Indigenous Youth, Food Knowledge & Arctic Change

EAllu
The word «eallu» is the Northern Sámi word for «herd», i.e. reindeer herd. Eallu bears a close relation to the word «ealát». Ealát signifies ‘pasture’, while the word eallin means ‘Life’. So from the pastures, springs life, both for the herd and the people.
Indigenous Youth, Food Knowledge & Arctic Change

EALLU

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Editor in Chief: Philip Burgess

Coordinating Authors: Elena Antipina, Svetlana Avelova, Svetlana Chernyshova, Anna Degteva, Andrey Dubovtsev, Binderiya Dondov, Alena Gerasimova, Svein D. Mathiesen, Anders Oskal, Mikhail Pogodaev.


Cartography: Chris Brackley
Layout: Lill Vivian Hansen


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Photos, back cover L to R, top row: A. Ausland, A. Ausland, L. Sidurova, K Vanujto.
Third row: N. Radunovich, K. Fogh, A. Ausland, S.D. Mathiesen.
Fourth row: K. Fogh, A. Ausland, A. Ausland, A. Ausland.
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DISCLAIMER
This project was undertaken as an approved project of the Arctic Council Sustainable Development Working Group. The project report was prepared by a project team and does not necessarily reflect the policy or positions of any Arctic State, Permanent Participant or Observer of the Arctic Council.
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This is a book about the fabulous abundance and diversity of food in the Arctic. While many think of the Arctic as a place of climatic extremes and scarcity, in fact the Arctic hosts an extraordinary food culture, built on 10,000 years of knowledge, and intergenerational knowledge transfer.

Over millennia, Arctic Indigenous Peoples’ culinary traditions and food cultures have nourished peoples, enriched communities, bound generations and embodied the very essence of ‘sustainability’. Indigenous food production and processing systems ensured that by connecting to the deep cycles of the seasons, sun and moon, their specific ecological niches, and their rich knowledge; herders, hunters, fishers and gatherers could sustain human and animal life over thousands of years. This is not ‘Traditional Knowledge’ constructed in the form of a declaration or political statement. This is ancient knowledge enacted in the everyday. Still today, in some regions of the Arctic, life would not be possible without this commonplace reality of slaughtering, preparing, storing and consuming foods in the traditional way.

Arctic change is underway and is rapid, and climate change is one of multiple drivers (ACIA 2005, AMAP 2012, IPCC 2013). Others include significant land use change, globalization, new challenges for traditional livelihoods, demographic and cultural change, and multiple social and health indicators that point to challenging times ahead for Arctic Indigenous Peoples (Larsen et al 2014, Glomsrød, Duhaime & Aslaksen 2017, Glomsrød & Aslaksen 2006).

To our knowledge, this is the first attempt to present an overview of the culinary world of Arctic Indigenous Peoples in one volume. This book provides a snapshot of the rich, diverse and living culinary traditions of the food systems of Arctic Indigenous Peoples. We also want to show that the skills and knowledge associated with these food systems is also undergoing rapid change. In some areas, the skills and knowledge needed to slaughter, hunt, gather, feed ourselves and our communities and conserve food traditionally are in peril. A ‘public health crisis’ is underway in some parts of the Arctic, due to unprecedented dietary shifts away from traditional foods. A direct correlation can be drawn between many physical, social and mental ills to an increased reliance on market foods of poor quality, and decreased consumption of nutrient dense traditional foods (Council of Canadian Academies 2014).

The Arctic has become a fully integrated unit of the global economy. This process will intensify over the coming decades. What this will mean for the regions’ Indigenous Peoples is central to discussions going on in communities, big and
Máret Rávdrá Buljo with her son, Jusse Niklas, Kautokeino, Norway. Photo: Anders Oskal
small, in villages and in the tundra and taiga; across the Arctic and sub Arctic. These changes will also impact Indigenous food cultures and systems.

While diversity could be seen as an important dimension in local adaptation, the wide-ranging topographic and climatic factors across the Arctic has also produced diversity, namely a diversity of Indigenous cultures and ways of life. To produce this book, a total of 16 different Indigenous Peoples from across the Arctic have been involved. This book is just one product from this exciting ‘people to people’ engagement, and it is our intention to expand its scope and engagement beyond this deliverable, while building on the passionate engagement by youth.

What will these changes mean for our communities? Our food culture and traditions? Our unique languages? Our physical and mental health? Can we harness the power of the market on our own terms? Can we retain and continue to use the knowledge embedded in our food systems? Can we develop our economical spheres in partnership with the land and animals that we share our territories with? Will our knowledge help us navigate future challenges? Can the food we harvest, prepare, store and eat be a part of our future solutions so that we can continue to thrive on our ancestors land?

These are some of the questions that we hope to answer by addressing the topic which we can all relate to: food. Food is clearly universal to all human beings. It is a single thing that is common to all, that is essential for human life (UN 2015). Illustrating this universal nature of food for indigenous peoples, Evenki and Even people in Eastern-Siberia have a term for greeting others that meant «how was the hunt?» rather than «how do you do?» In the Arctic and sub Arctic, food is central to the very heart of who we are as peoples. Our food systems are the very essence of Indigenous traditional knowledge in practice. They are real world sustainability in praxis.

We are trying to present more than just an ordinary cookbook, with mere recipes. Rather we are attempting to create ‘a foodbook about peoples’: This is the story of Arctic Indigenous Peoples, their food resources, their culinary traditions, and their traditional knowledge on food. We attempt to give a holistic view through examples of the food systems of Arctic Indigenous Peoples, presenting the whole process: How food is collected, how it is prepared, how it is processed, how it is conserved, how it is consumed, including traditional knowledge on food in the forms of stories, anecdotes, values and insights. Included in this book are stories and examples from across the Russian Federation, Fennoscandia, Canada, Mongolia and the USA.

The EALLU project saw extraordinary engagement by Indigenous youth from many cultures and was energized by a passion for traditional food that runs deep through our communities. Over the course of the EALLU project, there has been 30 EALLU community-based workshops, seminars and traditional food-related events across Eurasia and North America, with more planned moving forward. Reindeer and other foods have been slaughtered, prepared and cooked in multiple ways. People have prepared, documented and eaten traditional foods of the highest quality. Elders, youth, herders and hunters, fishers and gatherers have talked about and eaten traditional foods: on the tundra, in the taiga, tents, lávvu, chum and yaranga.1 Discussions have followed

1) Lávvu, chum and yaranga are various names for the traditional dwellings of nomadic peoples across Eurasia.
in classrooms and online. All participants agreed and underlined that this is a topic of great importance and interest and one held closely to our hearts.

One of the primary concerns arising from the EALLU project is connected to the knowledge embedded in our food systems. To some extent it has already been eroded by assimilation, industrial food systems, food governance models, poverty and some of the more pernicious aspects of globalization. Without it, our peoples will be limited in their ability to adapt to future changes. We must continue to make use of this knowledge, the lessons learned from our stories, and follow the taboos, imperatives and guiding principles found within. These elements hold powerful lessons about how our food systems can sustain us over thousands of years.

BACKGROUND, OUR MANDATE

Traditional livelihoods are critically important for the diversity of Indigenous Peoples in the Arctic and Sub-arctic living within the present day nation states of Sweden, Finland, Norway, Russia, Canada, Alaska, and Mongolia. Their nomadic life ways have enabled the use of barren Arctic mountain, tundra, and taiga areas for food production since time immemorial (Oskal et al 2009). In this report we present the traditional food systems of Nenets, Sámi, Chukchi, Koryak, Dolgan, Nivkh, Evenki, Even, Yukagir, Dukha, Aleut, Athabaskan, Inuit, Inupiat, Gwich’in and Yup’ik peoples.

This book is the intermediary report from the Arctic Council EALLU project (SDWG EALLU: Indigenous youth, climate change and food culture 2015-2019). This project is co-lead by Canada, Denmark/Greenland, Norway, Russia, USA, the Aleut International Association and the Saami Council, and is managed by the Association of World Reindeer Herders (WRH) and the International Centre for Reindeer Husbandry (ICR). A central aspect of the project is that it is co-managed by Indigenous youth themselves, as a capacity building effort. The EALLU project is a direct follow-up of earlier projects of the Arctic Council, notably the SDWG/ IPY EALÁT Reindeer Herding, Traditional Knowledge and Adaptation to Climate Change and Loss of Pastures Project (2007-2011) (Magga et al 2011) and the EALLIN Reindeer Herding Youth Project (2012-2015) (Pogodaev, et al 2015).

This time, we combine our understanding of Arctic change and our methodology of Indigenous youth engagement with a focus on food, economic and societal development, and youth leadership.

The EALLU project is a follow up of point 22 of the Iqaluit Declaration on the occasion of the 9th Arctic Council Ministerial Meeting in Iqaluit, Canada, April 24 2015, that states:

[we] «...Welcome the work of the Arctic Council on reindeer herding and youth, and further welcome the promotion of food culture and leadership opportunities for Indigenous youth»

ARCTIC CHANGE IS IMPACTING INDIGENOUS PEOPLES

Today the Arctic is changing in ways unprecedented in our long histories in the north, challenging our traditional ways of life, our wellbeing, our food security and food sovereignty. The combination of these rapid changes occurring simultaneously constitutes a legitimate concern for the future of traditional Indigenous livelihoods and peoples. (Glomsrød et al 2017, van Rooij et al 2016). Examples
include changing resource bases, shifting land use and/or settlement areas, combining technologies with traditional knowledge, changing the timing and location of hunting, gathering, herding, and fishing, and improving communications and education (AMAP 2017, Degteva et al 2017).

Furthermore, according to the IPCC 5th Assessment, while Arctic Indigenous Peoples practicing traditional lifestyles are facing unprecedented impacts from climate change and resource development (oil and gas, mining, forestry, hydropower, tourism, etc.), they are already implementing creative ways of adapting (AMAP 2017, Degteva et al 2017, Larsen et al., 2014). The Assessment concluded by stressing the importance of local and regional decision makers in understanding and mitigating potential future development and advancing adaptation strategies. Tipping points for the continuation of traditional livelihoods exist and in some areas, may be passed in the next two decades. The protection and sustainable management of critical natural resources for the practice of traditional livelihoods needs to be rigorously examined, they concluded.

Indigenous Peoples practicing traditional livelihoods possess a rich, varied and valuable body of knowledge, which obviously includes knowledge related to cultural food production systems. All available types and sources of knowledge, which includes knowledge of food, needs to be included when developing adaptation strategies to climate change and other challenges in the Arctic. Recently, researchers (Huitric et al 2016) investigated what factors build and erode resilience in the Arctic. They found that the ability of people to self-organize underlies resilience in the Arctic and the erosion of this ability resulted in a loss of resilience. Self-organization requires knowledge, local-level monitoring, and the ability of people to define problems and implement an agreed-upon plan. A key step towards enhancing resilience across the Arctic is to understand the social, behavioral and ecological processes that are already building (or eroding) resilience and should include the social-ecological system of Arctic food production.

Finally, the role of governance must not be overlooked, even when talking about food. We assume co-management and participatory processes alone are not enough in the field of Arctic Indigenous Peoples’ food governance but if we are to fully prepare communities to change in the Arctic, we also have to include traditional knowledge about Indigenous Peoples food systems. For example, recent research has underlined the need for holistic strategies to include traditional ecological knowledge in governance of reindeer husbandry (Turi 2016).

**OUR PEOPLES’ FOOD CULTURES**

Indigenous languages are central to the identity and worldview of the Indigenous Peoples of the Arctic. Language loss has a direct correlation to a loss of practical skills and coping, and ultimately, biodiversity itself. (Degteva et al 2017). Likewise, food can be seen as one of the strongest carriers of identity. Food culture is intimately entwined in the long histories of Arctic Indigenous Peoples, having played a pivotal role in the development of our cultures, ways of life and physical and mental wellbeing in some of the planet’s most inhospitable natural environments.

Our traditional livelihoods such as herding, hunting, fishing and gathering are defining activities of who we are as peoples, and constitute the core of our cultures. And to remain who we are, we must continue to do what we do.
Or rather, put in another way for our purpose here, *to remain who we are, we must continue to eat what we do*. For Arctic Indigenous Peoples, the challenge is not just food security and sovereignty seen in isolation, but maintaining the fabric of who we really are as peoples, our cultures, identity, traditional knowledge, ways of life and world views. For millennia, our food systems have relied upon traditional knowledge to achieve sustainability and reciprocity in the relationships with the land, water and animals upon which we depend. This body of knowledge has enabled hunters, herders, fishers and gatherers to respond rapidly to change, thereby reinforcing community strength. This knowledge can also be seen ‘as a set of cultural practices that are essential for food security and food sovereignty’ (Council of Canadians 2014: xxi). Indeed one should always discuss food security in tandem with food sovereignty (Nilsson & Evengård 2015).

Our food cultures are not immediately visible to mainstream society, and the important role that this food culture plays is sometimes occluded by some of the more obvious challenges that Indigenous Peoples face in the Arctic. However, this issue is beginning to gain traction, as food underpins a multiplicity of other important issues for sustainability, human security and life in the North. Indigenous food systems are related to people, place, culture, the traditional and modern markets, food systems, physical, social and mental health, colonial histories, environmental and climate change as well as governance. Therefore, if we are to investigate what is best described as food insecurity, which research in some parts of the Arctic shows impacts women and children more severely (Council of Canadian Academies 2014), we need to address a host of themes including: governance and food sovereignty, gender, human health, well-being, poverty and

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**A definition of food security**

Food security «exists when all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life» (FAO, 1996, rev. 2009). It is based on the various pillars of access, availability, use, stability, acceptability, adequacy, and/or agency (Myers et al., 2004; FAO, 2006; RCSFS, 2012).

**A definition of food sovereignty**

Food sovereignty can be understood as the ability and the right of people «to define their own policies and strategies for sustainable production, distribution and consumption of food that guarantee the right to food for the entire population» (WFFS, 2001).
economic development, self-determination and education.

Against this backdrop, during the course of the EALLU project, we have seen it necessary to bring our own definition of food security for Arctic Indigenous Peoples: Our understanding of food security is that it must be based on Arctic Indigenous Peoples’ equitable access and possibilities to select our own resources, food empowerment through the utilization of our own knowledge, the sustainable use of all resources in accordance with our traditional food systems, food safety regimes adapted to Arctic realities and Indigenous cultures, health and well-being, and local economic development and value-added from within our own societies. In short, a full and meaningful enactment of Arctic food sovereignty.

Throughout our multiple EALLU workshops and activities in classrooms, seminars and on the land, we heard again and again that the knowledge that underpins our Indigenous food systems is barely utilized for economic development. Arctic food governance systems often seem unable to incorporate traditional knowledge and the family-based nature of traditional livelihoods into its practice, thus hampering locally founded economic development.

By way of example, Sámi reindeer herders in Scandinavia have often heard that they are «backwards» and «stupid», «ruining the tenderloins of reindeer by boiling them» - as opposed to frying them in the style of western chefs, the perceived «correct» way of doing things. With this in mind, one might be tempted to reply by asking: Who knows by experience more about how to make reindeer taste good: The 7 billion people on this planet that don’t herd reindeer, or the 100 000 that do? And, why is it that one way is deemed «wrong» and the other is «right»? One argument is that you have to respond to what the market wants. And that is a sound argument from an economic point of view. But if we frame this another way, if people are not exposed to our culinary traditions and products in any way, how could one expect the market to demand such products by itself? The next question then, could be who should work to rectify this situation? And how can we do this in a way that also secures that the Indigenous primary producers are left with a fair share of values created? And further, how can we improve mechanisms to assist Indigenous youth bring their products to market? These are some of the challenges raised by the EALLU project.

As it turns out, revitalizing traditional products for modern markets could be a good way of generating local value added and businesses in the food sector (Reinert 1997). This is arguably what has happened with some of today’s established culinary delights, like for example Parma and Serrano ham, Parmesan cheese, and Russian caviar. They are traditional small-scale handicraft food products, adapted to modern production and markets.

In parts of the Arctic, efforts have been made to bring Indigenous Peoples products into modern value chains. Such efforts are very important, though one should remain sensitive as to how this is done in practice. In terms of reindeer herding in Fennoscandia, for example, this has mainly happened through larger scale industrial models based on an agricultural design, and with standardized products, a preference for certain cuts, taste and distribution. These systems easily run counter to the self-governance intrinsic to traditional Sámi food...
systems, which favors divergent products, tastes and techniques. Diversity has been found to be a central element in the general adaptation of Arctic Indigenous Peoples (Magga et al 2011). The «imposition» of an industrial food production system onto an Indigenous food production and distribution system certainly can make it difficult for small-scale Indigenous food entrepreneurs in the new economy to leverage the power of the market – i.e. a market that is increasingly eager to embrace healthy and exotic products from local producers. Centralization and «modernization» processes have had a disproportionate impact according to gender with a negative effect on the roles of women in reindeer herding and the value-added chain, which is so central to family-based reindeer husbandry (Degteva et al, 2017; Reinert 2007; Reinert 2008, Benjaminsen et al 2016).

«The main challenge in Sámi reindeer husbandry today is that a large part of the raw materials of the slaughtered reindeer such as skin, bones, heads, blood and intestines are regarded as waste and are thrown away and not used for food production or economic development. In this modernized processing of reindeer, I believe that as much as sixty percent of the reindeer is not utilized. The bulk slaughtering of calves in our industry has been a major threat to women’s active participation in Sámi reindeer herding, since the raw materials that Sámi women traditionally used are no longer available, thereby forcing us away from the herding livelihood. If the traditional materials for clothes and food production are not available, the specialized language and traditional knowledge related to these processes will disappear. The calf slaughtering strategy imposed upon us as a reindeer herding people has so impacted women’s roles and perspectives in reindeer husbandry, that this is having significant consequences for the continued survival of family based reindeer husbandry as we once knew it.»

Inger Anita Smuk, reindeer herder from eastern Finnmark, quoted in Degteva et al 2017.

Research in other parts of the Arctic have pointed to the need for a more holistic approach.

Relevant and effective responses to improve food security and food sovereignty must be holistic, enabled by local traditional knowledge, and paired with economic development strategies to tackle the closely connected issue of poverty. Long-term alleviation of food insecurity requires clarification of locally identified needs and drawing on the assets of distinct northern communities. Stable funding is also a key factor. All of these solutions require Northerners to establish program ownership.

