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## Bark Food

The Continuity and Change of Scots Pine Inner Bark Use for Food by Sámi People in Northern Fennoscandia

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Thesis submitted for the Degree of  
Master of Philosophy in Indigenous Studies  
May 2016





# **Bark Food**

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**Cover Photo:** Scots Pine (*Pinus Sylvestris* .L) Inner Bark, *piets* (saSk) with *kåállam* (saSk), a tool made of reindeer antler, by Bjørn Hatteng and Sandra Bogdanova.



*Dedicated to*  
*The Sámi Community*  
*To Researchers in Indigenous Studies of any Background*  
*And Age, for Embarking on the Voyage of*  
*Indigenizing Research Methodologies*  
*And Heritage Protection*  
*Above all,*  
*In Memoriam*  
*Of my Grandmother Neli Bogdanova*  
*And Archaeologist*  
*Sven-Donald Hedman,*  
*The Irreplaceable*  
*Sources of*  
*Inspiration*  
*For this Study*

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Sandra Bogdanova,

Pikku Pettu Tyttö (The Tiny Bark Lady) <sup>1</sup>

London 09.05.2016

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<sup>1</sup> My common name among the Skolt Sámi.

## Abstract

This thesis is a cultural document, a study of the Scots pine (*Pinus Sylvestris* L.) inner bark use, as a source of food and medicine among the Indigenous Sámi people of Northern Fennoscandia. The questions that drove this research centered on the methods and reasons people have developed over time for using Scots pine inner bark. It is still largely considered a 'food taboo' and is mostly associated with the years of crop failure. This research is written in indigenous studies with the elements of anthropology and ethnobotany. Using these interdisciplinary fields it becomes possible to locate the effect of such taboos and other burdens of history to the Sámi community. There are three major analytical pillars that hold up the content of this thesis. First, the literary encounters of bark food narratives, that were historically documented across Fennoscandia. Second, detailed 'bark food' practices and processes in the Sámi culture. Third, the availability of local resources and ethical dimensions of collecting, exhibiting, curating and representing such Sámi traditional food related material at a local museum. The thesis argues that the Sámi have been using Scots pine inner bark as a source of food continuously and that whilst this tradition has changed it has not been lost. The key finding is a record of 'bark food' tradition continuity among the case study community in Northern Finland. My intention is to contribute to the politics of appreciation, of Indigenous food traditions, recognized as part of their identity and as intangible cultural heritage, including a choir of native voices, both in a historical and a contemporary perspective.

**Keywords:** *representation; Indigenous people; cultural heritage; ethnobotany; food taboo*

## Acronyms and Abbreviations

CBD: Convention on Biological Diversity

CESCR: Committee on Economic, Social and Cultural Rights

FAO: Food and Agriculture Organization of the United Nations

HRC: Human Rights Council

ICH: Intangible Cultural Heritage

SAKK: The Sámi Education Institute (Finnish *Saamelaisalueen koulutuskeskus*)

SIIDA: Sámi Museum and Northern Lapland Nature Museum

TEKW: Traditional Ecological Knowledge and Wisdom

TMU: Tromsø University Museum

ULMA: Uppsala Dialect Archive (Swedish *Uppsala landsmålsarkiv*)

(UN)DRIP: United Nations Declaration on the Rights of Indigenous People

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNPFII: United Nations Permanent Forum on Indigenous Issues

### Glossary keynote

Davvisámegiell [Northern Sámi = saN]

Sää'mǰiõll [Skolt Sámi = saSk]

Julevsámegiella [Lule Sámi = saL]

Anarâškielâ [Inari Sámi = saI]

Ubmisámegiella or Urálalaš Giella [Ume Sámi = saU]

Åarjelsaemien gielle [Southern Sami = saS]



## List of Illustrations

- Figure 1:** Ojašš Sverloff, taking bark from a living pine tree in Suenjell, 1933, by I. Manninen. This photograph became a presentation of Finnish Great Famine years in 1867-1868 at SIIDA the Sámi Museum and the Northern Lapland Nature Centre Exhibition in Inari, Finland. Photograph by Sandra Bogdanova, August 2014; page 9.
- Figure 2:** Map of the fieldwork area, by Bjørn Hatteng and Sandra Bogdanova, page 25.
- Figure 3:** Fieldwork: 1) *The Archive*, August 2014, photograph by the Sámi Archives (*Sámi Arkiiva saN*) in Inari, Finland; 2) *The Kithcen*, January 2015, photograph by Albina Griniütè; 3) *The Forest*, July 2015, photograph by Heni Wesslin, page 27.
- Figure 4:** Skolt Sámi bark harvesting tools, sheets of inner pine bark and grinded bark flakes in the birch bark bowl. Items are from the future exhibition of the Eastern Sámi Museum in Neiden, Norway. Photograph by Sandra Bogdanova, August 2014; page 34.
- Figure 5:** Carlous Linnaeus in traditional Sámi clothing. Mezzotint by R. Dunkarton, 1805, after R. J. Thornton and M. Hoffmans. Collection: Iconographic Collections, Library reference no.: ICV No 6755, Wellcome Library Catalogue, London; page 44.
- Figure 6:** A collage of the signs carved in trees, *Muorra mearkkat* (saN). All photographs are taken from the exhibition “*Ealli Biras - the living Environment.*” By Eija Ojanlatva and Paivi Magga at SIIDA the Sámi Museum and the Northern Lapland Nature Centre in Inari, Finland. Photograph by Sandra Bogdanova, August 2014; page 52.
- Figure 7:** A cross section of a pine tree: 1) Inner bark, cambium layer or secondary phloem; 2) Outer bark; 3) Annual growth rings or sapwood; 4) Hard wood; 5) Pith; Scheme by Sandra Bogdanova and Bjørn Hatteng; page 58.
- Figure 8:** Harvesting of pine inner bark: 1) Skolt Sámi tools; 2) Separating the outer bark; 3) Bark sheets ready for the harvest; 4-5) Separating the inner bark; 6) Drying bark sheets; 7) Roasted inner bark, shredded for preservation; Photographs 1-6 from the private archive of Matleena Foffonof, photograph 7 taken by Sandra Bogdanova, January 2015, page 62.
- Figure 9:** Products with pine inner bark “Barkchips” and “Barkbröd” made by Lule Sámi Greta Huvva and Linn Huvva and sold at their family café “Viddernas Hus” in Jokkmokk, Sweden; Photograph by Sandra Bogdanova, February 2015; page 69.
- Figure 10:** Darja (Tarj) Jefremoff tasting ‘bark gruel’ or ‘pine bark porridge’ (*piets’hutt saSk*). Photograph from a book *Pohjoiskalotin ihmisiä* by Hans Lidman, 1969; page 70.

# Table of Contents

<i>Acknowledgments</i> .....	<i>vi</i>
<i>Abstract</i> .....	<i>vii</i>
<i>Acronyms and Abbreviations</i> .....	<i>viii</i>
<i>List of Illustrations</i> .....	<i>ix</i>
<b>1 Introduction</b> .....	<b>1</b>
<b>1.1 Significance of the Pine Tree in the Northern Hemisphere</b> .....	<b>1</b>
<b>1.2 Research Questions and Objectives of the Study</b> .....	<b>3</b>
<b>1.3 About the Sámi</b> .....	<b>4</b>
<b>1.4 Theoretical Framework</b> .....	<b>5</b>
<b>1.4.1 Common Cultural Heritage</b> .....	<b>6</b>
<b>1.4.2 Museum Collections</b> .....	<b>7</b>
<b>1.4.3 Indigenous Curation</b> .....	<b>10</b>
<b>1.4.4 Indigenous People and Theory</b> .....	<b>14</b>
<b>1.5 Literature Review</b> .....	<b>15</b>
<b>1.6 Thesis Outline</b> .....	<b>19</b>
<b>2 Methodology</b> .....	<b>21</b>
<b>2.1 Postcolonial Indigenous Research Paradigm</b> .....	<b>21</b>
<b>2.2 Situating Knowledge Systems</b> .....	<b>22</b>
<b>2.3 Empirical Data</b> .....	<b>24</b>
<b>2.3.1 Fieldwork Framework</b> .....	<b>24</b>
<b>2.3.2 Data Collection</b> .....	<b>28</b>
<b>2.4 Ethics and Reflexivity</b> .....	<b>30</b>
<b>2.5 Conclusion</b> .....	<b>32</b>
<b>3 Contextualizing ‘Bark Food’ Discourse</b> .....	<b>33</b>
<b>3.1 Northern Encounters</b> .....	<b>33</b>
<b>3.2 Health Food</b> .....	<b>39</b>
<b>3.3 Famine Food</b> .....	<b>42</b>
<b>3.3.1 Carl Linnaeus and Famine Bark</b> .....	<b>43</b>
<b>3.3.2 Emotional Food</b> .....	<b>45</b>
<b>3.3.3 Emergency Food</b> .....	<b>47</b>
<b>3.4 From Propaganda and Railway to Oblivion</b> .....	<b>47</b>
<b>3.5 Conclusion</b> .....	<b>49</b>
<b>4 Of Bark and Sámi Culture</b> .....	<b>50</b>
<b>4.1 The Worldview</b> .....	<b>50</b>

4.1.1	<b>Culturally Modified Trees</b>	51
4.1.2	<b>Etymology of Place Names</b>	54
4.2	<b>The Harvest</b> .....	56
4.2.1	<b>The ‘Right’ Time</b>	57
4.2.2	<b>The Method</b>	59
4.3	<b>The Food</b> .....	64
4.3.1	<b>Preparation and Taste</b>	67
4.4	<b>Conclusion</b> .....	71
5	<b>Sámi Food Challenge</b> .....	73
5.1	<b>“The Poor Can Eat the Cake”</b> .....	74
5.2	<b>Availability of Resources</b> .....	76
5.3	<b>The Right to Food</b> .....	77
5.4	<b>Conclusion</b> .....	79
6	<b>Rethinking the ‘Burdens’ of Famine Food</b> .....	80
	<b>References</b> .....	83
	<i>Appendix 1: Glossary of Sámi Terms</i> .....	90
	<i>Appendix 2: The Six Times of Eastern Sápmi</i> .....	93
	<i>Appendix 3: Photographs</i> .....	95
	<i>Appendix 4: Sketches of Tools</i> .....	105
	<i>Appendix 5: List of Informants</i> .....	107



# 1 Introduction

*By the time the Second World War started and after, the Skolt Sámi still kept it. Their traditions were so different. They already felt much separated or even discriminated by the other Sámi because of their language and their religion, or the way they ate. Therefore, it became somehow a shameful secret, or something that people were doing in secrecy and younger generation did not consider it as a practical skill. Elders were hiding it from their children because it was so shameful. One person said it was not so easy to take it anymore because one would mostly need to compensate for the tree being cut... Many practical matters not only the attitude.*

From an interview with Ritva Kytölä, presenter of local food traditions and courses in the region of Inari Lapland, Finland

The narrative by Ritva Kytölä describes the main subject of this study that is the “pine inner bark food” or “it” in the above given story. There are several reasons why a thesis on traditional plant food of the Indigenous Sámi people is worth writing at this time. At source, for raising the awareness of Indigenous food traditions and their representations, recognizing knowing and accounts of knowing, studying distinct knowledge practices that have to be nurtured, as well as locating the geography of cultural heritage. This project is a record of traditional ethnobotanical knowledge about the ‘edible landscape’ as part of the Northern environment. Moreover, food is a source of the economic, social, and ideological importance and use of forest resources in a number of societies. Hence, it becomes a marker of defining a cultural and historical identity. Indeed, land is just like the people: it has a memory, it has names, and it has its own distinct features. Therefore, I am to tell a story of this food phenomenon, or shall I dare say ‘taboo’?

## 1.1 Significance of the Pine Tree in the Northern Hemisphere

To begin with, it is important for us to get an understanding of the physical appearance of the pioneer boreal forests in the Northern hemisphere, Fennoscandia and the North Eastern Sápmi region within it. Here, my focus is going to fall on a single tree, the Scots Pine (*Pinus sylvestris* L.), *Piedz, pie3* (saSk), in Finnish *petäjä, mänty*, in Norwegian *furu*, Russian *Сосна́*, or commonly a pine tree (hereafter – pine), a thorough deciduous tree, easily recognizable by the fiery red hues of its bark, which blend into dark grey-browns towards the base. In the rough Northern climate, pine becomes a valiant and resilient warrior, with a strong will to live. It successfully adapts to the environment and stands

up to the severity and impact of the elements, as well as the poor soil or rock, and still thrives. Pine has been one of the dominant species since the Ice Age (Hagender, 2006). It is of great importance for forest animals like: reindeer, red deer, moose, pine martens, red squirrels, birds, as well as mice, wood wasps, voles and wood ants.

Like spruce and fir, pine has a long history of supplying people with pitch, turpentine, wood, tar and resin. The Sámi have also been using, the latter two, medicinally. People used to chew the hard amber color resin of the pine throughout the year: its' extract (*glogi gahcci saN*) used as toothpaste, was rubbed against teeth to whiten them. In springtime, the fresh resin below the bark could be applied on wounds (as well as tar) that festered to enhance healing (Solbakk, 2012: 30).<sup>2</sup> Today, if it is not cut down for the production of paper, furniture, poles, fences, construction work, boxes, firewood, shipbuilding or more, it can live for about three hundred to eight hundred years (Hagender, 2006). In the past, it determined the excellent qualities of the Sámi bow and arrow, it has also been used for skis, sledges, various tools and cradles (*gietkka saN*), and even for carving a highly resistant case for storing a historical document scroll of the Skolt Sámi people.<sup>3</sup> The roots were used for weaving ropes, lasso, also for fixing traditional wooden boats.<sup>4</sup> People used to carve out reindeer milking handles, to form waxes for milk vessels in the trunk of living trees, also used the same kind of scarred tree trunks for carving out a memorial or marking the important trade routes. Pristine pine forests in the sub-arctic regions are rich in (hanging) lichen. They are an important source of food for the Sámi reindeer during the winter pasture time. Needles, resin, pollen and the inner bark (*Guolmmas saN, Piets saSk, Kuolmâsleibi sal*) of the Skots Pine (raw or extracts), also from other various conifers, such as the Yellow Pine (*Pinus*

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<sup>2</sup> For more on Sámi plant use see also "Eatnanšaddu - Sámi and the use of natural plants." Web-Exhibition. (Accessed 14-07-2015). [Online]. – URL: <http://www.teronen.com/eatnansaddu/?lang=en>

<sup>3</sup> The archives from Suonjel, Pechenga, are the most significant body of documentation in the cultural heritage of the Skolt Sámi. The oldest document in the archives dates to 1601 and the most recent document to 1775. The long document scroll was kept inside a case carved from a pine tree. The meticulously carved sliding lid of the casing was easy to close tightly to protect the valuable documents from the harsh northern weather conditions. The archives were stored in a secret location known only to three trusted men, who all came from different families. The documents, which form an over nine-meter scroll, comprise edicts issued by Russian emperors, confirming the rights of the Skolt Sámi to their pasture and fishing territories. The National Archives Service of Finland and the Sámi Archives have proposed including the Skolt Sámi archives in the UNESCO Memory of the World Register. Retrieved from "Skolt Sámi archives candidate for UNESCO list", by Pettersen T. in an open internet news server Barents Observer (Published 01-04-2014; Accessed 15-07-2015). [Online]. – URL: <http://barentsobserver.com/en/culture/2014/04/skolt-sami-archives-candidate-unesco-list-01-04>

<sup>4</sup> For more on Sámi plant use see "Saami Culture Natural Remedies and Foods. How do we make use of Nature's gifts?" [Motion Picture]. Director Laila Spik. Producers Agnetha and Torbjørn Rosander. (Published 26-09-2009; Accessed 08-10-2014). [Online]. – URL: <https://www.youtube.com/watch?v=PnyqXQq8e5s>

*Ponderosa* L.), the White Pine (*Pinus strobus* L.), the Red Pine (*Pinus Densiflora* L.), the French Maritime Pine (*Pinus Pinaster* L.), the Lodgepole Pine (*Pinus contorta* L.), the Western Hemlock (*Tsuga heterophylla* L.), the Larch (*Larix* L.), etc. can all be used for food. This common knowledge use to be widespread across the Northern hemisphere, among the Indigenous and non-Indigenous populations, i.e. Finland, Sweden, Norway, Russia, Lithuania, the USA, Canada, China, Japan, Korea, and Russia. The latter plant food system, the ideology, its' management, representation and practice is the key core of this study.

## **1.2 Research Questions and Objectives of the Study**

At the time of my project proposal, the primary research questions focused on the Sámi cultural identity, forest resource management and revitalization of the subsistence practice under discussion. My working statement was as follows: “a continuous custom of bark harvesting for food, is likely to reveal the sustainable approach of the Sámi to forest resources.” That working statement was not likely to be verified so easily for a number of challenges (see Chapter 2). Therefore, later field observations led me to adjust the main issues, that are addressed in this study.

The main questions I will address in this research are:

- **How and why has the use of ‘pine inner bark’ for food among the Sámi changed over time? How is it represented as a cultural heritage by the heritage institutions and in the academic literature?**

In order to answer this question I wish to define the following tasks:

- ❖ Firstly, I will explore, analyse and elaborate on the different reasons and attitudes people had and still have for eating ‘bark food’;
- ❖ Secondly, I will describe the important ecological, ideological and nutritional aspects of gathering and preparing this food;
- ❖ Lastly, I will discuss how the representation of food traditions at museums and in the academic literature is part of cultural heritage.

### 1.3 About the Sámi

[I]n the distant and close time before time began in Sápmi, in the Sámi, Sámmlaž homelands;

It is remembered how humans and animals spoke each other's languages,

It is remembered how the first reindeer and the first men agreed on their roles and responsibilities,

It is remembered how humans could transform into animals such as the two men who walked as bears one Autumn close to Čeeu'resnujuu'nn down to the Lake Lounnjäu'rr when the ice had just set in,

It is remembered how the Spirit Men and Women took part in the creation of Äinisuâl Island

It is remembered how a Great Food came to the shores of the Arctic Sea and threw the boats and ships deep inland into Käärablekk, Áâgažjäu'rrpääutaž and Peäccam-moorâst,

All of these things and many more are remembered of the distant and close time before the time began. <...>

*The Six Times of Eastern Sápmi* (Mustonen, and Mustonen, 2013: 22)

The Sámi are regarded as one people who have historically inhabited the area of Northern Fennoscandia, that they call Sámi Homeland (*Sápmi*<sup>5</sup> saN). The majority of them live in four countries: Norway, Russia (Kola peninsula), Finland and Sweden. They are the only Indigenous people of the European Union and one of many Indigenous peoples living in Russia. The total Sámi population is estimated to be over 75,000, with the majority living in Norway, although the number varies according to the estimates.<sup>6</sup>

[W]e Sámis are one people, and national frontiers shall not divide the unity of our people. We have our own history and traditions, our own culture and our own language (Kulonen et al. 2005: 102).

The Sámi speak nine different Sámi language dialects. In the past, they did not constitute a single homogeneous people but a group of Sámi peoples: the reindeer Sámi, the fishing Sámi, the Sámi settlers living along the rivers, and the forest Sámi, each with their own way of life and language. In the early 19th century, a person's identity as a Sámi was defined by his place of abode and livelihood and consequently by the cultural codes (such as dress) that were associated with his livelihood (Kulonen et al. 2005: 25). There are about 9 000 Sámi in Finland. More than 60 per cent of them now live outside

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<sup>5</sup> Sápmi is both a geographically definable area and a historical term that can be applied on the Sámi people as an Indigenous nation, expressing their historical belonging. As a geographical term, it often applies to the northern areas of Norway, Sweden, Finland and north-west Russia, but as Isak Mathis O. Hætta emphasizes, today it can be a problematic term to use geographically, as many Sámi live outside of the area. For more, see Hætta, O. M. (2008). *The Sami – An Arctic Indigenous People*. Karasjok: Davvi Girji.

<sup>6</sup> For details, see "Sámi in Finland", Samediggi (Accessed 27 January 2016).



*Sápmi*, which brings new challenges for the provision of education, communications, for example services and heritage, *Árbi* (saN), curation in the Sámi language.<sup>7</sup> Only about 1,000 of the Sámi living in Finland are Skolts (*Sä'mmlaž* saSk), who belong to the Eastern Sámi. They are the case study community of this study. Their neighbouring groups are Inari Sámi and North Sámi. The heaviest milestone the Skolt Sámi history is believed to be the evacuation from their home district Pechenga (*Peäccam* saSk) in Russia to Sevettijärvi (*Če'vetjäu'rr* saSk) in the Northernmost Finland during the Second World War in 1939<sup>8</sup>. The story of Skolt Sámi people is told through their own narrative *The Six Times of Eastern Sápmi*. In their own words:

<...> [I]n the recent time when a great silence befell on Sápmi;  
It is remembered how many new people arrived to Sápmi,  
It is remembered how these people wanted more and more of the things that are in Sápmi,  
It is remembered how their borders divided Sápmi and the Sámi had to change,  
It is remembered how many people came to Sápmi to take Sámi things and lands away,  
It is remembered how war came to Sápmi and a brother was against a brother, a sister  
against a sister,  
It is remembered how Skolts had to go to Finland and others stayed in the lands of the  
Russians  
It is remembered how the Finns ignored the Sámi in their need,  
It is remembered how a great silence befell on Sápmi.  
All of these things and many more are remembered of the recent time when a great silence  
befell on Sápmi. <...>

*The Six Times of Eastern Sápmi* (Mustonen, and Mustonen, 2013: 23)

## 1.4 Theoretical Framework

In this section, I present the theoretical perspectives that I will use in order to analyze the empirical data in the following chapters. I am using the 'heritage discourse', because food is one of the main components of a personal or communal identity, and food as heritage is one of the themes that the collecting institutions support. Here it is important to note that this study is not a search for an authentic Sámi food culture, as discussed by anthropologist Jeffrey Sissons (2005), as in his discussion on the search for authenticity

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<sup>7</sup> Ibid.

<sup>8</sup> "Sää'amjie'llem", The Skolt Sámi Life (Accessed 28-07-2015). [Online]. – URL: <http://www.samimuseum.fi/saamjiellem/english/>

in indigenous research. Instead, it aims at discovering the social meaning of food traditions for collective identity and seeks for its cultural values and usefulness, as a part of Sámi cultural heritage. In the case of this study, I will use the terms 'Indigenous people', 'Native people', and 'First Nations' interchangeably, when referring to the similarities of their history or cultural heritage.

#### **1.4.1 Common Cultural Heritage**

The academic debates on the politics of heritage are common among anthropologists and historians. Anthropologist Kathryn Lafrenz Samuels (2015) provides with rich heritage terminology in her work "Introduction: Heritage as Persuasion." She shows the care for cultural heritage and further explains that it "is variously invoked as something (some object, site, building, landscape, traditional practice) with historic connections that must be properly tended to, as well as the field of expertise that has developed around this care" (Lafrenz Samules, 2015: 3). Cultural heritage and the mediation of identity, memory and historical narratives are well discussed by an Australian scholar Laurajane Smith (2006) in her book *The Uses of Heritage*. She is challenging the idea of heritage value as self-evident, and that things must be preserved because they have an inherent importance. Laurajne Smith questions the heritage value and discusses how it is not inherent in physical objects or places, but rather that these objects and places are used to give tangibility to the values. Consequently, they underpin different Indigenous and non-Indigenous communities to assert and affirm these values. In the framework of this thesis, more detailed on food, its preparation, cultivation and communal consumption as heritage are anthropologists Ronda L. Brulotte and Michael A. Di Giovine (eds.) (2014), with *Edible Identities: Food as Cultural Heritage*, talking about food and foodways as cultural heritage. Here scholars argued that heritage is less an identifiable thing than a constructed discourse strategically deployed for political economic, or ideological goals.

In the case of the formations of common cultural heritage in the region of Northern Fennoscandia, Sámi historian Veli Pekka Lehtola (2005) highlighted the importance of historic image of the Sámi (mostly in Finland) and the burdens of this historical perception due to Finnish involvement in the knowledge production. He is saying, that

[t]he image of "wandering Lapps" was once replaced by the concept that the members of a *siida* (Sámi village) had a right to the land and water from the time immemorial and that this right was taken from them by various colonial governments. The Lappological view that

justified sedentary settlement by peasant colonists was replaced by the idea of partly violent assimilation, described in terms of colonialism and imperialism. The Sámi regarded the colonialist era as very damaging, an ultimate break with traditional culture, or its destruction, and they saw their ancestors as its victims (Lehtola, 2005: 90).

In Finland, the history of assimilation played a major role for the development of a uniform culture, or the notion of common cultural heritage. My informant, Skolt Sámi craftswoman Heini Wesslin, pointed out that due to that, Skolt Sámi culture has been in crisis for almost a century:

**Heini Wesslin:** *Well, you have to understand that what happened after the Second World War ...everything became so fast and Skolt Sámi were removed from where they lived and such big changes happened. The culture is now in crisis. It has been in crisis for almost a century. There have been such big changes that came with Finnish government. The policy was that everyone and everything should be Finnish and especially Skolt Sámi, that have been such a small group and so much different than the others. What happened in the 1920s, you know, the policy that happened in Germany? The same happened in Finland. It started before that but then it was really strong. People were told to be of lower races, like Skolt Sámi were at the very bottom.*

#### **1.4.2 Museum Collections**

The formation of common cultural heritage can be seen through the historical relationships between Indigenous communities and museums. Museums are public institutions that emerged from the European Age of Enlightenment. Historically, they have been committed to the notion that “through the study of things gathered together from all over the world, truth would emerge” (Klobe et al. 2015: 373 in MacGregor, 2009). For centuries, museums have broadened the cultural horizons of the general public in ways that foster greater understanding of human, cultural and biological diversity (Kolbe et al. 2015: 373). Explorers have traveled the Arctic and other regions of the world in the pursuit of scientific knowledge and economic gain. Their engagements with local people have resulted in a material legacy which today can offer challenging perspectives of cultural encounters. Representation of cultural heritage at museums is related to Indigenous identity. As “these collections would embody native peoples’ history, science, heritage and traditional knowledge. Increasingly, these collections — if identified, studied, and understood — contain implicit information and traditional knowledge about how humans make and utilise both biological organisms and material culture” (Kolbe et al. 2015: 373).

Sámi researcher Vuokko Hirvonen (2008) is raising the issue of cultural encounters and how Sámi national “awakening” is being generated through Sámi

museums. They were started as a part of Sámi self-esteem and political activism that began after the Second World War (Hirvonen, 2008: 17). Establishing them was an important step forward for the Sámi people. They were set up to write and show the history of the Sámi people from their own point of view: the museums were seen as symbols of self-representation (Hirvonen, 2008: 17). Up to this day, they continue to serve as functional centers of Sámi knowledge, identity, culture and history.

