the various ecological zones to the historic Montagnais.

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<sup>249</sup> Silvy, *Dictionnaire*, 63 & 63.

<sup>250</sup> Clément, *La Zoologie des Montagnais*, 191. See also Silvy, *Dictionnaire*, 95 & 107 for two of these terms, *notchimitch* (“dans les terres”) and *8inipek8* (“mer”). Although there appears to be no inclusion of *shîpekut* Silvy does include an extensive vocabulary relating to tides and the coast, but little to the ocean suggesting that *8inipek8*, which he defines as “mer,” may have referred to the coastal waters that are represented at length in the dictionary. See Appendix 8.

<sup>251</sup> See Appendix 8.

Entries like *machtekd* (“prairie, marécage”), *michtigaskaskan* (“forêt, broussailles”), *mchaḡagau* (“terre sans herbes, pelée”), *ḡatchihḡ* (“montagne”), and *iripi* (“eau”) classify habitats in a general manner.<sup>252</sup> Entries in the *Dictionnaire* also include more specific Montagnais classifications of forest and other habitat types. With respect to forests, *irinaskḡau* (“sapinière”), *sitiskau* (“sapinière”), *sagachkau* (“sapinière épaisse”), and *machitchiskau* (“cèdrière”) define forest types based upon the prominence of certain tree species, although here Silvy’s definitions of the first two do not appear to adequately translate the differences between the two terms.<sup>253</sup> Silvy also includes entries that speak to other habitat types associated with forests, including *chibeïau* (“éclaircie d’arbres”), *naraḡaskḡteḡ* (“grande éclaircie dans la forêt”), and *mchaḡaskḡteḡ* (“où le feu à brûlé les arbres”); to rivers, lakes and bogs, including *kamḡatibeïan* (“fleuve qui a peu d’eau”), *nichichiḡagau* (“la terre est boueuse”), and *kinḡchegamau* (“lac long”); and finally to mountainous terrain, with entries like *piskḡatinau* (“montagne pierreux”), *kichkaïaḡau* (“écore, raide, falaise”), and *tchihikatchiḡ* (“pied de montagne”).<sup>254</sup> There is also a sizeable vocabulary describing tides and tidal habitats on the coast; *pitaḡaska* (“il y

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<sup>252</sup> Silvy, *Dictionnaire*, 63, 73, 80, 102, & 39. Clément lists these as, respectively, *mashtshekut* (“la savane”), *minashkuât* (“la forêt”), *mûshuânit* (“les espaces dénudés”), *uâtshit* (“la montagne”), and *nipit* (“l’eau”). For a summary of Clément’s analysis, see “Tableau 8: Principaux Milieux Géographiques Établis par les Montagnais en Fonction de la Faune,” in *La Zoologie des Montagnais*, 204. For his discussion, see “Chapitre 4: Écologie I: L’Habitat et l’Alimentation,” *La Zoologie des Montagnais*, 189-205.

<sup>253</sup> Silvy, *Dictionnaire*, 38, 146, 142, & 63. The first seems related to *irinachit* (Balsam Fir), and thus suggests a Fir forest. The meaning of the second is unclear, although *sitta* has been recorded as a Plains Cree word for an unspecified spruce tree; in “Cree Plant Names Database” provided by Dr. Marguerite MacKenzie.

<sup>254</sup> Silvy, *Dictionnaire*, 26, 85, 80, 44, 90, 53, 134, 50, & 153.

a bien du sable au bord de l'eau, le chemin de sable est long”), *piḡask8bi* (“eau puante, laissé par la marée”), and *m8chtitchi8an* (“où la marée sort par les fentes de la glace”) likely speak to Silvy’s time on the coast of the Saint-Laurent.<sup>255</sup>

### **Conclusion: History and Knowledge in *Nitassinan***

This paper has framed the discussion of Antoine Silvy’s *Dictionnaire montagnais-français* in terms of communication and translation, and throughout, has discussed Montagnais ecological knowledge historically. The aim has been to explore the role historians have to play in the academic debate surrounding indigenous knowledge. Although the analysis of Silvy’s dictionary has allowed for occasional observations on the nature of Montagnais ecological knowledge, as a source the book does not allow for a thorough historical examination of seventeenth-century Montagnais knowledge. The dual acts of transcription and translation alter the nature of the knowledge in such a way that it loses much of its distinctiveness; transcription strips the entry of its social and environmental context, while translation renders it compatible with the worldview of the translator. As such, there is little in Silvy’s dictionary that suggests a uniquely Amerindian viewpoint.