Council of Canadian Academies 2014: vii

The food cultures of different Arctic Indigenous Peoples display striking similarities and differences. As a starting point, these Arctic food traditions are mostly based on relatively simple production environments, where people have made use of what was at hand to prepare their food. As an example, Nenets use the stomach of the reindeer to both store and preserve reindeer meat. Evenki and Even use intestines to prepare sausages, Even use stomachs in soups. Sámi use stomachs to boil meat in. Open fire and simple woodstoves are used, along with the often scarce additional resources and spices that nature could offer. There seems to be relatively few ingredients used at the same time in our traditional cuisine. Our ways of food preparation are mostly based on boiling or raw consumption, with less frying and grilling. While ingredients may be few in number, we
The fire must also be fed. Topolinoye, Republic of Sakha (Yakutia). Photo: ICR
Jon Mikkel Eira tends the cauldron, Sápmi /Norway. Photo: Kasper Fogh
would argue that the simplicity of our cooking methods allows for enhancing the complexities of the raw materials. There are also important aspects of Indigenous food systems that relate to food safety (see for example the Sámi practice of slaughtering reindeer, or the Nenets practice of food production and storage). As is well known, food preparation and production carries risks. There is the animal health to consider, practices for the safe consumption of raw meat, the practice of meat and fish «fermentation,» to control bacterial growth and multiple methods of harvesting and butchering, specifically adapted by peoples to their ecological niche. This field has been little studied.

There are some fascinating direct similarities of food cultures and understanding between different Indigenous Peoples. One such example is connected to the tip of the reindeer tongue. As it turns out, all Indigenous reindeer herding peoples and some of the Indigenous caribou hunting peoples have a similar tradition: No one eats the tip of the tongue of the reindeer/caribou (Gerasimova et al in preparation). There are various explanations as to why one should not eat it, and all seem connected to different subsequent negative behaviors by those who do. While the reasons behind this particular phenomena is now being investigated, it does illustrate commonalities across a huge Eurasian triangle, between the Sámi people in Fennoscandia, the Dukha people of Mongolia, and the Chukchi people of Chukotka, and then further into North-America.

A key value that runs throughout the Arctic Indigenous kitchen is the strong tradition to use everything: As far as the exploitation of Arctic food resources goes, Arctic Indigenous Peoples tend to see everything as a resource. We strive to utilize all that is usable for human food and the rest for other purposes. This is an important common value among our peoples that is practiced even today. As far as we have been able to tell, none of the Arctic Indigenous Peoples have the term «sustainable development» in their original languages. Yet, their food cultures embody the very core concepts of sustainability by this common norm.

If we look at many of the dishes presented in this book, they speak volumes about the diversity not only in raw materials, but also in preparation techniques, conservation methods, flavor emphasis, and goals. Sámi dishes tend towards the completely cooked, and an avoidance of the raw. In Nenets cuisine, raw meat and blood is the central part of their food consumption, so much so, that authors here call it the «anti stress» diet. Many Indigenous Peoples across Eurasia eat frozen raw fish as a delicacy. In the Sámi area, fish is fried or cooked on the fire. There are regional differences too. Natural conditions may even be a reason why there are differences within the same group. For example North Sámi like to dry reindeer meat, whereas Southern Sámi tend to smoke it and then dry it. There are many practical explanations for different regional practices that include access to firewood, the presence of permafrost, and the need for Vitamin C (where reindeer blood is a significant source of vitamins and minerals). There is also different knowledge depending on different usage of the same resources. One such example is the Nenets versus the Sámi way of killing a reindeer as described in Chapter 2 and 3), where one determinant is the end use of the meat (raw versus boiled).

**WHAT ‘LESSONS’ DOES EALLU HAVE FOR ARCTIC INDIGENOUS SOCIETIES?**

Arctic change means both challenges and opportunities. Indigenous communities however often find themselves at a disadvantage.
The negative impacts of e.g. cumulative land use change and socio-economic conditions often ‘overshadow’ possibilities of positive local development, in terms of the communities’ capacity to be proactive and take the lead for local actions. Food insecurity is another challenging dimension on top of this. New approaches for adaptation and resilience to Arctic change in Indigenous communities are thus needed.

This is where we believe that food culture can serve as a fundament for our own economic and societal development, on our own terms. We believe indigenous food culture and the practice of food sovereignty in the Arctic is a means by which the possibilities of an economic and societal development based on our own resources, knowledge, and collective strength can be fulfilled. It holds the potential to provide us opportunities to engage in economic activities that maintain our own cultures, that keeps our youth on our lands, and that builds our societies from within. Seen from this perspective, it can offer more than just the «menial jobs at the local mine», as one young project participant phrased it.

A key goal of EALLU is to work with food culture in ways that inspire, consolidate and build the pride of our Indigenous youth in their own heritage and traditional knowledge. As we seek to build not only their competence but also their confidence to be leaders of their own societies in the future, the EALLU project is co-managed by youth themselves as a capacity-building initiative.

Another key aspect of our work is the very valuable and energizing experience of our youth as they exchange views, understanding, values and experience with Indigenous youth from other regions of the Arctic, both visiting and hosting others in a two-way exchange. As with the EALLIN project (www.eallin.org), what we strive for is our youth to see themselves in a new light from this international exposure: We wish for them to see their food resources and culinary traditions in new ways, so as to inspire them to raise entirely new questions and seek to answer them. We wish to inspire our youth for action.

The intergenerational aspect of food production is a critical piece of this puzzle. Indigenous food preparation, processing and production techniques include all members of the family, across gender and generations. The consequences of a move away from traditional foods have been severe for community and individual health and the resulting food insecurity is linked to poor dietary quality, under-nutrition, obesity, chronic diseases, poor educational outcomes, and family stress. A relatively rapid shift away from traditional foods towards carbohydrates and saturated fats (e.g. instant noodles and bread) is projected to increase the prevalence of chronic diseases such as obesity, diabetes and heart disease. This is a serious public health issue in many Arctic communities (Egeland et al., 2011; Council of Canadian Academies 2014). Food security has also been highlighted by the Arctic Council (e.g. the Nuuk Declaration 2011), as well as by Indigenous Peoples’ organizations (e.g.: ICC Kitigaaryuit Declaration 2014). Food security is very much linked with human security in the Arctic.

**ECONOMIC PERSPECTIVES**

Arctic Indigenous Peoples’ traditional food products seem to be well aligned to current food trends regionally and globally: It represents clean, natural food, that is local, ethnic, healthy, different, genuine, small-scale, roots oriented, and so on. A focus on food culture
represents a diversification of local economic structures, through the primary food producing, through food processing and distribution. It also links well with the tourism sector, where food can be considered an integral part of customer’s travel experiences, and local food can thus be important for a differentiation of products and services.

On the micro economic level, the use of Indigenous traditional knowledge can be seen as a means to differentiate products and a potential source for innovation and lasting competitive advantage.

In fact, the rich food cultures, culinary traditions and traditional knowledge of Arctic Indigenous Peoples really represents a repository of food innovations from time immemorial: Through a close dependency on and observations of Arctic nature, our peoples have over generations, centuries and millennia developed the very best flavors, healthy and sustainable products that our Arctic landscapes, lakes, rivers and oceans can provide. These products have up until today largely existed only within our cultures and living areas. Yet, we would argue that they still hold a great potential for culinary discovery for the rest of the Arctic and the world.

Innovation is also to combine known things in new ways. A potential exists in revitalizing our known traditional products, and presenting them for new markets. There is also potential for combining known dishes, preparation, conservation and serving methods. As one example, participating Indigenous youth worked to create an entirely new dish by combining Sámi dark-blood-pancakes with Evenki light-blood-sausages: Light-blood-pancakes – real Arctic product innovation in the making!

**EPILOGUE**

We need sustainable development based on the living resources of the Arctic.

But what does «sustainable development» mean to us as Indigenous Peoples, within the context of our work on food? Apart from defining the core question «sustainable to who?» What do we mean by the term sustainable development? Real sustainability to us means a way to develop our own societies on our own terms that builds on our traditional knowledge and our people. It means a development that is anchored within our societies, initiated and driven from within our cultures. It means a development that builds on our own traditions, our own cultures, and our own worldviews, and that - with this as the foundation - brings our societies into the future. Our recipe for true sustainable development is very simple, yet not necessarily easy to achieve: To use our own knowledge to develop our own societies!
Smoke, Fire and Ventilation. Inside a Sámi lávvu. Photo: Kia Krarup Hansen
Based on the implementation of the EALLU project in 2015-2016, we are:

Noting the range of ongoing profound changes in the Arctic not witnessed before in the long histories of Arctic Indigenous Peoples,

Recognizing that economic freedom of Indigenous societies is a key foundation for their adaptation to Arctic change, and that any civilization is dependent on using the knowledge of its people to build its own societies,

Recognizing that climate change is also about what we are going to eat in the future,

Recognizing that the rich understanding and knowledge-base Arctic Indigenous Peoples food has not been fully utilized for innovation and local economic development, and that it thus represents an untapped resource for Indigenous Peoples’ societies’ self sufficiency, prosperity and adaptation to Arctic change, and underline the key importance of Indigenous languages and traditional knowledge.

Underlining the need for food security for Arctic Indigenous Peoples based on their equitable access to and possibility to select their own resources, food empowerment through utilization of their Traditional Knowledge, sustainable use of all resources in accordance with their traditional food systems, food safety regimes adapted to Arctic realities and Indigenous cultures, focus on health and well-being, and local economic development and value-added from within their own societies,

Noting that our human and natural resources have the capacity to enable Indigenous Peoples to become more food sovereign and food secure, and support development of mechanisms and technology to back up and encourage this,

Noting the need for more research, education and monitoring of traditional food availability, access, utilization, sustainability and health for Arctic Indigenous Peoples,

Underlining that Arctic food governance, as well as marketing and supply chains, must be adjusted to better accommodate Indigenous traditional knowledge, family-based reindeer herding and other traditional Indigenous livelihoods, and Indigenous Peoples’ local economies,

Recognizing the need for special efforts to realize that Arctic Indigenous Peoples and societies are in position and able to utilize arising opportunities from Arctic change, on their own terms, based on their own needs, their own resources, knowledge base and people, so that the opportunities of our changing Arctic can be real opportunities for all.

RECOMMENDATIONS TO THE ARCTIC COUNCIL
The participating Arctic indigenous youth and project management of SDWG EALLU therefore make the following Recommendations to the Arctic Council:

1. Encourage the Arctic Council through its relevant Working Groups to maintain a clear focus on Arctic indigenous food cultures and systems, and support activities on Arctic indigenous food systems, youth, food security, nutrition, health, economy and well-being.

2. Encourage further development of indigenous trans boundary knowledge networks to bridge the gaps between society and academia, between academia and business, and between science and traditional knowledge, focusing on Arctic indigenous peoples food culture, food sovereignty, food security and business development, and invite Arctic Council Members and Observers to contribute to this including UArctic, IASC and IASSA.

3. Encourage the establishment of an international multidisciplinary program for training of indigenous youth in food TK documentation, food entrepreneurship and innovation, based on the EALLU project, as a follow up of point # 20 of the Iqaluit Declaration from 2015.

4. Support in general that Permanent Participants themselves and Observers with the support of at least one Arctic State continue to initiate, plan and implement Arctic Council projects of relevance to their local societies in a rapidly changing Arctic, to secure both local engagement and capacity building.

The participating Arctic Indigenous youth of EALLU therefore also identify the following additional opportunities and options for consideration:

1. Support a separate follow-up EALLU task to further investigate the possibilities for utilization of the Northern Sea Route and new slaughterhouse processing technologies for improving the economic base of Arctic indigenous peoples’, in close cooperation with Association of World Reindeer Herders, Permanent Participants and Member States. Sakha Republic (Yakutia) in Russia will function as a pilot region.

2. Support establishment of Arctic standards of indigenous food production, based on food security and safety, but adjusted to Arctic indigenous cultures, food practices and traditional knowledge, as well as our Arctic food production realities.

3. Encourage development of a new branding system for Arctic indigenous peoples’ products including fair trade and food specialties.

4. Acknowledge the importance of the economic freedom and economic basis of Arctic indigenous peoples’ traditional livelihoods, and encourage their access to and ownership of the most profitable activities in the value chain.

5. Consistent with national laws, suggest that free trade of indigenous foods and products between indigenous peoples’ business enterprises be investigated in order to spur in situ Arctic development that could be part of future Arctic agreements on economic cooperation.

6. Invite the Arctic Economic Council (AEC) to prioritize stimulating indigenous peoples’ businesses, including traditional indigenous livelihoods and food, to build on the Arctic region’s strengths, its peoples and its knowledge base.
EALLU: Using our knowledge to develop our societies through food culture, food security and food sovereignty.

Photo: Olesya Yakovleva
NENETS: RAW MEAT EATERS

BY ELVIRA OKOTETTO, MARTA OKOTETTO AND NECHEI SEROTETTO
The Nenets (in Nenets - Neney «real man» or «true man») are an Indigenous people of the Russian Federation, who live in the north of European Russia and north-western Siberia. Nenets have retained much of their traditional nomadic way of life, moving with their reindeer through the seasons. This chapter will present a snapshot of the knowledge and culture of Yamal Nenets reindeer herders, who have maintained their family based traditional economy, language and culture, including their rich, though little documented, food culture.

The Nenets people are known for their generosity and hospitality. Whenever a guest comes to a traditional camp, there will be always a warm welcome. In this way, herders going on a long journey would never bring a lot of products with them. Nenets herders regularly visit each other's remote camps and stay for a long time. When guests arrive, the hosts always do ŋayabad.

THE KNOWLEDGE OF RAW EATING: ŋayabad - OR HOW TO DETERMINE THE RIGHT REINDEER FOR RAW EATING(112,407),(759,467)

ŋayabad (ngayabad) is fresh fish or reindeer meat, slaughtered in the traditional way and eaten only in raw (fresh or frozen) form. ŋhayabarma is the traditional Nenets social meal that consists of freshly slaughtered reindeer meat and blood.

For ŋayabad herders choose a healthy and fat reindeer. Females without a calf (vaŋ ty) are considered especially good for slaughtering and eating raw. ŋayabad has a lot of social and religious values. It is carried out on each of the important events of Nenets life, including births, weddings, when slaughtering a reindeer for clothing, sacrifices at sacred places, funerals, and more. In the chum (the traditional tent), a share of ŋayabad - meat and drink - is also given to long-dead ancestors, whose images are represented by sacral dolls (sidryaneg and nytaurma). Near the fire, some food should also be left for the spirit of fire hostess (tu’ khada).

Nenets herders chose a healthy reindeer for raw eating due to their deep knowledge about both the herd welfare and each reindeer's health and condition. Herders determine the health of their reindeer by its appearance at that moment, and also remember their behavior and well-being from previous years: the length of antlers in the summer in comparison to previous years; how quickly the horns fell and hair shed in the spring; and how reindeer breathes during the summer heat (if a reindeer was short of breath it indicates the presence of some diseases). Herders also consider if necessary vaccinations (against rabies, gadflies, anthrax, etc.) were carried out.

Slaughtering a Reindeer for Raw Eating

On the Yamal tundra, reindeer are slaughtered from mid August to April. Slaughtering from spring to late summer is not recommended, as after a long winter the reindeer are exhausted and their meat is considered to be of poor quality.

The method of slaughtering reindeer is an important factor in determining meat quality. For raw eating, an ancient traditional method is used: strangulation. A reindeer is strangled by a lasso (tynzya’) which is tightened on both sides by two men, while the third one pulls a rope tied to the animal's right (or left) foot. This method is considered by herders to cause less suffering to the animal and ensures the juiciness and good taste of the meat. Strangulation ensures that not a drop of blood is lost, and reindeer blood is very valuable for the Nenets.

A second slaughtering method is thought to have been borrowed from other Indigenous
PRESERVING REINDEER MEAT IN THE REINDEER STOMACH

The Nenets have a rich knowledge about the extended preservation of reindeer meat in traditional ways, that are chosen depending on various factors such as time of year and weather conditions.

In autumn, Nenets often have to slaughter several reindeer a day. This is due to the fact that at this period reindeer skins are at their best to use for clothing. From skins harvested in Autumn, Nenets sew malitsa (for men), and pany (for women), and sovok (for men - with fur on the outside which is used as an additional top cover in the cold winter weather). All of these traditional garments are still used in everyday nomadic life and indeed are central to the maintenance of the traditional herding way of life in Yamal.

One of the traditional methods of preserving reindeer meat is keeping sliced meat in the reindeer stomach. All the meat from one animal can be placed inside the same animal’s stomach. It allows for the storing of reindeer meat for a long period – up to 8 months. This method is used just before the first frost, around the end of September or in early October. In the summer, this method allows meat to be kept for up to a week.

In order to pack the meat into the stomach, its contents need to be removed and the stomach must be thoroughly washed with water. The meat is cut into small pieces and placed into the stomach. The spine is cut into small pieces, i.e., each vertebra are separated from each other. One does not place the neck vertebrae, head, legs or bones into the stomach.

The cut up pieces of meat can be salted as needed or desired.
people, probably from the Khanty (T.V. Sinit-
syn, 1960: 69). It became widely practiced in
the 1960s, with the mass slaughter and proces-
sing of reindeer in the Soviet state farms (sov-
khozy). According to eyewitnesses, at first the
Nenets did not want to look at the killing of
their reindeer in this unconventional way, na-
mely by knocking them senseless with a blow
to the head by an ax and by a knife into the he-
art and Nenets initially refused to eat the meat
of a reindeer slaughtered in this way. Today,
outside the official slaughterhouses the se-
cond method can be used in case of emergency,
when a herder is alone in the tundra and help is
not near at hand. For family use, clothing and
food, including raw eating, Nenets herders will
always use their traditional method of slaugh-
tering.

The ancient traditions in the process of rem-
oving reindeer skins and butchering carcasses
are similar among the many Indigenous Peo-
bles of Siberia. In Nenets culture, skinning as
well as slaughtering the reindeer has always
been a task for men. This is normally done by
two people. First, an incision is made below
the knee of a front leg, and then, holding the
knife blade up, a cut from the knee to the belly
and further from the belly to the neck is made.
The next step is that the rear legs are cut in the
same way and the knife goes almost up to the
chest, and then to the tail. After this, the skin
should be easily and quickly separated from
the carcass, holding the skin in the left hand
while pushing the fist of the right hand under
the skin. After opening the abdomen with a
knife, the kidneys (suik) are pulled out and gi-
gen to children or guests as a delicacy. Then the
stomach is taken out and its contents should
be poured or squeezed out. The stomach con-
tents (tiv) have healing properties: it helps to
remove rheumatic pain and should be applied
fresh and warm on stricken joints. Stomach
contents can also be used in the processing of
the skins. The stomach is then filled with blood
and/or meat in order to preserve it.
Guests and the family sit in the *chum* according to their recognized social status. The most honored man or guest would sit at the middle of the table. Women and children sit *si’nyana* around the table toward the back of the chum. Neighbors are also invited to the feast, and they are also given reindeer meat.