According to Lehtola (2005), a considerable part of the extant Sámi heritage, old physical objects and other materials, are to be found in museums and institutions outside the Sámi area. It is connected to the geography of a cultural landscape that has been constantly rewritten. This area has attracted a great deal of interest and exploitation ever since the 17th century, which has resulted in physical objects, works of art and mythology being exported to the South by the public servants, tourists and researchers (Lehtola, 2005: 83). Not only have museum exhibits been recovered, but the information from the Sámi area has been accumulated over the course of the centuries. This kind of information is especially valuable at present, because the essence of cultural identity of the Sámi also includes the past. Both archival sources and photos elicit entirely different stories to the Sámi themselves than to outsiders and non-Sámi researchers (Lehtola, 2005: 84). Displayed in culturally insensitive ways, “facts” abstracted from their context have often resulted in biased and utterly erroneous conclusions (Lehtola, 2005: 87). Food is one of the themes that collections support and these *cultural insensetivities*, for example, can be found in a photograph (Figure 1), taken from a museum exhibition during my fieldwork in August 2014. It is an example of a Skolt Sámi food representation through a common cultural narrative at SIIDA, the Sámi Museum and the Northern Lapland Nature Centre Exhibition in Inari (Finland), or the major Sámi museum in Inari Lapland.



**Figure 1:** Ojašš Sverloff, taking bark from a living pine tree in Suenjell, 1933, by I. Manninen. This photograph became a presentation of Finnish Great Famine years in 1867-1868 at SIIDA the Sámi Museum and the Northern Lapland Nature Centre Exhibition in Inari, Finland. Photograph by Sandra Bogdanova, August 2014.

I showed this photograph of the museum display to the presenter of local food traditions and courses Irja Jefremoff and an elder Skolt Sámi duodji craftswoman Matleena Fofonoff. Both women found it unacceptable, as a misrepresentation of the Sámi culture, and agreed that the tradition of 'bark food' presented in the photograph is not that of the Sámi:

**Matleena Fofonoff:** *How can it be possible! Skolt Sámi people did not do agriculture. They were not starving. In the War times Skolt Sámi were not here, they were evacuated to Puoherma (Southern Finland) it is a rather flat place, so maybe there they were involved in agriculture. Skolt Sámi have never put 'pettu'<sup>9</sup> into bread, nor it was a famine food, I have never heard of it. When I was a child, we ate it because it was so good! It was not very much of a common food, but more of when we wanted some delicacy.*

**Irja Jefremoff:** *It is not a very good tree; it looks like it is only a show. This is not the tradition.*

<sup>9</sup> Pine inner bark or vascular secondary cambium layer, the product of bark harvesting, commonly known as *pettu*, in Finnish, in Norwegian *lappsav*, Russian *Камбуи*.

In the original photograph, taken by a Finnish ethnographer I. Manninen back in 1933, Ojašš Sverloff can be seen taking bark from a living pine tree in Suenjell. It became a presentation of Finnish Great Famine years in 1867-1868 at SIIDA. Veli Pekka Lehtola commented on the Famine years that, according to him, have not concerned the region of Inari Lapland:

**Veli Pekka Lehtola:** *The Great famine in the 1860s was in the south of Finland. I am not sure if it was in the Sámi area. The Famine years are in the Finnish history. I think it is a mistake of Aili Aikio, who has done it or it is my mistake because I believe that it did not concern Lapland or the Sámi area. The people who were suffering from the Great famine came to the North, up the coast and other areas to escape it. So I haven't heard that it would have been in the Sámi areas but it would be interesting to check whose mistake is it? It is just a detail and I do not know why it is there because it was already in the 1860s and the photograph is from the 1930s, so what is the point then? I should check out. It seems that this information is from Finnish historical books and that they always ignore the North, speaking only about Southern and middle Finland. I have not heard about the Great Famine in Inari at all in those years. There were other famines, but small. This is the famous Great famine.*

Such examples question the legitimacy and knowledge production of museum curation as well as the representation of the exhibited peoples. While collections are often the greatest resource of an institution, visitors experience museums primarily through displays and exhibitions. Therefore, an exhibit's most important role is as a tool for communicating and educating the public (Klobe et al. 2014: 382), which is challenging. Museum anthropologist Michael F. Brown, in his article "Exhibiting Indigenous Heritage in the Age of Cultural Property" (2009), presents a corollary belief on how museums broaden the cultural horizons of the general public, in ways that would foster a greater understanding of human cultural diversity. However, he further argues,

[f]or the past quarter-century, an array of social forces has called these principles into question and turned the encyclopedic museum into a site of conflict. Global processes of ethnic assertion and redefinition, Indigenous rights, evolving ideas about colonisation, and the intensifying struggle over cultural property have converged on the museum to cast doubt on its legitimacy and public mission (Brown, 2009: 145).

### 1.4.3 Indigenous Curation

[W]e must require just and equitable material transfer agreements and intellectual knowledge partnerships between biocultural collections and Indigenous groups worldwide in order to facilitate strong, collaborative and continuing relationships (Salick et al. 2014: 10).

The quotation above is taken from the ethnobotanists Jane Salick, Katie Konchar and Mark Nesbitt (eds.) (2014) publication *Curating Biocultural Collections. A Handbook*, presents several chapters on Indigenous perceptions on 'biocultural collections' (Chapters 17, 18 and 19). Biocultural collections are ethnobotanical specimens, artefacts and documents – plant, animal and cultural – that represent dynamic relationships among peoples, biota, and environments (Ethnobiology Working Group 2003 cited Salick et al. 2014: 1). Food artefacts and any handling objects related to food are part of biocultural collections. When they are of plant origin, they represent the ethnobotanical knowledge of the people. Salick et al. agree, that not only museums but also such collecting institutions as botanical gardens (where food knowledge traditions are commonly presented under the Economic Botany displays) “must draw on the experience of ethnographic museums, which in recent times have entered into extensive partnerships with source communities, resulting both in better-curated and interpreted collections and in enhanced access by source communities to their cultural heritage (Salick et al. 2014: 12). Efforts are made to keep all of these concerns in mind when curating objects, without unduly compromising museum conservation standards. Along with the mission to curate – to care for and preserve objects for future generations – comes the responsibility to show respect for the people who made them. Salick et al. further elaborated: “this should be manifested in the ways we house, exhibit, handle, study and disseminate information about the materials with which we are entrusted” (Salick et al. 2014: 39). Every item has a story to tell, yet only ‘the keeper’, or *árbečeahppi* (saN) the owner of traditional knowledge, a custodian of the story can gain access to the items for such cultural engagement:

[T]here are literally millions of nameless, story-less, context-less items sitting on dusty museum shelves throughout the world. Some pieces will never come out of the contextual darkness because there is no one to tell their story <...> In the hearts and minds of Indigenous People, these items are more than just museum exhibits, and having open access can mean the difference between a tenuous relationship with institutions and truly reciprocal relationship. Access is more than just being able to view and study an item. It is the ability to connect with a piece of your people’s spirit – to connect with those who came before you (Salick et al. 2014: 261).

Museologist Christina Kreps (2005) discusses the hegemony of Western museology in her essay “Indigenous Curation as Intangible Cultural Heritage: Thoughts on the Relevance of the 2003 UNESCO Convention”. Kreps explores how Indigenous curation

qualifies as intangible cultural heritage (ICH) under the Convention on the Safeguarding of Intangible Cultural Heritage adopted by the United Nations Educational, Scientific, Cultural Organization (UNESCO) in 2003 (<http://unesdoc.unesco.org>). She takes the further notice: “*Indigenous curation*, as I use the term, is for non-Western models of museums, curatorial methods, and concepts of cultural heritage preservation.” (Kreps, 2005: 3). As the recognition of Indigenous curation is highlighted in the international documents, Kreps says (2005: 5), that it “theoretically qualifies as intangible cultural heritage as defined in the Convention on the Safeguarding of Intangible Cultural Heritage. According to the Convention, the intangible cultural heritage means: “the practices, representations, expressions, knowledge, skills—as well as instruments, objects, artifacts and cultural spaces associated there with—that communities, groups and in some cases individuals recognize as part of their cultural heritage” (Article 2.1, Definitions).” Indigenous curation is equated to safeguarding as of the collections, as of the people’s heritage. Kreps (2005: 4) highlighted that “Indigenous curatorial practices should be recognized and valued in their own right as unique cultural expressions and evidence of human cultural diversity.” Under the Convention “safeguarding” means: “measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission (particularly through formal and informal education) as well as revitalization of the various aspects of such heritage.”

The encounters of the past, that generated the ‘historical burdens’ for the Indigenous communities, are still felt today. As a museologist Jane Mt. Pleasant (2014) further commented: “researchers and administrative staff working in botanic gardens and museums often meet with resistance or even hostility when they attempt to engage Indigenous communities, in what the institutions see as common goals and shared interests around biocultural collections. A long history of exploitation, both recent and distant past, constrains current relationships between Western institutions, tribes and nations.” (Pleasant, 2014: 245). This is applicable to the Sámi people as well. The successful collaborations between institutions and Indigenous communities will require that garden and museum staff have a thorough knowledge of these historical relationships, as well as understanding of the contemporary political, social, cultural and economic factors that affect specific communities. The challenges are substantial



(Pleasant, 2014: 245). Many institutions have gone through changes to curatorial and access policies in the last two decades, but more remains to be done. It must be thoroughly participatory, community-based, and respectful of the intellectual property rights pertaining to traditional knowledge (Salick et al. 2014: 226). Access refers to the ability to see, to handle, to use and model biocultural artefacts. As Lehtola said: "Providing the Sámi with access to their material culture is like the archaeology of knowledge in reverse. Not only (1) repatriation of knowledge, but (2) its re-interpretation is important, as well as (3) recovery and return of the voice and role of the ancestors, a determination to figure out the silenced strategies characteristic of Sámi culture" (Lehtola, 2005: 84). A well balanced approach that includes Native peoples in the decision-making process for object selection is ideal (Klobe et al. 2014: 385). Such example can be seen at the future exhibitions of the Eastern Sámi Museum in Neiden. I visited the museum during my fieldwork in August 2014 and was shown around by the leading archaeologist Honna Havas. She presented how various objects (including 'bark food' tradition) were selected and how they were being labeled in the Skolt Sámi language, in collaboration with the community:

**Honna Havas:** *Our original idea was to have all the original items in the exposition but we do not have the needed space. Therefore, we have moved them together with the film to the third room, so that people can see them together. Here will be only some parts on 'pettu' also some parts of pinewood. I chose these pictures... Photographs<sup>10</sup> with the remains of 'pettu' tools are from Norskfolkemuseum. They are not exhibited there, they are from the archives.*

Further, she commented on the way the museum would like to serve as a transmitter of Sámi food culture with the engagement of Skolt Sámi community:

**Honna Havas:** *Almost everything is state owned. The areas we were registering were partly state owned... the National park area... We want to start cultivating these areas, involve the people from Sevettijärvi, who have done this before, new people... Find a field where people could get to know about 'pettu' trees in the forest earlier. Maybe to organize a mini seminar? The museum could serve as a mini co-operator. I was thinking about people from Sevettijärvi and Nellim. Many of them have relatives near Pasjok, like Hanna-Maaria [Kiprianoff, a Skolt Sámi working at the museum. -Bog.]. She has more relatives in Pasjok than in Finland!*

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<sup>10</sup> Among the photographs there is the one with *Maažsážjäu'rr* (*saSk*), a place in *Suð'nn'jel sijdd* where in 1939 Karl Nickul visited Si'rǧǧi Fofonoff and documented bark handling process.

As traditional uses of plants go through the major transformations, the artifacts in ethnobotanical collections at the botanical gardens and museums take on a new significance to Indigenous groups and anthropologists. Older collections in particular are likely to contain significant artefacts made by Indigenous peoples, which can assist in helping people to 're-learn' lost skills (Salick et al. 2014: 65). Hence, for example, many Native Americans are beginning to see value in museum collections as opportunities for cultural restoration. There is a great need for Indigenous perspectives to inform standards for both the storage, use and for the understanding of the biocultural collections (Salick et al. 2014: 259). The role of Indigenous consultants and the wider subject of how Indigenous peoples and collectors interacted are subjects for further research (Cornish, and Nesbitt, 2014: 289). As more comprehensive management and influence on the expositions is needed, a rising tendency to consider the events of the past is forming a new angle of perception. The improved appreciation of oral tradition as a source for interpretations of the past was a shared characteristic between Indigenous thought and research into recent history (Lehtola, 2005: 93). In addition, Kreps (2005: 5), also takes a further notice: "A cultural expression must also be transmitted from generation to generation, constantly being recreated by communities and groups, and provide them with a sense of identity and cultural continuity to qualify as intangible cultural heritage and for protection under the Convention." In the time of great cultural transformations for the Indigenous people, objects of the past and present could become a form of cultural expression through the process of engagement (Indigenous curation) leading to the recognition of their heritage.

#### **1.4.4 Indigenous People and Theory**

[I]ndigenous peoples have been, in many ways, oppressed by theory. Any consideration of the ways our origins have been examined, our histories recounted, our arts analyzed, our cultures dissected, measured, torn apart and distorted back to us will suggest that theories have not looked sympathetically on us. <...> for Indigenous peoples, most of theorizing has been driven by anthropological approaches. These approaches have shown enormous concern for our origins as peoples and for aspects of our linguistic and material culture (Smith, 2012: 39).

For a long time, the development of theory regarding Indigenous people was mainly in the hands of anthropological research. The given quotation illustrates how the quest for peoples' authenticity (origin, language, material culture) and the tension of research power dynamics, provoked the Indigenous peoples' resistance which includes within it, their desire to do and lead their own research that is driven by scientific theory. Māori

scholar Linda Tuhiwai Smith calls past theorizing oppressive and non-sympathetic, she does however argue for the benefits of theory for Indigenous people:

[T]heory at its simplest level is important for Indigenous peoples. <...> it contains within it a method or methods for selecting and arranging, for prioritizing and legitimating what we see and do. Theory enables us to deal with contradictions and uncertainties. Perhaps more significantly, it gives us space to plan, to strategize, to take greater control over our resistances. The language of theory can also be used as a way of organizing action. It helps us to interpret what is being told to us, and to predict the consequences of what is being promised. Theory can also protect us because it contains within it a way of putting reality into perspective. Part of exercise is about recovering our own stories of the past. This is inextricably bound to a recovery of our language and epistemological foundations. It is also about reconciling and what is really important about the past with what is important about the present, and reprioritizing accordingly (Smith, 2012: 40).

A few other Indigenous scholars (Grande, 2000; Chilisa, 2012) have argued that postcolonial theory can easily become a strategy for Western researchers to perpetuate control over research related to Indigenous peoples and the colonized 'Other' in general, while at the same time ignoring their concerns and ways of knowing. Values of the colonized 'Other', such as concepts of family, spirituality, humility, and sovereignty, are most likely to be missed in a postcolonial research theory that draws from a critical theory (Chilisa, 2012: 49). Bagele Chilisa has used the term 'postcolonial indigenous theory' to emphasize Indigenous theorizing and Indigenous knowledge as essential ingredients in postcolonial theory. Postcolonial indigenous theory thus gives researchers the tools to theorize Indigenous research paradigms, and culturally integrative research approaches (Chilisa, 2012: 50). In relation to these arguments, the application of provided theoretical guidelines in this section will determine the whole research process. It derives from what I call a 'participatory research approach' (Chapter 2).

## **1.5 Literature Review**

I have chosen to look into the previous research studies on comparable topics related to the discourse of 'bark food'. I present some of the most important local and international literary sources that are mainly written by archaeologists, anthropologists, ethnographers, (forest) historians, ethnobotanists and food scientists. It is important to point out here that those studies were partly (or completely) carried out by Sámi or other Indigenous scholars.

Various plants that humans use for food are of high economic importance. For documenting this ethnobotanical knowledge, nutritionist Harriet V. Kuhnlein and ethnobotanist Nancy J. Turner (1991) published their book *Traditional Plant Foods of Canadian Indigenous Peoples. Nutrition, Botany and Use*, written together with the First Nation communities. This work became essential for this thesis, since I am using it to see comparisons on types of tree bark, harvesting, preparing and storing practices between First Nations, Native Americans and the Sámi, who historically have given 'bark food' an important place in their diet. Ethnobotanist Andrea Pieroni and anthropologist Lisa Leimar Price (eds.) (2006), in their book *Eating and Healing. Traditional Food as Medicine*, start an important discourse on how food can be medicine, and vice versa. They assert, "plant resources in traditional societies, especially wild ones are often used multicontextually <...> the gathering or cultivation, and consumption of these species are rooted in the 'emic' perceptions of the natural environments; coupled with the availability of resources, local cuisine, and cultural heritage (2006: 1). Even though pine bark has previously been put into a category of traditional and local vegetables (Kytölä, 2011), a dispute on "traditional Sámi society" here would become a challenge (Bjørklund, 2013: 186). Therefore, in this thesis I will try to reason the social meaning of 'bark food', as presented by Pieroni and Price.

The discourse of indigenuos foodways and dietary change is a global concern, hence the work of Kuhnlein and Receveur (1996), "Dietary change and traditional food systems of Indigenous peoples"; Kuhnlein et al. (2006) "Indigenous peoples' food systems for health: finding interventions that work"; Bodirsky and Johnson (2008) "Decolonizing diet: healing by reclaiming traditional Indigenous foodways" all enter a discussion on 'food sovereignty' and 'food security', according to legal sources and international conventions. To name a few, Food and Agriculture Organization of the United Nations (FAO) "Right to Food and Indigenous Peoples"; Committee on Economic, Social and Cultural Rights (CESCR); United Nations Economic and Social Council, General Comment 12: The right to adequate food (Art.11): 1999.05.12. Indigenous peoples' identity is closely linked to cultural rights with regard to food choices, food preparation and food acquisition.<sup>11</sup> Pine inner bark, when used for food, has such cultural value to

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<sup>11</sup> For further reading, see "Right to Food and Indigenous Peoples." From Food and Agriculture Organization of the United Nations (FAO) home website. (Accessed 14-07-2015). [Online]. – URL: [www.fao.org/docrep/016/ap552e/ap552e.pdf](http://www.fao.org/docrep/016/ap552e/ap552e.pdf)

the Sámi community. The book *Eating the Landscape*, by anthropologist Enrique Salmon (2012) found that a common effort to maintain food traditions increased the cultural identity of a community and reinforced their land and food consciousness. What is more, two books by forest entomologist William M. Ciesla (1998) *Non-wood Forest Products from conifers 12*, written for FAO - Food and Agriculture Organization of the United Nations, and another one by ethnobotanist Anthony Cunningham et al. (eds.) (2014) *Bark. Use, management and commerce in Africa* in *Advances in Economic Botany, Vol. 17* present some positive examples of how inner bark, that is also considered as a waste product, can be thoughtfully utilized and even commercially managed.

The earliest evidence of 'bark food' used by the Sámi is provided by archaeologists and forest historians of Northern regions. The first contribution to the topic can be found in the article by Nikalsson et al. (1994) entitled "A dendrochronological reconstruction of use by Sami of Scots pine (*Pinus sylvestris* L.) inner bark over the last 350 years at Sädvajaure N. Sweden.", where authors investigate special distribution of 'bark-peeled' trees, that are the cultural remains and evidence for the Sámi use of forest resources for food. Other articles of Östlund et al. (2002), Josefsson et al. (2009; 2010), Sjören and Kirchhefer (2012), Anderssen et al. (2013), Elvebakk and Kirchhefer (2012), a book by Kajsa Kuljok (2013) note the importance of bark-harvested trees, what they call 'culturally modified trees' (hereafter CMTs) of Northern Fennoscandia. Only archeologists Sven-Donald Hedman and Bjørnar Olsen (2009) in their article "Transition and Order: a Study of Sámi Rectangular Hearths in Pasvik, Arctic Norway", come closer to the case study area and investigate the historical lands of Eastern Sámi. At this point, one can say without doubt, that in Fennoscandia this topic has been investigated mostly by Swedish archaeologists and forest historians, such as Östlund et al. (2004) "Trees for food - a 3000 year old record of subarctic plant use." In their later article (2009) "Bark-peeling, food stress and tree spirits - the use of pine inner bark for food in Scandinavia and North America." they suggest the comparison between CMTs across the continents and also present Native narratives about the sacredness of Boreal forests. Earlier an archaeologist Arnoud Stryd (1997) with *Culturally Modified Trees of British Columbia: A handbook for the identification and recording of culturally modified trees* presents another thorough terminology connected to CMTs. Later Arno et al. (2008), in the article "Living Artifacts: The Ancient Pendoresa Pines of the West", following the topic about

CMTs, incorporates the voices of several First Nations and shows the importance of ancestral knowledge related to local food traditions.

The introductory to Sámi food economies starts with an early work of Johannes Schefferus (1956) [1673] book *Lapponia*. This book is the first ethnographic book about the Sámi people in Sweden-Finland, under the government of Swedish King Gustav II Adolf. In his article on “Domestication, reindeer husbandry and the development of Sámi pastoralism” cultural anthropologist Ivar Bjørklund (2013) suggests some insights to Sámi food production and consumption. Historically important work to this thesis is entitled *Food and emergency food in the circumpolar area*, was written by a Swedish ethnographer Kerstin Eidlitz [Kuljok] (1969). Here she focuses on food traditions of a number of subarctic nations, as well as illustrating the importance of ‘bark food’ discourse in Northern Fennoscandia, by using works of early ethnographers and rich archival narratives from Uppsala Dialect Archive (Swe. *Uppsala landsmålsarkiv*). Her ideas, on the other hand, also support social concepts such as ‘famine food’ and ‘black food’ that form negative attitudes to this food. Ethnographer Argunova-Low (2009), “Black Food: Diet, Subsistence and Exchange.” and Kulonen et al. (2005) with *The Saami. A Cultural Encyclopaedia* give some important grounds to separation of ‘bark food’. In contrast to Pennanen, and Näkkäljärvi (2003), *Siidastallan. From Lapp communities to modern Sámi life*, who in the section named “Conditions of Survival in early days” claim that: “Gathering was another basic livelihood <...> The Sámi a long time ago, were taught by the Finns to add flour made from the cambium layer of the pine to their food, especially in dishes that included fish (2003: 44). This is questionable, since no other sources support the idea of Sámi learning how to harvest pine inner bark. A few other relevant works by Kaspersen (1997) *Samisk mat og kultur*; Svanberg, and Tunón (2000) *Samisk Etnobiologi: Människor, djur och Växter i Norr*, can provide valuable historical information on Sámi food traditions and local plant foods. Two articles are of particular importance to the work of a noble contributor, Swedish born botanist and taxonomist Carl Linnaeus (1707-1778), for recording Sámi culture as it was in the 18th century. His travel journals are analyzed by Räsänen (2007) in an article “Of all foods bread is the most noble: Carl von Linné (Carl Linnaeus) on bread” and Zorgdager (2008) in “Linnaeus as Ethnographer of Sami Culture”. He (Linné) was one of the first to start the discourse on the importance of ‘bark bread’ to Sámi culture. In relation to my case study,

works by British social anthropologist Tim Ingold (1969), Finnish geographer and ethnographer Karl Nickul (1948), Swedish travel writer Hans Lidman (1969), another Finnish ethnographer Toivo Immanuel Itkonen (1991), chef and Sámi food entrepreneur Ritva Kytölä (1999; 2011) all together, build a fundamental collection on Eastern Sámi culture and food narratives.

There has been a fair amount of studies on Sámi culture, yet not so many on their food. This means that for the purpose of this study I will need to combine the interdisciplinary elements of previous research on 'bark food' with the new data from my fieldwork.

## 1.6 Thesis Outline

**1- Introduction.** This chapter offers an opening to the topic by starting with a brief presentation of Scots Pine (*Pinus sylvestris* L.) and its significance for the people of Northern Fennoscandia, notably the Sámi; followed up by the research question and objectives of the study. I continue by introducing the theoretical framework that comes with reflections on cultural heritage, and the formations of common heritage at a local museum, this is followed by a literature review, ending with the thesis outline.

**2- Methodology.** This chapter opens with the research approach, provides analytical tools such as the 'Indigenous research paradigm' and discourse of knowledge systems. The section of empirical data shelters my framework of data gathering, which includes a participatory research approach. It all corresponds with my research methods: data collection sources and techniques. Finally, research ethics and reflexivity on challenges and responsibilities are being discussed.

**3- Contextualizing 'Bark Food' Discourse.** This section presents the first share of data analysis: the development of various attitudes to 'bark food' within an ethnographic narrative focused on food. Later, I look into the discourse of 'health' and 'famine' food overtime. Moreover, I present the historical background, colonial power dynamics and cultural encounters within food traditions in the North.

**4- Of Bark and Sámi Culture.** This chapter undertakes the largest part of my data analysis. In this section, I elaborate on the Indigenous worldview by presenting some

living parts of the landscape: culturally modified trees and the lore of knowledge locked in the local place names. Later on, I present the main components of bark harvesting practice: time, tools, and technique. Lastly, the topic of nutrition, preparation and taste, social practices are being introduced.

**5- Sámi Food Challenge.** This chapter links the factors that influenced the change of the 'bark food' practice as a part of Sámi cultural heritage. In the later section 'the poor can eat the cake', I place this discussion, into the discourse of indigenous foodways and dietary change. I then talk about such legislative factors that influence this type of cultural continuity, as the availability of resources and 'the right to food'.

**6- Rethinking the 'Burdens' of Famine Food.** I sum up the entire work with comments on the project as a whole. Finalize by presenting some views on the implications for further research.



## 2 Methodology

To explain the topic of the study better, in this section I reflect on the choice of balancing between the 'Indigenous research paradigm' and the scientific methodological approach, as well as the problematics and benefits of weaving them together in the context of this work. I do that by situating different knowledge systems. Later in chapter I present the framework of data gathering by introducing the outline of data collecting sources, tools and techniques. Lastly, I present a great number of ethical challenges and responsibilities I met in the process of this research project.

### 2.1 Postcolonial Indigenous Research Paradigm

[R]esearch institutions and practitioners are called upon to commit themselves to undertaking research that is relevant, participatory, based on Indigenous culture and language of the people and that would serve the needs of the local communities.

-- United Nations Educational, Scientific and Cultural Organization, 1996

The quote above addresses research in the light of participatory research paradigm. In her book *Indigenous Research Methodologies* Indigenous scholar Bagele Chilisa (2012) asserts 'postcolonial Indigenous research paradigm' as a framework of belief systems that emanate from the lived experiences, values, and history of those belittled and marginalized by Euro-Western research paradigms. The term 'paradigm' was first used by Thomas Kuhn (1962) to represent a particular way of thinking and seeing the world that is shared by a community of scholars, researchers, or scientists, and also one that is used to represent commitments, worldviews, beliefs, values, methods and approaches that are shared across a discipline (Chilisa, 2012: 20). A research paradigm is a way of describing a worldview that is informed by a philosophical assumption about the nature or social reality (ontology), ways of knowing (epistemology), and ethics and value systems (axiology). A paradigm also has theoretical assumptions about the research process and the appropriate approach to system inquiry (methodology) (Chilisa, 2012: 20). As another Indigenous scholar, Michael Hart (2010) explains: "Research is not only respectful or 'culturally sensitive', but is also biased in approaches and processes that are parts of cultures" (2010: 1). Spirituality and reciprocity are two key elements of Indigenous ontology and key in Indigenous paradigm (Hart, 2010: 7). Another

Indigenous theorist Shwan Wilson (2008) when talking about understanding of Indigenous paradigm draws upon the relationship that needs to be formed between readers of his story, himself as the storyteller and the ideas he presents. Indigenous paradigm, as he notes, “must hold true to its principles of *relationality* and *relational accountability*” (Wilson, 2008: 6). Entities that make up the Indigenous research paradigm are Indigenous epistemology and ontology, which are based upon relationality; axiology and methodology, which are based upon maintaining relational accountability (Wilson, 2008: 11). A Sámi theorist Rauna Kuokkanen (2000) has linked the issue of an Indigenous paradigm in a way of both decolonizing Indigenous minds by “re-creating” Indigenous values and cultural practices. She placed Indigenous peoples and their issues into dominant, mainstream discourses, which until now have regarded Indigenous peoples to marginal positions (Kuokkanen, 2000: 411). I found, that the way to carry the relational accountability is to discuss relationality, in particular traditional ways of knowing.