The entries in the dictionary represent fragments of conversations that took place between Jesuits like Antoine Silvy and the Montagnais, Papinachois, and Mistassini that

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<sup>255</sup> Silvy, *Dictionnaire*, 132, 130, & 80.

they worked among while assigned to the missions in the Saguenay.<sup>256</sup> The entries suggest that the linguistic efforts of the Jesuits in the seventeenth century were intimately linked to exchanges of knowledge, including that knowledge that relates to the non-human world. While the dictionary obscures the collective voice of the Montagnais who informed Silvy's *Dictionnaire*, and privileges that of the individual who compiled the book, the Montagnais language serves as definite evidence of authorship and agency; the document could not exist without the active and deliberate participation of Montagnais sharing their language and knowledge with the French missionary.

Earlier, this paper suggested that the portrayal of indigenous knowledge is closely related to the recognition of indigenous agency, and that even though anthropologists tend to recognize the role of knowledge in subarctic Amerindian societies, there are powerful assumptions and motifs in subarctic anthropology that serve to obscure the importance of knowledge in Amerindian society and to deny agency. A reading of the *Dictionnaire montagnais-français* supports Robin Ridington's emphasis on the important place of knowledge in Algonkian society. There is no suggestion in the dictionary that Silvy had a particular interest in the non-human world; the work makes no effort to segregate or highlight the names or observations concerning flora and fauna. What is more, he would never follow his compatriots Boucher and Nicolas in writing a

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<sup>256</sup> As it has already been noted, Silvy may have relied on the knowledge of other Jesuits knowledgeable in the Montagnais language. While this paper tends to discuss Silvy's acts of transcription and translation, it must be acknowledged that in some ways he becomes a visible personality that represents the cumulative work of a collective. This, however, does not alter the basic point that the dictionary contains the fragments of conversations between Jesuits and Montagnais.

descriptive work on the natural history of Canada, and the descriptive writing of his that survives places little emphasis on describing flora and fauna.<sup>257</sup>

The inclusion in the *Dictionnaire* of a significant amount of information on the non-human world suggests that the study of the Montagnais language inextricably involved an engagement with Montagnais knowledge about their environment. Further, the inclusion of intimate observations on habitat and behaviour, as well as the inclusion of an extensive corpus of names for flora and fauna, points to the active and likely deliberate role the Montagnais played in educating the French missionaries about life in the North American forests. The suggestion that the Montagnais actively shared their knowledge of flora and fauna serves to emphasize indigenous agency and rebuts deterministic accounts that emphasize only the European disruption of Amerindian life; Amerindians played an important role, not only materially but intellectually as well, in supporting the European presence in the New World.

Silvy's *Dictionnaire* also provides an interesting basis for a discussion of current efforts to study and appropriate indigenous knowledge. Efforts to elevate their traditional ecological knowledge that do not take proper account of historical power relations surrounding the generation, transmission, and use of knowledge within Amerindian

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<sup>257</sup> See for example his "Journal of Father Silvy from Belle Isle to Port Nelson," in Father Antoine Silvy, S.J., *Letters from North America*, transl. Ivy Alice Dickson (Belleville: Mika Publishing, 1980), 31-58. While the rest of the letters in this volume do reveal a sensitivity towards the natural world, they were wrongly attributed to Silvy by P. Camille de Rochmonteix, who edited an edition entitled *Relation par Lettres de l'Amerique Septentrionale* (Paris: Letouzey et Ané, 1904). The other letters in the collection are now accepted to have been written by Intendant Antoine-Denis Raudot; see note 117, Saliha Belmessous, "Assimilation and Racialism in Seventeenth and Eighteenth-Century French Colonial Policy," *American History Review*, Vol. 110, No. 2 (April 2005), 322-349.