**What to eat and not to eat for ӈaybad?**

*ӈaybad* is always a kind of feast and is done to mark a special day. The whole family and guests gather around a slaughtered reindeer. Each person cuts off a piece of meat or other delicacy and dips it into the warm blood before putting it in their mouth. The first things to be eaten after slaughter are the lymphatic nodes (*syabdka*). While still warm, they are often given to children, as they are easy to chew.

For *ӈaybad*, Nenets traditionally eat the ears, liver, kidney, larynx, adenoid glands, thymus, the meat of the cervical vertebrae (only from calves), lungs, pancreas, meat secretions from the back (*makhey*), fat from the back (in the autumn-winter period), bone marrow and neck meat. During *ӈaybad* the meat is eaten only from one side of the carcass (flesh from the buttock, ribs, shoulder, etc.). The other side is left for boiling or preserving in other traditional ways.

The head is a stand-alone dish that is usually served to children. In winter the reindeer head is a dish that is left to be prepared later – because it requires more time to butcher, which is not always convenient in cold weather. In summer the head is often eaten immediately and for *ӈaybad* all parts are used: the eyes (*nyaŋuy ӈyamsa*), brains, palate (*paydy ӈyamsa*), ears, the fat from the eyes, cheeks, chin, and brains are also eaten raw. Children are usually given raw kidneys, raw liver slices and ribs, because they are the tastiest morsels. Nenets regard reindeer meat that is still warm after slaughtering to be a delicacy. The tastiest parts of reindeer are the thymus (*ŋaramz’*), liver (*myd*), kidney (*syuik*), trachea (*hungo*), tongue (*nyamyu*), the lower lip (*pibtya’*), as well as the marrow of long bones (*khev’a*). Immediately after slaughtering, the Nenets drink warm fresh blood, and it is considered as being very beneficial for human health.

**What is not eaten raw?**

The Nenets only eat reindeer meat and fish raw (but not all species). For example, pike is never eaten raw, and although considered a delicacy in many other places, burbot is not eaten at all by Yamal Nenets, except its liver, which is a prized delicacy. In addition, Nenets do not eat raw migratory game, nor local mammals like hare, moose, bear, etc. This is possibly due to the fact that being so closely coupled to their reindeer, herders have a very good knowledge about the health of each animal in their herd (both past and present).

Nenets do not eat all parts of the reindeer raw: the meat from the spinal bones of an adult reindeer, meat from the breastbone, legs, neck and ribs are never eaten raw, but are boiled in a soup. As are the heart, tongue, first and second stomachs. These parts are used to cook a traditional Nenets soup called «Ya». In addition, the heart of the reindeer is considered sacred, and it must not be either eaten raw nor cut across the muscles - it is considered to be a taboo.

**THE BENEFITS OF RAW EATING IN THE NENETS DIET**

Raw eating occupies a special place in the Nenets traditional diet, because raw reindeer meat and blood contains a lot of the vitamins and minerals needed to survive and be healthy in the harsh conditions of the North. Thanks to the raw eating of meat, fat, and blood the hu-
With thanks to Marta Okotetto and family. Photos: Konstantin Vanujto.
The human body is able to compensate for the lack of essential vitamins and nutrients in the Arctic. If a Nenets does not get to eat raw meat and drink blood, she or he will experience feelings of hunger or stress. Therefore, for the Yamal Nenets, the consumption of raw meat is their ‘anti-stress diet’, as it is their only year round source on the tundra of many minerals and vitamins, in particular Vitamin C. Even in modern times, it is still difficult (and expensive), to deliver fresh fruits and vegetables to the nomadic herders of Yamal.

If slaughtered in the traditional way reindeer meat has a special soft, pleasant taste. If frozen, reindeer meat should be unfrozen once and eaten or consumed while still frozen and sliced thinly. The drinking of fresh and still warm blood is very important for maintaining good health. The Nenets have a special saying ‘Yan khamortada veyarida yargu’, that literally means: ‘there is no dripping blood’, i.e. «in the pink of health», describing someone who is the very picture of health, and this is obtained through the raw-eating of meat and blood of a healthy reindeer. Nenets and other peoples of the North have never suffered from scurvy (lack of Vit. C) or beriberi (lack of Vit. B).

What is High Quality Meat for Nenets?
Nenets eat freshly slaughtered raw meat, and have a deep knowledge about how to judge if the meat is safe and of high quality, and how to adhere to certain conditions in order that it retain that quality. The best Ṇayabad is from healthy well-fed reindeer (usually this is in the autumn and winter). Due to lengthy migration routes (up to 700 km toward the summer pastures) reindeer at that time are less well nourished. For example, Nenets do not usually slaughter Ṇayabad in late spring and summer when reindeer have completed a long winter and a lengthy migration. The next important factor in selecting reindeer for Ṇayabad is the absence of diseases that could be judged by the condition and appearance of the internal organs and meat, by blood clotting, by the presence of parasites that could be observed on the meat and organs. Nenets have a particular technique when eating raw: meat from the organs should be sliced in the hand before dipping into the blood and eaten.

The raw marrow of reindeer leg bones is a true delicacy, which is not found in good restaurants, and will keep a person feeling full for many hours.

TRADITIONAL WAYS TO PRESERVE MEAT
The traditional methods for preserving fresh meat vary depending on the season and the time of year. For example, in late summer, the meat is salted in wooden barrels or tanks and placed in pits that have been dug to serve as a refrigerator. Wild rosemary is used to cover the meat containers to deter insects.

Another traditional way to preserve reindeer meat is smoking, which takes place inside the chum in summer. Raw meat is hung on the crossbar in the chum, not directly above the fire. In summer, the fire is usually smoky as the wood (mostly willow, also some Arctic birch) is wet. This smoke dries the meat hard (in Nenets syamdravy) quickly and it can be saved for a long time. Another traditional method to preserve meat is drying by air and sunlight outside the chum. One traditional way of preserving raw meat may be at risk due to climate change: During the spring thaw, salted raw meat could be placed in the snow on slopes that were in the shadows, where it could remain until the summer warmth. Due to the fact that in more recent years, the summer has been arriving...
several weeks earlier and heat waves have been extreme, this method of raw meat preservation has hardly been used in recent years.

In late autumn reindeer meat is salted in barrels or containers, and left in sledges along migration routes at the spring campsites. The meat is preserved well and still tastes very good raw. Nenets use this method in spring as 6 months later they return to these places during their migration to the summer pastures. Also in the autumn, when there is a busy season of slaughtering well fed reindeer in the traditional way and there is a lot of raw meat, it is folded into reindeer stomachs and put in the sledge. In winter, the meat is kept frozen on individual sleds. The meat can be preserved in this way until the warm weather comes in spring. These frozen stomachs can be sawn into pieces when needed and used for ṣaybad.

LOCAL BERRIES AND PLANTS USED FOR DECORATION

Reindeer meat that has been slaughtered, butchered, packed and frozen in a modern slaughterhouse, does not meet the Nenets requirements for raw eating. The qualities of taste cannot be compared with the traditional Nenets frozen ṣaybad. This limits opportunities for Nenets who are not practicing the nomadic way of life, for example children and youth at schools and universities, and who still long for raw meat and blood. This causes extra stress to those who are, for whatever reason, away from the reindeer and the land.

Some Raw Dish Recipes
1. Bone marrow wrapped in sliced reindeer meat (fresh or freshly defrosted) with salt and pepper, blood served as a sauce.
2. ‘Salad’ from pieces of raw reindeer meat, liver, bone marrow, lungs (the Nenets salad)
3. The trachea, sliced in rings with pieces of chopped lung
4. Fresh blood filled with a mixture of sliced pieces of meat, lungs, liver, bone marrow, reindeer meat.
5. Muksun stroganina with salt and black pepper

Photo: Konstantin Vanujto
SÁMI: SMOKED & COOKED

BY MÁRET RÁVDNÁ BULJO, ANDREI DUBOVTSEV, RÁVDNÁ BIRET MÁRJÁ EIRA SARA, INGER MARIE GAUP EIRA, OLGA FEFEOVA, KIA KRARUP HANSEN, ALEXANDER KRASAVIN, INGER ANITA SMUK, ISSÁT TURI, AND ASTRID RIDDENVOLD

«...How happy is the life of the Lapps, hidden for the world in their blessed wilderness...Your beverage is crystal-clear water [...]. Your food is in springtime fresh fish, in summer soured reindeer milk, in autumn ptarmigan and other wild fowls, in winter fresh reindeer meat without salt or bread [...]. You eat in peace after rising or before going to bed and you have no knowledge about our poisons hidden in sugar and honey.»

Carl von Linné, Flora Laponica, 1737
Sámi live across four nation states (Norway, Finland, Sweden and Russia) and although their territories have been altered irrevocably in the last century, wherever they live, the rhythm of life for the reindeer herders, hunters and gatherers of Sápmi remains largely unchanged. Sámi remain largely connected to the seasons, the lifecycle of the reindeer and the plants and animals and fish upon which their Indigenous food systems are built. Reindeer are a totemic species for the Sámi and the herding, slaughtering, preparation and consuming of reindeer meat, along with a widespread consumption of lake and ocean fish are major ingredients of Sámi cuisine in all countries in which they live.

HOW TO SLAUGHTER A REINDEER USING TRADITIONAL SÁMI KNOWLEDGE
by Issát Turi

Slaughtering a reindeer in the traditional way means doing it in such a way that you can make use of the whole animal: for food, clothing, medicinal purposes and the many other things you can derive from the animal. When thinking traditionally, multiple decisions need to be made when choosing a reindeer to slaughter. You need to look at the animals’ gender, age and even fur color. These varied and complex decisions are underpinned by the need to maintain a diverse and strong herd, in case of harsh winter conditions. A diverse herd will be more resilient and give us herders more flexibility when dealing with unexpected climate events.

Preserving meat
The traditional way of slaughtering is also a matter of food safety. When you slaughter out in the tundra then you need to know what steps to take to avoid the growth of unwanted bacteria.

Traditionally we have started with what we call giehtadit, which is to kill the animal with a knife right into the heart. This way, the reindeer will bleed out from inside the chest cavity after which we let the reindeer bagga, which means we let it rest and ‘inflated’ itself. The amount of time you let the reindeer bagga depends on the season, the weather and the temperature before you start to skin it. The Sámi concept of baggan is both about food safety and flavor enhancement. Baggan makes the meat tender and juicy. This also has the effect of loosening the skin so you are not touching the meat so much during the slaughter. This is ‘on the land’ food safety where the traditional way of slaughtering may be the best way.

Only after you have let the reindeer bagga, do you start to skin the reindeer. The traditional way of skinning a reindeer is doing it in such a way that you can make use of the whole hide. Then you can also use the legs and skin of the head for clothing. However, there are important seasonal differences. You slaughter calves in late July or early August for beaskanáhki and then you use the whole skin to sew the traditional winter garment, which is called beaska. When you need a warmer beaska - such as when you need to watch over your herd during winter nights - then you slaughter later in the autumn, when the hair of the reindeer has grown longer.

After you have skinned the reindeer you take out the intestines with which you make your blood sausages and then you open the chest cavity where the blood has already coagulated and has already separated. This will give you the best blood for márfit (blood sausages) or guhpárat (meat balls made with blood). After that, you cut the meat up in a way that is not only the best way of preserving the meat but also a way in which you get the most out of the reindeer, in terms of food.
Issåt Turi slaughtering a reindeer in the traditional way. Photos: Andreas Ausland.
Sámi cuisine does not take shape in the ‘kitchen’, but really starts at the moment when and where the reindeer is slaughtered, the condition of the reindeer in the days and weeks before it was slaughtered and finally how it was killed.

Mális is another important part of Sámi food culture and mális means to cook the meat with just water and salt. Then the quality of the meat is very important, as the reindeer must be fat. Because reindeer meat is not marbled, this means that the more fat it has on the outside, the higher the quality of the meat is. Meat quality is also determined by how you kill the animal.

**SUOVASTUHTTIT: USING SMOKE TO PRESERVE REINDEER MEAT**

*by Rávdná Biret Márjá Eira Sara, Inger Marie Gaup Eira, Kia Krarup Hansen, Inger Aníta Smuk, Issát Turi, and Astrid Riddervold*

Sámi reindeer herder’s traditional knowledge about meat security and meat conservation is rich and deep. These are technologies developed over millennia, which secure the sustainable and safe use of animals for food production. The renowned Norwegian philologist Konrad Nielsen who compiled the exhaustive Sámi language dictionaries in the late 1920s and 30s refers to *suovas* as the smoke fire - the fire that gives smoke for smoking, explaining the characteristics of the fire. *Suovasbiergu* means «smoked meat», while *suovastuhttit* is the Sámi term for the technique or practice of smoking meat and fish. *Suovastuhttit* is little documented, but is in daily use in reindeer herding communities across Sápmi.

Reindeer herder’s knowledge of smoking meat integrates the understanding of selecting the right type of animals for slaughtering, at the right season of the year and using specific parts of the reindeer. Further knowledge includes; the correct use of salt and moisture generated from selecting specific plants and firewood. This produces a specific and dense white smoke, which penetrates the meat tissue without the use of too high temperatures. The type of plants used and how long the smoking takes place (from 3-6 hours), determines the degree of conservation and taste. A lack of traditional knowledge about the process of *suovastuhttit* might affect human health and wellbeing. The combined antibacterial effects of the components of salt and smoke protect the meat from degradation. Even today with modern deep freeze technologies, *suovastuhttit* is still practiced and the characteristic flavour of *suovasbiergu* is preferred in many Sámi households.

*Photos: Kia Krarup Hansen*
HOW TO MAKE A FAMILY MEAL – SÁMI FOOD KNOWLEDGE AND TRADITIONS

by Máret Rávdná Buljo

The Sámi ‘family meal’ is not only the center of a family coming and sharing food together. In fact, as described here, it’s not a ‘meal’ as might be understood by many, where people sit down at a certain time each day and have dinner. Life with reindeer means movement, especially in Spring and Autumn. Someone is always with the reindeer. Sometimes the whole family can be with the reindeer. Living with reindeer means your life is lived according to the rhythm of the animals. So, to describe a ‘family meal’, is really a description of the collective journey of reindeer, people and food.

The family meal starts with choosing a reindeer to slaughter, how it is slaughtered, how it is processed and deciding who gets to eat which specific part of the animal. The family meal, is also a means by which important knowledge is transferred across generations about animals, health and food safety, based on the raw materials available. Creating the family meal requires a considerable amount of knowledge and time and involves many family members. Making it takes time. The meal might not be ready at the same time every day, but there is so much to be done and many people are needed to do it. During this time of preparation, stories are told, knowledge is shared and children learn the useful life skills of work and self-sufficiency. During preparation time guests may appear unannounced. They are to be made welcome, and they too shall find food and warmth. A ‘family meal’ is really about the coming and going of family life, and this is not possible to create or recreate in a modern industrial slaughterhouse.

I grew up in Guovdageaidnu in a reindeer herding family in a village where most people are Sámi, speak Sámi and have some direct or indirect connection to reindeer husbandry. I now live on the coast of Norway and herding and the preparation and eating of reindeer products remains at the heart of our daily life.

When we make a ‘family meal’, although we never called it that, there are many steps and observances along the way to making it, codes of etiquette that need to be observed. I learned
Máret Rávdná Buljo prepares a family meal of blood, sausage, intestines, stomach and cuts from the spine. Photos: Andreas Ausland. Line drawing by Máret Rávdná Buljo.
Máret Rávdná Buljo prepares a family meal of blood, sausage, intestines, stomach and cuts from the spine. Photos: Andreas Ausland. Line drawing by Máret Rávdná Buljo.
them from my immediate and extended family and now teach them to my own children. The preparations and observances start with the slaughter of the reindeer. After slaughtering a reindeer, the spine is the first part that is used to make a family meal, and for reindeer herders it is the best meat. It is regarded as almost holy. The spine is taken immediately after slaughtering and is usually cut up in joints and put into a pot for boiling.

The large dorsal sinew (sávvosuotna) is removed when the carcass is still whole. This sinew is very good for sewing a coat made of reindeer fur or making nice handicrafts with small and neat stitches.

Our family tradition is that certain parts of the spine are designated for different family members. The tail (bieža) is for the butcher, the sacrum (gánis) is for the person who took care of the intestines (usually the mother or a female person). The vertebrae (ruossadávttit) are for the father and the other adults, and the vertebrae in the middle (gaskačielgedávttit) are for the youth. The vertebrae on the spine shoulder (sehpodatdávttit) are for smaller children because it is easy for a child to hold the bone.

Kidneys (moninčalmmit), spleen (dávdi), blood sausages (márffit) and small intestines (sáhp-pasat) are boiled together with the spine. The broth acquires the varying taste of these different parts. Importantly, these parts replace vegetables with regards to vitamins.

We drink the broth and dip the meat in it. The fat layer on the top of the broth is skimmed off, to be used as a separate dip. Spine and broth are a natural medicine for treating a wide variety of different sicknesses and spine broth is seen as the most valuable broth from a reindeer.

Fresh reindeer meat does not need to be boiled for more than 20 minutes for it to become tender. If boiled for longer, the meat becomes hard, and then you have to boil the meat for at least another hour until it becomes tender again.

The spleen is very good food for young babies, being good ‘food training’ and is easy for a baby to suck.

Blood sausages and small intestines are also a part of the family meal. These should be shared so that every family member gets a piece of the different tasting blood sausages. Also small in-
SÁMI DIIDDAT – SÁMI CODES OF ETIQUETTE RELATED TO FOOD

When you have decided which reindeer to slaughter before lassoing it, you must not say out loud what you are thinking, you must just think it. As you are living in nature, you learn that everything in nature has an understanding. You should not speak out loud that which you intend to do. You should just do it. In this way, the reindeer do not hear, nor have time to run away.

Traditionally it was thought that a reindeer should not die by a lasso around its neck before being stabbed in the heart. You should quickly remove the lávži (rope made of reindeer skin) before the reindeer draws its last breath. In this way, you honor the reindeer. When the reindeer is dead, you should mark a cross in the antlers axis to honor and give gratitude to the reindeer so that you will be able to continue to work with reindeer.

It is not good practice or hygienic to work with food at the entrance of a tent. When slaughtering outside or near the goahti (tent), you should always slaughter outside the innermost part (boaššu). Otherwise you will bring bad luck upon your family. The meat should be taken into the tent where the tent cloths overlap, so luck and good fortune will follow you into the tent.