## **2.2 Situating Knowledge Systems**

For centuries before the arrival of Europeans, Indigenous peoples developed, managed and stewarded their biological resources, developing a rich foundation of knowledge about plant and animal life and the ecosystems that supported them (Pleasant, 2014: 248). Native knowledge systems were embedded within cultural traditions and transmitted across the time and space using complex ceremonies and rituals. Dynamic knowledge systems enabled Native farmers and other plant users to adapt their practices to changing conditions. Early accounts by Europeans indicated that Native peoples had extensive and deep knowledge regarding the plants and natural resources in their territories, they often aided Europeans in collecting and identifying plants and frequently shared their knowledge about how to use them (Pleasant, 2014: 248).

The UN Convention on Biological Diversity (hereafter CBD), which has been ratified by 178 countries in 1992. Finland, where I carried out my case study, was one of the first. CBD recognizes the important role of Indigenous peoples in the conservation and sustainable use of biological diversity. It is relevant when applying provisions governing Indigenous peoples’ rights to their own knowledge, culture, land areas and resources. According to the Article 8(j):

[E]ach contracting Party shall, as far as possible and as appropriate: Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of Indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices.

According to CBD, the knowledge is presented as an accumulation of experiences of a certain ethnic group. In this research, I will analyse the continuity and change of uses and attitudes to and the ethnobotanical knowledge about 'bark food' among the Sámi people, therefore, whenever possible, I will refer to their concept of traditional knowledge - *árbediehtu*<sup>12</sup> (saN). I chose to do so, because it is going to help us get the understanding of the foundation as well as the development of knowledge in its particular context from an Indigenous perspective. Moreover, used as analytical tools, Indigenous concepts are deeply and inevitably connected to particular Indigenous epistemologies, ontologies and value systems (Porsanger, and Guttorm, 2011: 241).

In the earlier definition given by CBD, traditional knowledge refers to the knowledge, innovations and practices of local and Indigenous communities around the world. Even if there are many definitions for Traditional Ecological Knowledge – which is also known as Traditional Environmental Knowledge System or Traditional Environmental Knowledge and Wisdom (Turner, and Clifton, 2006: 153), there is an agreement among scientists about the fact that such knowledge is linked to a specific time and place, culture or society. It is dynamic in its nature; it belongs to groups of people who live in close contact with natural ecosystems and it contrasts with 'scientific knowledge'.<sup>13</sup> In the case of this study, by analyzing the discourse of a plant food tradition among different peoples, I will also use the definition of Traditional Ethnobotanical Knowledge (TEK).

Scientific research is deeply implicated in the forms of colonialism and the academy has originated in the orientalism (Smith, 2012), both have to be decolonized. It is as a significant site of the struggle between the interest and the knowing of the West and the interest in knowing the 'Other' (Smith, 2012: 2). Scientific colonialism speaks

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<sup>12</sup> It is the collective wisdom and skills of the Sámi people, used to enhance their livelihood for centuries. For more on this academic term and field of knowledge (see Porsanger, and Guttorm, 2011).

<sup>13</sup> For discussion see Agrawal (1995) "Dismantling the divide between indigenous and scientific knowledge". *Development and Change*, 26: pp. 413-439.

directly to the production of knowledge and ethics in social science research and has been described as the imposition of the positivist paradigm approach to research on the colonies and other historical oppressed groups (Chilisa, 2012: 9). Although, in some cases, knowledge holders, who feared the loss of information, intentionally worked with American anthropologists and ethnobotanists to transfer their knowledge. These varied strategies to maintain knowledge have left a complex residual of colonial relationships and Indigenous self-determination in many Native communities (Pleasant, 2014: 248). Nevertheless, separations and connections of the given knowledge systems occur simultaneously. As a 'web', or a fabric, and only we determine the thickness and thinness of the threads within it.

## **2.3 Empirical Data**

As I will be discussing the cultural encounters of attitudes about bark as a source of food, and raising the question of access to natural resources and the representation of cultural heritage at the museums, the chronological focus for that will be the 1600's up until the current times. In order to support the previous research with the newest data from the field, I will reflect upon the reasons and ways the tradition has continuously evolved and changed over time. The goal of this research was to collect knowledge and other cultural aspects related to the tradition of harvesting and using the inner bark of pine. I found that my archaeological background, archival and past ethnographic work has been relevant for building up the fundamental platform to understanding the common pattern of bark harvesting tradition amongst different nations throughout the Northern hemisphere. What I did not know when setting off, was that I would encounter many unforeseen challenges and how the process of solving them would determine the outcome of this research.

### **2.3.1 Fieldwork Framework**

Northern Fennoscandia is a multiple peninsula connected to the continent of Eastern Europe by the Karelian, Olonestian and Onegan isthmuses. Fennoscandia is divided into the states of Norway, Sweden, Finland and Russia. Historically, the Sámi have lived in the Northern and Eastern Fennoscandia, or *Sápmi* (saN), which is where the case study was conducted. It took place in the heart of Inari Lapland in the northernmost part of

Finland. The municipality has four official languages: Finnish, Northern Sámi (ca. 700 estimated speakers), Inari Sámi (ca. 400 speakers), and Skolt Sámi (ca. 400 speakers). It covers an area of 17,333.77 square kilometres<sup>14</sup>. For the purpose of the research, I visited current Sámi villages and settlements near Lake Inari (*Aanaarjávri* saI)<sup>15</sup> (Figure 2), Sevetijärvi (*Če'vetjäu'rr* saSk) was the main fieldwork location. I also did my fieldwork in other places such as Inari (*Anaar* saI), Nellim (*Njeä'lem* saSk), Ivalo (*Avvil* saN), Neiden (*Njauddâm* saSk) and Kotajärvi, to conduct two interviews. In search of additional relevant literary and archival sources, I worked in Tromsø (*Romsa* saN). I selected these places to meet the key participants who could provide me with some reliable up-to-date evidence.



**Figure 2:** Map of the fieldwork area, by Bjørn Hatteng and Sandra Bogdanova.

Several steps were made to answer the main research question and follow the objectives. First of all, the fieldwork was carried out in three phases (Figure 3): *Phase 1:*

<sup>14</sup> For details, see "Area by municipality as of 1 January 2011" (PDF), Land Survey of Finland (Accessed 15 July 2015).

<sup>15</sup> The transcriptions of most relevant key concepts and placenames are introduced in the local Sámi languages or dialects. Hereafter, the translations are there to be used throughout the study for convenience even though it can preserve neither the accuracy, nor the primal structure of the term. To examine the originals see Appendix 1: Glossary of Sámi Terms.

*the Archive* lasted for five weeks in August 2014. *Phase 2: the Kitchen* that lasted for two and a half weeks in January 2015, midway through the thesis writing. *Phase 3: the Forest* lasted for 7 days in July 2015. I analyzed the data as I went along and soon discovered the degree of involvement in the traditional practice was significantly higher than I have expected.

### **Phase 1: The Archive**

In the summer of the year 2014, I travelled to Inari Lapland in the northernmost part of Finland. The duration of the journey was five weeks, from 24th July – 25th August. It took time to get to know the people. Therefore, I started gathering the data at the *Sámi Arkiiva* (saN) (Sámi Archives) in Inari, which eventually led me to the Skolt Sámi community. At the archive library, I also found relevant local literary sources and was recommended of conducting an interview with an archaeologist Honna Havas. I later visited *Østsamisk Museum* (East-Sámi Museum) in Neiden. There, I was introduced to the future exhibition and took photographs of recently made Skolt Sámi bark harvesting tools (see Chapter 3: Figure 4). During this fieldwork, I received a dried pine inner bark sample from my informant, chef and food entrepreneur Ritva Kytölä.

### **Phase 2: The Kitchen**

To continue my data gathering, I decided to return in winter for more fieldwork that lasted for two and a half weeks, from 19th January – 5th of February 2015. I was invited to come back and had some pre-arranged meetings from the first fieldwork with two of my key informants. This trip provided me with local recipes (see Appendix 3: Figure 19 and Figure 20), including current preparation and storing techniques of the 'bark food'. I received 9 photographs from a personal archive of Matleena Fofonoff, with her family collecting pine inner bark in the early 1990s (see Chapter 4: Figure 8). The sequence of photographs captures the whole process of gathering the bark, from opening the outer bark of the tree to drying it over the fireplace. To this day, it is done in the same way. Later I received photographs from the private archive of Irja Jefremoff, which were later hereby used for creating a poster for this research project (see Appendix 3: Figure 11). As a result, I learned about the local food narratives, mostly emerging from Skolt and Inari Sámi history. In addition to that, I have collected three more interviews, received a the main antler knife to separate the inner layer of bark, as a gift from a craftsman Arttu

Niemenma and 2 sketches with measurements of 3 models of the same tool from Sámi *duodji* craftsmen Atro Saijets. On the way back home, I visited the Sámi winter market in Jokkmokk, or *Johkamohkki* (saN), where I met a Lule Sámi family, Greta Huuva and Linn Huuva, in their family café Viddernas Hus. They were using the pine inner bark as an ingredient in two products and presented it as a traditional and medicinal Sámi food (see Chapter 4: Figure 9).

### Phase 3: The Forest

As I was invited to come back once again, I decided to go on the last data gathering fieldwork. This trip lasted for six days, from 11th – 16th of July 2015 and resulted in a hands-on practical workshop on bark harvesting (Figure 3: 3). This time I learnt about the harvesting practice *in-situ*. At the end of my last stay, I realized how coming back created a participatory dialogue with the community. In all community approaches *process* - that is, methodology and method - is highly important. In many projects the process is far more important than the outcome. This belief made me reflect on what it means to bring old knowledge as Indigenous into places that are new to them as academic research (Kovach, 2010: 41) and not to forget that researchers need to outline a wide picture of what research is from Indigenous perspectives (Hart, 2010: 11).



**Figure 3:** Fieldwork: 1) *The Archive*, August 2014, photograph by the Sámi Archives (*Sámi Arkiiva saN*) in Inari, Finland; 2) *The Kithcen*, January 2015, photograph by Albina Griniūtė; 3) *The Forest*, July 2015, photograph by Heni Wesslin.

### **2.3.2 Data Collection**

I collected the main data using techniques such as: document analysis, interviews, participant observation and sample collection. In addition to that, I have tried to document the knowledge through narratives that lay in museum exhibitions and archival photographs with a goal of demonstrating how this knowledge is maintained through such different forms of communication. Most of the information was collected through daily interactions with the people, workshops, as well as through conversations and informal interviews.

**Document Analysis** helped to create analytical frameworks through the process of gathering the relevant data. Open-published documentary sources, such as scientific reports, online journals, legal documents (international conventions, recommendations, regulations) and previous research studies on the topic were used for the textual analysis. I used monographs as well as recent anthologies, primarily within an Indigenous, ethnobotanical, and historical context. Additionally, I was using the results of relevant previous studies in ethnography, archaeology, museology and heritage curation to supplement my objectives. In search of historical photo-documentation, I have reached out and visited several public archives and museums, such as Sámi Arkiiva (Sámi Archives) in Inari, Tromsø University Museum (also online archive database), *Østsamisk Museum* (East-Sámi Museum) in Neiden. I recorded some textual remarks from exhibitions at museums in order to locate Indigenous representation in cultural heritage curation and find out how present research participants relate to it.

**Qualitative Interviews** was the main method of gathering new data for the research. Interview is a recognized method in social studies, which helps not only to collect data, but also to supplement and correlate conclusions. I chose face-to-face type of interview since it is particularly useful as a research method for accessing individuals' attitudes and values (Byrne, 2012: 208). I used 'snowball sampling' method to collect nine (9) semi-structured interviews. Snowball sampling is an approach, when the few first selected participants help to identify others who they believe have knowledge or information on the phenomenon under study (Chilisa, 2012: 169). I interviewed four (4) men and five (5) women, Sámi and non-Sámi people, from various occupations: historians, archaeologists, cultural practitioners. Given their consent, I can address them



by their real names (see Appendix 5). Thus, they are: two archaeologists Honna Havas and Sven-Donald Hedman, an Inari Sámi historian Veli Pekka Lehtola, two Skolt Sámi *duodji* craftswomen Matleena Fofonoff and Heini Wesslin, North Sámi *duodji* craftsman Artto Sajets, *duodji* craftsman Arttu Niemenmaa, two chefs and food entrepreneurs Ritva Kytölä and Irja Jefremoff. Indeed, Matleena Fofonoff and the latter two women guided me all the way through this research with their stories and could be called the ‘three bark food godmothers’ of this work. As a Native theorist Margaret Kovach pointed out (2005): “Story is a means to give voice to the marginalized, and assists in creating outcomes from research that are in line with the needs of the community. Reliable representation engenders relevancy and is a necessary aspect of giving back to the community (Kovach, 2005: 96). Thus, for the record of accountability, with the voice of a Māori scholar Linda Tuhiwai Smith (2012), allows me to point out here that storytelling, oral histories, the perspectives of elders and of women have become an internal part of all Indigenous research (Smith, 2012: 145). Here are few lines from an interview with Irja Jefremoff, which give meaning to the choice of an interview method in regard to the area and topic of the research:

**Irja Jefremoff:** *My parents are coming 5 km from the border close to Vyborg. My husband Pekka Jefremoff, a Skolt Sámi, was from Petsamo siida. When the border was closed, they could not get in touch with their families. For me it was easy to understand Skolt Sámi because we were always discussing how can we get back to Karelia. It was so close to me.... You know, for me it is so important to give some help to you. Because as I was collecting memories here when I was young, people helped me so much. First, I went to Nellim to see Darja Jefremoff. She said that once I go to Sevettijärvi, I should go to Jakko Sverloff, as he was her cousin. That is how he would know, that he could trust me. That is how they were leading me from home to home, saying, where is good to overnight.*

Being a non-indigenous person myself, that is how I felt at the beginning of this research. Later, especially in the Skolt Sámi community, I was embraced with curiosity. One reason to that is that ‘Bogdanoff’<sup>16</sup> is a common family name among the Skolt Sámi. Notably, I bear a cultural sensitivity to the participants of the study; therefore, primarily I came as a ‘cultural ally’<sup>17</sup> before the notion of a researcher.

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<sup>16</sup> From an interview with Ritva Kytölä conducted on August 9, 2014 in Ivalo, Finland: “I thought you might be Skolt Sámi, are you? You see, Bogdanoff... they came from Russian Karelia for trading the fish. There was a Karelian village close to the Skolt Sámi areas. They got intermarried; Archipoff too. In addition, from another interview with Irja Jefremoff conducted on January 27, 2015 in Kotajärvi, Finland: “Bogdanoff, they were all over Karelia! The name was commonly given by priests to those children, who did not have a father.”

<sup>17</sup> The concept of a ‘cultural ally’ is well explained by an American novelist Anne Bishop (2002) *Becoming an Ally: Breaking the cycle of oppression in People* (Zed Books, 2002). The author, an ally herself, provides the reader with tools for achieving equity in people and institutions.

**Participant Observation** was used with the role of an observer (I) as a participant and an apprentice. Observation was carried out while staying in the study area (Phase 1, 2 and 3), engaging in studying the local *know how*, or explanations to the nature of reality (ontology), knowledge (epistemology), and values (axiology). Nevertheless, I am aware that observations may result in subjectivity. As Chilisa explains, “they are theory laden and influenced by the researcher’s biases and worldviews” (Chilisa, 2012: 27).

**Photography** as a powerful instrument of expression was used as an attempt to visualize and record the current issues discussed in the research (with an assent of those involved). I have chosen this method to document the visual aspects of continuity and change of bark use and the ways the knowledge about it is being transmitted and represented. As a result, I have successfully documented some tools, traditionally used for particular stages of bark harvesting, as well as social activities (i.e. games), museum exhibitions, food preparation and cultural landscapes from different Inari and Skolt Sámi areas.

## **2.4 Ethics and Reflexivity**

The aspiration of my research study is to be both analytic and emphatic. Not only did I find myself biased between my roles as a young woman researcher but also was facing a challenge of being a foreigner and a non-native language speaker neither to the research area, nor to any of the informants. Indigenous research is an empirical self-determining research (Smith, 2012: 143). It serves for taking back the control over research, sharing and respect, reciprocity, safety, non-intrusive observation, deep listening and hearing, reflective non-judgement, honor what is shared, logic of the mind and feeling of the heart, self-awareness and subjective insights (Wilson 2003 cited Hart, 2010: 9).

In Western culture, narrative has predominantly been textual, implying a set of assumptions and implications (Kovach, 2010: 96). Sámi theorist Rauna Kuokkanen (2000) states that “written language documents the histories of our families; it documents our progress as people” (Kuokkanen, 2000: 424). Therefore, when it comes to the published literary sources that were relevant for this study, they were handled carefully, by being aware of who wrote them, when, for what audience and to what purpose. Works by other Indigenous scholars as Chilisa Bagele (2012) *Indigenous*

*Methodologies*, Māori researcher Linda Tuhiwai Smith (2012) *Decolonizing methodologies*, Opaskwayak Cree writer Shawn Wilson (2008) *Research is Ceremony: Indigenous Research Methods*, Sámi scholars Jelena Porsanger and Gunvor Guttorm (2011) *Working with traditional knowledge: Communities, Institutions, Information Systems, Law and Ethics* became fundamental for guiding me through the research process. Some relevant sources on the topic were published in Finnish, Russian, Norwegian, German, Swedish, French or Sámi languages only. This complexity of foreign languages became the greatest personal challenge. Juggling back and forth between the languages, using dictionaries and seeking assistance from the native speakers, simply took more time than one could expect to write things down and put them in a fluent story. It may have also undermined the reliability and validity of data, since some things are inevitably lost in translation. A written literature mimetic of speech puts Native voices into print. However, holistic knowing is hard to preserve when stories are not delivered orally: “So much is lost in translation – the communal context of performance, gesture, intonation – even the best translations are scriptural reductions of the rich oral nuance” (Kovach, 2010: 102 in Stevenson, 2000: 19). Holistic lore of knowledge includes religious teachings, metaphysical links, cultural insights, history, linguistic structures, literary and aesthetic form, and Indigenous “truths” (Kovach, 2010: 97).

Similarly, while continuing with the writing I reflect on who I am writing for and how I am representing the research participants. As Chilisa (2012: 86) highlights: “Research subject should be protected from physical, mental and psychological harm.” By carrying out this study, I feel responsible for re-telling stories from my source community. To the best of my capacities, I try to imply Indigenous concepts to explain the complexities of local phenomena’s. It is important for me to listen to Indigenous voices in scholarly discussion on Indigenous issues, since finding out how silenced they were in certain publications or museum exhibitions; I set myself a goal of using sources of Indigenous authors whenever possible. What is more, it is commonly argued that the power relations (Silverman, 2001) between the researcher and research participants are a major issue within social research. Therefore, it was important for me not to create hierarchies and to avoid terms of control (Ali, and Kelly, 2012: 63). Finally, it is crucial to remember that poor ethical practice causes potential harm to those involved in the research, as well as “muddies the waters for future efforts to undertake research in

those populations” (Ali, and Kelly, 2012: 63). As Smith (2012: 5) concludes the thought: “<...> research is not an innocent or distant academic exercise but an activity that has something at stake and that occurs in a set of political and social conditions”.

Photography became an important part of the project. Oral consent was asked when taking photographs of people, as well as consent for printing and publishing the images (Ali, 2012: 299). In the process of data gathering, for communicating the project, this technique helped to create a common visual tool to bridge local people and other Sámi communities, as well as other Indigenous and non-Indigenous peoples.

Finally, an official letter from UiT the Arctic University of Norway with contact information was used as a part of the formal procedure and was especially useful in museums and archives, notably for the Sámi archives in Inari. Presenting it to some of the informants was a sign of my awareness of the expectations and responsibilities I carried as a researcher representing UiT the Arctic University of Norway.<sup>18</sup> It did not distance me from the communities as I expected, in contrast, it helped me to maintain the level of trust and accountability. It contributed to the protection of peoples’ individual privacy, which is an important ethical rule to follow in any research (Smith, 1975: 14). It is about trust and the responsibility and the future of shared knowledge, which should be safeguarded and protected from misuse. To respect, protect and maintain these rights, researchers must have an understanding of the nature of Indigenous traditional knowledge systems, traditional cultural expressions and the intellectual property rights (Porsanger, and Guttorm, 2011).

## **2.5 Conclusion**

To summarize, I discuss methods in relation to my findings. Relational approach is at the core within the Indigenous paradigm reflecting people’s worldviews and knowledge that is shared with all creation. Both of them inevitably relate to the very root of personal and communal identity.

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<sup>18</sup> The research study was submitted for the Norwegian Data Protection Official for Research (NSD), registered under the number of 39399 on August 12<sup>th</sup>, 2014.

### 3 Contextualizing ‘Bark Food’ Discourse

Over the years, a real question to the past diet of the Sámi has emerged within ethnographic narratives. However, rarely did these narratives acknowledge each other’s existence. Even the most questionable element of a cuisine, such as the topic of this work the ‘bark food’, could become a representative of a distinct knowledge system. Consequently, given enough attention, the later could reveal a convoluted story of people’s adaptation and their cultural and social evolution. Throughout the region of Northern Fennoscandia, within last couple of centuries, complex colonial structures have woven together a number of narratives about the topic. As a result, new understandings were ascribed to both: the phenomenon itself and to the people who consumed the ‘bark food’. Therefore, in this chapter I aimed to situate the encounters of narratives about the ‘bark food’, as a past Sámi diet, using ethnographic literary sources. I chose to analyse two major categories of ‘health’ and ‘famine’ among non-agricultural and agricultural food economies with a regional perspective of Northern Fennoscandia. To localize the discourse better, I focused on the voices of my case study community, the Skolt Sámi people. I also included other relevant narratives on the topic of edible barks from several places in the Northern hemisphere, to compare and contrast the broader scope of ‘bark food’ discourse.

#### 3.1 Northern Encounters

Plants could be regarded as additions to the diet. Since the beginning of human civilization, the bark and roots of conifers have been used for a variety of purposes. People in the North used the inner bark of trees to bulk up their food (Argunova-Low, 2009; Bergman et al. 2004; Eidlitz 1969). As I reviewed the literature, I came across **nine major categories to ‘bark food’** and will discuss them further.

The inner bark of pine (Figure 4), spruce, cottonwood, birch, poplar, elm, aspen and willow have been used as **(1) normal food** among the indigenous peoples, besides it was regarded as **(2) seasoning** and **(3) medicine/ health food** (Arunova-Low, 2009, Eidlitz, 1969; Siuvatti, and Penkkimäki, 2014<sup>19</sup>; Kuhnlein, and Turner, 1991;

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<sup>19</sup> The relevant part of this publication on ‘*Pettu*’ (pp.22-29) was translated from Finnish to English with the help of a native speaker.

Kuhnlein, 2009; Siuvatti, 2014). There is little documentation of nutrient content of these foods; however, they would be expected to have high sap content (Kuhnlein et al 2009: 8). Several First Nations of northwestern British Columbia (Canada) obtained a staple food by processing the cambium and inner bark. These were the Haisla, the Gitksan and Wet'suwet'en. Other Indigenous people across North America also made use of conifer bark as food (see Table 1). The Adirondack of northern New York State used the bark of a number of different conifers for food. Bark was such an important part of their diet that their name in the Mohawk, or Kanien'kehá:ka people, language means "tree/bark eaters" (Gaertner, 1970 cited Ciesla, 1998). The social concept of "bark eaters" led to an 'edible stigma' among Indigenous groups and the record of this food use for the Indigenous Sámi people serves as a good example of it. All these categories could be applicable to such a broad spectra of cultures as Native North Americans, Indigenous peoples of Siberia and Northern Fennoscandia. The widespread tradition shows the availability of a resource hence several method manuals and distinct cultural uses can be identified. It was Cornelius Tacitus, a senator and a historian of the Roman Empire, who mentioned that "around one hundred years after the beginning of the present era, that a people he called Fenni, who for all intents were the Sámi of the time, they lived by hunting and by gathering wild plants. The edible herbs that could be found and the pine trees' inner bark gave the Sámi the vitamins, minerals and fibers that their other fare lacked" (Kulonen et al. 2005: 123 OKn).



**Figure 4:** Skolt Sámi bark harvesting tools, sheets of inner pine bark and grinded bark flakes in the birch bark bowl. Items are from the future exhibition of the *Eastern Sámi Museum* in Neiden, Norway. Photograph by Sandra Bogdanova, August 2014.

The local use of the inner bark from Scots pine (*Pinus Sylvestris* L.), in the geographical region of Northern Fennoscandia, extended all across at least 3,000 years and probably even longer (Östlund et al. 2004). The same study provides with an extensive archaeological fieldwork from northern Sweden and Norway, which confirms that it was a geographically widespread practice among Indigenous Sámi people. This product had been a much more important and nutritious part of the diet than previously recognized (Gabrielsen, 2009 cited Bjørklund, 2013: 187). In Finland it was (still is) known as 'pettu' and, among other names, in a number of articles was regarded as **(4) a survival food** (Gottesfeld, 1992 cited Ciesla, 1998). Norwegian anthropologist Ivar Bjørklund (2013), among others discussed the Sámi diet in detail - Graan, Lundius, Truderus (1672); Kulonen et al. (2005), Östlund et al. (2004; 2009), Anderssen et al (2013); Elvebakk, Kirchhefer (2012), referred to bark food as a dietary supplement. He noted that "fish, berries and plants were the dominant part of diet in the summer. The importance of milk (later made into cheese) production had to do with its use for later consumption and trade, also during the winter. The main diet could not come from the herd, but had to come from hunting wild reindeer, birds, fishing, milking, barter and the gathering of berries, eggs and bark flour from pine trees." (Bjørklund, 2013: 182). Trade was among most common ways to get new ingredients for food and diversify the daily cuisine. In the words of the Sámi:

<...> In the time of arriving peoples in Sápmi, in the Sámi homelands;

It is remembered how the ones called söörnets or monks arrived in the River Peätsam and along the lakes such as Vue'll Äkkjäu'rr and Pá'jj Njannamjäu'rr,

It is remembered how the first iron items were seen in the trade with the ones called Pomor which in the later Times were called Russians,

It is remembered how the ones called Karelians came to the lands of the Sámi,

All of these things and many more are remembered of the time of arriving peoples.