societies tend to obscure the distinctive nature of indigenous forms of knowledge. An historic understanding of indigenous knowledge, however, is difficult. Many discussions of traditional ecological knowledge emphasize its timeless nature, and while historians increasingly recognize the importance of understanding the place of non-literate knowledge in history, the lack of written records detailing its development, transmission, and use can serve to prevent nuanced historic understandings. As this discussion of Silvy's *Dictionnaire* illustrates, the necessity of engaging modern Montagnais knowledge and language can have the effect of placing indigenous knowledge outside of history. Here, the analysis of the past is wholly reliant on the language and knowledge of the present day Montagnais. Rather than an historical vision that emphasizes continuous passage of time, this sort of analysis jumps back and forth repeatedly, comparing two discrete points in time without adequate attention to the period in between or to historic process. Only blatant discontinuities like species extinction, or the introduction of Eurasian flora and fauna, provide the contexts that point to the historic nature of the knowledge in question.

Importantly, attempts to assess that knowledge as being distinct from academic, European, and scientific traditions risk distorting the nature of indigenous knowledge and so inhibit the very recognition of distinction. As Nadasdy's critique of the academic work on traditional ecological knowledge points out, the knowledge in question is inseparable from the lives of the indigenous peoples in question. The inclusion of indigenous environmental knowledge relating to flora and fauna throughout the

*Dictionnaire* parallels such an observation; Silvy in no way differentiates this knowledge from the entries detailing other aspects of Montagnais life. However, the act of transcription itself leads to a transformation in the fundamental nature of the knowledge in question, and while this transcription allows for comparison with literate academic knowledge, it obscures the profound differences between what are in fact very different things. The nature of the definitions in Silvy's *Dictionnaire* point to this transformation as the discrete bits of information are organized along arbitrary European lines. Here, the knowledge becomes amenable to historical review only because it has been transformed into an extended list of words, that is as discrete elements of literate knowledge. If seventeenth-century Montagnais knowledge is only available to historians as literate French knowledge this illustrates the deep-rooted imbalance in the power relations between these two forms of knowledge.

Clément's work on Montagnais zoology illustrates how attempts to use and record indigenous knowledge in the twentieth and twenty-first centuries have too often tended to deny this distinction by recognizing only that which conforms to the needs of the researcher in question. While Silvy's work differs in many ways from Clément, his imposition of European categories, particularly with respect to the existence and composition of the supernatural, tends to present Montagnais knowledge in a manner that obscures significant differences between ways the Montagnais and the French conceive the non-human world. The entries *atchagach* ("petit animal fabuleux") and *memg8echi8* ("genies des rochers, qui sont à l'eau") illustrate this point nicely as Silvy clearly draws

distinctions based upon his conception of what belongs in the supernatural realm and what does not.<sup>258</sup>

A discussion of recent calls by historians of colonial science to place indigenous knowledge with reference to early-modern intellectual pursuits introduced the analysis of Silvy's dictionary. The *Dictionnaire montagnais-français* is, of course, not a work of descriptive natural history, and almost certainly did not contribute directly to the work of natural historians and other later scientists on the flora and fauna of what is now Québec. The work, however, does speak to the non-European intellectual influences on the writing of seventeenth and early eighteenth-century natural histories. As Lynn Berry notes, Pierre Boucher's descriptive writing on the natural history of the French colony differed significantly from that of his European counterparts: "his descriptions of birds and animals include a strong sense of habitat, sight, and sound almost completely lacking among the zoologists of the day."<sup>259</sup> Berry argues that Boucher's appreciation of the American flora and fauna grew out of an exposure to Amerindian peoples.<sup>260</sup> Silvy's *Dictionnaire* details conversations between French and Montagnais that strongly support Berry's point.