When making a meal of reindeer meat and the meat is boiling, skim off the foam, and empty the ladle on the innermost part in the tent near the fireplace or you give the skimmed foam to your own dog. You should drink the first ladle with bouillon yourself so that luck and good fortune stays in your own tent.

«The crow always sticks out its tongue first» (It is very bad behavior to take the tongue to himself/herself and not share with others. For this, you will be compared to a crow).

The person who eats the reindeer nose will be very popular (among members of the opposite sex).

If you eat the tip of the tongue, you will become a liar.

If an unmarried girl eats the chin of a reindeer, then the groom and his companions will turn back home, at Gáibenjárga (chin cape), and the girl will never get married.

The eye bone should always be broken into two to avoid guorżžu (one with the evil eye) looking through it. You should also break the marrowbones and split the trachea.

Always chop the patella (kneecap) to avoid the bones getting stuck between a dog’s teeth or risk choking the dog, and prevent the dog’s intestines becoming blocked.

It is said that the person, who cleans the bones by eating everything on them, will have a big lávvu. Those who do not will have a small lávvu. Meat nearest the bone is the richest meat and there is a saying that a thief does not clean the bones.

During food preparations, if you find a globule (čodgi) of fat, water, milk, hair or flour, it will bring you luck. Likewise, a water globule in the skin should be burned to avoid hunger and a fat globule will give you fat reindeer. A globule of hair will give you a big herd, while a globule of milk will give you female reindeer rich with milk. A globule of flour will mean an abundance of food. And when a dried globule makes a ringing sound, then some money will come your way.
testines should be shared. This has been done from ancient times and was a way to ensure that everyone got all the vitamins and minerals from the food eaten by the reindeer.

The names of the blood sausages are: Čeaksa (omasum), doggi (abomasum), manŋebuoi-di (rectum), gahpárus (duodenum), guopmolággá (appendix), čalmmás (reticulum), seakkaguopmolággá (the thinner/smaller part of appendix) and čalmmásnjálbmi (opening of the reticulum).

Also according to our practice, the upper marrowbones (čuožžemas) of the back legs were for father, the lower marrowbones of the back legs (njiehcehas) were for mother, the lower marrowbones of the front legs (vuorgu) were for the smallest children and the upper marrowbones of the front legs (dábbá) were for the older children in the family. According to this way, every member of the family got the pieces of the animal that gave them the most necessary nutrients.

Not all families are alike of course and traditions and customs vary from region to region, from siida to siída. In some families I have heard that blood sausages made from the omasum are for males only. These stories, traditions and etiquette have much to teach us about a healthy relationship between people, animals and food.

Kola Sámi food culture has been subject to intense modifications due to the influences of long term cultural and economic contacts with surrounding peoples – Russians, Norwegians, Finns, Komi and others. Kola Sámi have purchased and traded with Russians for rye flour for well over a century usually baking lenten rye flatbreads with it. In the 1920s Kola Sámi began eating vegetables, especially potatoes and onions. Until recently many Sámi did not pick mushrooms, which are very abundant in Lapland. Nevertheless, berries – crowberry, cowberry, bilberry and cloudberry – are picked with enthusiasm and eaten dried or soaked, and also used as seasoning (in soup and other dishes).
For millenia the Kola Sámi diet consisted of meat (in winter) and fish (in summer). In the past, when hunting played a more significant role, wild reindeer meat was also consumed. Reindeer husbandry became the main source of meat for the Kola Sámi by the end of the 1800s, as hunting had already reduced game stocks. Reindeer meat was boiled, sun-dried, frozen and less often — salted. Among the Kola Sámi, there is almost no evidence of raw meat eating. As early as the 16thC it was recorded that Sámi had acquired the habit of boiling food and that even by that time already preferred fried meat to raw. By the late 19th and early 20thC, reindeer meat was usually served as a soup seasoned with rye flour, salt and ground berries (crowberries and cloudberry). People ate the meat first and then drank the remaining broth.

However, for centuries Kola Sámi have consumed raw frozen meat, slicing it finely for eating. This is called stroganina, and is a well-known dish among many northern peoples. While Sámi in what we today call the Nordic countries widely used reindeer milk to make cheese, Kola Sámi do not appear to have milked their reindeer to any large extent. In addition to reindeer meat and fish, in winter Kola Sámi ate poultry, mainly grouse, which they usually boiled in soup and sometimes fried.

All parts of reindeer were consumed, except the lungs, which were given to the dogs. Kidneys, slightly seasoned with salt, were put on a stone in front of the fireplace and thus cooked. Liver was used for frying. Brains, heart, tongue, stomach and brisket were considered special delicacies. Sámi also liked fresh reindeer blood, which they drank for its medicinal purposes.

A much loved dish is reindeer kholodets. To prepare kholodets with reindeer tongues, reindeer hooves and tongues are needed. Clean the reindeer hooves thoroughly, and place in cold water for a day. Change the water after 6 hours. Place the soaked hooves in a casserole and cover with water, add meat and bring to the boil. Then decrease the temperature and cook on a low heat for 8 hours. For the preparation of dishes with reindeer tongue, it is important to soak it in cold water for several hours. Then the broth will be light and clean. 1.5 hours prior to the end of cooking, add a reindeer tongue, then (over the last 20 minutes) add peppercorns and a bay leaf, and/or some vegetables and season with salt according to your taste. Take everything out of the casserole. Detach the meat from the bones and if applicable cool the tongue and peel the skin. Serve in bowls, adding garlic and cover with meat broth. Let the dish jellify and serve.

Nowadays, kholodets is cooked with a wide range of ingredients. For the meat part of kholodets people use beef, veal, pork, poultry. Any variety of vegetables (carrots, onions, garlic, celery), herbs and spices are also used. However, the most important part of meat kholodets remain the trotters or hooves, pork or beef ears and heads. These special ingredients allow the cooking of kholodets without adding gelatin. Kholodets prepared with gelatin becomes «zalivnoye», which is a completely different dish.

Reindeer kholodets
- Reindeer tongue 0.5 kg, or other meat such as reindeer cheeks
- Reindeer hooves – 1kg
- 1 onion
- Salt
- Root vegetables, garlic if wished

Photos: Chris Schmetz
Reindeer round up in Lovozero. Photo: Chris Schmetz
A long time ago, when all the animals were living in peace and harmony with one another, and there was not an enemy among them, a small frog was jumping around.

Suddenly this little frog found some strange tools, and for the life of him, could not understand what they were. Bear ambled over and explained that it was a bow and arrow that could be used to kill other animals. Bear went on to explain to the others that they should kill a reindeer because it ran so beautifully and seemed so proud. Bear decided that Mouse should have the first arrow, Wolf the second and himself the third. Mouse shot the arrow and hit the reindeer between the hooves of a reindeer back leg. Today you find a small flap of skin, which in Sámi is called sáhpánnjuolla, the Mouse Arrow.

Wolf shot the next arrow and it hit the reindeer’s thigh muscle. Next time you look, you will find a 10 cm long bone that looks like a needle in the reindeer thigh. In the Sámi language, this is called gumpenjuolla, the Wolf’s Arrow.

Finally, it was Bears turn and he shot the third arrow, which hit the reindeer in the forehead. It did not kill the reindeer, but still today, when you remove the skin from a reindeer’s head, there is a mark in the forehead. This is called guovžanjuolla, the Bear’s Arrow.

Frog, who had been ignored and had not been given any arrow, was watching all this time, as the other animals tried to hunt the reindeer. When the reindeer went to the lake to drink water, the frog followed, collected spit and spat with his lightening tongue at the reindeer. His spit was so fast and hard that it became an arrow and it hit the reindeer in the heart. You can find a small bone in the reindeer’s heart called cuopponjuolla, the Frog’s Arrow.

The moral of the story is that a tongue can be used to speak many languages, taste if food is hot or cold, salty or sour. But it can also be used for an evil so strong that it can kill.
Upa - or sea squirts, near Novoye Chaplino, Chukotka. Photo: Elena Kaminskaya
CHUKCHI: REINDEER BLOOD, THE FIRST FOUR RIBS & WILD PLANTS

BY ZHANNA KAURGINA, VLADA KAURGINA, IRINA KRIVOSHAPKINA, MARIA YAGLOVSKAYA & OLESYA YAKOVLEVA
The Chukchi based their traditional economies on reindeer husbandry in the interior of the region and marine mammal hunting on the coast of what today is called the Chukotka Autonomous Okrug. Numbering nearly 16,000, the majority live in small rural villages. Traditionally, marine mammal hunters (Chukchi and Yup’ik) and reindeer herders had close trading relationships, the center of which was food related – whale fat and seal skins for reindeer skins and meat. Chukotka was at one time one of the world’s largest regions of reindeer husbandry, in terms of numbers. In the 1980’s there were over 500,000 reindeer. The collapse of the Soviet Union saw a more precipitous decline in herd size than anywhere else in Russia. The number of reindeer fell to around 90,000 in 2001. However, thanks to regional supports for hunters and herders, numbers have recovered and investments have been made in processing facilities and equipment.

Here we present two traditional Chukchi dishes from the Nizhnekolymsky District of the Republic of Sakha (Yakutia): Reindeer Blood Soup and the First Four Ribs. These dishes are also prepared in other Chukchi areas.

**REINDEER BLOOD SOUP**

*by Irina Krivoshapkina and Maria Yaglovskaya*

Reindeer blood soup is the favorite national dish of the Chukchi. Traditionally, people used to cook it for children, as it contains the whole complex of vitamins, gives strength, improves blood circulation and provides a long-lasting ‘warming’ effect. Reindeer blood soup is used in traditional ceremonies and is also offered to guests. We have included the traditional and modern methods.

### Traditional method

*Ingredients:*
- Reindeer intestines with inner organs (*pitiyki*)
- Reindeer large intestine (*nanwge*)
- Reindeer blood (*mulymul*)
- Visceral fat (the inner fat around the entrails) (*eimyk*)

Thoroughly wash and clean the intestines with inner organs, large guts, visceral fat and clean, chop finely, cover with cold water, and boil until thoroughly cooked. Pour the settled reindeer blood very slowly into the boiling broth, stirring steadily. The dish is ready when the broth thickens.

### Modern method

*Ingredients:*
- Reindeer head
- Reindeer blood
- Flour, salt

Make a broth by boiling a skinned reindeer head (antlers removed) in water. Remove the froth and impurities from the surface periodically and add salt while cooking. When the head is ready, remove it from the pot and strain. Mix flour with cold water in a separate bowl, add with the settled reindeer blood slowly into the boiling broth, stirring well. Cook until the broth comes to the boil and becomes a chocolate color before consuming.
In Chukchi reindeer husbandry, only women butcher the reindeer. Here, the First Four Ribs are being prepared and cooked. Photos: Svein D. Mathiesen / ICR.
THE FIRST FOUR RIBS
by Zhanna Kaurgina and Vlada Kaurgina

The Chukchi menu is not known for its variety. Boiled reindeer meat is a constant daily dish, the favored parts of the animal being the breast parts including brisket, ribs, and the breast section of the backbone. Once the reindeer is slaughtered and cut into smaller parts, the first four ribs are boiled as a delicacy and is the first dish offered to guests. In winter, these ribs are frozen, stored and eaten at a later date.

Why are the first four ribs from a reindeer considered to be such a delicacy?
Depending on the age and condition of the reindeer, the first four ribs have the following qualities:
• Bulk and mass with streaks of fat deposits;
• Juiciness which is related to their high oxygen saturation due to formation of the first four ribs in the chest cavity, and as the chest part of the body is stiff, there is an intense accumulation of bone oil in the cartilage and bone tissues, which provide taste and flavor.
• The broth produced from its cooking is rich nourishing providing a long-lasting sensation of satiety.

Ingredients:
First four ribs of a reindeer
Salt

Cooking method: Wash the ribs thoroughly and place into a large pot and cover with water. Set over a fire and bring to the boil, removing the froth that rises to the surface. Add salt, and maintain the fire so that the ribs simmer gently for 10-15 minutes. Eat immediately.

WILD PLANTS IN THE FOOD CULTURE OF SIBERIAN YUP’IK AND CHUKCHI
By Olesya Yakovleva

The east coast of Chukotka and Wrangel Island is part of the traditional territory of the coastal Chukchi and Yup’ik. Their traditional activities include sealing, reindeer herding and hunting. They call themselves «yuk» – a man, «yuit», «yugyt» or «Yup’ik» – «real man». Their preferred food mainly consisted of the raw, sun-dried, frozen or sour meat of marine mammals. One such delicacy was ma’ntak. Man’tak consists of two inseparable parts: whale skin and a top layer of fat and it needs extended chewing. Other staples included cereals and roots, laminaria (a type of kelp) and raw shellfish. Yup’ik and coastal Chukchi use around 60 species of terrestrial and marine plants for food. By way of illustration, there are no names for the whole plant in their various languages, but there are names for its edible parts – e.g. stem with leaves or the root. That which is not eaten is called «grass» or «flower».

The gathering and preparation of plants for winter consumption is an important activity carried out by women, and is actually called «women’s hunting». Laminaria is considered as an obligatory menu item; even hunters pick it on their way home after sealing.

Wild plants are necessary and important additives to meat and fish, which forms the basis of the Chukchi and Yu’pik diet. Upa and other invertebrates – such as crabs, shrimps, sea urchins, starfish, small octopuses, shellfishes (mussels, whelks), as well as seaweed – are all important components of their cuisine. Not only do wild plants add flavor, they also possess multiple health and medicinal benefits.
A selection of wild plants from Chukotka and Kamchatka. Photos: Olesya Yakovleva, Natalia Radunovich & Anatoly Sorokin
Sea squirt, or upa, is a saccate stationary animal: it remains firmly fixed to the substrate, such as stones and shells. Sea squirts are saccate round-shaped or cylindrical animals sized 0.5 to 10 cm. Their bodies are covered with smooth thick and often rather firm tunica. People eat sea squirt raw, boiled and frozen and they have long been used for medicinal purposes. Their tissues are rich in bioactive substances with unique pharmacologic properties. Moreover, sea squirts provide antineoplastic action. They have a detox effect, boost the immune system and activate blood formation processes. Also, sea squirts possess the unique ability to extract vanadium (a powerful infection fighter) from the water and accumulate this rare element. Moreover, in combination with other microelements, vanadium slows down the aging process and prevents atherosclerosis.

Since time immemorial, Chukchi and Yu’pik have eaten laminaria washed in by the tide on the coasts of the Bering and Chukchi Seas. People gathered and ate laminaria during the whole year. Even in winter, when the coastal area is covered with thick ice, laminaria was extracted using special spiral devices.

Laminaria absorbs elements from its surrounding aquatic environment. Its length may reach up to 13 m. Laminaria contains iodine in microelements, which is very important for human health. Moreover, it contains a full set of other useful elements: magnesium, ferrum, bromine and potassium.

Chukchi and Yu’pik also eat willow leaves, meadow onion, sweet edible roots and leaves of nunivak, cyuk’-lyak (edible roots), k’ugyl’nik (sorrel), and berries such as ak’avzik (cloud-berry), sygak (blueberry) and pagung’ak (crowberry).

1. Fireweed (Chamaenerion latifolium).
The leaves and stems of fireweed are used as a seasoning for sour caviar, fresh whale or walrus fat and boiled meat, as well as being added to meat broth. In the past fireweed was also used as a tea brew, instead of tea leaves.

2. Knotweed (Polygonum tripterocarpum).
Knotweed is one of the best known edible plants of Chukotka. This plant is widely used and the buds of young knotweed is the first delicacy of spring for children. In summer people eat them with seal blood and fat. Knotweed roots are dried and stored for winter. They are then soaked in water and used as seasoning for meat and fish.

3. Roseroot (Rhodiola atropurpurea (Turcz))
Roseroot – «nunivak» is probably the most popular edible plant for Chukchi and Yu’pik, which is indicated by numerous words related to and built with the «Nunivak» stem. The most traditional dish of roseroot is sour roseroot – nunivak. Also, this plant’s name is used to denote the month of – August – Nunivik – the «month of roseroot gathering». This word likely originates from the «numa» stem, which means «earth». There is an interesting relation between words «numa» (earth) – «nunivak» (tundra) – «nunivak» (roseroot). Thanks to their excellent flavor, the sappy stems, leaves and roots of roseroot are all eaten to this day. People try to gather the leaves and stems of roseroot before seed maturity, while they are most sappy.
The Yaranga is the traditional dwelling of the Chukchi and Koryak peoples.
Photo: Svein D. Mathiesen
4. Willow (*Salix*)

There are three known species of this plant (Yup’ik have one name for all three species): *Salix phlebophylla* – Skeletonleaf willow, *Salix arctica* – Arctic willow, *Salix pulchra* – Diamondleaf willow.

The young leaves of Arctic willow are stored for winter use. Then the leaves are soaked in cold water under a weight before use. In winter they are used frozen as seasoning for meat or fresh whale fat.

In summer the roots of Arctic willow are buried and in winter they are unearthed the bark is peeled off, which is then eaten as a seasoning with whale fat.

**Seasonal Gruels**

«Summer gruel». Fresh leaves of knotweed are steamed, mashed, and added to the rendered fat and blood of walrus. Children eat this gruel with seal or walrus meat.

«Spring gruel». Mash the young boiled leaves of knotweed and add rendered fat. When eating raw walrus meat, dip the pieces in the gruel.

«Winter gruel». Boil knotweed leaves until the broth becomes dark-green, then drain and put into various dishes for freezing or in a sealskin bag and store for the winter. In winter, defrost the frozen mass and prepare the gruel. Add rendered fat and seal blood into the mash (the dish can also be eaten frozen).

When boiling walrus, ringed or bearded seal meat, add fresh and boiled leaves of knotweed for taste and to add thickness to the broth. Grated knotweed leaves are eaten with fresh gray whale fat or white whale *mantak* (beluga whale skin). This broth is used as a preserving agent when preparing walrus meat for winter.

5. Wild onion (*Allium fistulosum*).

This wild perennial has an antiscorbutic effect, and grows in many places on the Chukchi coast and is widely used fresh as a seasoning for meat and fish dishes.

6. Crowberry (*Empetrum nigrum s.l.*).

Crowberry is a watery berry with slightly sweet taste. It grows throughout Chukotka. It is normally consumed fresh and more recently as a jam. It is used in several dishes.

7. Lingonberry (*Vaccinium vitisidaea var. minus*).

Lingonberries grow in small amounts and are eaten fresh and as a seasoning for various meat dishes. People also prepare lingonberry jam. Lingonberries have diuretic, binding, anti-inflammatory and antiseptic effects.