In the time when others came to Sápmi for taxes, advice, fish and trade;

It is remembered how Great Leader of the ones called Russians, the All-Mighty Tsar, invited many of Spirit Men and Women to the city of Moscow far to the South to tell him of the things to come,

It is remembered how the Sámi spoke to Tsar about Sámi rights and responsibilities to the lands, waters and air of the Sámi homelands and how the Sámi signed a treaty with him to guarantee these rights to these things for all time,

It is remembered how much trade was done with the arriving peoples to Sápmi,

All of these things and many more are remembered of the time when others came to Sápmi for taxes, advice, fish and trade. <...>

*The Six Times of Eastern Sápmi* (Mustonen, and Mustonen, 2013: 22)

American ethnobotanist Nancy J. Turner (2014) in her latest book “Ancient pathways, ancestral knowledge”, also touched upon a topic, often overlooked in discussions of dietary role of plants in northwestern North America. She categorized famine and emergency foods and, for example, the use of inner bark of black spruce (*Picea mariana* L.) was regarded as **(5) “alternative” food** source (Turner, 2014: 329). Similarly, Northern Fennoscandia and Far East, pine inner bark, was commonly associated with **(6) famine food**. This is the dominant category in the literature I reviewed, that contradictory presents the evidence for the inner tree bark being used by the Indigenous peoples as a main source of food in times of famine. Early sources commonly provide derogatory notions to record the geography of bark food, for example, using “from the Chukchi and Eskimo at one end of the Arctic stretch to Lapps and Swedes at the other” (Eidlitz 1969: 54–59, Agrunova-Low 2009). Once processed, it was also known as an **(7) emergency food** among the Norwegians, Swedish, Russians and Finnish of Northern Fennoscandia, this is an important category in the case of this study. For example, a Russian ethnographer Tatiana Annugova-Low (2009) writing about emergency food introduced a concept of *Black food*, as a social concept in reference to the inner bark of pine eaten by the Lake Yessei, Yakut in Siberia. Swedish ethnologist Kerstin Eidlitz [Kuljok] in her book (1969) *Food an emergency food in the circumpolar area*, also called the inner bark of pine and larch trees, a good example of emergency food, which, she said, “was intensively used in the past but not consumed nowadays.” It was also applicable to some other agricultural societies north of the equator, such as Lithuanians in Europe or Chinese in the Far East. To illustrate it with a historical example, I chose an important confession by Ken Hom, a Chinese-American; a chef, a broadcaster and a teacher above all. Hom told a story of the times in the 20th century China, when his relatives survived only on tree bark:

[I] have always integrated things about culture. You cannot see food outside its culture. There is a reason why we are eating what we are eating. In China, they say, we would eat everything. Everything that flies, except an airplane, anything on four legs, except the table... and that comes from our history. These days people talk about how much there is to eat, especially older people of a different generation. There were times, when we did not have anything to eat and people talk about times when... there is something we do not really know in the West, especially in our era, when people *had to eat bark*. Can you imagine? ...scraping the bark of a tree? I have relatives that tell me about taking the bark



of a tree and stewing it, so you can eat something... I mean, that is really though. They say they cannot believe there is so much to eat now.<sup>20</sup>

In the available narratives of 17th – 20th centuries, bark naturally tended to be **(8) poor man’s food** since it was accessible and frequently plentiful (Eidlitz, 1969). In Yakutia, the Far Eastern District of Russia, local Sakha people were known to rely on the inner bark of the pine tree as a **(9) subsistence food** (Savvin, 2005: 185–86 cited Eidlitz, 1969). The Sakha consumed so much of the inner bark that Richard Maak, a Russian explorer of the Far East and Siberia, referred to them as “tree eaters” (*dendrophages*) (Popov, 1926: 8 cited Eidlitz, 1969). The Komi on the Višera River, today Perm Krai in Russia, were referred to by their neighbors as “Baumrindenesser” (Manninen, 1932: 276 cited Eidlitz, 1969). In Karelia, the Komi peasants were also said to have mixed bark in their bread when food was scarce (Lašuk, 1962: 99 cited Eidlitz, 1969). The understanding of subsistence food is context specific, but generally, the notion implies food that is necessary to sustain life (Eidlitz, 1969: 27 cited Argounova-Low, 2009: 484). Some Khants<sup>21</sup> who did not hunt reindeer or fish all year round, sometimes varied their diet with hare, ptarmigan or spruce and pine bark (Eidlitz, 1969: 56).

<b>Peoples</b>	<b>Location</b>	<b>Type of trees</b>	<b>Notes</b>	<b>Source</b>
<b>Adirondack</b>	Mountains of upstate New York, USA	Eastern White Pine ( <i>Pinus Strobus</i> L.)	Tradition well documented; an important part of their winter diet. “Adirondack” means “bark eaters” in the Iroquois language.	Fontaine 2010
<b>Blackfoot</b>	Alberta, the Shuswap of British Columbia, Canada and Montana, USA	White-Bark Pine ( <i>Pinus Albicaulis</i> L.)	<i>Old Man [the sun] showed them the roots and the berries, and showed how to gather these, and certain times of the year they should peel the bark of some trees and eat it... Blackfeet creation.</i>	Grinnell 1913 cited Östlund et al. 2009; Kuhnlein, Turner 1991

<sup>20</sup> “Ken Hom part II.” BBC Radio 4 Food Programme. Pod-cast of 2014 May 12. (Accessed 22-05-2014).

<sup>21</sup> Khanty-Mansi. In the older literature known as Ostyaks.

<b>Coast Tsimshian</b>	British Columbia, Canada	Western Larch ( <i>Larix occidentalis</i> L.)	Scrape off the inner bark, usually in late spring, and eat it. Fresh or dried in cakes for winter. It was often mixed with berries such as highbush cranberries ( <i>Viburnum edule</i> L.) before serving.	Kuhnlein, Turner 1991
<b>Gitga'at</b>	Hartley Bay, North coast of British Columbia, Canada	Hemlock ( <i>Tsuga</i> L.)*	Eaten alongside other traditional foods, such as edible red laver seaweed ( <i>Porphyra abbottae</i> L.), called <i>ta'ask</i> .	Turner and Clifton 2006
			It was harvested in spring, before the bark "sticks" to the tree and gets tough, and was eaten, freshly cooked or dried.	Kuhnlein, Turner 1991
<b>Gitksan (Gitxan), Interior Tsimshian</b>	British Columbia, Canada	Lodgepole Pine ( <i>Pinus contorta</i> L. var. <i>latifolia</i> )**	For food, as a blood purifier, and a purgative.  Name translates as "tree fat". Eaten fresh, when left it is said to discolor quickly and "go sour." When dried for winter, soaked in water before use. Some people like to add sugar to this food, making it even sweeter.	Hart 1992 cited Östlund et al. 2009  People of 'Ksan, 1980 cited Kuhnlein, Turner 1991
		Western Hemlock ( <i>Tsuga heterophylla</i> L.)	Eaten as "cakes". These were stored in a dried form and could be reconstituted by soaking chunks of dried cake into water.	Gaertner 1970 cited Ciesla 1998
<b>Haisla (Xa'islak'ala)</b>	NW British Columbia, Canada	Western Hemlock ( <i>Tsuga heterophylla</i> L.)	They devoted considerable attention to obtaining and processing hemlock cambium. Suitability of a tree was determined by making a test scraping of the bark and tasting it for tenderness and sweetness.	Gaertner 1970 cited Ciesla 1998
<b>Khants (Khanty-Mansi formerly Ostyaks)</b>	Western Siberia, Russia	Scots Pine ( <i>Pinus Sylvestris</i> L.)	As they did not hunt reindeer or fish practically all year round, sometimes varied with hare, ptarmigan or spruce and pine bark.	Tretjakov 1869 cited Eidlitz 1969
<b>Sakha (Yakut)</b>	Lake Yessei, Yakut in Siberia, Russia	Scots Pine ( <i>Pinus Sylvestris</i> L.) and Larch ( <i>Larix</i> L.)	Dishes with fish. High dependency: in past Yakut family ate an average of 16 pud (ca. 260 kg) pine bark a year. In 1859 the Yakuts in Vilyuysky okrug used 10-100 pud (ca. 163-1630 kg) per family a year.	Von Middendorf 1878; Maak, 1887 cited Eidlitz 1969
			An ingredient, i. e. a mixture of boiled fish or boiled dried blood with larch inner bark for cooking porridge.	Popov 1926 cited Argounova-Low 2009
<b>Sallish and Kootenai tribes of Flathead Nation</b>	Bitterroot National Forests other areas in	White Pine ( <i>Pinus Strobus</i> L.)	<i>Ok'nok</i> [inner-bark] full of sweet water; Did not split, scraped the water off after the bark was removed.	Arno et al. 2008

	Western Montana, USA	Yellow Pine ( <i>Pinus Pinderosa</i> L.)	After split tied in knots for eating easier, not drying out too quickly; kept with grass or green leaves in parfleches or bags. Harvested the first Sunday in May, combined with bitterroots harvest. Peeled half the living tree; juicy and sweet bark.	Arno et al. 2008; in White 1954 cited Östlund et al. 2009
		Lodgepole Pine ( <i>Pinus contorta</i> L. var. <i>latifolia</i> )	Used as a remedy for tuberculosis.	Hart 1992 cited Östlund et al. 2009
		White-Bark Pine ( <i>Pinus Albicaulis</i> L.)	No record found.	Kuhnlein, Turner 1991
<b>Tsilhqot'in (Chilcotin)</b>	British Columbia, Canada	White-Bark Pine ( <i>Pinus Albicaulis</i> L.)	No record found.	Myers et al. unpubl. notes 1988 cited Kuhnlein, Turner 1991
<b>Wet'suwet'en (also known as Hwotsotenne)</b>	NW British Columbia, Canada	Lodgepole Pine ( <i>Pinus contorta</i> L.)	The inner bark was harvested from young standing trees in May and June, a time when the bark is of maximum sweetness and is loose and easy to harvest	Gotesfeld 1992 cited Ciesla 1998

\*Also used by several coastal groups, including Tlingit and Kaigani Haida of southeastern Alaska, and the Coast Tsimshian, Haida, Nuxalk (Bella Coola), Kwakwaka'wakw, and some Coast Salish peoples of British Columbia (Kuhnlein, and Turner, 1991: 43 in Turner, 1975; Heller, 1976; 'Ksan, People of, 1980; Norton, 1981; Jacobs and Jacobs, 1982).

\*\* It was an almost universal food of the Interior peoples of British Columbia and neighboring groups. Peoples who used it included: the Tahltan, Beaver, Carrier, Chilcotin, and other Athapaskan groups; Gitksan, Coast Tsimshian, Shuswap, Nlaka'pamux, Lillooet, Okanagan-Colville, Kootenay, and the Flathead of Montana (Kuhnlein, and Turner, 1991: 40 in Gorman, 1896; Palmer, 1975; Hart, 1979; Turner, 1978; 'Ksan, People of, 1980; Turner et al., 1980; Myers et al. unpubl. notes, 1988; Turner et al., 1990).

\*\*\* Several other coastal groups, such as Haida of British Columbia, and the Tlingit and Tanaina of Alaska. The Haida reportedly learned about this food relatively recently from the Tsimshian; some Tsimshian still use it today. The Nuxalk of Bella Coola ate it in summer, but mainly as a laxative.

### 3.2 Health Food

The first written records of the Sámi 'bark food' can be traced down to the 17th-18th centuries, around the time of 'Enlightenment'. Over the years such figures as Johannes Schefferus (1673), Samuel Rheen (1670), Linnaeus (1890), \*Fellmann (1844), J. K. Qvigstad (1904); Tanner; Itkonen (1951), Eidlitz (1969), \*Pelto (1962), \*Skum (1955), Xaruzin (1890), Kytölä (1999)<sup>22</sup>, Nickul (1948), P.-W. Auren\*, H. Lidman\* and others have all contributed to what Smith (2012) calls *Travellers' tales*, which had a wide coverage of topics. Their dissemination occurred through the popular press, from the

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<sup>22</sup> The relevant part of this publication (pp.60-62) was translated from Finnish to English with the help of a native speaker.

pulpit, in travel brochures, which advertised for immigrants, and through oral discourse. They appealed to the voyeur, the soldier, the romantic, the missionary, the crusader, the adventurer, the entrepreneur, the imperial public servant and the Enlightenment scholars (Smith, 2012: 9). Irja Jefremoff, a Sámi food entrepreneur from Kevajärvi, further provided a local example:

**Irja Jefremoff:** *Now there is this book... [Irja is checking for words in the dictionary for a number of times, -Bog]. That man, Peter Wilhelm Auren, was travelling here 1867, but really travelling in 1860-1870. One day he was staying near Petsikoffjell, near Merasjärvi, towards Utsjoki. It was a poor family, with seven children. He was giving some coffee for the woman in the house. He woke up early in the morning and noticed that the woman was chewing something in her mouth all the time. When asked, she replied that it was tobacco. She needed to take it, since she was starving, her children as well. They could not milk the cow too much. But then she said that she is cooking to them 'pietsmella'<sup>23</sup> it is a kind of gruel, like a porridge but softer. So there she is using 'pettu'. She is an Utsjoki Sami. In that area they still have the 'Paistunturin' north from it the pine tree line ends. Later he is describing in his writings that in Inari and Suenjell there is a pine growth. People are taking about 'pettu'. To 'fjell Sámi'<sup>24</sup> it was introduced as a present.*

Early ethnographic records seemed to be unanimous with favorable Sámi attitudes to pine bark food. In 1673, an international bestseller entitled *Lapponia* was published. It was compiled by Johannes Schefferus, and described the Sámi people and their relation to the surrounding landscape. He provided the narratives that shaped the fundamental description of Lapland. These accounts were written in the 1670's mostly by clergymen, some of Sámi origin. They were unique in comprehensiveness, provided a lot of information on Sámi methods of hunting, fishing, reindeer-herding, folk medicine, and wild-plant harvesting.

In 1670 Samuel Rheen reported in detail how the Sámi utilized the inner bark of the pine as food. Others, such as Graan, Lundius, Tuderus (1672) also mentioned pine inner bark as a dietary supplement used by the Sámi. It was considered as 'sweet', i.e. it was coveted (Kulonen et al. eds. 2005: 31). A century later, in 1769 Leem wrote: "Several things were eaten by Coast and Mountain Lapps, not out of hunger but for pleasure (Leem, 1767: 127 cited Eidlitz, 1969: 56).

More ethnographical records supported the idea of it as a health food for the Sámi. For example, at the end of 1800's Jacob Felmann suggested the idea that bark was a very important food *in general* and not just a reserve to fall back on when other food was

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<sup>23</sup> Bark flour (from Finnish).

<sup>24</sup> Mountain Sámi (from Finnish).

particularly scarce. This was supported by the fact that the relatively well-situated Finnish Skolts in Suenjel used bark as food up until the last World War. The bark must have contained vital nutritional substances, which were easy to obtain from this special environment (Vorren, 1964: 8 cited Eidlitz, 169: 55). In 1906 he reported that inner bark was a most healthy and wholesome food, allowing the Sámi to ski for a whole day without feeling hungry (Rautio et al. 2013: 370). Concerning the Inari Sámi, he wrote:

[H]ow happy I thought, can a person be who has no needs, and how unhappy when he seeks his fortune far away in order to acquire a false or passing pleasure. These people owned practically nothing but lacked nothing. The pine forest was the best to be in the district and provided plenty of bark. The bogs were rich in cloudberry and the shores or the steams in shoe hay. Quantities of these were collected during the summer and exchanged for reindeer meat with the Mountain Lapps. Fish were caught with the few nets they owned and the bark was mixed with this animal matter to make food according to their means and opportunities (Fellmann 1844: 154 cited Eidlitz 1969: 55).

The food tradition of the Inari Sámi, neighbour Sámi community to the Skolt, was based on a natural subsistence economy: fish, game and berries. Inari Sámi food traditions varied areally. Among others, they traded with the Skolts. According to Ritva Kytölä, earlier, Inari Sámi also practiced reindeer and cattle husbandry and grew turnips and potatoes. In her text<sup>25</sup>, based on the interviews made in Nellim area in Inari Lapland, the author described the regional Sámi trading route from Inari to Bugöynes (for more see Chapter 4: Figure 6):

[i]mportant foodstuffs that were procured mostly from Bugöynes in Norway. Goods used for bartering were reindeer steaks, shoulder and hindquarter cuts, and reindeer cheese, which was a prized good in trading. Different kinds of furs, reindeer hides and pelts, salted fish, cloudberry, willow grouse, reindeer antlers and boot hay. Goods they brought home with them in their ahkio-sledges were flours, barleycorn, sugar, salt, coffee, fish lard, margarine, cod and other sea fish. Sweet homecoming gifts bought were twist buns, round wheat bread (made with unshelled wheat), raisins and molasses. Various kinds of sweets and biscuits were brought home for the children.

Indeed, in the Sámi food economy, pine bark has been used in diverse ways (see

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<sup>25</sup> “Food Tradition.” By Ritva Kytölä, SIIDA 2006. (Accessed 09-03-2015). [Online]. – URL: <http://www.samimuseum.fi/anaras/english/elamantapa/ruokaperinne.html>

Chapter 4). The Sámi considered pine bark as a health food, and, for many, the bark was a delicacy that was thought highly of and eaten every day.<sup>26</sup> When I asked my informants if collecting bark among the Sámi was seen as something healthy, that was what they replied:

**Veli Pekka Lehtola:** *Yes, I think so. For instance, my father referred mostly to the Finnish concept of 'pettu', as a famine food... and to Kajaani area that is a little bit more south from Inari. In the Finnish literature there are number of descriptions of 'pettu' as a famine food. My father was making a distinction between traditional Finnish ideas of 'pettu' as a famine food and then how it was used among the Inari Sami.*

**Ritva Kytölä:** *It was a healthy food even precious or something that has being celebrated back in the days. I can tell you, that it is the main indigenous vegetable in the circumpolar area, there are not that many others.*

Favourable attitudes to bark food developed not only among the Indigenous people but among the farmers too. For example, there are many naratives from Southern Sweden. As there was a story that was told of a man from Dalarna, who was working on a farm near Stockholm, he was asked by a gentleman, how they managed to live so long in Dalarna, he replied: "You should eat bark and drink water like me and you would have lived forever. But you eat too fat and drink too sweet and so you rot away alive." (Ulma<sup>27</sup> 7328 cited Eidlitz, 1969: 57). Another record from Medelpard ran: "I once tasted bark bread. It was sour and good... A little bark bread and May water, birch sap, makes people strong. There were many Finnish girls in Åvikebruk... Finnish girls complain if they never get bark bread." (Ulma 12711 cited Eidlitz, 1969: 57).

### 3.3 Famine Food

Over the time, a clash in opinions seemed inevitable. In comparison to favorable attitudes to bark food within the written records, such as 'God's gift', delicacy, survival, health, bountiful, staple, good, exotic, luxury, much more informative literature was published on substances for making bread in times of famine. The advocates of healthy 'bark food' met the severe famine opposition. Indeed, Nordic and Finnish farmers used the inner bark to make bread as emergency food during years of famine (Bergman et al. 2004: 5). The Sámi have made use of the same plants as the peasant population of the

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<sup>26</sup> "Pine bark – The health food of the sami. " Åile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>

<sup>27</sup> Uppsala Dialect Archive (In Swedish *Uppsala landsmålsarkiv*)

north. However, in a more recent anthology, *The Saami. A Cultural Encyclopaedia* edited by U.-M. Kulonen, I. Seurujarvi-Kari and R. Pulkkinen (2005) the use of the inner bark of pine for food stood out as a unique Sámi tradition (Kulonen et al. 2005: 104). At the same time, the authors added: “it is a custom that survived among the Eastern Sámi into the twentieth century” (Kulonen et al. 2005: 104). In contrast, Swedish archaeologist Ingela Bergman (2005) in her article “The roasting of plants: Sámi tradition and the archaeological record” claims that: “Among the Skolt and Inari Sámi the use of Scots pine inner bark for food continued into early 1900’s. However, in northern Sweden the use of inner bark had totally ceased by the end of the 19th century (Bergman et al. 2004; Zackrisson et al. 2000, Östlund et al. 2004). Today, traditional knowledge of the harvesting and preparation of inner bark has been lost” (Bergman 2005: 51-52). In search of some *in situ* evidence, I chose to situate this research in a Skolt Sámi community, which belongs to the Eastern Sámi group. Overall, to deconstruct the complexity of ‘bark food’ discourse, first, I had to clarify several ethnographic narratives that gave birth to the key social concepts and categories analysed throughout this chapter.

### **3.3.1 Carl Linnaeus and Famine Bark**

Several authors, including Eidlitz (1969), Räsänen (2007) and Zordrager (2008), have pointed out to the importance of Carl Linnaeus (Linné) (Figure 5) ethnographic work for the development of Sámi plant use documentation, therefore the appearance of early records of Sámi food too.



**Figure 5:** Carolus Linnaeus (Linné) in traditional Sámi clothing. Mezzotint by R. Dunkarton, 1805, after R. J. Thornton and M. Hoffmans. Collection: Iconographic Collections, Library reference no.: ICV No 6755, Wellcome Library Catalogue, London.

Indeed, the question of substitutes to be used in times of famine was very much *in vogue* among learned men interested in agricultural economy or botany in the second half of the 18th century (Räsänen, 2007: 96). According to Linné, no other bread was such common ‘famine bread’. He described how in springtime the soft inner layer can be removed from debarked pine trees, cleaned of any remaining bark, roasted or soaked to remove the resin, and dried and ground into flour. Linne’ had obviously eaten bark bread, since he could say that “it tastes rather well, is however more bitter than other bread.” (Räsänen, 2007: 95). Linné’s high regard for ‘bark bread’ was shared by many of his contemporaries, but not all. For example, Pehr Adrian Gadd, the first professor of chemistry in Turku (Åbo) Academy and one of the most prominent utilitarians in Finland, condemned bark bread as “useless, if not harmful to use”. In Sweden, Anders Johan Retzius, a professor in Lund and an expert on the economic and pharmacological potential of Swedish flora, called bark bread “a paltry food, with which they can hardly survive and of which they always after some time get a swollen body, pale and bluish



skin, big and hard stomach, constipation and finally dropsy, which ends the misery” (Räsänen, 2007: 96).

Linné’s view of ‘bark bread’ was mostly positive but one could think unrealistic. He noted how important it was for the people to have access to it. Therefore, an emotional attachment was recorded: “People not only sustain themselves on this, but also often become corpulent of it, indeed long for it.” (Räsänen, 2007: 95). In a commentary on the Dalarna journey of Linnaeus, Eidlitz (1969) found Berg’s, another writer’s, comment on how pine tree bark was a delicacy for children. He wrote: “Only the sugar-containing inner layer of the thin bark is used, at least for human food. It happened that the pine trees were sapped, i.e. felled and debarked, simply so that the children might eat the tasty sap layer” (Berg, 1953 cited Eidlitz, 1969: 57).

### 3.3.2 Emotional Food

In Finland, as in Sweden, bark eating was not a uniform habit. Besides being eaten regularly by the poor, bark has been contrasted strongly with ‘God’s gift’<sup>28</sup>, i.e. “Bread made from cereals, and bark bread had emotional associations and served as an emergency food” (Eidlitz, 1969: 57). Attitudes to bark bread were more common to be negative than positive. These records, however, were obtained after the custom of using bark had vanished from certain regions and perhaps the result would have been different if attitudes had been studied during the actual years of the famine. Ritva Kytölä commented on the pine inner bark eating in other parts of Finland:

**Ritva Kytölä:** *In the other parts of Finland, it was humiliating to eat ‘pettu’, except the north. In the other parts, it was considered a famine food, or if you had to start using ‘pettu’, you were seen as a poor.*

This unwillingness to admit that one had eaten bark bread was pointed out as long ago as 1916, by Geijer: “It certainly happens that people from shyness conceal or deny that they themselves have eaten bark bread (Geijer, 1916 cited Eidlitz, 1969). The use of bark as food has become a highly emotive subject: “But the worst was not the famine bread in the past. The scorn for it was more difficult to bear. That was why it was difficult to obtain facts about famine bread” (Ulma 9120, 18). Eidlitz admitted to have

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<sup>28</sup> In Swedish ‘*Gudslånet*’.

personally tried asking about bark bread in the parish of Järvsö, Sweden, without managing to get any answer - it seemed that people there did not want to speak about it. A record (Ulma 18712, 58) from the same parish ran: "My father told me what it was like when the church was built. I cannot remember whether it was 1832. But there had been several famine years and then they went ... and worked on the church, so they came from different villages. And some of them had bark bread to eat. But they were ashamed of being so badly off, so they went aside and ate." It became as 'shameful secret' even among the Skolt Sámi as illustrated by the quotation introducing this thesis and by others, such as my informant archaeologist Honna Havas:

**Honna Havas:** *Skolt Sámi did not use it as bread. All people in Norway know about it as 'Barkebrød'<sup>29</sup> because people associated it with poverty, war, lack of food but for the Skolt Sámi it was a very different thing. In Norway, it is quite newly becoming an interesting theme when in Sweden it has been for a longer time...*

According to a personal communication of Kristin Eidlitz, recorded from Marianne Gillberg in Uppsala (Sweden), 'bark bread' was baked in Norway during the Second World War but her informant, when asked, subsequently denied this, as she notes "presumably for irrational reasons" (Eidlitz, 1969: 59). Similar attitude still holds in Finland at the end of last century:

**Ritva Kytölä:** *When I was writing a book about food, I went to Helsinki (1990s) to get some photos from the archives of the museum and one of the photos that I wanted for the book was missing, so I went to the person working at the archives to ask about it... At the same time, there was a food exhibition for the members of the parliament in Helsinki. Someone from the eastern part of Finland has brought 'pettuleipä' ['bark bread'.-Bog.] The person working in the archives was horrified to find out that it had been served for the parliamentarians! -How did they dare?! Why would anyone do something as humiliating, - he asked. Then I said that in the Sámi tradition it is a healthy food. Therefore, this story is representative of the Finnish attitude.*

Even after the hunger years' people tend to miss it, they got used to the 'resinous' taste of it. In addition, since it took a long time to prepare the inner bark, people did not throw it away but stored it for the 'bad day'<sup>30</sup> (Siuvatti, 2014: 22-29).

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<sup>29</sup> Bark bread (from Norwegian).

<sup>30</sup> In Finnish 'pahan päivän varalle'.