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<sup>258</sup> Silvy, *Dictionnaire*, 20 & 70. Here "fabuleux" and "genies" are markers for Silvy's defining of these terms as supernatural. See Appendix 11 for other entries that illustrate this point.

<sup>259</sup> Berry, "The Delights of Nature," 227. Pierre Boucher wrote his *Histoire veritable et naturelle* in 1664, little more than ten years before Silvy's work in the Saguenay.

<sup>260</sup> Berry, "The Delights of Nature," 227.

The descriptive writing of authors like Boucher, however, often obscures the role of Amerindian peoples. While it is clear that the authors in question have observed indigenous peoples, the involvement of indigenous peoples in the dissemination of this knowledge is unclear. Chambers and Gillespie's call for the study of localities and vectors of assemblage suggests a means of remedying these lacunae, but perhaps naïvely neglects the asymmetry in the historical visibility of indigenous peoples and their European neighbours in the early modern period. Despite the formidable asymmetry in visibility between the Jesuit author of the *Dictionnaire* and the Montagnais who informed its writing, the nature of the linguistic evidence does suggest a flow of information from Montagnais to missionary. Throughout the dictionary, Montagnais entries carry greater and more specific meaning than their French counterparts and Silvy clearly struggles in many cases to come up with an adequate French translation for a Montagnais term that is as precise in its meaning. The French Jesuit is coming to terms with a world in which much is foreign, and his ability to define the non-human elements of this world depends on Montagnais knowledge of this world; while Silvy may not have been able to name a Belted Kingfisher (*Ceryle alcyon*) or a Goldeneye (*Bucephala sp.*) in French, he appears able to have done so in Montagnais. In this sense, the indigenous voice in the dictionary carries greater authority on the non-human world. That Silvy felt compelled to include words for which he could supply only the most basic of translations is a tacit recognition of this authority. In this way, if Silvy's *Dictionnaire* is at all representative of the communication taking place between French and Amerindians at the vernacular level, or

among those educated in European academic institutions, then it should be seen as evidence of a considerable education of the French by their Amerindian hosts.

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## APPENDICES

### Introduction: Notes on the Montagnais, *Attikamekw*, and East Cree Lexicons

The Appendices contain the relevant entries taken from the *Dictionnaire Montagnais-français*. The Page number in the left hand column refers to the published edition of the dictionary that has been cited throughout the paper (see Bibliography). The modern usages column contains the entry from the noted lexicon as well as the definition. These entries sometimes relate a degree of uncertainty, noted with a question mark. As such, the definitions in the modern usage column should be duly noted alongside the English and scientific names.

The following abbreviations, found in the Appendices 1-6, refer to the lexicons used:

**Attikamekw:** Atikamekw Sipi (Conseil de la Nation Atikamekw). *Notcimiw kekwan ka ici aitakok Atikamekw Askik (Coup d'oeil sur les plantes et les animaux du territoire Atikamekw)*.

**CI** (in Appendices 1-4, & 6): Daniel Clément, *La Zoologie des Montagnais*. The numbers refer to his numbering of the entries in his Appendix 3.

**CI** (in Appendix 5): Daniel Clément, *L'Ethnobotanique Montagnaise de Mingan*.

**Dr :** Lynn Drapeau, *Dictionnaire montagnais-français*.

**ECN:** Ella Neeposh, et al., eds. *East James Bay Cree Dictionary (electronic version), Northern Dialect*.

**ECS:** Ella Neeposh, et al., eds. *East James Bay Cree Dictionary (electronic version), Southern Dialect*.

**LN:** Marguerite MacKenzie and Bill Jancewicz. *Lexique Naskapi*.

Scientific Names are taken from the two works by Clément, as well as “Appendix V: Names of living things mentioned in the the *Atlas of Breeding Birds in Québec*,” in Jean Gauthier and Yves Aubry, eds. *The Breeding Birds of Quebec*, 1243-1247. English names were taken from “Appendix V” as well as the lexicons that offer English translations (LN, ECS, ECN).