The Yup’ik and coastal Chukchi have very rich knowledge about the value of plants in their food culture. To maintain both their health and their wellbeing, the food culture in the region necessitates a high biodiversity of edible plants.
KORYAK: FESTIVE FOOD AND KNOWLEDGE IN KAMCHATKA AND MAGADAN

BY OLESYA BOLOTAeva, ANATOLY SOROKIN AND ROKSANA AVEVKhAY
The Koryak are an Indigenous people of the northern Kamchatka peninsula, who live in the Kamchatsky krai, Chukotka and Magadan oblast’ of the Russian Federation. According to their livelihoods, Koryak are divided into reindeer herders - the Chavchuvens (čawčәvaw which translates as rich with reindeer) and settled Koryak - the Nymylans (nәmәl’u meaning settlers) who are engaged in fishing and marine mammal hunting. It was Koryak reindeer herders’ dialect Chavchuven that served as the basis when a written language was established in 1931. Unfortunately, fewer and fewer Koryak consider the Koryak language as their mother tongue. According to the 2010 census there were 7953 Koryak people in Russia and only 2191 (27.5%) considered Koryak as their native language: In 1959 nearly all Koryak spoke their mother tongue. By 1989 this had fallen to a half. Furthermore, the literature mentions 11 Koryak dialects, while today in Kamchatka there are only four main dialects, namely Chavchuven (reindeer herders dialect), Palana, Alutor and Karaginsky (settlers’ dialects). There are no exact statistics, but by regional estimations, Alutor is poorly spoken by only 250 people. The Magadan dialect is studied poorly and not yet distinguished as a separate dialect. More effort is needed to bring the Koryak language into every day use and food may have an important role to play in this regard. Much has been written about the traditional foods and rituals of the Koryak and other Indigenous Peoples of Kamchatka and the Magadan oblast’. If we look at one of the ancient cultural layers – story telling, it speaks to meanings and knowledge embedded in food culture and its connection to festivals and ceremonies.

Koryak food traditions are an integral part of their culture, are closely connected to their livelihoods and are associated with a number of folk customs and regulations. For nomadic Koryak - čawčәvaw reindeer meat, blood, fat and entrails of the reindeer play an important role, while for settled Koryak - namәl’u — fish, marine mammal meat, blood, fat, and guts were at the center, although today it is mostly fish. The food choices of both groups have always been seasonal and celebrations are held on certain occasions. These celebrations consist of a set of certain ritual actions, including slaughtering of reindeer in one case and fishing or hunting for marine mammals in the other, and the preparations of certain dishes.

**TOLKUSHA AND THE FESTIVAL OF MILANYәT: COASTAL KORYAK**

In November or early December the coastal Koryak – the Nymylans celebrate the festival of Milanyәt - the holiday of the Ringed Seal. The meaning of this holiday is to guide the spirits of marine mammals that have been hunted during the season, back to the sea. Every family that celebrates this holiday cooks special dishes, in particular tolkusha (tılqәtil). During the festival, all the guests that come to the feast are considered to be the seals. And during this festival, people meet each other with a cry «olo-lo» because ringed seals emit this sound when resting on land. That is why this holiday is also known with the name Hololo or Ololo.

When the master of the feast (a hunter or elder of the family) performs the rite of taking the seals back to the sea, small figures of seals are made from twigs of alder, and bound with sedge grass (lә`утан). Such seal figures are ritually fed with tolkusha, watered and sent to the fire. Almost all the rites are performed with fire. Everybody is having fun, playing the tambourine, dancing and showing to the seals who are ‘returning home’ that they had a good time with delicious food at the festival. Upon returning home, these seals would tell their friends,
Qutkinjnąaqu and the Mice
TEXT IN ALUTOR DIALECT OF KORYAK LANGUAGE

1. A long time ago there was a grandfather named Qutkinjnąaqu.
2. With bits of red fabric these little mice once decorated his eyes.
3. «Well, my nieces, Home I go but back I will be», said with his eyes painted.
4. And this Qutkinjnąaqu he shouted to his wife, named Miti: «Miti, you are burning! «Oh, how terrible, and the children. We are on fire. Oh, how bad.» But his eyes had been painted by these little mice.
5. It is getting very red, as if everything is burning.
6. And shouts to his wife saying «Get outside, we're on fire!»
7. Miti says: «Where is the fire, I don't know! Nothing is here. There’s no fire! Seems like you’ve been tricked. Bad!»
8. She suddenly notices: «Oh, how terrible, your eyes are decorated red. It is seen on your head!»
9. «Prepare, tolkusha and fetch dishes, fill the dishes with tolkusha, to each their own plate within reach!»
10. «Prepare, tolkusha and fetch dishes, fill the dishes with tolkusha, to each their own plate within reach!»
11. And here the mouse said: «Mama, Oh how bad, Qutkinjnąaqu is coming. Oh, bad, mad, he really is.»
12. «Prepare, tolkusha and fetch dishes, fill the dishes with tolkusha, to each their own plate within reach!»
13. And Qutkinjnąaqu he approaches “No, I'll smash the guts and shit out of you. I'll kill you Mice”.
14. And Qutkinjnąaqu he approaches “No, I'll smash the guts and shit out of you. I'll kill you Mice”.
15. He removed the decorations and had a change of heart.
16. He removed the decorations and had a change of heart.
17. And he is. Then...
18. «Well, what could I do, for my nieces you are. Worry not».
19. Here he became kind, because of the tolkusha and the toad-stool.
20. He changed his mind. He won’t crush them.
21. «Enough, my nieces then home I go».
22. And there Qutkinjnąaqu returned home.
other marine mammals, about this holiday and would always come back again the next year. Thereby people secure hunting luck for the following season.

This is one such story, told by Tamara Khupkh- hi in the village of Tilichiki, in the Olyutorsky district of the Kamchatskiy Krai. As this ancient tale tells, that to please the angry Qutkin’nuqu, little mice prepared and started to treat the visitor to the well loved dishes, tolkusha (tilqәtil) and dried toadstool (wapaq). This is one of the favorite dishes of the Koryak and is served at Milanyәt - the holiday of the Ringed Seal.

This dish has a very sweet taste and is filled with nutrition and vitamins. It is always served as a dessert. For Milanyәt many other meals are also prepared, for example, kilikil. To make kilikil, boil fish, then mash it, remove the bones and add crowberries (ljәɣәvәn’u). The resulting mass is infused with mәtqәmәt - liquid ringed seal fat.

One of the most common festive foods of any holiday, including Milanyәt, is tavәl – dried fish, yukola [a sun-cured fish dish, see our Yukagir and Nivkh contributions]. It is especially tasty when eaten together with valival – ringed seal fat. Tavәl is prepared in the sum-

The ancient recipe of tilqәtil

«In summer we collect cloudberries (rәttuwwi), blueberry (liŋluwwi), crowberry (ljәɣәvәn’u), red-berry (yәjin’u) and rowan (mimәjuwwi). Also we collect the roots of Bering Sea Spring Beauty or Claytonia (ramjuwwi), knotweed, snakeroot, alpine bistort and sweet vetch. Cedar lump (yуnawwi) and nuts are put into the tolkusha to create an rich flavour.

Dwarf fireweed (nununu) is collected and made into a pulp (jiwjir’u) from which the skins are separated. Fireweed (rosebay willowherb) and sorrel are collected and dried. Separate the nuts, and prepare the cones. A piece of ringed seal fat (valival) is mashed a liquid state (mәtqәmәt).

We dry caviar (kәljljaljŋu), which should be well beaten for tolkusha that is prepared for special celebrations. There are wooden bowls used only for tolkusha. Boil the roots of Bering Sea Claytonia (ramjuwwi), knotweed, snakeroot, alpine bistort and sweet vetch and make them tender. Mix the roots with the caviar and again tenderize. Dried pulp of Dwarf fireweed is also mixed with caviar and tenderized. Everything should be beaten and beaten, until the contents turn white (imu’im). Add a teaspoon of liquid ringed seal fat and a broth from the roots. Dried leaves of River Beauty (wiwiwtu), Sorrel and skins from the stems of Fireweed are all mixed together and sifted. They should become small, like ash. Then for the second time add the ringed seal fat and water, and the third, fourth and fifth time, more and more fat and water and later broth. Then add more ringed seal fat. Finally just top it up with more water, because it (tolkusha) also gets very «tired». Then stir in the crowberries. We then make the eyes of tolkusha with cloudberries. After adding cloudberries put the tolkusha in a bowl. In the past, we did not add sugar, because there was none. Nowadays we do add sugar as well as bog whortleberry and redberries.

Figure 3: Tatiana Golikova, quoted in Yukari, p. 48

Photos: Anatoly Sorokin
mer, during the main run of salmonids. The Koryak make *yukola* from salmon, Arctic char, trout or other fish. The dorsal and other fins are cut off, and only the fillet is separated and hung to dry.

**FESTIVE FOOD AT QOJANJÔTÈK: REINDEER HERDING KORYAK**

The nomadic Koryak hold their holiday called *qojaŋajtәk* (*qojaŋajtatәk*) in the autumn, during the waxing moon. *Qojaŋajtәk* literally means ‘to move the reindeer’. Women prepare *Cenčitkuwәtwәt*, a sacrificial green colored gruel made from the ‘river beauty’ (here called ‘reindeer leaves’). It is harvested in summer, dried and then ground on a stone mortar. In the village of Achayvayam this is called *qozjaŋatәtwәt*. The resulting mass is used for *tolkus-ха* and crowberries are added to it. While the coastal Koryak add ringed seal fat, the nomadic Koryak add reindeer fat.

After certain rituals, *yukola* is eaten. For the *qojaŋajtәk* holiday, it is made from Arctic char with the head still on. It is called *lewtetewәl* and literally means ‘sun-cured fish with fish head’. For *qojaŋajtәk*, sacrificial reindeer are slaughtered, and *Qәmәl* (bone marrow from the rear legs) is eaten raw. Everyone except male children eat the bone marrow. While girls are allowed to eat large amounts, boys are not, so that they do not lose their appetite, as they need to build their strength to herd the reindeer when they grow up. The meat of the sacrificial reindeer is laid out on a sled. The sacrificial meat (*inelәtәl*), the lungs (*zitcat*), liver (*pontan*) and meat from the spine (*zavjaw*) are baked in the embers of the fire, which should...
be situated on the Eastern side of the entrance of the yaranga (the traditional Chukchi and Koryak tent). Then kinuŋi – meat boiled in a cauldron over the fire – is eaten.

Half of the raw meat is hung on poles outside and after 2-3 days the dried meat is brought into the yaranga where it is smoked over the fire and eaten in winter.

A ritual sausage (zezjat) is made from the third stomach of the sacrificial reindeer. It contains boiled bone fat from the broken leg bones of a reindeer. Zezjat is considered to be a substitute for a live reindeer in a bloodless sacrifice during the winter and spring holidays. Part of the sausage can be eaten in the morning.

During the holiday for the thanksgiving ceremony to the fire, ‘dried toadstools’ (wapaq) are a vital ingredient. Toadstools are collected in the summer, and removed completely with the top intact with care being taken not to touch it. They are strung out on a thread and dried in the yaranga. The consumption of dried toadstools is considered to be essential during this thanksgiving ceremony.

In the early morning, a ritual blood soup called mjeŋapqa (literally, ‘fire soup’) is made, which no holiday can be without. To prepare the blood soup you need clean water and blood, which is boiled on a low fire until a certain sound is heard.

In connection with the birth of children, coastal Koryak hold the feast of Ananavisqatin («in celebration of women»). Here taknonoi-kau (bringer of happiness) is prepared, by first frying flour until brown, to which coastal Koryak add the blood, meat and marine mammal fat. Nomadic Koryak add reindeer meat, blood, and fat. Eating this cereal is supposed to provide a prosperous life for the newborn child.

Considering the parlous situation of Koryak languages, the enduring traditions of Koryak food culture, their connection with rituals, celebrations and festivals, their rich terminology and methods and purpose of particular foods may assist the preservation and development of the Koryak language. Koryak traditions and ceremonies and all connected activities, including the names of dishes, ingredients, and so on, remained unalterable due to the sacredness of the rites themselves. In this way, these foods, their memories and terminologies act as a storehouse for the Koryak people and culture. The importance of these ancient and unchanging food traditions of the Koryak are a vital part of their desire to remain as a thriving and vibrant culture in a period of rapid change.
DOLGAN: REINDEER EYES AND FISH

BY ANNA CHUPRINA, EVGENIA CHUPRINA AND SOPHIA ZAKHAROVA
'Dolgan' means "people living on the middle reach of the water". The Dolgan live in the territory of Taimyr, Dolgan-Nenetsky Municipal District, Krasnoyarsky krai and Anabar ulus, Republic of Sakha (Yakutia) and in the vast territory from the west side of the Lower Yenisei river to the east of the Anabar river. Dolgan number less than 8000 people. Traditionally nomadic hunters, gatherers and reindeer herders, the region is also home to the largest wild reindeer herd in the world. Despite the similarities in livelihoods and major economic activities with neighboring peoples, such as reindeer herding, hunting, fishing and gathering, Dolgan (the self-designation of Dolgan – dulgan, ty-a-kikhi, haka) culture contains a number of distinctive features that create its special uniqueness. Primarily, this relates to Dolgan traditions and their food culture.

Dolgan cuisine, traditions and customs related to food, are an important part of the material culture of Dolgan culture and reflects their socio-cultural and historical processes, religious beliefs and worldview. As the main traditional activity of the Dolgan people is reindeer herding, unsurprisingly the main component of their diet is reindeer meat, an easily digested and clean food packed with macro and microelements (calcium, phosphorus, potassium, sodium, iron), vitamin B and vitamin PP (nicotinic acid), essential for good health. Reindeer meat can be boiled, dried, smoked, frozen or eaten raw. There are several Dolgan dishes made from reindeer such as kyyl ete (wild reindeer meat), et (boiled meat), amaha (stew made from cut meat and bone marrow), kyos (soup), oiogos mine (rib soup), heliei (meat broth with wheat flour), ulukte (sun dried meat), and others. Beside reindeer meat Dolgan also use bone marrow (boiled or raw), tun’iakh (hooves), tyl (tongue), karak (eyes), hynak (cheeks) etc., and inner organs (liver, heart, lungs, kidneys, intestines etc.). Blood is used to make chyol (blood sausage). Dolgan consider velvet antlers as a delicacy, which should be slightly grilled on a fire before being eaten.

Fishing is an additional seasonal activity, which is also socially and economically important for Dolgan. Fishing is important in summertime, when hunting wild reindeer is difficult. Domesticated reindeer are herded on separate pastures in order to gain weight and keep the wild and domesticated reindeer separate. Dolgan food culture is rich in various fish dishes, such as balyk mine (fish soup), diykula (dried fish), kabardaak (a traditional fish dish), kuumsa mine (brown trout soup), kyspyt (sliced frozen fish), kerdilek – yukola (a special way to dry fish), tuustak balyk (salted fish) and baarky (semi-dried fish). Favorited fish for Dolgan are sturgeon, broad whitefish, muksun and nelmaa.

Traditionally the broth made from reindeer meat, fish or bird is called min. Min is very easy to cook while herding, migrating, fishing or hunting, because it does not require a lot of time or ingredients to prepare. Herders or hunters can quickly warm themselves from drinking min, and recover their strength.

For Dolgan, as for other northern peoples, food is a key factor in maintaining health. Wild plants serve an important medicinal function in the Dolgan diet and they are also an additional source of food, delivering gastronomic diversity and useful nutrients. Dolgan use the roots of edible herbs, wild onions, and berries.

2) These freshwater whitefish are popular foods across the Arctic and are of the subfamily Coregoninae, which consists of Coregonus (members include muksun and broad whitefish, both of which are favoured for stroganina or ‘shavings’ of frozen fish. Peled (Coregonus peled), also called northern whitefish, Arctic cisco (Coregonus autumnalis). Prosopium and Stenodus (commonly known as nelma, sheefish, inconnu or connie).
such as cloudberrys, blueberries and lingonberries.

Due to the abrupt economic and social changes experienced by Indigenous Peoples in the Arctic, their traditional food cultures have also been transformed. As an example, with the change of the nomadic lifestyle to a settled one, when Dolgan moved from tundra to villages, their involvement in traditional activities decreased. This had a dramatic influence on the traditional model of Dolgan food culture, which now includes products such as wheat flour, vegetables, cereals, pasta, bread, milk etc. People began to add pasta and vegetables (potatoes, carrots, onions, spices etc.) to meat soup. Ptarmigan is often now cooked with vegetables and pastries are baked using flour, eggs and cow milk. Such culinary influences and trends have negatively influenced Dolgan health, as elsewhere in the Arctic.

Further research into Dolgan food culture is needed which could also improve the diet model of modern Dolgan society, which has lost many cultural traditions associated with etiquette, diet and methods of cooking traditional dishes that go to creating the full spectrum of Dolgan material and spiritual values.

**BAARKY**

*Baarky* is a well-known and much loved fish dish. The dish name *baarky* originates from the Russian word *parit* (to steam).

To cook this dish, Dolgan use a large fish of the *Coregonus* species, preferably those with the roe intact. First scale, clean and then fillet the fish. Cut the fish into small pieces and place on a hot pan together with the visceral fats, guts and roe. Cook fish with its own fat and stir constantly. Add salt and sometimes you can
add a seasoning of meadow spring onion (*Allium fistulosum*). Cook until the liquid in the pan is completely evaporated and the fish flesh changes to a color. The dish is then stored in canvas bags to complete the drying process. In this way the dish can be stored throughout the whole winter. Children are fed this dish during migration and it is a favored delicacy.

**REINDEER EYE SOUP**

Dolgan believe that by eating reindeer eyes, people will preserve their visual acuity, their sharpness of sight, and will retain good eyesight into old age. Good eyesight is obviously very important for hunters and herders living out on the tundra. A symbol of the eye is also used in the Dolgan national costume, which you can see most obviously in the decoration of a man’s hat. The eye also plays the role of a protective amulet.

First, you need to skin the reindeer head and cut it into six parts (while reserving the eyes). Wash all parts thoroughly and place in a casserole and cover with water. Cook the broth for long time, until all the meat detaches from the bones. Remove all cooked parts of the head from the broth; and detach the eyes from the frontal bone by hand. Filter the broth. Slice the eyes into 5-6 segments and return to the broth. The dish is ready. The entire eye is eaten.

For a large family prepare the dish by using several heads.