### 3.3.3 Emergency Food

According to another record (Ulma 19758, 16) from Nederkalix in Sweden, “bark bread was only bread for an emergency and was simply regarded as such. It was said to ‘tear out the stomach’. This phrase was used for food that could be eaten in large quantities without making one satisfied or strong.” In Finland bark has widely been used as an emergency food, especially during the great Famine of Finland in 1695-1697, or the mostly the whole decade as well as during the Finnish Famine in 1866-1868, in Finland this famine was known as ‘the great hunger years’; and lastly, during the Civil War in 1918 (Siuvatti, 2014:). Irja Jefremoff and Veli Pekka Lehtla also commented on the famine years:

**Irja Jefremoff:** *‘Pettukahvi’<sup>31</sup> was used especially during the war times. People were roasting oats, dandelion, Siberian spruce. Perhaps it is wrong to tell about the hunger. In Petsamo people were not affected by the famine...Crown farms... The State was giving the land.*

**Veli Pekka Lehtola:** *For instance 1918 there was a famine, influenza. In those years people in Inari and Utsjoki were starving. Two years later, there was a Spanish influenza that killed quite a lot of people but it was different.*

Finnish people, who made the bread only from bark flour called it ‘silikko’. It would not be eaten it on the day it was baked because one’s stomach could not handle it. It was eaten on the following day. Because one could not eat it with butter, the body could not handle it for long, it was said to corrode kidneys and cause swelling (Siuvatti, 2014: 22-29). One soon felt hungry again after eating bark bread, the legs would swell, one became generally weak and bark only served to fill the stomach.<sup>32</sup> One informant (Ulma 9120), however, said that the weakness that arose during famine years was not directly due to bark but to lack of other, more nutritious food (Eidlitz, 1969: 58).

### 3.4 From Propaganda and Railway to Oblivion

In Sweden, the tradition ceased rather abruptly during the late 1800s, because of legislation banning the destruction of valuable timber trees (Rautio et al. 2013: 364-

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<sup>31</sup> A coffee substitute from pine bark.

<sup>32</sup> E.g. A record from Arvidsjaur in Lappland, Ulma 7720, 6: It did not taste good but one ate it just same. But it was not considered very nutritious and he, who ate pine-bread became “grådu”, i.e. he developed an enormous appetite. It was really only belly-filler. Ulma 3145: 5, 17 Frostviken, Jämtland: Bark bread as food was regarded as a last resort... Ulma 3062, 4 Piteå, Norbotten: Bark was not considered to have any food value... only to take out the supply. Ulma 8149 Bjurholm, Ångermanland: Bark bread was considered to have little food value. Even light work made one hungry. Ulma 3510, 19 Mora, Dalarna: Some held that bark bread made the legs swell. Ulma 3808: Äppelbo Dalarna: The food value of bark was not held to be particularly high. It tasted rather bitter but bread mixed with bark made one feel well and it was generally held that people in those days were particularly healthy and strong.

365). Eventually most of the people stopped using bark. That happened for several reasons, for instance, improved communications and distribution, but also as a result of intense propaganda against bark as food. According to a record from Northern Sweden (Ulma 2460: 1, 30f.), a local said: "My grandfather, who was born in 1836, has told me that as a small boy he was not allowed to eat his fill of bark bread. His greatest desire had been to eat as much bark bread as he could... He has related that, up in the summer pastures, when he was alone in the hut, he took a chance to steal a bark rusk." An old man in Bodsjö (Sweden) complained: "I had nothing against bark bread except that there was too little of that as well" (Ulma 9120, 82).<sup>33</sup> According to another record (Ulma 3469: 1, 4) from Lit in Jämtland, "bark bread probably was not used after 1870. It started to die out with the arrival of the railway and relief loans from the south."<sup>34</sup> The weather returned to normal in 1868, and that year's harvest was somewhat better than average, yet, contagious diseases that had spread in the previous year took many additional lives. Programs were launched to increase the diversity of Finnish agriculture, and rapidly improving communications made a recurrence of such a famine less likely.

People stopped eating bark bread around the middle of 19th century in some places in Sweden... A record (Ulma 5442) from Järna states that the custom of eating 'bark bread' died out early in the 19th century, "it has hardly been done at all after 1850". Bark was eaten Sollerön (Sweden) only until the first decade or so of the 19th century (Ulma 2204). Records from Mora, Våmhus, Transtrand, Äppelbo and Venjan (Sweden) all mention the 1850's as the last period when bark was used (Ulma 3510, 1740, 2399, 3808, 2460: 1).

The propaganda for famine bread, when the harvest failed was distributed during the 'bad year' of 1867, it was said that the poor people despised mushrooms "and in their ignorance prefer to mix the flour with bark and other unnatural matter..." (Eidlitz, 1969). According to Campbell, "famine bread was a favorite theme in economic literature during the 18th and 19th centuries. In actual fact, the first propaganda for

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<sup>33</sup> There are some passages in the records which indicate that aquavit might be available even in the famine years: "Bark bread was dry and difficult to digest but it was possible to swallow together with aquavit. There was seldom any butter, usually the bread was eaten with salt herring or a slice of raw pork" (Hälsingland, Färila EU 27454, NÅ II). Further, at Bodsjö in Jämtland, "aquavit was distilled and people drank unrestrainedly in the intervals between famine years, and even during such years. This is true" (Ulma 9120, 19). "They drank up the grain and then had to turn up to pine" (Väamland, Borgvik, Ulma 2357: 6).

<sup>34</sup> Cf. EU 24699, 175 from Eidlitz 1969.

cultivating potatoes chiefly aimed at presenting the potato as a suitable food in years when the grain harvest failed.” (Campbell, 1945 cited Eidlitz, 1969: 52). According to another source, “If these so-called earth-pears were planted, particularly in northern districts, that are often subject to frost, with God’s help they would not have to eat bark bread” (Campbell, 1945 cited Eidlitz, 1969: 52). Ritva Kytölä and Matleena Fofonoff commented on the continuity of using the bark for food,

**Ritva Kytölä:** *It was not really possible but it was important in the Suonikyla up until the early 1900s. People still considered it an important part of their diet.*

**Matleena Fofonoff:** *Active taking of ‘pettu’ didn’t ever stop completely, because it wasn’t sold in stores. The people who wanted ‘pettu’, they always took it. I still take it because I can’t buy it from a store. The stuff that worked decades ago still works, nothing has changed when talking about traditional food or handcrafts.*

Even if more recent literary sources confirm that, the skill of taking the inner bark from pine trees and preparing it has passed into oblivion, there are still many areas where there is evidence of bark peeling trees (Kulonen et al. 2005: 31). Cultural importance and evidence of such trees are the subjects of the following chapter.

### **3.5 Conclusion**

Just as the literature calls to question the encounters of people in the North, so scholars should show care and due consideration for what goes on in practice. That includes accepting Indigenous practices, and distinguishing between various foodways and food economies. The inner bark or secondary cambium layer of various trees used to be a staple food for many generations of Indigenous people. Yet, what has been striking in this discussion is how many literary sources would merge traditions and simplify this plant food. In fact, it has been used for at least 3000 years in the geographical region of Northern Fennoscandia. In comparison, First Nations of Canada and Natives of North America, Indigenous peoples of Siberia all obtained a staple food by processing the inner bark, as did the Sámi. At large, crop failure and ‘famine years’, derogatory names, propaganda, colonization processes, Second World War and other historical events all led to the formation of favorable and negative attitudes to ‘bark food’. It stimulates an interesting discussion, since this product has been a much more important and nutritious part of the diet than previously recognized (Gabrielsen, 2009: 17 cited Bjørklund, 2013: 187).

## 4 Of Bark and Sámi Culture

[O]ld Man [the sun] showed them the roots and the berries, and showed how to gather these, and certain times of the year they should peel the bark of some trees and eat it... Blackfeet creation (Grinnell, 1913 cited Östlund et al. 2009: 95)

[T]hey [the Sámi] also use pine bark for food, which they take from Pine trees and subtly cut from the innermost part of the bark which is sweetest... From a description of the Sámi people of Northern Sweden in 1672 (Graan, 1899 cited Östlund et al. 2009: 95)

The aim of this chapter is to locate the continuity and change of the pine tree inner bark use among the Sámi overtime. I choose to present the *worldview* of the Sámi and analyze how its cultural elements could be situated in the parts of landscape of Northern Fennoscandia. To identify the elements, the record of local place names and an overview of culturally modified trees are taken into account. Later in the chapter, I analyse the components of harvesting *practice*: the relevance of time, and the method of harvesting, common tools and technique. After that, I present the *food*: the nutritional value of inner bark; taste and preparation techniques from parts of Northern Sweden and Eastern Sámi regions and Inari Lapland.

### 4.1 The Worldview

As two given quotations above suggested, the pine tree inner bark has been an ancestral source of food as for the Native Blackfeet of North America and for the Indigenous Sámi of Northern Fennoscandia. The later had a calendar year that comprised of 13 months where every month and week had a specific name. In the past, this highlighted the fact that time was defined by different contexts and weather conditions, which then determined the exact events of the year. The events were illustrated by concrete events and processes observed in nature. It was an example of a context and quality symbiosis of cultural elements and expressed the volume and movement of the relationship of the Sámi to the land and forests, all that could be understood through a certain phenomenon. Because of the locality, two of them are of a great importance for the 'bark food': culturally modified trees (hereafter – CMTs) and etymology of place names.

### 4.1.1 Culturally Modified Trees

The opening of this chapter suggested that uses of the pine tree inner bark and associated traditions have long time depths, and trees with old, or even ancient, pine bark-peeling scars are still common in the old-growth pine forests on both continents, Eurasia and North America. Similarly, for both peoples a strip of pine inner bark was commonly left to show respect to the tree and the tree spirits and to ensure the tree's survival. Archaeologist, forest historians, botanists and others, all are unanimously drawn to the topic of CMTs and the past application of these modifications that have a number of explanations (Hedman, and Olsen 2009; Östlund et al. 2002, 2004, 2009; Arno et al. 2008; Elvebakk, and Kirchhefer 2012). It is important to point out that due to their varied shape and length CMTs might commonly be confused with certain ecological factors such as fire scars.<sup>35</sup> As well as scars, left by the animals, who feed on the pine inner bark - animal repast scars (i.e bears, red deer).

Nevertheless, what scientists agreed to call CMT are scars in trees, left by the humans. Again, even those are versatile in shape, length and North – South orientation but could be classified into **the first layer scars for preserving (1) sinews** or harvesting for **(2) food** and the second layer scars that are for marking of **(3) trade routes, (4) settlements/seasonal camps** and used as **(5) sacredness and memorial dedications**. It is also common for trees to have several layers of cultural modifications. Irja Jefremoff has described in detail one of the most important trade routes of the past for the Skolt and Inari Sámi, which was marked with such trees (Figure 6; also see Map of Fieldwork Area for places).

**Irja Jefremoff:** *Skolt Sámi and Inari Sámi have moved after fish, not so much after the reindeer. The habitat can also give the name, or the livelihood. People have made marks in trees, for example, old trading route marks carved in trees: Sompiojärvi Nature park-Kylope, Laanila, Veskonieni, Inari Lake, Bugöfjord, Nuorgam, and Karlebotn... the Reindeer road. For example, for trading coffee with Pomors<sup>36</sup>. People came from as far as Rovaniemi. Sámi people were arranging the transportation. It was by the end of the Russian revolution. Before the Second World War. Nowadays in Vardø they have Pomor market days in July. E6 road has its stop in Bugøyfjord. One can easily see this route in trees, sometimes marked with crosses.*

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<sup>35</sup> Although recorded in the Western Yellow Pines (*Pinus Ponderosa* L.), fire scars are common for more than one type of pines. These trees were also used by the Salish and the Kootenai people for harvesting the inner bark. For more see Arno, S. F., Östlund, L., Keane, R. E. (2008). "Living Artifacts: The Ancient Penderosa Pines of the West." *The Magazine of Western History*, Vol. 58, No. 1 (Spring, 2008), pp. 55-62, 99-100.

<sup>36</sup> Or *Pomory* - the settlers from Northwest Russia.



**Figure 6:** A collage of the signs carved in trees, *Muorra mearkkat* saN: (1) Marks carved in wood from Sotavuoma (*Čuđevuohčču* saN), Angeli (*Áŋgel* saN); (2) *Mearkamuurra Finnmarkkubalga guoras jagis 1866* (saN), a tree with a sign showing the route from Inari to Northern Norway and Arctic Ocean, from 1866; (3) Mark from the border line of Finland and Russia in Rja-Jooseppi (*Ráji-Jovssetsa*N), 1919. (4) Mark from a tree on the River Vasko, 1879; (5) A mark that has closed up in Suojanpera, Sevettijärvi (*Če’vetjäu’rr* saSk, *Čeavetjávri* saN). All photographs taken from the exhibition “*Ealli Biras - the living Environment.*” By Eija Ojanlatva and Paivi Magga at SIIDA the Sámi Museum and the Northern Lapland Nature Centre in Inari, Finland. Photograph by Sandra Bogdanova, August 2014

Sven Donald Hedman, archaeologist from Sweden, who has been working in the Inari Lapland, Upper Pasvik (*Paaččjokk* saSk; *Báhčaveaijohka* saN), for a number of years, when interviewed in October 2014, has commented on the density of scarred trees in the historical Sámi settlements and some other indicators:

**Sven Donald Hedman:** *It would be strange if there were no bark peeled trees because there are many remains of Sámi settlements from historical times... Pasvik is near the Russian border... We were doing excavations from Sámi settlements from the Viking age in Upper Pasvik. It was last year and we have been there for four years. They have a special organisation, linear organisation seven hearts in a row. We have not been working with trees. However, they have a national park with old trees. You need to have the old trees to find these coals and the inner bark trees...I have seen bark peeled trees in Inari, in the old forest, in Angeli. I saw them when I was looking at the settlements; there are many remains of fire places. Those were excavated by Petri Halinen, an archaeologist from Helsinki. I know that now there have been some people searching for bark peeled trees...*

Two of my informants, archaeologist Sven Donald Hedman and Honna Havas, an archaeologist from the Eastern Sámi (*ØstSámisk*) Museum in Neiden (*Njauddâm* saSk; *Njáv dán* saN), Norway, both highlighted the long standing tradition of sacredness and memorial dedication, that is commonly inscribed in the pine tree scars. In some North-Eastern European countries as Finland, parts of Russia, also Lithuania - pines are widely known as memorial trees. In Finnish tradition, they are



commonly called *Karsikko* pines<sup>37</sup> and sometimes can be confused with the sacred Sámi pines, which at the same time could also be marking the past migratory routes of the Sámi:

**Sven Donald Hedman:** *...Sacred motives in trees. It is another way of using the trees. You can find them inscribed after the tree has been harvested for bark. One can find signatures and years inscribed. You are showing that you are using and moving in this area. ..There is a tree as a memory of a son to a forest Sámi. Two reindeer, did I show you the carving? There are Christian symbols and Pre-Christian inscribed. A father did it in a memory of his 5 year old son, who died in 1868; there are at least three articles about it. The book is called "Marksgrave", published in the 1950-60s. A drawing of the picture is there too.*

**Honna Havas:** *These were made by different Sámi groups. There were some trees that brought some discussions up; for example, in Varanger, Northern Sámi engravings in the trees. However, I think, it could more likely be Skolt Sámi. Nevertheless, the trees were registered as a Sámi cultural heritage. Today there is a good cooperation with 'Finmarks oyen', the state company. At the same time when we were on the field, there were other people registering pine trees, the visible cultural use. So the awareness is growing in general.*

Kulonen et al. (eds.) (2005) in their anthology *The Saami. A cultural Encyclopedia* say, that: "forests with such trees should be regarded as relicts of traditional landscapes and protected for their cultural historical value" (Kulonen et al. 2005: 31). In this way, these trees become rooted in time. Honna Havas also marked their cultural importance and lack of attention for recording them in Finland:

**Honna Havas:** *I discussed pine trees that people have gathered 'pettu' from with an archaeologist from SIIDA. She said they are everywhere! In Finland, they have not had a special focus on trees and, in fact, every tree is a cultural relict.*

Old pine trees bearing marks of bark peeling on them, can be found near Sámi homesteads in the town of Inari, near the town of Kiruna (*Giron saN*) and in a number of other known *Sápmi* (*saN*) areas. Forestry researchers, for example, have examined some three hundred locations of Sámi bark peeling in Swedish Lapland, in the area from Vindel River and northward. The trees have been dated by the dendrochronological dating method to a period dating back from the mid-fifteenth century to the end of nineteenth century (Kulonen et al. 2005: 31). Contradictory to the literature of the time, the act of bark peeling was commonly called '*Lappsav* damage' or even 'vandalism'. The migrating Sámi and the reindeer were believed to have caused it all across the northern region down to the South Varanger (*Mátta-Várjjat saN*):

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<sup>37</sup> Other names are Cross Pine, Carved Tree, Number Pine, Cross-Patch Pine, Memory Tree, etc. For more see the book by Finnish authors Kovalainen, R., and Seppo, S. (2014). *Tree People*. Bookwell, Porvoo, Finland, 2014, pp.89-106.

[T]he lately enforced forest supervision has contributed to lessen also this damage of the forest. One can only hope that all Lapps also in this case, soon will realize the necessity of being more considerate towards the wellbeing of the forest, than to their own pleasures. (Ielstrup 1908)<sup>38</sup>

[C]oncerning the 'Lappsaving', it is a pleasure to see from the above that such vandalism virtually can be described as a careless sin that is discarded among the Lapps of Salten. But this can unfortunately not be said of Lapps everywhere in the northern parts of the country. At least, last spring during an inspection of the pine forests of the Pasvik valley in South Varanger, I saw a large amount of beautiful pine trees disgracefully damaged by such 'Lappsav.' (Ielstrup 1908)<sup>39</sup>

Honna Havas has commented on the area in Upper Pasvik (*Paaččjokk saSk; Báhčaveaijohka saN*) and clearly related the same kind of scars in the trees to the cyclical and culturally important act of the Sámi who have been moving in that area:

**Honna Havas:** *Maybe these were the Skolt Sámi, because they stayed mostly inland. This is interesting, with the yearly cycle, from Upper Pasvik the coastline where Pasvik Skolt Sámi stayed in spring and summer time. This gives new questions, maybe this dichotomy inland autumn-winter and spring-summer is a bit too ridged for moving in this area. But for taking 'pettu'! It was irregular but there were some markings. Some are very clear, others not so much. If you have several trees in the same are - most likely it is a sign of cultural use. Sometimes in the lower or upper part of the scar, one can see where the knife has been. They might be 200 years old... Because when the border of 1826<sup>40</sup> was established the Sámi have moved to the other side of the river. Maybe they had good places for gathering 'pettu', and then they could have taken a boat for crossing over and collecting it. There are pines on the other side of the river as well. However, near the border, just near the border, there has been a lot of forest industry, so many old trees are gone... but near Sevettjärvi there are many places that are still potential for use.*

#### 4.1.2 Etymology of Place Names

While projects on mapping CMTs are ongoing in Norway and Sweden, the importance of this collaborative research is still seeking its' acknowledgement in Finland. Such a record and its' further use is important for the Sámi language. As these days only about a third of the Skolts consider themselves to be Skolt Sámi speakers. Language is also one of the most important ways to define ethnicity: according to the Finnish law, "a Sámi is a

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<sup>38</sup> "Dividalen/Dieváidvuovdi – imponerande gammelskog med eit overraskande kulturpreg. " Botanist Arve Elvebakk presenting at Vin&Viten, Tromsø Museum, September 15, 2015. Originally in Norwegian from Ielstrup (1908): "De senere Tiders skjærpede Skogopsyn har bidraget til at formindske ogsaa dette Aat\* paa Skogen. Man faar haabe, at alle Lapper ogsaa i saa Henseende snart vil indse Nødvendigheden af at tage mer Hensyn til Skogens Vel end til sine egne Lyster."

<sup>39</sup> Ibid. from Ielstrup (1908): "Hva 'Lapsavet' angaar, er det glædeligt af ovenstaaende at se, at denne slikvorne Vandalisme nærmest maa betegnes som en aflagt Skjødesynd blandt Lapperne i Salten. Men det kan dessværre ikke siges om Lapperne overalt i de nordenfor liggende Landsdele. Ialfald saa jeg ifjor Vaar paa en Befaring af Furuskogene i Pasvikdalføret i Sydvaranger en Mængde vakre Furutrær skamfert ved saadant lapsav."

<sup>40</sup> The border refers to the treaty between Norway and Russia in 1826 which possessed Finland, defined the easternmost part of the border.

person who considers himself to be a Sámi with the stipulation that they or one of their parents or grandparents have learned Sámi as their first language” (Laki saamelaiskäräjistä 974/1995). Therefore, names of various traditional dishes, tools, as well as the harvest place names should be recorded as well as used. Among the Inari Sámi of northern Finland, for example, who continued to use inner bark for food up until in the early 1900’s, the well-developed terminology connected to ‘bark food’ is thoroughly documented (see Appendix 1: Glossary of Sámi Terms). This precise and detailed terminology reveals the economic and technological significance of bark processing (no other plant food resource has such a well-developed terminology for collection, preparation and use) (Bergman et al. 2004: 6). Even so, the mapping of CMTs is on hold and that may be due to lack of cooperation, interest or infavourable legislation.

When it comes to the place names in the Inari region, they refer to the purpose the place was used for. For example, *Pecyvetkimjáávraš* (saSK), not far from Nellim (*Njeä’llem* saSk; *Njellim* sal), refers to the gathering of pine bark.<sup>41</sup> There is an island in the Lake Inari (*Aanarjäu’rr* saSk; *Anárjávri* saN, *Aanaarjävri* sal), called *Many*. It’s name derived from pine (*Manty* Fin.) and may identify a good former harvesting site. There are others, like *Makea Petäjäsaari* (Sweet ‘*pettu*’ Island).<sup>42</sup> Olavi Korhonen, Professor emeritus of Sámi Language, University of Umeå (Sweden) provided the idea that the initial element in certain Sámi names for natural phenomena such as *Savddusjárvi* (a lake near Jukkasjärvi), *Savdivárri* (a mountain north of Gällivare) and *Savdduogielas* (a heath south of Arvidsjaur) may indicate that bark peeling was the source of the names. The name element is comparable to the Ume Sámi *savddie* or *savđdie* ‘tar valley’ and its stem variant, *savdduo-* in the word *savdduobiehtsie*, which, according to Rheen, can be interpreted as ‘bark treated in a heating pit’. This word stem is considered to be an Old Norse borrowing, referring to the preparation of food using heat and liquid (Kulonen et al. 2005: 32). Ritva Kytölä and Irja Jefremoff also provided several place names, that are historically significant for the pine inner bark harvesting:

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<sup>41</sup> Ojanlatva, E. And P. Magga exhibition *Ealli Biras - the living Environment* at Sámi Museum Siida, Inari, Finland. (Duration 15-06-2013 till 12-10-2014; Visited 08-08-2014).

<sup>42</sup> “Pine bark – The health food of the sámi. “ Áile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>

**Ritva Kytölä:** *It is Suonikylyla, which had the best places! Not so much around Petsamo, the winter camp. The name still talks even if the places have changed. Places did not really come up in the interviews. Usually they have looked up places before; either it was a place they have used from before or they have seen a promising place with many young trees. It was quite a lot of work for the women of the family because they needed to harvest a lot to get enough for the whole year.*

**Irja Jefremoff:** *At Tromsø University look for Tanner archives. 1920-1930 he was coming to Petsamo often. He was a geographer, geologist, social scientist, racial anthropologist; therefore, not very popular in Finland after the Second World War. He has collected place names around Petsamo. 'Pietsjaur', where Petsamo River, 'Pietsamojoki', begins. However, not all older people agree that the name is coming from 'Piets'. For example, when you go to Utsjoki, you pass 'Petsikotunturi', there are still some old pine trees, it is coming from 'pettu', or 'petaja'. It does not mean they are good for collecting 'pettu'. But in Inari, Suenjell there where pine grown areas so they have used 'pettu'.*

## 4.2 The Harvest

From historical records, it is known that pine tree inner bark was commonly harvested during early summer and it is proposed that this mainly depended on raised starch levels in the tree during this season. Here the pine stands out throughout the north and individual trees showed a large variance of soluble sugars during June, which explains the spatial patterns of bark-peeling scars in the landscape. However, as a Finnish scientist, nutritionist Anna-Maria Rautio et al. (2013) suggested, nutrients and sugars alone cannot explain this spatial pattern. Variety of conditions support this type of CMTs and support the idea that the varied spatial pattern in the landscape is the result of many factors, such as the migratory pattern (i.e. where people were residing at the time of the inner bark harvest), the weather in a particular year (late or early summer), the availability of other food resources, and logistical reasons including processing of the pine inner bark (Rautio et al. 2013: 363).

The Skolt and Inari Sámi tradition of 'bark food' comes from an area in which many general similarities of harvesting can be found. These are the 'right' trees, places and the time for collecting the pine inner bark, as well as the performance practices (i.e. tools used for gathering and preparing). However, there also are some significant differences (i.e. performance technique and meals). In an interview Ritva Kytölä provided an overview of the tradition in the area, defining some key elements, important for a potential harvest:

**Ritva Kytölä:** *People who lived in these areas they knew the best places where trees could be found that were right for harvesting. Not every tree is good, you know. Depends what colour is the outer bark, also the light and shade, water contributes to how the tree grows. Probably local people named places after the harvesting places... That was more of the Inari Sámi area... there were also some Finns.*

### 4.2.1 The 'Right' Time

There are several factors that define the 'right' time for collecting the pine bark. These are: **(1) the type of tree**, its physiology (the color of the outer bark, the size, and the age); **(2) the time of year** (calendar and certain signs in nature). Equally important is to ask if any of them have changed over time and why, what still remains? To trace the answer, I chose to follow my informants. However, the practice of collecting 'bark food' is not *in vogue* in the literature anymore as it was at the end of the 19th century, consequently there is a lack of English sources in the region. In this case, the most recent data for this and the following sections of the chapter mainly comes from my informants, today's Sámi and non-Sámi 'bark food' practitioners of Inari Lapland in northern Finland.

#### Type of Tree

The importance of the type of tree is reflected in the local knowledge of my informants. The best pine is the red skin pine, according to Matleena Fofonoff and Irja Jefremoff. Additionally, a good pine to get bark from grows in a lush area. The bark of young trees is a grayish color and is thin and easily broken. As the tree grows larger the outer bark becomes reddish brown, thick, scaly and with deep furrows. This is the 'right' pine tree for harvesting and Heini Wesslin clarified:

**Heini Wesslin:** *The one for 'pettu' needs to be quite young, light and slender which has no branches and thin a bark. You cannot take any tree. I would pick quite a young tree and maximum 20-25cm diameter by the base. Less than a hundred years old, yet still quite young as a tree.*

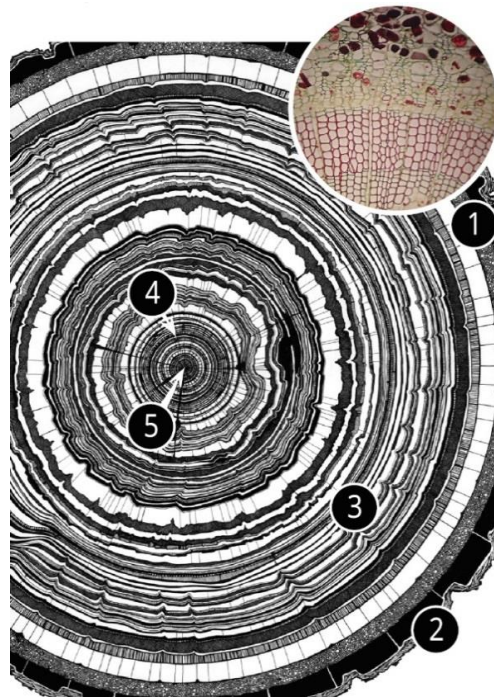
#### Time of Year

The importance of the subsistence for nourishment was reflected in the fact that month of June in, for example, Lule Sámi, was (still is) called *biehtsemánno* (pine month) (Kulonen et al. 2005: 31). In the past, it resonated with people's livelihood and the cyclical/working year of the Sámi<sup>43</sup>. Today, the part of the bark to be eaten (Figure 4; (1)

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<sup>43</sup> A model of two traditional subsistence communities of the European North for their seasonal cycles around the year 1900. Sompio –west of Skolt proper, was a mixed Forest Sámi – Finnish – North Sámi community. *Suð'nn'jelsijdd* (saSk) was one of the last communities of Skolts which lasted until 1944. Two circles, based on Mattson (2007) , outline different events of the year, regarding fishing, reindeer herding, hunting, berry picking, and only for Sompio – doing bark bread from mid-June

Inner bark) is taken from the pine in the early summer – before the 29th of June, the ‘day of Pietari’<sup>44</sup> – when the bark comes loose easily.<sup>45</sup> Other sources are also supportive of this; pines are best harvested during the time that local people call *nila-aika* (the time when the frost has melted) – from the end of May to the beginning or early July. The thickness of the pine inner bark or *nila* layer (Figure 6: (1)) can vary 1-3 mm (Siuvatti, 2014: 22-29).



**Figure 7:** A cross section of a pine tree: 1) Inner bark, cambium layer or secondary phloem; 2) Outer bark; 3) Annual growth rings or sapwood; 4) Hard wood; 5) Pith; Scheme by Sandra Bogdanova and Bjørn Hatteng.

Sometimes it can be collected at all times of the year (even in winter). Even so, it is at its’ richest during the spring, when the iron levels are at their highest. Eidlitz also says that, “the bark was usually collected in the spring, since it was easy to remove when the sap was rising, and this was naturally important for its nutritional value.” (Eidlitz, 1969:

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till mid-July. The model map can be found in Mustonen T., and Mustonen, K. (2013). *Eastern Sami Atlas*. Vaasa, Finland: Snowchange, p. 233.

<sup>44</sup> St. Peter’s Day or the feast of two Apostles Peter and Paul in the calendar of the Eastern Orthodox Church. It is being celebrated since the 16th century, when a Russian monk St. Tryphon of Pechenga (*Pää’ss Treeffan* saSk) ‘enlightened’ the Sámi in the Kola Peninsula and in Lapland. Most of the Skolt Sámi people to this day follow the Eastern Orthodox Church.

<sup>45</sup> “Pine bark – The health food of the sámi. “ Áile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>

55). All the research participants-practitioners agreed on collecting bark in early summer during the *nila-aika*.

Other signs for the 'right' harvesting time came from observing the nature and they intertwined in the Sámi and Finnish cultures. For example, observing migrating birds (i.e. cuckoo – the beloved bird of Finnish folklore) and flowering plants (i.e. Wild rosemary, *Suopursu* Fin, *Guohcarássi* saN, *Rhododendron tomentosum* L).

**Irja Jefremoff:** *Do you know a cuckoo bird? When the birds are coming to the north at the beginning of summer, they start to cuckoo. It last until the end of June. This is the right time to pick. When 'suopursu' is flowering, also good to pick; same time - for root bark and if you are making leather, then willow bark for tanning.*

**Matleena Fofonoff:** *The 'nila-aika' is the time when I collect it every year except this year. It is in July when 'suopursu' is flowering. However, you cannot say one day, or a month. It is when the summer comes and when it is flowering, depends on a year.*

## 4.2.2 The Method

### Tools

In the past, up to seven types of tools and utensils were used for bark harvesting and storing by the Sámi. Those were: **(1) a knife**; **(2) a long chisel** called *vue'tkkkem* (saSk), *vyetkim* (sal), or *beahcenjaldin* (saN); **(3) a short chisel** called *káállam* (saSk), or *kollom* (sal); **(4) a spud** called *norddmōs* (saSk), or *nuordamos* (sal); **(5) a reindeer hide** (see Appendix 3; Figure 15); **(6) a birch grid** and **(7) a storing container** (see Chapter 2: Figure 2), that could be a flour sack, leather bag (for Skolt Sámi) or a birch bark cylinder called *keeu'lek* (sal). Using these tools, about a century ago, a family in Inari was calculated to need around 17 kg of bark (T. I. Itkonen) (Kulonen et al. 2005: 31). The amount, types, materiality, application and terminology are the five factors that changed overtime. After all, only the application strategy has remained. An outtake from a text written by Ritva Kytölä explains the harvesting practice in details:

[T]he bark was detached from the pine with a *vyetkim*, a broad chisel that was 20 cm long and made from reindeer antler. The phloem, in turn, was detached from the bark with a *kollom*, a small, flat chisel made from antler. The bark sheets were ground with the help of a *nordamos*, a bark spud that had two blades and a wooden handle. The grinding was done on the skin side of a reindeer hide. The person doing the grinding would first form a hollow into the centre of the hide. Then the bark sheets that had been dried and roasted were placed into this hollow in small pieces. The pieces of sheet were ground with a spud until they were the size of oatmeal.

Then, they were put into an empty flour sack or in a big birch bark cylinder called *keeu'lek*. The sacks and the cylinders were kept in a storehouse.<sup>46</sup>

The first most detailed description with sketches of traditional bark harvesting tools for the Sámi was provided by a Finnish ethnographer Toivo I. Itkonen (1981) in his book *Lappalaisten ruokatalous, Suomalais-ugrilaisen seuran toimituksia*. As for 2015, it was still being used as a teaching material for the students at the Sámi Education Institute in Inari (hereafter SAKK). I have received two pages with detailed sketches of *kåállam*. They present three distinct patterns of Suonikylä (*Suõ'nnjel saSk*), Petsamo (*Peaccäm saSk*) and Inari (*Anaar saI*) and have a cultural value to this particular area. They were given to me by one of the participants of this study, Arto Saijets, who is a Northern Sámi artisan himself, working at SAKK. In fact, every year his students are being taught how to make these tools. It is seen as an important part of local traditions and when Arto Saijets was asked why he keeps doing it, he replied: *“So that the tradition does not die”*. Yet, when asked about the revitalization of ‘bark food’, he replied: *“Hopefully not. I hope those times never come back; anything that primitive.”* Seemingly, he is not alone in this position. When Ritva Kytölä was looking for an educational cooperation, she was not supported in her will to teach people how to gather ‘pettu’ using traditional tools. Since the only thing missing were the actual tools, the idea was left behind:

**Ritva Kytölä:** *I have discussed with the leader of the Sámi handicraft association the possibility of making more of ‘pettu’ tools for learning... Because they are beautiful items, it could contribute to the revitalization but it would require that people would know how to use them. I have suggested to teach people how to use them. Even though, I do not have proper tools myself and there are no proper tools anymore. I was also taking to Aune Musto, yet there was no agreement.*

Another artisan, Arttu Niemenmaa, a former student of Ilmari Laiti, the main teacher for antler and bone classes at SAKK, has expressed his disappointment in the will for learning of the local community: *“They do not want it. I wanted to teach them but they do not need it.”* In this case, if Ritva Kytölä and Arttu Niemenmaa worked together, there could be a potential for the cultural revitalization. However, as anthropologist Natalia Magnani (2016) found with her study presented in an article “Reconstructing

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<sup>46</sup> “Pine bark – The health food of the sámi. “ Áile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>



food ways: role of Skolt Sami cultural revitalization programs in local plant use”, such collaboration between individuals, communities and ethnobotanists is an option for organizing more avenues of direct, participatory learning. Revitalization programs are less about reviving all local plant uses and more about selectively promoting certain practices, and in many ways illustrate how what we conceive as “traditional” is often dynamic and negotiated (Magnani, 2016: 102).

During my fieldwork, I received a gift from Arttu Niemenmaa. It was a *Peaccäm käällam* (saSk) just like in one of the sketches (Appendix 4: Sketches of tools). He made it as a part of his three year course in 2005, that is continuously being taught at SAKK every year. I took this tool to the joined conference of the Society for Economic Botany (SEB) and Indigenous Plant Use Forum (IPUF) in Clanwilliam, South Africa in July 2015 as part of the research poster presentation. It became an ambassador of the people and guided this study in winning the distinguished American ethnobotanist Julia Morton's award (Appendix 3: Figure 11). It was also taken to the harvesting of the pine inner bark with Fofonoff family in Nitsijärvi in July of 2015.

At the beginning of the 20th century several photographs documenting the method of harvesting were taken by T. I. Itkonen in Inari and I. Maninnen in the summer *sidda* (saN) in *Suõ'nnjel* (saSk), *Peaccäm* (saSk) (see Appendix 3: Figures 15-18). They can be found in the archives of Tromsø University Museum and T. I. Itkonen's book (1991) *Lapin-Matkani* (see Appendix 3: Figure 19). The oldest harvesting tools, (dated from around 1896) I found at the permanent exhibition of Tromsø University Museum<sup>47</sup>. Photographs from the early 1990s donated for this study by Matleena Fofonoff from her private archive (see Figure 8). They document how the harvesting continued into the late 20th century and continues to this day. All the pictures from the slides were taken in different years, in Jorvapuolijärvi, Northern Finland. In the given collage, one can also see the traditional reindeer antler tools and harvesting technique.

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<sup>47</sup> “Barkebrød-Hungesnød?” An outtake from *Ottar* Nr. 41, 1964: p. 7-9, corresponding with the permanent exhibition at Tromsø University Museum (TMU). (Personal e-mail communication with TMU researcher Dikka Storm 23-04-2015).



**Figure 8:** Harvesting of pine inner bark: 1) Skolt Sámi tools; 2) Separating the outer bark; 3) Bark sheets ready for the harvest; 4-5) Separating the inner bark; 6) Drying bark sheets; 7) Roasted inner bark, shredded for preservation; Photographs 1-6 from the private archive of Matleena Foffonof, photograph 7 taken by Sandra Bogdanova, January 2015.

## Technique

[S]ámi children were told not to peel all around the stem, or else their fathers would get pain in their backs (Drake, 1918: 248 cited Bergman, I. et al. 2000).

As the above quote indicates, in the past, the pine inner bark was taken from the living trees and children were involved in the activity. Trees were respected and were equated to people. Importantly, a piece of outer bark was left for the tree to survive. The harvest bared traditions and teachings that reflected Sámi worldview

and care for biodiversity. Commonly, among the Skolt Sámi after detaching bark in sheets, they were carried home, with the help of a holder. There, the remaining outer bark was scraped off. The fresh sheets of inner bark were dried above the fireplace (see Appendix 3; Figure 17). After drying for about a day, the sheets were placed on a birch grid and roasted in the glow heat of willow coals.<sup>48</sup> Ritva Kytölä, Irja Jefremoff and Mateena Fofonoff commented on the gender, age and role distribution during the harvest within a single-family unit and a small-scale community:

**Ritva Kytölä:** *These were especially women of all age: daughters, mothers and grandmothers. Men did not do much. There is this picture of a man in Suonikyla harvesting the bark, but I doubt that it was a real photograph... Sweden, well, I have heard how there it was dug into ground and made into something sweet. They did not make the flakes. Maybe men could be the ones digging the pits? The tradition was very different. The Skolt Sámi usually cut the tree and Inari Sámi might have cut the tree but also used the living trees. They used both. But because they have not been doing it as recently as Skolt Sámi there in not that much knowledge about how they used it. Inari Sámi have not been using it as extensively as Skolt Sámi up until the times of the Second World War, when they had to move from Petsamo and Suonikyla. It was a practice all around Inarijärvi, not only in Inari but in villages all around, like Nellim, where the Inari and Skolt Sámi live until this day. It is harder to get the information about the Inari Sámi, though.*

**Irja Jefremoff:** *Children helped. They have taken from fallen tree or living tree. People could have done it in winter too, cut the tree and taken it inside the house, then drying the bark. Using the willow is important for taking the taste of resin away. Itkonen<sup>49</sup> is writing that willow is absorbing the taste of resin. One can use willow in the fire.*

**Matleena Fofonoff:** *'Pettu' can be gathered by both men and women. So it wasn't only a women's thing to do. Yes, they (men) helped, I saw them there along with women. Surely the felling of the tree was their job. Before I have seen from pictures, that 'pettu' was also taken from a standing tree, but we never did that. Trees were always cut down, so it was easier to maneuver from there. You don't reach very high if you take of a standing tree. I don't have a knowledge why some people did that; I have only seen photos of that ... I started doing this as an adult, but I have seen the 'pettu' work methods and tricks since I was a child. Older people taught us.. We were in "a herd" there, my mother-in-law and her parents, my father... we all did this together. Children were of course there with other people. I have always known when it is harvested, at what time it is taken... I have always had the know-how, but I didn't do it myself before my adult years. As a child I didn't have to do it myself, I only ate the 'pettu'!*

Just as with any tradition, variation develops in the ways of collecting and preparing the pine inner bark. Here are some factors that define the continuity and many that define the change of this tradition. For example, the forced relocation of Skolt Sámi brought the change; however, in this case, the consistent circulation of TEK or in

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<sup>48</sup> "Pine bark – The health food of the sámi. " Áile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>

<sup>49</sup> Referring to Itkonen, T. I. (1991). *Lapin-Matkani*. Söderström, Porvoo, Finland, 1991.

this context *árbediehtu*<sup>50</sup> (saN), about the pine inner bark, was an important factor that contributed to the ‘cultural resilience’ of the relocated community. Matleena Fofonoff and Irja Jefremoff comment on the distinction:

**Matleena Fofonoff:** *In Finland ‘pettu’ did not get a good reputation because people ate it during the war times but for Skolt Sámi it was a normal food. They collect ‘pettu’ in summer time. There were many ways to prepare it in Skolt tradition: porridge, flour, toast it. They ate ‘pettu’ porridge with salmon: collected the fat from salmon or a goose. People did not add it to the bread only to the porridge and only with the fat.*

**Irja Jefremoff:** *Sámi people in Petsamo used to eat it in a different way, not bread. It was considered in a different way – healthy. They could not live without it. For many it was the favourite, like a delicacy. In Petsamo many families have eaten it daily. In springtime, they were eating it with goose fat, in winter - reindeer fat, in summer – fish, such as perch.*

Nevertheless, from my fieldwork, I can identify some key changes in the harvesting of the inner bark. Unlike in the historical past, these days the Sámi mostly cut the tree (i.e. with a chain saw), detach the inner and outer bark layers together with or without traditional tools, and later scrape off the inner bark. Sheets are put into big bags and brought to the fire (outside or inside the house) for roasting on a birch grid. A simple (practical) wooden tool substitute, mimicking only the shape, can be used instead of *vue'tkķem*; *kåállam* can be replaced, for example, with a kitchen knife; *norddmōs* - by an electric coffee grinder<sup>51</sup>. Some of my informants were storing the bark sheets, or fine flour in glass jars, others in birch bark containers.

### 4.3 The Food

#### Nutritional Value

Nutritional analyses of Scots pine inner bark are rare and more research needs to be done for drawing reliable scientific conclusions. However, according to Kulonen et al. (2005) the existing analyses “reveal an energy-rich plant food, ideal for long-term physical activity because it helps keep blood sugars at stable levels. Thanks to its

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<sup>50</sup> It is the collective wisdom and skills of the Sámi people, used to enhance their livelihood for centuries. For more on this academic term and field of knowledge (see Porsanger, and Guttorm, 2011).

<sup>51</sup> See also “Saami Culture Natural Remedies and Foods. How do we make use of Nature's gifts?” [Motion Picture]. Director Laila Spik. Producers Agnetha and Torbjørn Rosander. (Published 26-09-2009; Accessed 08-10-2014). [Online]. – URL: <https://www.youtube.com/watch?v=PNyqXQq8e5s>

constituents of minerals and secondary metabolites, it also promotes good health. Like many other examples of plant food, it was probably used interchangeably as both food and medicine by many of the circumpolar people.” (Kulonen et al. 2005: 31). The custom of mixing bark with animal fodder was defended on the grounds that “the animals did well on it”. There are also presumably some nutritional grounds for this attitude (Roped, 1960 cited Eidlitz, 1969: 55). In the beginning of 1900’s pine ‘bark gruel’ was also lauded by a Finnish priest and plant collector Jacob Fellman, who wrote that “the nutritional value of the phloem is proven by the fact that a man who has eaten a substantial portion of this gruel, without any other sustenance, can endure the most strenuous journeys and skiing expeditions” (Kulonen et al. 2005: 31); and according to the politician, a pioneer and leader of the cooperative movement in Finland, Väinö Tanner (1929): “it helped to fight the scurvy (*Skurbbet, skurbbedávda* saN).”<sup>52</sup> Should this be true, today Scots pine inner bark could possibly be called an ‘adaptogen’.<sup>53</sup>

Pine inner bark as medicine is discussed in an article by two folklorists Thomas A. DuBois and Jonathan F Lang (2013), where they present the variety and depth of the healing knowledge and the ethnobotanical work of a Sámi reindeer herder and trapper Johan Turi (1854-1936). Among other medicinal uses of plants Turi gives away some recipes for bark use as medicine. He provided a detailed list of Sámi medical knowledge through the text he wrote, *Muitalus Samiid birra* (Turi 1910; translated as *An Account of being Sami*, 2011) - the first secular book written in Sami language. In the same book, the section *Glossary of Sami terms*, Turi introduces *guolbma* (saN) as the inner bark of pine tree, used as food source. Turi’s ethnobotanical lore, among other plants describes the pine inner bark for two main uses: bread preparation and for treating stomach ailments. In regard for the first, he states, “use beard moss (*Unea sp.*), lichens, and inner bark of pine tree (*Pinus sylvestris*), with a little flour added.”, also medicinally for treating

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<sup>52</sup> Tanner, V. (1929). Skolt-lapparna. In *Antropogeografiska studier inom Petsamo-området*: 1: Fennia: 49, No. 4. Helsinki : Geographical Society of Finland: pp. 446-47. Originally in French: “On preparait aussi avec du cambium de pin qu’on avait habitude de mêler a la soupe au poisson (et auquel on avait recouru depuis des temps très recules, comme un moyen prophylactique contre le scorbut).

<sup>53</sup> In the past, most of the studies conducted on adaptogens were performed in the Soviet Union, Korea, China, and later the US during the 1980s. Yet, this is an emerging field of natural remedies that are found to prevent a variety of ailments, such as increasing stamina and sports performance and helping us adapt to changing conditions in our environment. According to Christopher Hobbs (2014) “herbs and other natural remedies that help us adapt to our environment, whether a modern chemical environment or simply an environment in rapid change, are being called adaptogens” (Hobbs, 2014: 2). The ones commonly used in dietary supplements are *Rhodiola Rosea*, True Ginseng, Licorice Root, Slippery Elm Bark and also the Maritime Pine or Cluster Pine (*Pinus Pinaster*) bark extract or *pyncogenol*.

stomach ailments: “boils reindeer brains with pine bark (*Pinus sylvestris*) and fat and then ingest.” (DuBois et al. 2013: 6).

According to the Finnish researcher Tarja Siuvatti (2014), the latest studies from Finland show, that “pine inner bark has a lot of fiber, iron, magnesium, zinc, also flavanoids. There are some limits for using the inner bark: if more than half of the bread has the pine inner bark flour - it is unhealthy. The recommendation is that it should contain around 25% of the product. It has 1/4 of energy that rye flour contains. Of minerals iron, manganese, zinc, cobalt and aluminium levels are higher than in rye also higher than in spring wheat. <...> Part of the sugars and proteins in the pine inner bark are lost during the necessary handling” (Siuvatti, 2014: 22-29). More detailed nutritional analyses from various sample collections need to be done. During my first fieldwork, I received a bark sample from my informant, chef and food entrepreneur Ritva Kytölä. A year later (in September 2015) it was used by a bark anatomist, Ekaterina Kotina at the University of Johannesburg to analyse its anatomical structure and its nutritional content (see Appendix 3: Figures 12-13). Table 2 is based on several scientific articles and provides the comparisons of the nutritional content of the pine inner bark harvested in June and in autumn.

<b>Table 2.</b> Comparisons Between Nutritional Content of Scots Pine ( <i>Pinus Sylvestris</i> L.) Inner Bark harvested in June and in Autumn (table source Rautio et. al 2013: 371).									
Part used	Energy (kcal)	Water	Protein	Fat	Carbohydrates	Starch	Total Sugars	Ash	Source
Inner Bark (June)	107,6	62,2	0,8	2,0	9,9	6,7**	3,2	0,64	Rautio et al. 2013
Inner Bark (Autumn)		62,4	2,33		4,3	0,65	3,3		Rautio et al. 2013 in Källman 2006
Inner Bark Flour (June)			1,5	2,3	6,0				Rautio et al. 2013 in Källman 2006

\*All numbers are g/100 g FW = fresh weight. The weights do not sum up to approximately 100 g because all proximates (such as fibres) are not presented in this table.

\*\*Calculated as the difference between total carbohydrates and total sugars.

Another key point is that the inner bark contains lots of vitamin C, iron, kalium and other important elements for our health (Kuljok, 2013: 20).<sup>54</sup> It is at its' richest during the spring, when the iron levels are at their highest. Ritva Kytölä (1999) in her book *Kaarnikasta kalanpaistokeppiin: petsamonsamelainen eilinen* along with vitamin C also mentions vitamins B1 and B2 (1999: 60-62). With attention to the latest research, it is proven to be genuine heath food because of the flavonoids it contains (Siuvatti, 2014: 22-29). However, Matleena Fofonoff, concerning scientific nutritional analyses added a Sámi perspective:

**Matleena Fofonoff:** *Many years ago people did not know if it is healthy, people just ate it. Nowadays they know that there are many antioxidants and flavonoids in it. It is similar to 'pakuri'<sup>55</sup> with the nutritional value.*

#### 4.3.1 Preparation and Taste

##### Northern Sweden

The most documented use of bark for food by the Sámi comes from Sweden. An early text from the 17th century by Samuel Rheen, Swedish clergyman and ethnographer notes that the Sámi wrapped the phloem (*Sautopetzi* saN) in birch bark, covered it with peat and earth, and then heated it under a fire. The phloem became a ruddy brown colour and acquired a more pleasant taste. The chopped inner bark was added to meat and fish dishes (Kulonen et al. 2005: 31). The bark prepared this way was red and sweet, and they ate it as a confection. Kerstin Eidlitz found how Skum has also described the use of bark by Sámi from Sweden: "Then there was the drying of pine bark. It was hung up in the hut, though not so that it became too smoked, and then it was ground with a wooden pestle in a bowl so that it could be mixed with flour and used for baking. Without flour it was mixed in meat broth together with fine pieces of meat and eaten in that way." (Skum, 1955 cited Eidlitz, 1969: 56). A Sámi writer Kajsa Kuljok also quoted Skum on the way reindeer herders ate the dried pine bark or what she called *Sávvdobiettse* (saL): "it was chopped into small pieces that were then mixed in various foods such as cooked meat, blod soup or fish. Nils Nilsson Skum (1955) in his book *As*

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<sup>54</sup> Originally in Swedish: "Savvdobiettse, den torkade barken hackades i små bitar som sedan blandades i olika maträtter tex kokt kött, blodsuppa eller fisk. ...Innerbarken innehåller mängder av C-vitamin, järn, kaliumoch andra ämanen viktiga för hälsen."

<sup>55</sup> Chaga mushroom (*Inonotus obliquus* L.), that grows on birch trees.

*reindeer herders* describes how they prepared the pine bark... And without flour mixed it to meat broth with fine cuts of meat, and so they ate it. It was called **suvros** (saN) (Kuljok, 2013: 20)<sup>56</sup>. Irja Jefremoff also shared an insight from her experience:

**Irja Jefremoff:** *...Do you know about Swedish Sámi? Some years ago we had a seminar at SIIDA. It was when Sámi encyclopedia was presented, about 10 year ago. One man presented 'pettu' as an old Swedish Sámi tradition and said that this is something you would not know here. We surprised him that we knew about it. But in a different way. He presented that they were making a hole in the ground and covering it with a layer of birch bark and then they would put 'pettu' pieces there, then birch bark, soil and finally lid the fire. It was becoming a little red, very sweet and good to eat. I thought I will try to do it this way upcoming summer! In Arjeplog, in the silver museum I have seen some pieces in the exposition.*

Pine inner bark has probably also been used **as seasoning**. Eidlitz provides some evidence: “Ossian Sarstad from Kvikkjokk says that he has heard two Lapp boys relate to how they were once on a mountain trip and had forgotten salt. They did “what used to be done” - took ground birch bark and put it on the meat. Schefferus (1956: 245) also maintains that the Sámi used pine bark **instead of salt** (Eidlitz, 1969: 56). After been dried, the bark was cut into small pieces for grinding or else it was **shaved into meal**. It could then be used **for making porridge or bread** but it could also be eaten as it was **with sour milk** (Eidlitz, 1969: 59). During my second fieldwork, I visited the Sámi winter market in Jokkmokk, *Johkamohkki* (saN), (Northern Sweden), where I met a Lule Sámi mother and daughter, Greta Huuva and Linn Huuva, in their family café Viddernas Hus. I soon found out that a few years ago they developed two products using pine bark **as a main ingredient** and presented them as a traditional Sámi food (Figure 9). One bag had flat bread chips (*Barkchips*) and the other bag of flat bread (*Barkbröd*) were both made with pine inner bark. Both products were packed in paper bags and labelled. On the one with *Barkbröd* it said: “this was a candy for our ancestors - try to nibble on golden brown bark, roasted on a flame in a more modern variant but at least as good, - Greta”<sup>57</sup>. The one with *Barkchips* has these words on the label: “In Sami tradition wild plants are used for food and medicine”.<sup>58</sup> The family also told me that it is tasty to eat it

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<sup>56</sup> Originally in Swedish: “Savvdobiettse, den torkade barken hackades i små bitar som sedan blandades i olika maträtter tex kokt kött, blodsuppa eller fisk. ... Innerbarken innehåller mängder av C-vitamin, järn, kaliumoch andra ämanen viktiga för hälsen.” Originally in Swedish: “Nils Nilsson Skum (1955) beskriver i sin bok Valla renar hur de tillredde tallbarken.... Och utan mjöl blandade man den i köttbuljong tillsammans med fina köttbitar, och så åt man det. Den här maten kallades suvros (saN).”

<sup>57</sup> In original it was written in Swedish: “det här var godis för våra förfäder - alt knapra på barkflarn sorm rostats gyllenbruna i en modernare variant men minst lika god, -Greta”. Authors translation.

<sup>58</sup> In original it was written in Swedish: I den samiska traditionen har vilda växter används for mat och medicin”. Authors translation.



with honey and angelica<sup>59</sup> jelly - made with young birch leaves.