*The Dolgan mens hat which features the eyes of a reindeer. Photo: Sofia Zakharova*
Author Sofia Zakharova prepares reindeer eye soup. Photos: Sofia Zakharova
Reindeer round up in the Aldan region, Sakha (Yakutia). Photo: Svetlana Avelova.
EVENKI:
KAPKA AND BLOOD SAUSAGE

BY ALENA GERASIMOVA, NADEZHDA GERASIMOVA, LYUBOV SIDOROVA AND SVETLANA AVELOVA
According to G. Vasilevich (1969), Evenki did not have a word for «Hello» or «How are you». Instead, when greeting each other, they said: «What did you eat?» or «What did you hunt?» The person who was asked the question could answer also by naming what part of reindeer he or she ate.

Evenki are the most widespread Indigenous Peoples of the North. Formerly known as the Tungus, they can be found from the coast of the Sea of Okhotsk in Russia’s Far East, throughout southeastern Siberia, and along the entire length of the Yenisei River to the tundra regions of the Taimyr Peninsula.

Traditionally nomadic, they have practiced traditional subsistence activities, including reindeer herding and hunting. According to the 2010 census there are approximately 38,000 Evenki in the Russian Federation. Evenki food culture is mainly based on wild reindeer. Evenki also herd reindeer, but prefer to use their domesticated animals for hunting and transportation (Evenki ride reindeer). For Evenki to eat their own animals would be a last resort. Other popular foods are mountain birds, water-fowl, fish, and occasionally bear and elk, and fish. In summer and early autumn the Evenki diet is complemented by reindeer milk, berries (blueberries, honeysuckle berries, blackberries, cloudberrries, lingonberries and others), mushrooms, pine nuts and wild onions. But still, reindeer have always been and remain the absolute «king» of Evenki food culture. Everything is used from the reindeer, and nothing is wasted. Evenki also eat everything except for the spleen, it being the only organ which should not be eaten, it is even forbidden to give it to the dogs.

Family based reindeer herding is the foundation of Taiga reindeer husbandry.
Photo: Yuri Kokovin.
Here we present two Evenki traditional dishes: Kapka and Buyuren. These two are essential dishes for Evenki reindeer herders in the southern part of the Sakha Republic (Yakutia).

KAPKA
The term of this ancient dish «kapka» is used both for the designation of the dish, and the word for the reindeer trachea. The dish is common among Evenki reindeer herding communities in this region, specifically the Neryungri and Olekminsky districts.

The process of making the dish:
When butchering the reindeer, you use the entire reindeer head to get the primary ingredients for kapka. You will need the trachea, lips, ears, cheeks, meat and muscles around the eyes, and different parts of meat (usually some meat with sinews).

Separate all the ingredients from the skin and bones, rinse and cut into pieces. Fill the trachea with the cut-up ingredients. Connect the ends of trachea together to make a ring (by using a strong thread).

Use a skewer made from willow to insert into the trachea and stake it near an open fire for 45-50 minutes, periodically turning the kapka, in order that it cooks evenly. After 45-50 minutes remove from the fire, let it cool and slice. Place the sliced pieces of kapka on a pan and keep near the stove in order that they became drier (but do not fry).

Women prepared kapka to give to their men, when they were going hunting or herding reindeer. They are quick to make and serve as a highly nutritious snack, which can be conserved for a year or longer. Traditionally, it was saved to use in bad times, when there was not enough meat to eat. People could boil it and make soups, or eat it as a snack. It is important to note, that during the process of cooking, no salt was added to kapka. Because once it is salted, it quickly becomes moist. Once cooked kapka was conserved in cotton bags, usually kept away from heat, or outside of the tent in special packs (immek) made of birch bark and reindeer skin. Immek is used for keeping and transporting different products, such as wheat flour and other perishables. There were no special occasions to cook kapka, though herders tried to make it while the reindeer meat was still fresh. In addition, it did not matter whether the reindeer was a female or male, but that the important rule in Evenki culture be followed – it is forbidden to eat reindeer calves.

We (the authors) chose to present this dish, as we think it is important to show that it is not only meat which is used from the reindeer. Every part is important, and can be cooked. And kapka is both rich in nutrients and flavor.

BUYUREN – BLOOD SAUSAGE
Reindeer blood sausage (in Evenki language buyuren, buyukse, beyuhe, and subai in the Yakut language) is a popular dish for all reindeer herding peoples in the circumpolar North. Nonetheless, blood sausages are quite different in various reindeer herding regions and have different specifics in the process of cooking, in textures and even colors. Evenki reindeer herders usually make very soft sausages, sometimes of a very light color. The darker color sausage is less tasty, but not less healthy. Actually, the taste of blood sausages depends on the amount of blood and the fat content of the intestines.

There are just two main ingredients for this dish: fresh reindeer blood and intestines.
During the process of slaughtering, Evenki herders always collected the blood, usually the amount is about 5 liters, approximately 3 liters of which would be used for blood sausages. The blood is collected in a big bowl. One should let it be still for a while. Considering the fact that blood coagulates, you should first slightly cut the very first layer of the blood with a knife. Then squish the coagulated pieces with your hands while the blood is still warm, in order to get more liquid blood. Do not stir the blood.

Then filter the whole bowl, giving you only pure blood and let it be rest for approximately 8 hours (In some regions they let it rest for 5-6 hours). That which is left in the filter is given to the dogs. While the blood is standing, it starts to divide itself into three layers. The first layer is plasma - a very light mass on top. You use this first layer to make light blood sausages. The second layer can also be used for sausages or mixed with plasma, then they will have a darker color, but still soft. The blood from the second layer can also be fried with onions, or other vegetables. It is a very delicious and healthy dish especially for those who have anemia or low hemoglobin. The bottom layer is also boiled for dogs.

While the blood is resting so that it divides into layers, you can clean, wash and select the intestines. The thin ones are sometimes used for sausages. You need to check that the intestines are not broken by blowing into them to check that there are no holes. Intact intestines can be filled with plasma or blood. Bring the ends of the intestine together and use a thread to connect them. Reindeer herders in the Aldan region also add salt, black pepper and garlic to the sausage. Place the intestines with blood into boiling water for 15-20 minutes. Add salt. Boil over a small fire, otherwise the sausage might rupture. A little later, poke the sausage with a toothpick to let some air out. Slice the cooked sausage and serve hot.

Blood sausages usually were eaten right after they were cooked. But these days, raw sausages can be frozen and cooked later when preferred. However, it is important to remember, that only raw sausage can be put in a freezer, and that frozen sausages should defrost a little before cooking.

Evenki elder, Iengra, 2016:
This summer was very cold. This is why we didn't have blueberries and lingonberries this year. Besides that, I have noticed that we didn't see black grouse or ptarmigans for a long time now. And these birds are also a part of our diet. I think it is connected to the climate change.

Hunting is an important livelihood for Evenki. Photos: Yuri Kokovin
There are just two main ingredients for Evenki sausages: fresh reindeer blood and intestines. Photos: Alena Gerasimova, Lyubov Sidorova, Yuri Kokovin and Anders Oskal
Author Lyudmila Gashilova in the Nivkh language room at the Institute of the Peoples of the North at the Herzen State Pedagogical University. Photo: Lyudmila Gashilova
NIVKH: YUKOLA - OUR FOUNDATIONAL DISH

BY LYUDMILA GASHILLOVA
Nivkh are few in number but are one of the ancient cultures of the North Pacific. They are distributed across parts of northwestern, eastern, central and southern parts of Sakhalin Island, and also in the lower reaches of the Amur River along the coast of the Tatar Strait. The Sakhalin Nivkh call themselves -nigvn, nigngun, and those on the Amur - nivkh, nivkhgu. The name translates approximately as "person" or "people".

The primary traditional livelihoods of the Nivkh are fishing, hunting marine mammals and animals, and gathering. Still today, Nivkh reside in their traditional homelands allowing them to practice and maintain their traditional activities and livelihoods, replenishing their everyday meals with traditional food.

Nivkh food is characterized by a wide diversity in the use of products and the means by which they are prepared and cooked. Fish is the favored food of Nivkh, indeed a specific feature of the Nivkhi cuisine is the significant amount of fresh, boiled, fried, dried, soured, and smoked fish products that are consumed all year round.

There is a special place in the Nivkh menu for the dish known as Yukola (Ma). During late summer, early autumn Nivkhi women prepare yukola most commonly from Pink salmon or Humpback salmon (teni) and Keta (also known as dog, chum or silverbrite salmon (lagi). Each Nivkh has developed her own skills and knowledge about making Yukola that are based on traditional knowledge evolved over generations.

**HOW TO MAKE YUKOLA IN THE TRADITIONAL WAY**

The first outer layer of fish with skin for the yukola is called mandirma and it is cut from the flank of the fish, making an incision in the tail for threading the fillet on a thin pole (musk), which is used when suspending the fish for drying. The second layer of fish for yukola (makrma, makirma) is cut in a thin straight stripe with the skin, closer to the tail, which ensures the maintenance of the layers when suspended. The third layer of fish for Yukola is pikima, which is flesh cut off without skin in thin strips. Then the fish is turned over and cut in another way with three more layers. Some women put the second and third layers of fish on a tight net, periodically turning them over. This method allows for the rapid drying of fish, which affects the quality of the yukola.

After the first phase of drying, the yukola is strung on thin sticks and dried in the sun and wind until the fish is completely dried. Thick layers can take up to 5 days to dry, while small fish dry in 2-3 days, depending on the weather conditions.

Yukola can also be prepared from various other small fish species: East Siberian char (kandyo), smooth flounder (lok), needle (or arrowtooth), flounder (ysk), saffron cod (kani), smelt (arka), masu salmon (pani), the common rudd (tem-run), goby (lask) and others.
**Hirma – A dish made from soaked yukola**

To prepare this dish, use the first outer layer of fish (keta or pink salmon) with skin (*mandirma*).

**Cooking method:** *Yukola* with skin (*mad’, mand’*) from the first layer of fish should be soaked in cold water (usually overnight). After prolonged soaking the *yukola* is thoroughly rinsed with hot water, scaled and trimmed. Then the *yukola* is rolled with skin out and cut into thin circles. For dressing use pickled wild leek, seal fat and oil which are served in separate bowls.

**Yakma – a dish made from cut up yukola**

To prepare this dish use a thin layer of keta or pink salmon (*makirma, makrma*).

**Cooking method:** In the first method, use the second layer of *yukola* and cut off the edges of skin, soak the fish in water and then squeeze it out. Then cut the *yukola* into small pieces, mix and add a little seal oil, and in some cases, add wild leek. The second method of cooking is also based on using similar layers of dried *yukola*, which is not soaked, but instead separated from the side skin and cut into small chunks. Use this dish with seal fat or oil, add salt to taste.

Seal oil (*lanr t’om*) and fat (*nokh*) are important components of the Nivkh cuisine, and are especially useful as a seasoning when consuming *yukola*. There are special techniques in the preparation of the seal oil for its long-term storage and future use.

**Cooking method:** Fresh seal fat is washed several times in cold water to remove remnants of blood. Then the fat is cut into small pieces, and melted into boiling water, where they are boiled for 20 to 25 minutes. Then the boiled fat is cooled and ground with a meat grinder. The end product is strained and squeezed in order to get the oil (*t’om*), which is then stored in a covered container for two days. Seal oil is best stored in a dark and cold place.
Even herders, Republic of Sakha (Yakutia) Photo: ICR
EVEN:

STOMACH SOUP

AND REINDEER

YOGHURT

BY MARIA POGODAEVA, NIKOLAY OSENIN, MIKHAIL POGODAEV, MAXIM GULYAEV & ALENA PROKOPIEVA
Even (formerly known as Tungus) are an Indigenous people of Eastern Siberia living in five regions of the Russian Federation: the Republic of Sakha (Yakutia), Khabarovsky krai, Magadansky oblast, Kamchatsky krai and Chukotka. Today, Even number over 22,000 people according to the 2010 Census. Nomadic Even were reindeer herders and hunters; and also fished seasonally. The primary activities of settled Even on the Sea of Okhotsk were fishing, gathering, and hunting marine mammals. Even of the northeastern part of the Sea of Okhotsk coast call themselves Orochel, i.e. ‘reindeer people’, ‘owning reindeer’ (Popova 1981: 5). Even of the Magadan oblast call themselves Menel, which means ‘seated people’, ‘living in one place’ (Popova 1981: 11). Even from the Lower Kolyma river call themselves Ikhar – «real people» (Petrov 1991: 3). Even also have an internal distribution of names: Namankans (sea Even or people of the coast) and Donrytkans (‘living in the deep taiga’ or ‘people of the deep interior’ (Popova 1981: 6–7).

Even people as well as Evenki people do not have a word for «hello» or «goodbye» in their languages. When Even meet each other they usually say: yav bultanny? Which means ‘how was the hunt?’ Or yak ukchenek, ‘what’s the news?’

A combination of reindeer herding with fishing and hunting is at the core of Even culture. Since Even people were mostly living in mountainous regions, an important food source is the wild mountain sheep (Ujamkan). But there are also others such as wild reindeer (Bujun), moose (Toki), bear (Nakat), musk-deer, (Buchen), marmot (Chamak), different birds and fish.

Nonetheless, reindeer are at the core of Even culture and spiritual life. They say: Oron bidjin – Even bidjin, Oron acha odjin – Even acha odjin (As long as there is reindeer – Even will exist. If reindeer disappear – Even will also disappear). Even use reindeer as transport for hunting and for milking. If hunting or fishing was not successful they would resort to slaughtering their own reindeer for food. The connection to reindeer is very close, so this would only be done as a last resort. A reindeer would live for a long time in the family, especially transport reindeer (Gildak) and people preserve a close connection to every reindeer.

**Nimat - Customary Law**

Many Indigenous Peoples have the tradition of gifting, sharing and reciprocity in their system of social relations. Formally, gift and gifting are voluntary in these societies, but in practice are required; enabling a system of social relations based on the gift that is wider than just economic relations (Godelier 2007). Nimat is the customary law of Even and Evenki. This law is related to hunting and reindeer herding traditions. In literature it is often written that Nimat is a sharing law, but this is a simplification. It is more than just sharing. After a successful hunt, a person who killed an animal(s) would offer this as the gift to a friend or his relative. He usually takes only the stomach with intestines or anything else, which would deteriorate quickly. Other parts of the animal usually stay at the place where it was harvested. Then he went home and told his friend or relative that he has a gift for him (Nimat) and that he can find this gift in a certain place. Then he explains him how it can be found. That person had to go then to find it and bring the game back home and share it among other members of community (Gayun – sharing and distribution of game between members of community). He had to decide which part of the animal(s) everyone would get. (Osenin 2017) Nimat is a fundamental law for Even people and food culture is deeply connected to this law.
People and reindeer have a timeless and close connection. Maria Pogodaeva and her grandson with their reindeer. Photo: Svein D. Mathiesen.
The Taiga is open for everyone – come in! There is no need to knock on the door brother. But only keep in your heart
The custom of our fathers – Nimat!
We are people! We’ve only got one life!
We are weathered by one wind!
So, when you meet a wayfarer, Share your prey with him!
Make fire that he could warm up.
Be content with an unexpected meeting.
And together remember the law, The law of the Taiga– Nimat.
Let there be a mainstay in my edge For everyone who goes to taiga.
But remember: he who accepted your help, Is not in debt to you.
Even if you did everything you could - Do not expect anything in return!
Nimat - it is our duty to the forest, We give it to taiga!

(Kalitin 2006:40)

Game caught by one hunter, is also for others: shared with all, and not only between those who are involved in the hunt, but also visitors will get their share – «Nemada» (share of the hunting without participation in it). Not only relatives but also neighbors, and even random people enjoyed unlimited hospitality and fell into the category of the Mata - a person who got a share of the game after hunting.

In the past, this custom, and law in the understanding of Even people, pervaded all areas of their lives: it has an explanation in terms of economy, in particular, distribution practices, and in terms of social life, as a mechanism for establishing friendly and, under favorable circumstances, kinship relations on the exchange. It was also deeply rooted in the mind of a hunter, who believed that hunting success depends largely on the goodwill of the host-spirits.

In Even traditions the custom of Nimat was elevated to the level of law. But the punishment for violation of this law would come not from people, but from nature. Even believe that after a successful hunt for a mountain sheep, wild reindeer or any other animal; if you do not share with your relatives or friends, then you will have hunting luck. The custom of sharing game is a kind of social relations between people, but also relates to the relationship between the society / individual and nature: the need for sharing caused by the traditions based on Even and Evenki notions of our connection with the earth.

This was also an attempt to establish social relations with the natural world and the spirit world in order to ensure vital functions and continued life. The apparent reason for sharing – the expectation of reciprocity and gift not only from a person, but from the nature/earth/host-spirits (because the hunter did the
Reindeer milk has a very high fat content (19%). Whipped and added to berries, it makes for a tasty treat. Photos: Lyubov Sidorova
«right» thing). The accumulation of moral benefits, exceeds the scope of social links and moves into the sphere of relations between «humans – animals – spirit-owners.»

Nimat provides territorial and economic relations between nomads not only between relatives but also between unrelated clans. Possibly, this custom helped Even and Evenki peoples settle Siberia so widely, where they had to live on the land occupied by other ethnic groups.

So Even people are a very hospitable people, their hospitality has even been spoken of as being unlimited. They have another custom called Idekhe. This is about the slaughter of reindeer for guests and people close by. When you have a guest or when someone close by to you comes to your camp, reindeer herders make Idekhe.

**OKEN’ – REINDEER MILK**

Even use reindeer also for milking. They can milk reindeer from July to February. An adult productive female reindeer (*Nyamichan*) can produce about 1 liter of milk per day with a fat content of up to 19%. Even add it to tea. They also beat milk using a whisk (*Itaki*), which is then added to Even bread and blueberries.

**KEBEL – EVEN YOGURT**

For Even, the favorite dish made from reindeer milk is Kebel. To make it, fresh reindeer milk is filtered through a dense sieve and cooled down. Then you need to add 1/2 of teaspoon of leaven diluted in a tablespoon of milk and slowly, slowly stir, gradually adding it to 0.5 liters of reindeer milk.

Within 15 - 20 minutes the milk will ferment and become a yogurt, then you add blueberry, cloudberry or Even bread and a tasty delicacy is ready. It is usually served for breakfast and you can work for a full day with the reindeer, without feeling hungry.

But the most important thing is the leaven preparation: You need fresh abomasum of a just slaughtered reindeer, turn it inside out and, without washing the contents fill it with the fresh reindeer milk. Hang it in the Chora (Even traditional tent) above a smoky fire and then dry it in the shade. You can also prepare a leaven from the abomasum of the wild mountain sheep – *Uyamkan.*
The slaughter of a reindeer (*Idekhe*) or the occasion of a successful hunt for wild reindeer or mountain sheep means time for a feast for an Even family. The first dish is always made from the intestines of animals – a stomach soup (*chalmi, hilta hilen*). When you slaughter domestic reindeer, you immediately make an incision in the solar plexus and cut a blood vessel located along the spine, this is the best blood for making blood sausage. It produces a lot of whey and with that you can make a sausage with a bright color.

The entrails should be carefully and completely pulled out from the body so as not to spill the contents of the rumen onto other organs. The rectum (*momikan*) and cecum, (*mevki*) should be kept for the preparation of blood sausage. Other entrails: rumen (*goodi*), abomasum (*orakan*) and omasum (*heŋŋi*) should be washed with warm water. And the small intestine (*hilta*) and duodenum (*kurikich*) are washed very carefully, without washing out the contents because they contain a variety of useful enzymes for human consumption, especially the small intestine. In the old days, the bouillon from stomach soup without fat used to be given to malnourished people who had been hungry for a long time. It can be lethal to eat immediately after a long period of hunger. To such people, do not give a lot of the stock, only small portions every half an hour to revitalize the flora inside their stomach. After only a day or two, this person could drink more bouillon and eat nonfat cuts of viscera. Gradually he/she will recover after this dish. Many people have been revived thanks to this knowledge.

After washing the intestines, you put them into a large pan of boiling water in a specific order. First the rumen, then the abomasum, the midriff and the duodenum. At the end, you put in the small intestines. The small intestines are not boiled for long and are removed after 2 - 3 minutes, otherwise they will dissolve, and the bouillon will become bitter. After boiling all entrails, they are cut into small pieces and added to the bouillon. This soup is poured into bowls and served hot. Even food culture is diverse and rich and a wealth of knowledge is embedded in the Even food system and it is important to preserve, use and develop this knowledge system. Our food systems are little studied and the taboos and sacred knowledge surrounding it offer rich insights and clues as to how Even people can thrive moving forward into the future.

In Topolinoe 30 years ago an elder reindeer herder was lost. His name was Golikov Dmitry Gavrilovich. Afterward he couldn’t explain how it happened. He just went to search for his missing reindeer, without light, food, tent or any other things. They were looking for him for a long time and had not found him. We thought that he and his riding reindeer had been killed by a bear or that there had been an accident. After 1.5 months, this herder came by himself into the camp, which was 700 km away from his herd. He was exhausted and had been starving for a long time. Reindeer herders immediately slaughtered a reindeer and made a bouillon from the stomach soup to give to him. He survived. All reindeer herders are aware of this method from their parents.

*Story told by Maria Pogodaeva*
Mikhail Pogodaev cleaning intestines and stomach for stomach soup. Photos: Svein D. Mathiesen.
Salmon cut in the characteristic way for making Yukola. Photo: Elida Atlasova
YUKAGIR: ANCIENT FOODS FROM FISH AND REINDEER

BY VERA CHEBOKSAROVA & VALENTINA TOKHTOSOVA
Yukagir are a small numbered people spread across three regions of Eastern Siberia: the Republic of Sakha (Yakutia), Magadan and Chukotka, along the Kolyma and Indigirka rivers. They have become known as Tundra and Taiga Yukagir. Together they number just over 1500 people. Yukagir have traditionally been nomadic and semi-nomadic hunters, with wild reindeer being one of the preferred game, along with moose, wild sheep, sable, and of course fishing. Yukagir in the tundra regions also practiced small-scale reindeer herding primarily for transportation purposes. Yukagir are today settled, but some lead a semi-nomadic life during reindeer migration and hunting seasons.

Known for our hunting and fishing skills, Yukagir are one of the earliest indigenous people known to be living in North-Eastern Asia. Our traditional villages were located along the many river basins of the region, which are rich in Arctic and sub-Arctic fish so our fish related food culture is exceedingly rich. Fish is eaten fresh, dried, boiled, fried, baked, and in winter - frozen. Each dish has its own terminology and manner of preparation and some share characteristics with other indigenous peoples of the region. Reindeer also form a significant part of our diet.

**YUKOLA:**

**(TEL’YIEDAL’GZA (V); Y’UKULE (O)):**¹

Yukola is a traditional dish of the Yukagir, which is made from white fish species including pike, peled (*Coregonus peled*), longnose sucker (*Catostomus catostomus*), broad whitefish (*Coregonus nasus*) or similar. Freshly caught fish are scaled, gutted, and the fillets are separated from the spine. The spine can then be used for soup or given to the dogs. Fillets are divided into 4 slices with skin on. On the inside, one should then make cuts in the form of stripes, or «Christmas trees». Today, fish fillets are placed in salted water for 2-3 hours, but traditionally fillets were immediately dried. The fillets are dried on special hangers, first on a windy, sunny spot, and then smoked in a wooden structure in the same shape as a *chum* or traditional tent.

**KERILE**

*Kerile* is a popular food for our hunters. Smoked and dried Yukola is ground into a powder, or a fish flour. Add this flour to boiling water and then add a little wheat flour to make a creamy soup. Add salt and spices to taste.

**KUL’YIBAKHA**

*Kul’yibakha* is a dish of boiled fish with caviar and berries. Fresh fish is scaled, gutted, boiled, and then deboned. The prepared fillet is cut into small pieces and mixed with blueberries, fish oil and caviar.

**LULLEGUL**

This dish is made from lean fish, mostly Arctic cisco (*Coregonus autumnalis*). Cisco is boiled, crushed and dried in the sun, resulting in *corile*, a flour that can be stored for an extended period. It is eaten with fish oil and fresh berries. This flour is called *lullegul* or *yullegul*, which translates as ’smoky food’.

**PORSA**

Fish were dried in the open air until ‘half done’, care taken that it not be over-dried. Then the

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¹ (V) and (O) signify two Yukagir dialects: Valulskiy and Odulskiy.
Fish was deboned, cut into small pieces and fried in fish oil. After that the dish was put in a pouch or a barrel. The resulting product can be stored for a long time because of the way it is cooked, so it is also a popular food for hunters.

**ANIL KERILE** (V); **ANCHUU YIILEGUL** (O)

Scale fish and boil until half ‘done’. The broth is strained and the fish is dried in the sun, spread out on a special flooring. The fish is then crushed into the consistency of flour. This fish flour is stored in bags sewn from burbot skins. This dish is popular in winter when it is boiled in water, to which reindeer blood is added and cooked until ready. Add salt to taste.

**FISH GUTS**

Intestines of large fish are washed, cleaned and then boiled, and the resulting broth is strained out. Wild rose berries and fish oil are added to the boiled intestines and the mixture is poured into birch bark cups and frozen for winter storage. Thaw before use.

**FISH BELLIES**

Usually Arctic cisco is used for this dish. The fish is cleaned, gutted, and the belly is cut out and fried in fish oil, then dried and ground in a bowl. To the resulting mass, berries and crushed caviar are added, making a high-calorie and nutritious food.

**FISH PANCAKES**

Freshly caught fish is cleaned, gutted, washed in cold water and boiled. Then the bones are carefully removed and the fish is cut into small pieces. Add crushed caviar and salt to taste, mixing well into a smooth paste. Then mix with wheat flour, kneading into a strong dough from which you roll out flat pancakes. Fry on a low heat in a greased pan. Before serving, the pancake is cut or broken into pieces, and served with melted reindeer fat.

Traditionally, Beloribitsa (*Stenodus leucichthys*) was used to make a well-known Northern delicacy – *chahee*, better known as “stroga-*nina*”. Although this fish is now extinct in the wild, it can be made using other species. To prepare it, use a large white fish such as muksun, Arctic cisco, nelma or broad whitefish. Skin a freshly caught fish and immediately deep-freeze it. Once frozen, cut off its fins and tail and cut thin slices of the fish away from the body.
with a sharp knife. Slices of frozen fish without bones are eaten raw, and dipped into a mixture of salt and pepper.

Other tasty Yukagir fish recipes include Caviar juice, which is fresh caviar, usually from broad whitefish (Coregonus nasus), which is carefully crushed into a liquid state, and to which salt is added. This is stirred and cooled. Poured into cups, it is consumed as a soft drink. Al’gadal’alai is frozen fish liver cut into small cubes, eaten with salt. Coca are fish heads, which are eaten fresh and raw. Head cartilage is also considered as a special delicacy. Togorol is fish that has been cleaned and deboned, cut into pieces and slowly cooked in a frying pan with fish oil.

**CHUMUODODJE**

Chumuododje (smoked reindeer meat) is a popular dish from reindeer meat as it can be used while traveling and its long digestion time provides an enduring sensation of satiety. It can also be used for meat soup, the resulting broth being light, easy to digest and possessing a specific taste.

Cut the meat along the broad backbone sinews in lateral parts, and separate the meat carefully. Cut the meat in flat pieces and dry it in the sun until it has completely hardened. Then keep it over the fire and smoke in the chum. After a time, the meat is ready. Cut the smoked meat in pieces and serve with reindeer fat.
DUKHA:
HUNGUUN & THE WILD POTATO

BY BURMAA BATKHISHIH, KHOSCHIMEG BAYANDALAI, SARANTUYA GANBAT, BAYARMAGNAI GANBOLD, TSETSEGMAA GOMBO, UDVAL PUREVJAV, UUDUS ZOLZAYA, ZAGALMAA ZORIGT
The Dukha are a nomadic people whose traditional migration patterns have been disrupted by border closures in the 1920’s and are Mongolia’s only reindeer herders. Currently just over 200 live in the Mongolian taiga and their family based herding system comprises of herds of between 7 and 160 reindeer. Reindeer are used for milk production, transportation and more recently, antlers for handicrafts. Meat production is not a significant part of their reindeer husbandry.

Dukha move with their reindeer in the Eastern Sayan mountains, that mark the border between Mongolia and Siberia over an area of ca. 20,000 km² at elevations of between 1850 and 2100 meters. They mark the southerly boundary of indigenous reindeer husbandry and their animals are adapted to high summer temperatures of up to +40°C.

**HUNGUUN**

**Hunguun** is one of the traditional meals that Dukha people consume as part of their everyday diet and the dish has been passed down from generation to generation. The dish is favored for its health benefits, simple ingredients, and its portability during hunting and migration.

**Ingredients:**
Reindeer milk, flour, salt, and water.

**Preparation:**
Mix all the ingredients into a firm dough, forming it into a round shape with a hole in the middle, not unlike a large bagel.

**Method:**
Make a large fire, with lots of wood, in order to create a good supply of and ash. Place the round shaped dough into the ash and let it lie there, cooking for 30 minutes. Then turn it over and repeat on the other side for another 30 minutes. Remove from the ash and it is ready to eat immediately.

**THE WILD YELLOW POTATO**

The wild yellow potato grows in the forest and taiga regions with flower blossoms of a white or purple color. It starts growing in spring, and matures in autumn in mountainous areas and/or mountain slopes and is characterized by its bright crimson flowers. The wild potato is collected in autumn and is used in winter, spring and summer. Before rice and flour, it was an especially important source of carbohydrates. The wild yellow potato is divided into male and female potatoes. The male potato has a ball on the top of the stalk. It also has widely spread leaves on the top of the stalk, which can be used in a meal either dried or not. The wild yellow potato is said to prevent fatigue and help those who consume them live a longer life.

**Preparation**
1. Gather the wild yellow potato and clean.
2. Separate them from one another and boil them with water.
   If you decide to use it in winter, you will dry them in the sun for 3-5 days.
Wild yellow potatoes can be used with the following meals: Soups, fried vegetables, dumplings and mashed with milk.
**SOUP WITH WILD YELLOW POTATO**
1. Any kind of meat can be used; reindeer, boar, deer, moose, sheep and goat etc.
2. Wild yellow potatoes - 500-700g
3. Salt
4. Wild onion

Boil all the ingredients together until cooked. Add salt or seasoning to taste.

**FRIED NOODLES WITH WILD YELLOW POTATOES**
1. Wild yellow potatoes, dried or not dried, 1-2 kgs
2. Any type of meat 800 grams
3. Salt
4. Wild onions
5. Water

Steam the wild potatoes for 20-25 minutes together with the meat, then add your homemade noodles and steam for another 15-20 minutes. Once done, add 4 tablespoons of vegetable oil or any kind of cooking oil to add some more flavor. Mix all the ingredients together in the hot pan.

**FRIED FLAT DUMPLINGS WITH WILD YELLOW POTATOES**
1. Wild potatoes
2. Rice
3. Salt
4. Wild onions
5. Sunflower oil
6. Piece of fat

Steam the wild potatoes for 20-25 minutes and then mix with rice. Then making a firm dough, make a flat dumpling and fry it in the sunflower oil in the pan on a low flame on both sides.

**MASHED WILD POTATOES WITH MILK**
There are two ways to cook wild potatoes with milk: steamed or fried in the fire.

*Method 1*
1. Wild potatoes
2. Milk

Steam the wild potatoes for 20-25 minutes and then mix and mash with milk

*Method 2*
1. Steam the wild potatoes for 20-25 minutes
2. Then fry them under the ash in the fire
Thoroughly clean the ash from the potatoes and eat.
Rinsing Seal. Photo: Provided by Cyrus «Naunqaq» Harris, Maniilaq Association
INUIT ALASKA:
TUTTU, MIPKUQ, UGRUK, TUNUQ AKUTAQ

BY EILENE ADAMS, SONITA CLEVELAND, CYRUS «NAUNĞAQ» HARRIS, SANDY TAHBONE AND MARJORIE TAHBONE.
INTRODUCTION BY INUIT CIRCUMPOLAR COUNCIL ALASKA
Food is the center of Inuit culture and takes years of education to learn how to obtain and prepare. Many points have to be included when considering our foods – the passage of our Indigenous Knowledge, physical, mental and regulatory accessibility to foods, weather conditions, timing of gathering and preparation, funding for equipment and fuel, sharing, language, social networks, and respect are just a few (ICC Alaska. 2015).

Our foods and recipes are a connection from past to present. As one of the authors points out, it is not possible to sum up all that is involved in food preparation in a single recipe. However, we hope the below recipes (our Indigenous Knowledge) will provide you with a sense of our niqipiaq/neqpiat (real food: Inupiaq/Yup’ik). Referred to as Inuit internationally, Inupiat, Saint Lawrence Island Yup’ik, Yup’ik and Cup’ik make up four Inuit regions within Alaska (see figure 1). A recipe has been provided from each of these regions, by Eileen Adams (North Slope), Cyrus Harris (Northwest Arctic), Sandy and Marjorie Tahbone (Bering Strait) and Sonita Cleveland (Yukon-Kuskokwim).

**TUTTU (CARIBOU) SOUP**
*By Eileen Adams, Barrow, Alaska*

*Tuttu* soup is a favorite dish of all ages. People have been eating *Tuttu* soup for as long as we know. We all grew up eating Aaka’s (grandma’s) *Tuttu* soup daily – whenever caribou is available. We like to hunt caribou in the fall, when they have more fat. Caribou brings both physical and mental health to our people – we have learned to use all parts of the caribou for survival. This is part of our value system and how we respect our environment. All parts of the caribou are used for food, clothing and tools. Antlers are used to make tools, sinew is used to make boots and even as dental floss, the stomach lining is used to water proof boots, gloves and other clothing items. Today we include ingredients that are bought from the store, such as flour. But it does not have to be made with flour and at one time no one used flour.

**Ingredients:**
Caribou meat (brisket and hind quarter are preferable, but any caribou meat will work), 1 cup of rice, ½ cup of flour, one onion.

Boil caribou meat until tender - add rice, onion and cook for about ten minutes. Next add flour and cook another ten minutes. Some people like to also add noodles, potatoes, carrots or other vegetables.

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1 The Inuit Circumpolar Council uses the term Indigenous Knowledge as opposed to Traditional Knowledge. However the term is applied to the same definition as developed by the Arctic Council Permanent Participant Ottawa Traditional Knowledge Principles. The Alaska Inuit and Inuit Circumpolar Council Alaska authors of this section therefore use the term Indigenous Knowledge in this chapter.
**MIPKUQ (BLACK MEAT IN SEAL OIL)**  
– «Iñupiat Soul Food»

*Provided by Cyrus «Naunpga» Harris,  
Maniilaq Association*

*Mipkuq* is dried *ugruk* (bearded seal) meat preserved in seal oil, and for thousands of years it has been essential to the diet of Iñupiat. *Mipkuq* perfectly suits the Arctic region. It provides a source of energy-dense lean protein, packed with heart healthy omega-3 fatty acids, and has a long shelf life that provides Iñupiat nourishment throughout the harsh winter or, in the early days, when other foods were not readily available.

In the summer, when land fast ice is gone and there are offshore ice floes, teams of hunters harvest several adult *ugruk* on the sea ice and bring them back to camp. Adult *ugruk* grow 7–8 feet (2.0–2.5 m) in length and weigh 575–800 pounds (260–360 kg), which requires teamwork to transport and process. Delicious, nutritious and energy-dense, *Mipkuq* is highly sought after and present at nearly every meal and shared or traded with friends and extended family. It is used as a side dish, dipping sauce, or ingredient for other types of *niqipaqt* (real food).

In addition to physically sustaining Iñupiat people, *Mipkuq* also sustains Iñupiat spirituality. Traditional Iñupiat stories have called for the hunter to fill their mouth with seawater, which is then transferred into the mouth of the captured *ugruk* to return their spirit back to the wild. This practice was said to bring good fortune in future ugruk harvests for generations to come. It is also customary to give the season’s first catch to an elder as a sign of respect and gratitude. This reflects the Iñupiat *Ilitqusiat* (values) and sense of community associated with preparing, sharing, and consuming *niqipaqt* foods such as *Mipkuq*.