**Figure 9:** Products with pine inner bark “Barkchips” and “Barkbröd” made by Lule Sámi Greta Huvva and Linn Huvva and sold at their family cafe “Viddernas Hus” in Jokkmokk, Sweden; Photograph by Sandra Bogdanova, February 2015;

### **Eastern Sámi Regions and Inari Lapland**

Pine inner bark was also mixed **with reindeer milk or the fat from boiled meat**. ‘Bark gruel’ is known to have been eaten in the more Eastern Sámi regions, i.e. In Finland and in Kola Peninsula. In the Figure 7 below, a caretaker of Skolt Sámi community, Darja (Tarj) Jefremoff can be seen tasting ‘bark gruel’ from the field diary of a Swedish travel writer Hans Lidman, presented in his book *Pohjoiskalotin ihmisiä* (1969).

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<sup>59</sup> *Angelica Arcangelica L.*



**Figure 10:** Darja (Tarij) Jefremoff tasting 'bark gruel' or 'pine bark porridge' (*piets'hutt saSk*). Photograph from a book *Pohjoiskalotin ihmisiä* by Hans Lidman, 1969.

In these regions, even untreated bark was used, albeit to a lesser degree, **as thickener in meat or fish stews** (Kulonen et al. 2005: 31). Eidlitz found some support for this: “The Kola Lapps also used bark together with fish, fish fat and even meat. They did not buy or bake bread, used the pine inner bark in the 1880’s; this they **dried, cut up fine and added to meat or fish soup together with rye flour**” (Xaruzin, 1890 cited Eidlitz, 1969: 56). An outtake from a text written by Ritva Kytölä explained in details the preparation of bark by the Skolt and Inari Sámi:

[E]arlier, the Sámi considered pine bark as a health food, and, for many, the bark was a delicacy that was thought highly of and eaten every day. From the bark, the Skolt Sámi prepared porridge (*piets'hutt saSk*) (Appendix 3: Figure 21). In summer, the porridge was made into fish stock in connection with cooking fish that had been caught with a seine. When the fish were done, they were lifted into a wide wooden bowl *kää'rr* (*saSk*), or a birch bark dish, and the stock was poured over bark grain or flour. The porridge did not need further

boiling. In winter, the bark flour was mixed with greasy stock derived from boiling reindeer meat. Inari Sámi prepared a dessert soup called *peecimääli* (saSk) from pine bark. In summer, after boiling fresh fish, the stock was mixed with bark grain and rye flour in a rectangular birch bark dish; furthermore, the grease collected from the top of the fish stock could be mixed with fresh, crushed bark and berries. The Inari Sámi also used pine bark and rye flour to prepare flat bread and a thick dish called *soos* which consisted of pine bark, rye flour and whitefish roe. They also prepared a “snack” called *rachts* from bark, roe and reindeer milk.<sup>60</sup>

In an interview she also added:

**Ritva Kytölä:** *There are differences between Skolt and Inari Sámi. In the Skolt tradition, it was used in the **pre-course as porridge**, whereas in Inari Sámi it was used as a **desert or as a snack** between meals. They did not make porridge; they baked it into the flat bread, used blood or ate it with the berries. The Skolt Sámi haven't made any bread with *pettu*, only the porridge that **served in one big pot that was shared**. Especially the Skolt Sámi men lighted up when they remembered the taste of 'pettu'.*

According to Gaurlie (1939), “There seems to be no end to the employment that can be made of birch and pine bark, the latter amongst the Skolts being used as food during June, July and August. The white inside pith is **stripped out and hung up to dry**, then **pounded into a coarse flour, which mixed with fish fat is regarded as a summer delicacy**, and eaten with fish soup, made from fresh fish, generally partaken of it at midnight, on the return from fishing.” (Gaurilie, 1939 cited Eidlitz, 1969: 56) Ritva Kytölä and Matleena Fofonoff commented on the eating rituals of ‘bark food’:

**Ritva Kytölä:** *...back in the days when it was a lot in use, especially among the Skolts it was used as a first course.*

**Matleena Fofonoff:** *It is a very delicious food! People prepared 'pettu' porridge and they make a hole in the middle to fill it up with fat and everyone took a spoon-full of 'pettu' and dipped it in the fat.*

**Matleena Fofonoff:** *Nowadays everyone has their own plate instead of one big bowl. There is also an old belief, you cannot break the hole, you have to take the porridge from the side, guarding the hole. I knew it since I was a child. It was not anything bad because someone had to do it in the end, so it was more of a play... Now I am using 'pettu' porridge with Nalle porridge and the chicken stock, instead of a goose, just when she cannot get a goose anymore.*

#### 4.4 Conclusion

The Skolt and Inari Sámi tradition of ‘bark food’ comes from an area of Northern Fennoscandia where many general similarities of harvesting can be found. The signs for

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<sup>60</sup> “Pine bark – The health food of the Sámi. “ Áile Aikio from a text by Ritva Kytölä. (Accessed 01-04-2014). [Online]. – URL: <http://www.siida.fi/contents/for-children-and-students/theme-of-the-season/archive/pine-bark-2013-the-health-food-of-the-smi/?searchterm=bark>

the *right* harvesting time came from observing the nature and historically intertwined between cultures in northern Finland. Archaeologist, forest historians, botanists, all unanimously are drawn to the topic of CMT and the past application of these modifications that have a number of explanations. These trees represent cyclical and culturally important act of the Sámi who have been moving in the area from the time immemorial. The harvest bared traditions and teachings that reflected Sámi worldview and care for biodiversity. The mapping of CMTs is ongoing in Norway and Sweden, yet it is on hold in Finland. That may be due to lack of cooperation, interest or unfavorable legislation. The etymology of place names especially throughout Eastern Sámi areas, Inari and neighboring regions refers to the purpose places were used for, in that way they reveal the worldview of the local people. As the precise and detailed terminology of 'bark food' practice in Sámi languages reveals the economic and technological significance of bark processing. Language is one of the most important ways to define ethnicity, therefore the record of Sámi terms and its' further use could contribute to the survival of the fundamental composition of Sámi identity. The availability of information is quite limited. That is the main reason why I tried to create the Glossary of Sámi terms (see Appendix 1) that are in one way or another related to the local 'bark food' practice. My main conclusion for this chapter is that in different regions pine bark was used in a number of ways for a number of occasions, commonly as a processed ingredient for food or medicine; today, although changed, it is continuously being used among the Skolt Sámi (also Lule Sámi); and there are important scientific and Indigenous perspectives to nutritional value of 'bark food' that may become the new adaptogen, therefore calls researchers and practitioners for further research.

## 5 Sámi Food Challenge

[I]t is easy to show that you are Sámi, with clothing, *doudji* or jewelry, but it is not easy to eat Sámi.

A participant at the Sámi cultural festival *Márkomeannu* (Berg, 2014: 1)

A Master thesis by a student in Indigenous Studies Elisabeth Berg (2014) entitled *Sami traditions: Márkomeannu's contribution to the revitalization of Sami food traditions* found that food is one of the building stones of each cultural foundation. It is tied to Sámi identity and may contribute to the representation and continuity of their food culture. However, the Sámi traditional food has not always been used to maintain traditions, or for strengthening the identity. A Sámi historian Veli Pekka Lehtola (2005) in his article "The Right to One's Own Past. Sami cultural heritage and historical awareness" discussed challenges related to Sámi identity, cultural heritage and its' curation at collecting institutions (i.e. museums) in Finland. The question how Indigenous people can affect the image of their past is not only an academic problem, but a practical challenge to education and general knowledge to allow the collective self-knowledge and interpretations of Indigenous peoples to be manifested (Lehtola, 2005: 87). It has been difficult to access the motives and the personal and collective voice of the Sámi, because the sources were once mainly produced by others, rather than themselves (Lehtola, 2005: 93). When it comes to the case Sámi community, their major challenge was the evacuation period that older Skolt Sámi spent in Ostrobothnia<sup>61</sup>. That was the time when the Sámi missed their home region, their relatives but also their food. Notably, the pine bark dishes were among their favourites. After the war, older Skolt Sámi from the Suonikylä area still prepared bark and ate it more or less on the quiet, because they were supposed to pay for the trees that they took bark from – and too much, they thought.<sup>62</sup> A local chef, Sámi food entrepreneur, Ritva Kytölä, further explained to me:

**Ritva Kytölä:** *When I was interviewing the people I can really remember the feeling of the lack of 'pettu'. Once after the Second World War they had to move to the south. Later they moved closer to Nellim, just before Sevettijärvi was built. When they moved to Sevettijärvi it was not part of their daily diet anymore and they would feel the lack.*

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<sup>61</sup> Ostrobothnia is a region located in Western Finland.

<sup>62</sup> "Food Tradition." By Ritva Kytölä, SIIDA 2006. (Accessed 09-03-2015). [Online]. – URL: <http://www.samimuseum.fi/anaras/english/elamantapa/ruokaperinne.html>

## 5.1 “The Poor Can Eat the Cake”

The discourse of indigenus foodways and dietary change is a global concern. Linda Tuhiwai Smith (2012) in her book “Decolonizing methodologies”, Chapter 5, *Notes from Down Under*, the last out of twelve ways to be Researched (Colonized) is entitled *Let them eat cake*. Here the Indigenous scholar presents the ways people surrendered themselves into food dependence, food impoverishment and the threat of gradually fading away from their own food heritage, or *Biebmoárbi* (saN). This discussion on power dynamics is encoded in the title “The poor can eat the cake”, that Linda T. Smith follows up with a statement “as far as the rich world is concerned”, she says:

[I]ndividuals, families, communities, countries and groups of countries can barely feed themselves. We became aware of this when the television news tells us about a drought or a flood. What we fail to see is that the developed world cannot feed itself either - food is produced somewhere else, under conditions we do not wish to know. We eat out of season, because we can, we buy because it is there and we consume it with all its additives - somehow assured that someone, somewhere, has regulated to make sure the food is good, authentic, and will not harm us. There is little sympathy for the poor as the rich have their refrigerators filled with food that seems to last forever, its colour unchanged and its smell fresh for days or weeks. The poor can eat the cake as far as the rich world is concerned - more so, the poor can eat cake that must be purchased from the rich. Food dependency, food impoverishment, and monoculture of food products all contribute to world that is starving (Smith, 2012:107).

There are field case studies that mainly focus on the foodways of Natives in the North America. In the book *Eating the Landscape*, Enrique Salmon (2012) found that a common effort to maintain food traditions increased the cultural identity of a community and reinforced their land and food consciousness. When the change in the diet is profound, when it happens precipitously over the span of only a few decades, and when coercive sociopolitical, environmental, and economic pressures are at play during this period of transformation, there can be serious repercussions for peoples’ health and well-being (Parrish et al. 2007). This has happened to the First Nations of British Columbia – and all across Canada – and as a result both their ‘food sovereignty’<sup>63</sup> and ‘food security’<sup>64</sup> have been undermined. Along with the loss of the food itself, perhaps even more serious is the loss of the cultural knowledge relating to the production, harvesting, processing, and use of the food – the knowledge that has sustained

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<sup>63</sup> Food sovereignty is defined as the ability to make substantive choices about food consumption. This includes what types of foods are eaten and where, how, and by whom they are produced (World Food Summit 1996).

<sup>64</sup> Food security, as defined at the World Food Summit (1996), exists when all people, at all times, have physical and economic access to safe and nutritious food that meets dietary needs and food preferences in sufficient quantity and active and healthy lifestyle.

generations of people in their home territories for thousands of years (Deur, and Turner 2005: 104). In the past, Canadian First Nations contained plant and animal food respectively high in nutrients; however, the historical colonization has replaced most of their traditional food. Nutritionist Harriet V. Kuhnlein (2009) discusses that homogenization is the reason for the shift in the use of local traditional food. In her book, *Indigenous Peoples' food systems: the many dimensions of culture, diversity and environment, for nutrition and health*, Kuhnlein presents several case studies carried out together with *Organization for Food and Agriculture* and the *Centre for Indigenous Peoples Nutrition and Environment*. These studies show, how Western culture influences Indigenous peoples, their ecological knowledge, their food resources, the way they present their food, what they think about it and how the use of traditional food is practiced today. Kuhnlein conceptualizes 'Indigenous food systems' and a record of these traditions. She sees homogenization as a reason for the impoverishment of food cultures and a result from them. These ideas are also applicable to the Inari and Skolt Sámi people when talking about (bark) food. Both groups also went through the historical transformation of their way of life, health and well-being. Due to the loss of food diversity, therefore the loss of cultural knowledge, they became more food dependant. Still food could be received as a cultural marker of their collective identity. I invited two of my informants, an Inari Sámi Historian Velli Pekka Lehtola and a Skolt Sámi *duodji* craftswoman Heini Wesslin to comment on the importance of the pine bark in today's Sámi diet. Both mentioned the 'Westernized' current diet, drawing on the formation of the historical burdens between the Sámi and the State. Here is what they shared:

**Heini Wesslin:** *Bark was an important part of our culture and eating habits... Skolt Sámi were also eating a lot of fish and meat. They thought it tasted good and that is why I wanted to experience it myself... I am not the best person to say how it tastes because I have tasted it just once. I haven't been eating it really... my eating habits are very Western. It did not belong to our diet when I was a child because I am from the generation, that... I was not allowed to grow up with my traditions. I started taking them back as a grown up, so I tasted it as a grown up... It can be similar ....to your experience. For me it tasted a little bit bitter.*

**Veli Pekka Lehtola:** *I am a little skeptic about that. Because firstly, I think nowadays famine representation is quite strong and another reason, it needs a lot of work. Finally, is it as tasty as McDonald's food?*

## 5.2 Availability of Resources

There is a part of the Finnish constitution that refers to Skolt Sámi Act (kolttalaki)<sup>65</sup>. According to §9, “the Skolts have the right to collect subsistence wood for themselves and keep their boats and cattle wherever and with a permission get wood and gravel for their buildings and build shelters for boats, cattle, and reindeer etc.” That explains state-owned land, management of protected areas and wilderness areas, the use, lease and transfer. However, in order to get the inner bark, you need the land owner’s permission (Siuvatti, 2014: 22-29). In addition, some aspects of it were highlighted by Maleena Fofonoff and Heini Wesslin:

**Matleena Fofonoff:** *Finland's Forestry Office prescribed that it's forbidden to use standing trees for taking 'pettu'. Here were the Forestry Office's house and supervisors who kept track of this. It was also forbidden to cut trees randomly; the cuttable trees were marked by the supervisors. Far away from here in Suolisvuono, the trees weren't marked, as we cut young red-sided pines. These have a better taste than the older ones.*

**Heini Wesslin:** *Skolt Sámi are allowed to cut the trees for firewood in certain places. Permissions are being given by 'Metsähallitus' and they can say "no" and also you have to pay for it but as a Skolt Sámi you can take materials for handicrafts and such without applying for permission but I am not sure how is it for cutting a tree or taking it from a living tree, is it also included? I have been only collecting 'pettu' with Matleena but I would love to collect it for myself too. I have been checking out the trees already! But you are not allowed to pick wherever. You need to have permission, so there are certain places. All these kind of natural resources, for example hey for shoes, roots for weaving and other are very difficult to find, also to find the right ones. People have their own places and are not telling anyone.*

Both Sámi women rely on natural resources, since both of them are practitioners. To have and to rely on ‘their own’ or such ‘secret places’ for collecting is common for the people in the community. Bark is a strategic product in their livelihood and although not the most important, still belongs to their cultural identity. Ethnobotanist Antony B. Cunningham et al. (2014) have reviewed the use of plant barks and their extracts and highlighted the need for it: “with the income, livelihoods, and herbal health care of many people being undermined by unsustainable bark exploitation, this needs to change through recognition in social forestry training and forest inventories. Although there are notable exceptions, this gap in knowledge and training is surprising. Billions of people use bark and bark extracts for herbal medicines, dyes, spices, and a range of other uses. Yet historically, several bark resources have been, or are, a strategic product.” (Cunningham et al. 2014: 27). Linda Tuhiwai Smith (2012), commented on the importance

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<sup>65</sup> Laki saamelaiskäräjistä. 24.2.1995/253 (Accessed 14-08-2015). [Online]. – URL <http://www.finlex.fi/fi/laki/ajantasa/1995/19950253>



of such contextual belonging to the environments, sustainable mind and the responsibilities of Indigenous peoples:

[I]believe that our survival as peoples has come from our knowledge of our contexts, our environment, not from some active beneficence of our Earth Mother. We had to know how to survive. We had to work out ways of knowing, we had to predict, to learn and reflect, we had to preserve and protect, we had to defend and attack, we had to be mobile, we had-to have social systems, which enabled us to do these things. We still have to do these things” (Smith, 2012: 12)

### 5.3 The Right to Food

[T]he right to adequate food is realized when every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement.

General Comment 12, the Committee on Economic, Social and Cultural Rights (CESCR)

The given legislative framework is closely linked to another Article 11§1 of CESCR, which recognizes the right of everyone – including Indigenous peoples – “to an adequate standard of living for himself and his family, including adequate food...” The ‘right to food’ of Indigenous peoples is closely linked to cultural rights with regard to food choices, food preparation and food acquisition.<sup>66</sup> Pine inner bark, when used for food, has such a cultural value to the Sámi community. This natural resource has undoubtedly been used by the Sámi since the time immemorial (Kulonen et al. 2005: 31) and is continuously being used by several members of the Skolt Sámi community into the present days. That should be taken into consideration by the State once issuing legislation on the availability of natural resources and protection of biodiversity. In the light of the United Nations Declaration on the Rights of Indigenous People (hereafter - UNDRIP), that was signed in 2007.

[I]ndigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

Article 31§1, UN Declaration on the Rights of Indigenous Peoples, 2007

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<sup>66</sup> For further reading, see “Right to Food and Indigenous Peoples.” From Food and Agriculture Organization of the United Nations (FAO) home website. (Accessed 14-07-2015). [Online]. – URL: [www.fao.org/docrep/016/ap552e/ap552e.pdf](http://www.fao.org/docrep/016/ap552e/ap552e.pdf)

Moreover, on 14 May 2012, the United Nations Permanent Forum on Indigenous Issues (hereafter – UNPFII) held a half-day dialogue on the rights of Indigenous peoples to food and food sovereignty. This was underscored in the report of the UNPFII 11th session: “The Permanent Forum notes that Indigenous peoples’ right to food and food sovereignty is inextricably linked with the collective recognition of rights to land and territories and resources, culture, values and social organization. Subsistence activities such as hunting, fishing, traditional herding, shifting cultivation and gathering are essential not only to the right to food, but to nurturing their cultures, languages, social life and identity.”<sup>67</sup> Notably, UNDRIP Art. 26 addresses traditional land use, ownership, development and control, role of women in the community; UNDRIP established the responsibility of States to take all necessary measures to guarantee the right of Indigenous peoples to enjoy their culture, traditions, customs, religion, language without interference or any form of discrimination.

The narrative of *The Six Times of Eastern Sápmi*, presented in one of the previous chapters, continually strives to bring new insights to this discussion. The narrative concludes, “it is remembered how Sámi remember again who they are” and if so, taking the stand of their rights as well as their cultural heritage is an inevitable right.

In the time when Sámi remember again;  
It is remembered how newly born children cry in joy again in the camps and towns of Sápmi,  
It is remembered how reindeer run again with the Sámi,  
It is remembered how the salmon spring in the rivers of the Sápmi,  
It is remembered how Sámi remember again who they are,  
It is remembered how all of this was made,  
It is remembered how all the damages were inflicted on the people, lands, waters and air of Sápmi,  
It is remembered how these damages are stopped, repaired and healed,  
It is remembered how the things which are about to take place will look like,  
It is remembered how the Sámi live again strong, proud and in peace.  
It is remembered how the silence ends.  
All of these things and many more are remembered of the time when the Sámi remember again because this is the time in which the Sámi, Sämmlaž are living right now and all the other times are present now as well.

*The Six Times of Eastern Sápmi* (Mustonen, and Mustonen, 2013: 22)

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<sup>67</sup> Report of the 11th session of the United Nations Permanent Forum on Indigenous Issues, 7 – 18 May, 2012 E/2012/43, E/C.19/2012/13, paragraph 56.

## 5.4 Conclusion

This chapter links together the different factors that influenced the change in the 'bark food' practice as a part of a Sámi cultural heritage. Recent studies suggest that collective efforts to maintain food traditions increase the cultural identity of a community and with it reinforce their land and food consciousness (Salmon, 2012). Whilst Sámi traditional food has not always been seen to maintain traditions, or for strengthening identities, I argue that, their continued use of 'pine bark' does just that and illustrates their continued resistance. The 'right to food' of Indigenous peoples is closely linked to cultural rights with regard to food choices, food preparation and food acquisition. Indigenous peoples have the right to enjoy their culture, traditions, customs, religion, and language without interference or any form of discrimination. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

## 6 Rethinking the 'Burdens' of Famine Food

My main conclusion of this thesis is that the representation of Indigenous food today is a cultural heritage. This thesis provided an overview of cultural encounters focused on pine inner 'bark food' and the recent Sámi (plant) food studies. I explored approaches from both Indigenous and non-Indigenous researchers from the fields of archaeology, anthropology, (forest) history, ethnobotany, museum studies and Indigenous studies, touched upon nutrition studies. Among others, I also incorporated the work of early ethnographers and expeditors - little did they know - that a century or two later, their work would contribute to current internationally recognized terms, such as 'food systems' or 'Indigenous foodways'. Yet, and in most cases, food was not a main point of interest, but rather a key to discover other features of a given society.

Because food is one of the main components of a personal or communal identity, and food as heritage is one of the themes that the collecting institutions support, representation of cultural heritage at museums is related to the Indigenous identity. Their historical engagements with local people have resulted in a material legacy, which today can offer challenging perspectives of cultural encounters. The marginalization of Indigenous food cultures is undeniable. Dietary change has led to food impoverishment and food dependency. The right to food for Indigenous peoples, is closely linked to cultural rights with regard to food choices; food preparation and food acquisition. Historical colonization processes replaced most of their traditional food practises. Power dynamics are involved and connected to the availability of subsistence resources the manifestation of traditional foodways. The strength of community is located in cultural heritage. However, the 'historical burdens' of knowledge production have led to the uniform culture or common cultural heritage, as could be seen in the case of the exhibited photograph of a Skolt Sámi woman Ojašš Sverloff, harvesting the pine bark for food at Siida, the Sámi Museum in Inari, Finland. Seemingly, these food practices egzisted simualtaneously, nevertheless, the Sámi traditional knowledge of approximately 3000 years old was labelled as a part of Finnish Great Famine years from the second half of the 19th century. Such examples question the legitimacy and knowledge production of museum curation as well as the representation of the exhibited peoples. Museum collection was found to lack the multiple voices. In different regions of Northern

Fennoscandia pine bark was used in a number of ways for a number of occasions but commonly as a processed ingredient for food or medicine. Today this practice, although changed, is continuously being used among the Skolt Sámi (also Lule Sámi); and there are important scientific and Indigenous perspectives to the nutritional value of 'bark food'.

Re-learning Indigenous past food practices is needed for it enhances the collective self-knowledge of Indigenous groups, it helps to maintain food traditions - with the help of cultural practitioners, increases the cultural identity of a community and reinforces their land and food consciousness. Detailed terminology in Sámi languages on bark harvesting tools, place names, the names of dishes, all reveal the economic and technological significance of bark processing (no other plant food resource has such a well-developed terminology for collection, preparation and use). The fact that language is also one of the most important ways to define ethnicity encouraged me to collect a Sámi glossary with Sámi concepts and place names related to 'bark food' practice. Here I met a personal challenge of being a foreigner and non-native language speaker and thus had to create personal relationships with the locals. As a researcher, I was guided into three parts of the fieldwork, by the academic literature, later by the locals and Skolt Sámi, the case study community. These were: *the archive*, that resulted in visits to museum exhibitions, the collection of interviews and photographs; *the kitchen*, that resulted in interviews and practical use of knowledge about 'bark dishes' and tool sample collection; and *the forest*, that resulted in *in situ* harvesting workshop, interviews and plant sample collection. From this I came to understand the importance of learn to sit with people. One must sit and listen carefully. What are their concerns; what is closest to them? How can we determine ways that we might work together to address the problems of the research study?

My predictions about the continuity of 'bark food' tradition have been confirmed, as the pine inner bark was documented as a continuously used practice for traditional Skolt Sámi dishes; however, the previously used cyclical subsistence yearly pattern has become more occasional and fragmented. The harvesting and preparation techniques and tools were being adapted and simplified, arguably, losing their traditional outlook but not the function. Bark-peeling scars on the ancient pine trees (CMTs) helped us understand the full scale of the subsistence strategies, marked the landscape, primarily

of Northern Fennoscandia and the migration patterns of Indigenous peoples who were living in the areas with long winter seasons since the time immemorial. These patterns have relatively recently stopped changing the landscape of Northern hemisphere, due to the notable effect of negative historical narratives such as, crop failure and 'famine years', derogatory names, propaganda, colonization processes, the Second World War, legislation and other events that led to the formation of both favourable and negative attitudes to 'bark food'. Nine major categories to 'bark food' were found across continents: normal, seasoning, medicine/health, survival, alternative, famine, emergency, 'poor man's' and subsistence.

I hope that this research stimulated an interesting discussion, since the edible inner bark products have been a much more important and nutritious part of peoples' diet than previously recognized. Further research in this field is needed, as little documentation has been produced regarding the nutritional content of Scots pine inner bark and especially regarding the cultural and social practices for eating the pine inner bark among the Sámi and other Northern Nations. Many useful gains and insights of this study were achieved almost unexpectedly during my community participatory fieldworks, as I was led 'from door to door', I now see, more than ever before, that partnerships and access are needed to avoid misrepresentations of community and food traditions. Such partnerships may serve for generating Indigenous peoples' collaboration on their traditional foodways with researchers and for collecting institutions. More debates surrounding the encounters between peoples in the North are needed for revealing and healing the burdens of history, discussing the social meaning of food and suggesting new approaches to the curation of the biocultural Sámi heritage. This study has tried to situate itself within the literature of cultural heritage, primarily indigenous food representation. It became possible to define some cultural and social practices for 'bark food' among the Sámi. To summarize, cultural heritage representation is just one of many ways, from the ethnographic description of 'bark food' as a 'food taboo' to the indigenous food heritage. This is a small study within a large field that has not yet been well explored within academia, particularly in terms of how indigenous people's themselves are framing it within an academic discourse. I hope that this research provides valuable evidence informing scholarship in the field of indigenous studies.

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## Appendix 1: Glossary of Sámi Terms

Terms are inserted in the text itself.

### Keynote:

Davvisámegiella [Northern Sámi = saN]  
Sää'mkiöll [Skolt Sámi = saSk]  
Julevsámegiella [Lule Sámi = saL]  
Anarâškielâ [Inari Sámi = saI]  
Ubmisámegiella [Ume Sámi = saU]  
Åarjelsaemien giële [Southern Sami = saS]

**Árbi (saN)** heritage, inheritance

**Árbediehtu (saN), aerpiemaahoe (saS)** traditional knowledge in general

**Árbečeahppi (saN)** owner of traditional knowledge, a custodian

**Biehtsemánno (saL)** 'pine month', referring to the working year of the Sámi calendar, the equivalent of the month June

**Biebmoárbi (saN)** food heritage

**Golgi gáhčči (saN)** resin extract, in Sámi folk medicine used as a toothpaste

**Guohcarássi (saN)** Wild Rosemary (*Rhododendron tomentosum* L.). Finnish *suopursu*, that is important to carry out bark harvesting while the plant is flowering

**Guolmmas (saN); piets, pietts (saSk); kuolmâsleibi (saI)**, in Finnish *pettu*, Norwegian *lappsav*, Russian *Камбу́й*, vascular cambium layer or the product of bark harvesting

**Gietkka (saN)** Sami cradle

**Kää'rr (saSk)** a wide wooden bowl for fish, meat or poultry stock to store before pouring it over bark grain or flour

**Keeu'lek (saSk)** a big birch bark cylinder to keep pine bark flakes

**Kåállam (saSk), Kollom (saI)**, in Finnish *kuloin*, a small, flat, ornamented chisel made from reindeer antler, used for detaching the inner bark (phloem)

**Muora mearka (saN)**, in Swedish *Marksgrave*, a scar in a pine tree, left after the harvest

**Norddmôs (saSk)** a bark pestle with two sharp antler blades and a wooden (pine or birch wood) handle of 40-50 cm long

**Piedz, pie3 (saSk)**, (*Pinus* L.), in Finnish *petäjä, mänty*, in Norwegian *fur*, Russian *Сосна*, a pine tree

**Piets’hutt (saSk)** pine bark porridge. In summer, the porridge was made into fish stock in connection with cooking fish that had been caught with a seine

**Pecimääli (saI)** an Inari Sámi dessert soup from pine bark

**Rachts (saI)** a “snack” from bark, roe and reindeer milk

**Savdduobiehtsie (saU)** according to Rheen, can be interpreted as ‘bark treated in a heating pit’. The word stem *savdduo-* is considered to be an Old Norse borrowing referring to the preparation of food using liquid and heat

**Sámi Arkiiva (saN)**, Sámi Archives in Inari, Finland

**Sä’mmlaž (saSk)**, Skolt Sámi

**Sávvdobiettse (saL)**, secondary phloem, the inner layer of a pine tree bark, prepared in a cooking pit

**Savdäe (saU)** a tar valley; 1-2000 years old Norse loanword from 'sauthia', originated before the Viking era, with a root 3-4,000 years ago

**Siida (saN)** a Sámi community that has existed from time immemorial, or a “reindeer pastoralistic district”

**Skurbbet, skurbbetdávda (saN)** scurvy, an ailment quite common in coastal areas, often resulting from a deficiency of vitamin C.

**Soos (saI)** a thick dish of pine bark, rye flour and white fish roe

**Vue’tkķem (saSk)**, **Vyetkim (saI)**; **Beahcenjaldin (saN)** a broad chisel of 20 cm long, made from reindeer antler, used for detaching the outer layer of bark from the pine tree

## Placenames Mentioned in the Text

**Áŋgel (saN)**, Angeli, Finland

**Á’vvel (saSk)**, **Avveel (saI)**, **Avvil (saN)**, Ivalo, Finland

**Aanarjäu’rr (saSk)** **Anárjávri (saN)**, **Aanaarjávri (saI)**, in Finnish *Inarijärvi/Inarinjärvi*, Swedish *Enare träsk*, Norwegian *Enaresjøen*, lake Inari, Finland

**Če’vetjäu’rr (saSk)**, **Čeavetjávri (saN)**, Sevettijärvi village, also lake Sevetti, Finland

**Čuđevuohčču (saN)**, Suotavuoma, Finland

**Dieváidvuovddi álbmotmeahcci (saN)**, in Norwegian *Øvre Dividal nasjonalpark*, 'Øvre' means 'upper' referring to 'the upper part of' Dividal national park, Norway.

**Giron (saN)**, Kiruna, Sweden

**Johkamohkki (saN)**, Jokkmokk, Sweden

**Mátta-Várjjat (saN)**, in Finnish *Etelä-Varanki*, in Russian *Сѣп-Варáнзеп*, South Varanger is a municipality in Finnmark County, Norway.

**Maazzsâžjäu'rr (saSk)** a place in *Suõ'nn'jel sijdd* where in 1939 Karl Nickul visited Si'rǵǵi Fofonoff and documented bark handling process

**Njauddâm (saSk)**, **Njávďán (saN)**, Neiden, Norway

**Njeä'ilem (saSk)**, **Njellim (saI)**, in Finnish *Nellim/Nellimö*, Nellim Finland

**Paaččjokk (saSk)**, **Báhčaveaijohka (saN)**, in Finnish *Paatsjoki*, Norwegian *Pasvikelva*, Swedish *Pasvik älv*, Russian *Паз* or *Памсойоку*, Paatsjoki River is a river that flows through Finland, Norway, and Russia.

**Pâ'jj Äkkjäu'rr (saSk)** a place in *Suõ'nn'jel sijdd* where in 1933 Ilmari Manninen and Karl Nickul visited Åájjaž Sverloff family and documented bark handling process

**Peaccâm (saSk)**, **Beahcán (saN)**, in Norwegian *Petsjenga*, Finnish and Swedish *Petsamo*, Russian *Печѣнга*, Pechenga in Russia.

**Piecyvetkimjáávraš (saSk)**, a lake not far from Nellim refers to the gathering of pine bark.

**Ráji-Jovsset (saN)**, Raja-Joosepi, Finland

**Romsa (saN)**, Tromsø, Norway

**Sápmi (saN)** historical (home)land of the Sámi

**Savddusjárvi (saN)**, a lake near Jukkasjärvi, Sweden

**Savdivárri (saN)**, a mountain north of Gällivare, Sweden

**Savdduogielas (saU)**, a heath south of Arvidsjaur, Sweden

**Suõ'nn'jel (saSk)**, in Russian *Приречный*, in Finnish *Suonikylä*, Prirechny, Murmansk Oblast, Russia. It was the last subsistence community of the Skolts, which lasted until 1944.

**Vuohčču (saN)**, Vuotso, Finland



## *Appendix 2: The Six Times of Eastern Sápmi*

In the distant and close time before time began in Sápmi, in the Sámi, Sämmlaž homelands;

It is remembered how humans and animals spoke each other's languages,

It is remembered how the first reindeer and the first men agreed on their roles and responsibilities,

It is remembered how humans could transform into animals such as the two men who walked as bears one Autumn close to Čeeu' resnujuu'nn down to the Lake Lounnjäu'rr when the ice had just set in,

It is remembered how the Spirit Men and Women took part in the creation of Äinisuâl Island

It is remembered how a Great Food came to the shores of the Arctic Sea and threw the boats and ships deep inland into Käärablekk, Âgažjäu'rrpääutaž and Peäccam-moorâst,

All of these things and many more are remembered of the distant and close time before the time began.

In the time of arriving peoples in Sápmi, in the Sámi homelands;

It is remembered how the ones called söörnets or monks arrived in the River Peätsam and along the lakes such as Vue'll Äkkjäu'rr and Pâ'jj Njannamjäu'rr,

It is remembered how the first iron items were seen in the trade with the ones called Pomor which in the later Times were called Russians,

It is remembered how the ones called Karelians came to the lands of the Sámi,

All of these things and many more are remembered of the time of arriving peoples.

In the time when others came to Sápmi for taxes, advice, fish and trade;

It is remembered how Great Leader of the ones called Russians, the All-Mighty Tsar, invited many of Spirit Men and Women to the city of Moscow far to the South to tell him of the things to come,

It is remembered how the Sámi spoke to Tsar about Sámi rights and responsibilities to the lands, waters and air of the Sámi homelands and how the Sámi signed a treaty with him to guarantee these rights to these things for all time,

It is remembered how much trade was done with the arriving peoples to Sápmi,

All of these things and many more are remembered of the time when others came to Sápmi for taxes, advice, fish and trade.

In the recent time when a great silence befell on Sápmi;

It is remembered how many new people arrived to Sápmi,

It is remembered how these people wanted more and more of the things that are in Sápmi,

It is remembered how their borders divided Sápmi and the Sámi had to change,

It is remembered how many people came to Sápmi to take Sámi things and lands away,

It is remembered how war came to Sápmi and a brother was against a brother, a sister against a sister,

It is remembered how Skolts had to go to Finland and others stayed in the lands of the Russians

It is remembered how the Finns ignored the Sámi in their need,

It is remembered how a great silence befell on Sápmi.

All of these things and many more are remembered of the recent time when a great silence befell on Sápmi.

In the time when Sámi remember again;

It is remembered how newly born children cry in joy again in the camps and towns of Sápmi,

It is remembered how reindeer run again with the Sámi,

It is remembered how the salmon spring in the rivers of the Sápmi,

It is remembered how Sámi remember again who they are,

It is remembered how all of this was made,

It is remembered how all the damages were inflicted on the people, lands, waters and air of Sápmi,

It is remembered how these damages are stopped, repaired and healed,

It is remembered how the things which are about to take place will look like,

It is remembered how the Sámi live again strong, proud and in peace.

It is remembered how the silence ends.

All of these things and many more are remembered of the time when the Sámi remember again because this is the time in which the Sámi, Sämmlaž are living right now and all the other times are present now as well. The text is taken from T. Mustonen and K. Mustonen (2013). Eastern Sami Atlas. Vaasa, Finland: Snowchange. Pp. 22-23.

# Appendix 3: Photographs



## Background

This project examines the ancient practice of Scots pine (*Pinus sylvestris* L.) bark harvesting. The inner bark, or phloem, *guolmmas* (North Sámi), *piets, pietts* (Skolt Sámi), *kuolmås* (Inari Sámi), *pettu* (Finnish), *lappsav* (Norwegian), *заболонь* (Russian) is product of bark peeling. It is known to have been a source of the economic, social, and ideological significance of plant food and use of forest resources for the indigenous Sámi people.

### 3000 years old árbediehtu

The importance of bark food is reflected through the whole 'working year' of the Sámi. One of eight months in Lule Sámi is called *biehtsemánnu* 'pine month', equivalent of June (Kulonen et al. 2005). It is regarded as the oldest plant-based food and recorded to be used by the Sámi people extending back to 2800 BP (Ostlund et al. 2004). An interdisciplinary approach of this study aims to draw from traditional knowledge *árbediehtu* (Porsanger &

Guttorm 2011) of forests, focusing on the Inari Lapland region in Finland. The case study was conducted with the participation of Inari and Skolt Sámi, the latter being the main source community for data gathering.

### Food that 'tears out the stomach'

Bark-peeling scars on old growth pine trees can help to understand the full scale of subsistence strategies and migration patterns of the indigenous peoples living in the areas with long winter

seasons (Ostlund et al. 2004). In the Inari and Skolt Sámi food economy, pine bark was considered as healthy food. For many the bark was a delicacy eaten every day (Kytölä 1999). In the famine times it got radically labeled as food 'tearing out the stomach' among the Nordic farmers' societies (Edilitz 1959). However, among all little documentation exists regarding the nutritional content, cultural and social practices of eating pine inner bark.



Figure 1. 1) Bark peeling, 2) bark peeling, 3) bark peeling, 4) bark peeling, 5) bark peeling, 6) bark peeling. The photos show the process of bark harvesting. The bark is peeled from the tree and then dried. The bark is then used for food. The bark is also used for other purposes, such as for making traditional Sámi clothing.

## Objectives

The study aims to document the rationales people had and still have for eating pine inner bark. The main focus is to explore, analyze and elaborate on attitudes, practice and representation of the tradition.



Figure 2. A Sámi person in traditional clothing, likely related to the study's focus on traditional knowledge.

## Research Question

How and why did the use of pine inner bark as food among the Sámi change over time?



Figure 3. A tree trunk with a large section of bark removed, showing the inner bark.

## Methodology

Developing research methodology with the source community on collecting 'bark food' concepts, place names. Participatory research method was used, as well as sample collection, semi-structured interviews, photography, Archaeological records, maps, textual data, visual and sound archives, local exhibitions at regional museums were analyzed.



Figure 4. A person peeling bark from a tree, with a small inset showing a close-up of the peeling process.

## Discussion

'Bark food' has been important for the Inari and Skolt Sámi in many ways. Food is significant not only for nutrition but also for its cultural value. The use of inner bark has primarily been represented as related to famine times. However, so far I have found that people see 'bark food' as an aspect of their cultural identity.

Debates surrounding the encounters between peoples in the North are needed to reveal and heal the burdens of history, also suggesting new approaches to curation of bio-cultural heritage at museum collections (Salick et al. 2014).

This project hopes to support cooperation among local institutions and contribute to unity of the source indigenous community. Perhaps promoting the awareness and revitalization of a distinct and dynamic 'food heritage' traditions to a greater degree, on a long term could ensure food security among communities within and across



Figure 5. Map of the study area in Fennoscandia.

**Concepts related to 'Bark Food' in Fennoscandia and other sub-arctic regions:**

- Famine/Starvation/Scarcity/Contingency
- Poverty/Primitive
- 'Black/Emergency
- God's gift/Survival
- Healthy/Delicacy/Luxury/Good
- Common/Staple/Regular/Complementary



Figure 6. A plate of food, likely the inner bark being studied.

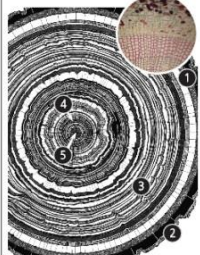


Figure 7. A cross-section of a tree trunk showing the inner bark.

## Results

- 1) Notable effects of negative attitudes, relocations, taxation, assimilation processes or historical propaganda against 'bark food' for the contemporary indigenous source Sámi communities.
- 2) Bark harvesting for food has become irregular in use, also with modified technique, yet is still continuing among Skolt Sámi.
- 3) Misrepresentation of Sámi *árbediehtu* at the SIIDA museum exhibition, points to the lack of inclusive curation, as well as awareness of a distinct food heritage.

### References

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**Figure 11:** Thesis poster won a distinguished American ethnobotanist Julia Morton's award at the joined conference of the Society for Economic Botany (SEB) and Indigenous Plant Use Forum (IPUF) in Clanwilliam, South Africa in July 2015.



**Figure 12 (above) and Figure 13 (below):** A dried pine inner bark sample from my informant, chef and food entrepreneur Ritva Kytölä. A bark anatomist, Ekaterina Kotina at the University of Johannesburg, analyzed its anatomical structure and its nutritional content in September 2015.



**Figure 14:** Ojašš Sverloff, taking bark from a living pine tree. (*Acta Lapponica* V. Karl Nickul: 'The Skolt Lapp Community'. Suenjelsud.), 1933, by I. Manninen. Archive reference no.: tslf3884, Tromsø University Museum (TMU), Tromsø, Norway.



**Figure 15:** Ojašš Sverloff with Vessi (middle) and Anni (to the right). The cambium, edible inner layer of pine bark, *piets* (saSk) is separated with *kåállam* (saSk), a tool made of reindeer antler. Later bark is ground into small flakes. Summer Sida in Suõ'nnjel, Peaccäm (Suonikylä, Petsamo), 1933, by I. Manninen. Archive reference no.: tslf3885, Tromsø University Museum (TMU), Tromsø, Norway.



**Figure 16:** Fetsi Sverloff, crushing the bark with a tool called *nuordamas*\_(saSk), a bark spud with two sharp antler blades and a wooden handle. Summer Sidda in Suõ'nnjel, Peaccäm (Suonikylä, Petsamo), 1933, by I. Manninen. Archive reference no.: tslf3886, Tromsø University Museum (TMU), Tromsø, Norway.



**Figure 17:** Bark left to dry in front of the hearth in a Skolt Sámi house, 1933, by I. Manninen. Archive reference no.: tslf1579, Tromsø University Museum (TMU), Tromsø, Norway.





**Figure 18:** Inari Sámi Santeli Valle detaching pine inner bark with *vyetkim saSk*, a broad chisel, made from a reindeer antler, 1914, by T. I. Itkonen (In literature - Ottar 1/87 Sámi doudji. Handicrafts - wood / roots); Archive reference no.: tslf1568, Tromsø University Museum (TMU), Tromsø, Norway.



Seuraava työ petun valmistuksessa oli pettuliusköjen paahtaminen pajuhiilillä. Työssä Santeri Valle 1914.



Paahtettu pettu levitettiin porontaljan kesipuolen päälle ja survottiin sarviteräisellä petkeleellä. Petkelen varressa herastuumari Paulus (Paavali) Vallen leski 1914.

**Figure 19:** (Left) Inari Sámi Santeli Valle. The next part of preparing pine inner bark was roasting the sheets over the willow embers. (Right) Roasted pine inner bark sheets were spread over the thin outer layer of reindeer skin and crushed with a pestle with two reindeer antler plates. Here, using the pestle, is Paulus (Paavali) Valle's widow in 1914. From T. I. Itkonen *Lapin-Matkani*. Söderström, Porvoo, Finland, 1991: 34-35.



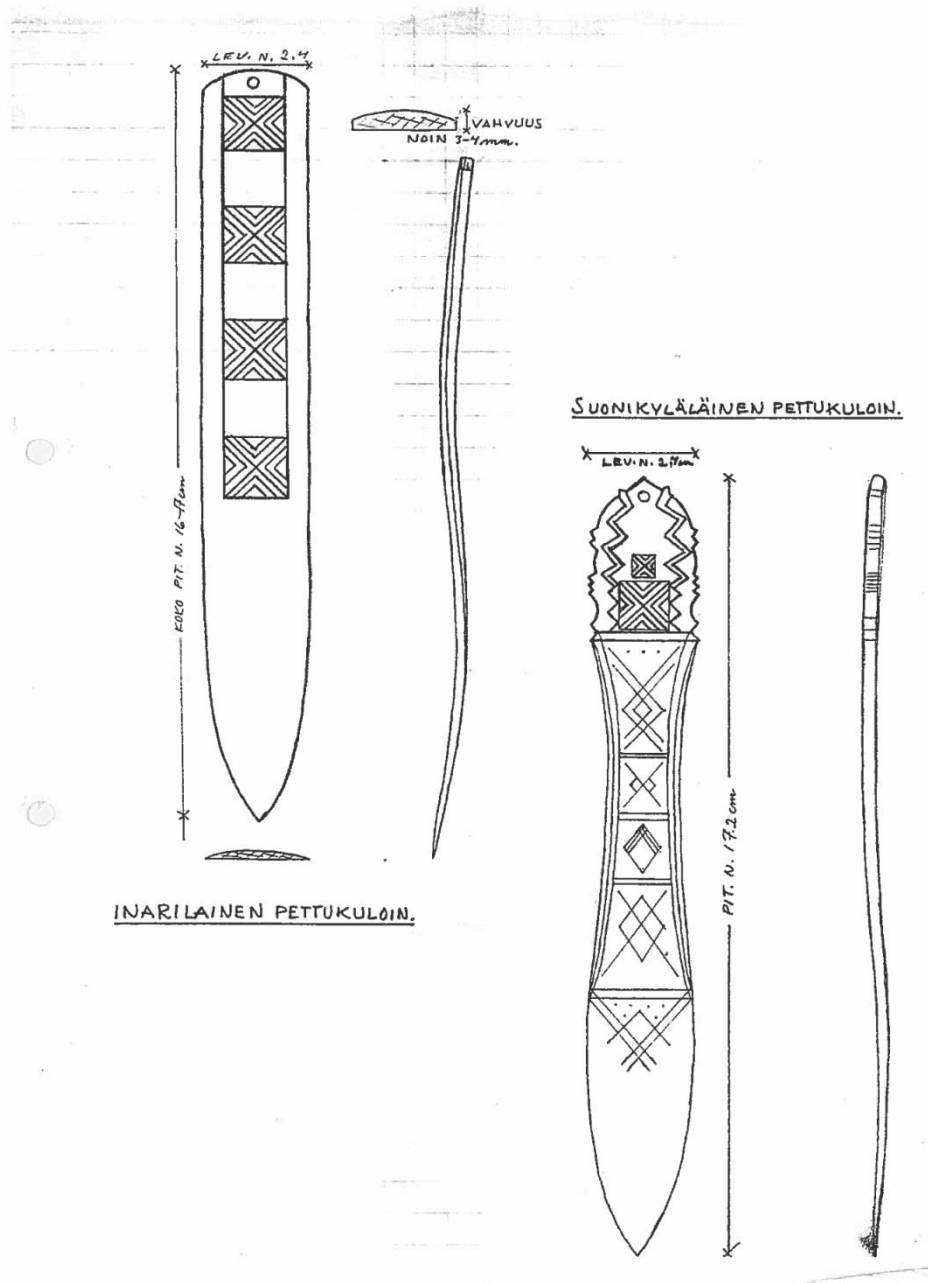
**Figure 20:** A type of Scots pine inner 'Bark bread'. It has not been common for the Sámi to bake such bread. Photograph by Sandra Bogdanova, January 2015 in Kottajärvi, Finland.



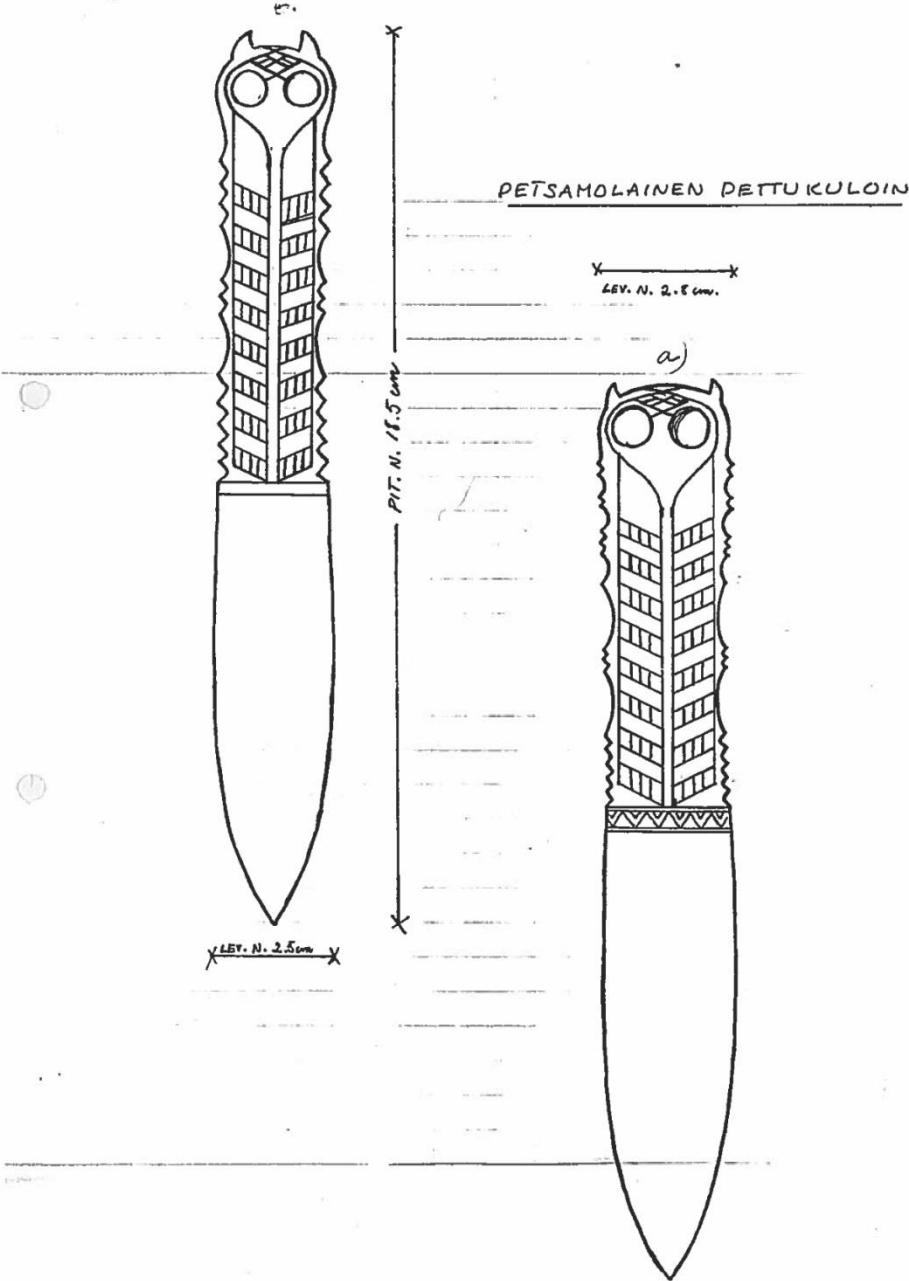
**Figure 21:** From the Scots pine inner bark Skolt Sámi prepare porridge or 'bark gruel' (*piets'hutt saSk*). Photograph by Sandra Bogdanova, January 2015 in Kottajärvi, Finland.

## Appendix 4: Sketches of Tools

Anaar Kollom (left) (saI) and Suõ'nn'jel Kåállam (right) (saSk) small, flat, ornamented chisels with distinct patterns from Inari and Suenjel, made from reindeer antler, used for detaching the inner bark. Sketch received from SAKK, the Sámi Education Institute, Inari, Finland, 2015.



Peaccäm Kåállam (saSk) a small, flat, ornamented chisel with a pattern from Petsamo, made from reindeer antler, used for detaching the inner bark. Sketch received from SAKK, the Sámi Education Institute, Inari, Finland, 2015.



## Appendix 5: List of Informants

All participants gave the consent to use their real names. The informants are listed in a random order.

<b>Informants (gender)</b>	<b>Approx. Age</b>	<b>Occupation / Ethnic background</b>	<b>Date / Location / Type of Data</b>
Ritva Kytölä (woman)	60-70	Chef, food entrepreneur / Finnish (past -married to a Skolt Sámi)	09-July-2014 / Ivalo, Finland / Interview (fieldwork journal notes without voice recording)
Honna Havas (woman)	40-50	Archaeologist / Finnish	20-August-2014 / Neiden, Norway / Conversation (fieldwork journal notes without voice recording)
Sven-Donald Hedmann (man)	60-70	Archaeologist / Swedish	10-October-2014 / Tromsø, Norway / Conversation (fieldwork journal notes without voice recording)
Veli Pekka Lehtola (man)	50-60	Historian / Inari Sámi	08-October-2014 / Tromsø, Norway / Interview (fieldwork journal notes without voice recording)
Irja Jefremoff (woman)	60-70	Food entrepreneur / Finnish (past -married to a Skolt Sámi)	27-January-2015 / Kotajärvi, Finland / Interview (recorded)
Matleena Fofanoff (woman)	60-70	Sámi Duodji craftswoman / Skolt Sámi	24-January-2014 and 13-July-2015 / Nitsijärvi, Finland / Interview (recorded)
Heini Wesslin (woman)	30-40	Sámi Duodji craftswoman / Skolt Sámi	22-January-2015 / Sevettijärvi, Finland / Interview (recorded)
Arttu Niemenmaa (man)	30-40	Sámi Duodji craftsman / Finnish	21-January-2015 and 14-July-2015 / Sevettijärvi, Finland / Interview (recorded)
Arto Saijets (man)	50-60	Sámi Duodji craftsman / North Sámi	29-January-2015 / Inari, Finland / Conversation (fieldwork journal notes without voice recording)