**MIPKUQ (BLACK MEAT IN SEAL OIL)**

*Ingredients:*
- Front straps, back straps and blubber from one adult *ugruk*

*Equipment:*
- Knives/Ulu/Gaff
- Flat cutting board (for butchering the ugruk)
- *Iññisaq* (meat drying rack)
- *Qavrak* board (a board for separating blubber from skin)
- 30 gallon rendering bucket
- Breathable cover for rendering bucket (game bag, cheesecloth, etc.)
- 4 ft. debarked spruce stirring stick
- Pot (for boiling meat)
- 5 gallon buckets for *Mipkuq* storage

Harvest, gut, and rinse the *ugruk*. Once the cleaned *ugruk* is hauled to camp, place it on a flat cutting board and remove the skin/blubber from around the seal meat. Let the skin/blubber lay out on the cutting board overnight to dry. Carefully trim any additional meat attached to the blubber so that the blubber is clean. Separate the blubber from the skin (*qavrak*) using the *qavrak* board, and cut blubber into 1” x 3” looped strips. Trim and discard low quality blubber where blood has soaked into the blubber. Place good quality blubber strips in the 30 gallon rendering bucket, and cover with a breathable covering to allow for air exchange and to protect from insects. Closely monitor and stir the blubber/oil at least two times per day and let the oil render at ambient outdoor Arctic temperatures (~ 60°F or 16°C) in a protected area away from dust and rain. Oil rendering times can vary, with an approximate rendering time between one to two weeks. In the old days, blubber strips would traditionally be rendered within the intact seal skin hide called a seal ‘poke’.
The black meat is made from the seal front and back straps. To prepare the black meat, hang the harvested ugruk meat to dry in the iññisaq for two to three days. This allows the meat to form a dry outer layer and develop a black color that indicates a taste that is not overly «gamey» or «fishy». The back straps are then filleted into an approximately 1/2” thick continuous blanket of meat and hung in the iññisaq to dry. Each day throughout the Mipkuq making process, the back strap meat blanket is monitored and turned over daily. For the front straps, after the initial 2-3 day drying period, they are cut into long 1” thick strips and hung back up to dry. Once the front strap strips reach 50% dryness, those strips are boiled in a large pot of water for approximately 15 minutes. After cooking, re-hang the cooked front strap strips in the iññisaq to dry for several more days.

Once the cooked front strap strips and back straps have dried sufficiently, remove the black meat from the iññisaq and cut it into serving size portions (about 4 inches in length). Evenly distribute the black meat portions among 5 gallon buckets filled with the freshly rendered seal oil. The fresh Mipkuq is stored in a sigluaq, or underground cooler, for 3-7 days to give the black meat time to absorb the oil. Once the Mipkuq is good, it is stored in the freezer. The last step in the process is to feed your Inupiat soul and enjoy your fresh Mipkuq with family, friends, and community members!

The Maniilaq Association is currently working on a collaborative project to establish a regulatory approved process to make Mipkuq and routinely serve it to elders at our long-term care center.
THE BEAUTIFULLY SIMPLE WAY TO PREPARE UGRUK (BEARDED SEAL)

By Sandy and Marjorie Tahbone, Nome, Alaska

It is rare (this day and age) that I will get fresh seal meat other than in spring; which is the time when many seals are harvested in our community and the majority of the meat is dried and stored in seal oil with rendered blubber. And having fresh boiled seal meat, blubber, and intestines is mouth-watering and I look forward to preparing this dish every spring.

It is rather difficult, for me to explain how to cook native food. It is not like you can go to the store and pick up a few pounds of meat and intestines and they are ready to cook. If this were the case, I would say perhaps for 4 servings you would need 4 pounds of rib meat for boiling, 2 pounds of blubber, and a yard of guts! Knowledge gained through years of processing is hard, for me, to pass on in written form and trying to do it using very few words makes it more difficult. I have given directions for a person who has knowledge about processing bearded seal.

Ingredients:
Seal meat, Seal blubber, Seal Intestines, Onion, Potatoes (optional), Salt, Water

This dish is prepared by slowly or gently boiling the meat, blubber, and intestines. The meat does not take that long to cook and is preferred medium to rare, but is okay to cook well done; so you will remove meat when done and continue cooking the blubber and intestines. The portions depend on how many people you are going to feed, so you will need to use your own judgment and common sense by adding more or less of the ingredients.

When I am processing bearded seal in the spring for dry meat I dry the meat with no blubber on the meat taking the time to get every bit of fat off the meat before I hang it for drying; and save the meat that is hard to remove fat for cooking (the flap of meat that covers the ribs). I also save the ribs for cooking as well, especially if the seal is young and fat runs through the rib meat and is not good for drying. I prepare the intestines for cooking by first running water through the entire intestine for the initial cleaning then cutting them into two foot sections and turning them inside out for final cleaning. After the intestines are cleaned I cut them into 6-8 inch pieces for cooking. Prepare the blubber by removing it from the hide and if the blubber has been exposed to air for a time you will need to remove the top and cut it into 1-inch wide and 6-inch long sections for cooking.

Cooking time for bearded seal meat is short not like cooking walrus. You can either use fresh or frozen seal meat, blubber and intestines. Prepare seal meat, blubber, and intestines as described above. Chop onions and quarter the potatoes. Put all ingredients in a pot and cover with water. Boil slowly, taking the meat out when desired rare/medium/etc. Continue cooking until the potatoes are cooked (fork tender). Take everything out of the pot and put on a serving platter. Serve the broth in cups and enjoy with some fresh spring greens in seal oil.
TUNUQ (ANIMAL FAT) AKUTAQ

By Sonita Cleveland, Quinhagak, Alaska

There are many ways to make akutaq. My favorite is tunuq akutaq because it is something different and provides a gamey taste that other types of akutaq do not. We eat it often and many grow up eating different types of akutaq. I watched my grandma make akutaq and she taught me how to make it. As my grandma taught me she always told me food shouldn’t be wasted: if we have it, it should be eaten. Now when I make it, it is like I am not doing it by myself. My entire family likes tunuq akutaq and so we eat it often.

We mostly make tunuq akutaq around the fall when we go moose hunting. If there is enough fat, we store it to make food, such as akutaq.

Making tunuq akutaq begins with rendering the tunuq. When we first get the moose or caribou or reindeer, we cut the pieces of moose or reindeer fat into small chunks, and we lay them across a baking sheet or cake sheet and bake for 2 to 3 hours at around 250 F, until it is rendered. When it is rendered, we take it out and pour it into another baking sheet and let that harden. Then we break it into chunks with an uluaq and freeze them and wrap them in foil, saran wrap, or ziploc bags and put in the freezer. When it is time to make akutaq the tunuq is taken from the freezer and melted or if the tunuq is fresh, we can render some to use. Some people melt the tunuq in a frying pan. I don’t like the slightly burnt taste it that a frying pan gives and so we put chunks of fat in a big cake pan and bake it on a low heat for a few hours.

From spring to fall, we collect different berries to store. For this recipe, we often use blackberries or cranberries. Every time we want tunuq akutaq, we just take some berries and tunuq out of the freezer.

Ingredients:
1 cup sugar – melted
1 ½ Crisco
1 ½ tunuq
3 cups of berries

I like to use equal amounts of Crisco and rendered fat, a hand full sugar, and berries. First, whip up the sugar and Crisco until it is blended by hand, pour in the melted rendered tunuq and keep mixing. Lastly, add the berries. While mixing all of the ingredients together, the akutaq begins to stiffen – this is when it is ready to eat. Sometimes people put in white fish. We boil the white fish first, take bones out, lay it across a cookie sheet – or just use it. Chum salmon or halibut is sometimes used in place of white fish.

Many people today make akutaq with only Crisco although this was not the case long ago, as people did use Crisco or sugar. I prefer tunuq akutaq over Crisco akutaq because it keeps us full and has a better flavor. Akutaq is nutritious, despite the Crisco – these are natural oils and it is our organic food. When going out to get wood or fish, grandma always told me to taquaq (take food with) such as dried fish and akutaq to keep you warm, full, and to have energy.

The older people we invite, like the elders, really like it when we make them tunuq akutaq. It is a rare treat for them and many say, ‘I remember my mom making this when I was younger.’ I know by eating it, it will give them memories of when they were younger. I am named after my grandma’s mom. When my uncle had the akutaq that my grandma had taught me to make, he said, ‘you take after your name sake.’ This is part of our knowledge passing through our generations. Unfortunately, many of the younger generation do not know how to make tunuq akutaq. As I get older, I will teach the younger generations.
Canada’s only reindeer herd, Inuvik, Mackenzie Delta, Northwest Territories. Photo: Peggy Jay.
INUVIALUIT / SÁMI: BACKBONE SOUP

BY LLOYD BINDER
BACKBONE SOUP

In the early 1900s, the Inuvialuit of the Mackenzie Delta faced desperate times due to fluctuations in the caribou herds and their migration patterns. In order to stave off famine, the United States and Canadian governments joined together to launch the Alaskan Reindeer Experiment and the Canadian Reindeer project which sought to mitigate food shortages by importing reindeer and Sámi herders from Scandinavia, whose job was to teach the Inuvialuit herding techniques.

A favorite meal of ours but an often overlooked recipe is made from the spine, or backbone of a reindeer or caribou. When deboned from rump to neck - but not too carefully: leave some meat on the bones - a lot of nourishment remains. The broth is loved by the young, the ill and the elderly. The meat is of course great for ‘picking at’.

Cut the carcass remains into serving portions or smaller and place in a heavy crock-pot. Add water to almost cover the meat bones and add 1 cup of dehydrated vegetables per 5 cups of water. Bring to a boil and then simmer for 4-6 hours depending how tender you prefer the meat. You can pull the meat off the bones before serving with the broth, making sure that no bone chips remain. You can freeze the broth or single-meal-sized portions for your elders and neighbors and for quick lunches. The recipe can be easily made in a pressure cooker set to run for 1-1/2 to 2 hours. If you allow the full pot to cool, you can skim off some of the fat that hardens on the top, which can then be used for frying. People with stomach problems may also prefer a leaner serving.
CARIBOU MEAT GRAVY

by Chantal Gruben

My name is Chantal Gruben; I’m from Tuktoyaktuk, Northwest Territories, in Canada. My grandparent’s adopted me when I was 2 years old. I’ve learned from them to prepare some of our traditional foods.

I chose this dish because, long ago when my mother was a child, her family didn’t have rice or soup mix but, her mother always made sure they had flour to make bread. So, they used the flour and water to fry with the meat and made it as caribou meat gravy. My mother also remembers that, her mother even used to make this dish with seal.

I was recently in Kautokeino, Norway for an EALLU traditional foods workshop and had a fantastic experience. It was amazing to learn about a lot of the other traditional knowledges around the world and leave Canada for the very first time. I met some very nice friends and I couldn’t have been happier with what I have experienced, and the hospitality I received. I am honored to present to you my recipe for this cookbook. Enjoy!

2-4 Servings

Brown diced up caribou meat on medium heat with oil

Stir in 1 handful of flour, add 1 cup of water, and desired spices or soup mix
Bring to boil, stirring occasionally.
Remove from heat and gravy will thicken as it stands.

Serve with homemade bread.
Josephine Shangin cleaning seal intestine in Unalaska. Pic: Qawalangin Tribal Council for the Qawalangin Tribe of Unalaska
ALEUT: TRADITIONAL UNANGAN/UNANGAS (ALEUT) FOOD

BY SUANNE UNGER

SUBSISTENCE IS SUSTENANCE FOR THE LIFE
The Aleutian and Pribilof islands are home to an abundance of foods from the sea and land. Traditional Unanga-n/s foods, harvested from the land and sea, are an essential part of Unanga-n/s culture and livelihood and have been for thousands of years. Unanga-n/s have survived off of these foods for centuries and continue to harvest and prepare many of these foods today.

The Unanga-n/s traditional diet historically depended on foods from the sea; seal, sea lion, whale, fish and tidal foods provided the majority of nutrients in the diet. Birds, plants, caribou, and later reindeer in some communities, were also important sources of food. All of these foods continue to be used today and are supplemented with store-bought foods. The recipes have changed dramatically over the years with the increased availability of store foods and the influence of different cultures.

**BRAIDED SEAL INTESTINE**

The intestine of seal is referred to as an’gi (E) or chidgi (E) / an’gi (A) in Unangam tunuu. Seal intestine was one of the resources used in the past for making the hooded parka, or chigda (E). As a food item, the intestines of the seal can be used to prepare “braided seal gut” or An’gim chikuğan kiichkağii (E), an’gim amağii (A). Seal gut is usually braided by women, however few people know how to do it today. The gut from a small young seal, one to one and a half years old, is best to use

«One of the other key important aspects of harvesting of traditional foods and sharing in the villages is that it helps to keep the communities, and individuals and families together through extended family feasts, through community celebrations. Having traditional foods in these kinds of gatherings are so important in keeping people together as a community and as extended family»
for braiding because it is easier to handle and clean and it’s not as stringy as an older seal. It can be braided and stuffed with any parts of the seal, such as the heart, lungs, or kidney, but is typically braided with the fat [Atka]. Once the braided gut has been prepared, it is boiled, cooled, and then eaten with mustard.

Lucy Kenezuroff learned how to braid seal gut from her dad, John Nevzuroff. Lucy was born in 1930 in King Cove to Annie Galishoff, and then moved to Belkofski. She came from a family of 13 kids. «I used to watch my dad braid seal gut. One time I was sitting out on the porch, my dad had strings all lined up to tie, to use for foxes and stuff. I took some of them strings, sit down and was putting them around my finger. That’s how I taught myself to braid seal gut. Using a rope».

Lucy’s braided seal gut recipe has two ingredients: a cleaned gut of seal and seal fat, cut into strips. The end of the seal gut must be split open and scraped out until it is clean. This takes a lot of work. After it has been scraped, Lucy soaks the gut in salt water and continues to stir it and clean it further. Her parents used to get water out of the bay to soak the gut. The gut gets soaked in salt water for a day or two. Lucy cuts the fat into strips and stuffs it in the gut while she is braiding it. The fat helps keep the gut soft. After she is done braiding, she cuts the braided intestine into three pieces, each about a foot long, to cook it. It is then cooked in boiling water for about an hour, or until it is tender. She likes to eat it right after it is done cooking with some plain rice: «I don’t wait till it gets cold. I always dive in when it’s hot... it’s a real tender meat...it almost tastes like corned beef in a way.» While Lucy prefers to eat seal gut warm, some others prefer eating it cold with mustard.

**JELLED MEAT – STUUDINA\textsuperscript{\textregistered} (E/A)**

Considered a delicacy by the Unanga-n/s, sea lion flippers can be cooked, fermented, or boiled and made into a dish called *stuudina\textsuperscript{\textregistered} (E/A).* *Stuudina\textsuperscript{\textregistered} (E/A)* is a variation of head cheese, or meat jelly, that uses the natural gelatin found in the bones and cartilage of the flippers to gel. In the past, flippers were sometimes cooked until they came apart. When cooled they were sliced and eaten with potatoes, onions, other vegetables, bread, salt, pepper, and mustard. Some people ferment the flipper in a paper bag for up to ten days until the skin gets loose. Then, it is eaten right away or preserved in salt or frozen.
JELLIED MEAT – STUUDINAĤ (E/A)

Recipe by: Mary Bourdukofsky, St. Paul Island, 2009
(Quoted in Unger 2014)

Ingredients
2 sea lion flippers
2 onions, chopped
3 carrots, chopped
1 teaspoon garlic, minced
3 tablespoons Worcestershire
Johnny salt, small amount (if needed)
1-6 tablespoons vinegar, to taste
2 tablespoons chicken bouillon
8 packages gelatin
4 dill pickles, chopped
1 can olives, sliced (green or black)
6 boiled eggs, sliced
Salt and pepper, to taste

Directions
Cut the sea lion flippers at the joints and soak in water 1-3 days. After the flippers have soaked, place in pot and cover with water. Bring pot to a boil, and boil for a couple of hours. After it has cooked, remove the bones. Chop the remaining meat by hand or carefully with a food processor so you don’t produce a paste.

Place chopped flipper, onions, carrots, vinegar, chicken bouillon, and spices into a pot and add an amount of water that is equal to the mixture (for example, if the mixture is 2 inches high in pan, add 2 inches of water). Bring to boil and boil for ½ hour. Remove from stove and add pickles and olives. Add gelatin and stir to dissolve.

Tip: Mary’s mom never used gelatin to make stuudinaĥ (E/A), however, Mary feels that the gelatin helps bring the oil out of the stuudinaĥ (E/A) and makes it less oily.

Pour mixture into 6 small bread pans making sure to leave room on the top for the sliced eggs. Take a paper towel and remove any oil that comes to the surface in each of your pans. When the paper towel no longer absorbs oil, gently press sliced eggs on top before mixture gels completely. Slice and eat with bread as a sandwich. Serve with vinegar, Worcestershire, or steak sauce.

UNANGAN/UNANGAS VALUES:

Value of the Unanga-n/s: Help others – Agitaasiin sismida (E)/Anĝaĝinas kiduda (A) (ANKN, 2006).

«The whole thing about hunting and being a hunter in the community is that we provide a very useful food diet for people who grew up on it, a lot of elders. A lot of them nowadays can’t eat it but they really enjoy seeing it maybe and tasting a little bit of it and knowing that this kind of tradition of hunting sea lion and seal has not been forgotten. I’m trying to instill that on my boys.»


Value of the Unanga-n/s: Do not do anything to excess- Manachin ilam axtalakan agliisaachin (E) / Anaĝis mal agumis ilam axtalagada (A).

«For hunting and fishing the elders told me not to kill or take anything that I do not need. They asked me to control the wildlife. They never wasted anything that is edible.»

– Nick Golodoff, Atka, 2012 (Quoted in Unger 2014).
GWICH’IN: CARIBOU ARE HALF OUR HEART

BY JACEY FIRTH-HAGEN
Gwich’in are Indigenous Athabaskan Dene peoples who have inhabited the areas of the interior region of Alaska in the U.S.A, and the Northern Yukon, and Inuvik Region of the Northwest Territories, Canada; since time immemorial. Gwich’in are commonly referred to as just Gwich’in due to the English translation being «The people of a certain area», so saying, «the Gwich’in people» would be similar to saying «the people» twice. Gwich’in are also known as Dinjii Zhuh, which refers to a person as a whole, rather than the area in which they inhabit. Gwich’in are known by many different names including ‘the caribou people’. Today, Gwich’in are settled in 11 different communities and ten different bands across northern Alaska and Canada, still to this day practicing ancestral traditions such as hunting, fishing, trapping, moose hide tanning, and sewing. The land, animals, language, and culture are very important to us with many different organizations and initiatives aimed towards autonomy.

The Gwich’in language is considered critically endangered as approximately out of 9,000 or so Gwich’in, only 500 people still speak the language. Although the Gwich’in language is taught in the primary and secondary school system, the number of language speakers continues to decline. Organizations that exist to combat language decline include the Gwich’in Social and Cultural Institute, the Gwich’in Language Revival Campaign #SpeakGwichinToMe, and the Yukon and Alaska Native Language Centers.

As a young girl I travelled throughout the land with my father learning about the importance of the caribou (vadzaih), being taught how to identify animal tracks and different food sources of the caribou and being taught stories and proverbs. One such is a rite of passage for manhood in Gwich’in culture, is when a boy hunts his first caribou, which then must be given away and shared with community members, specifically elders. Another is that half of our Gwich’in heart is that of a caribou, as our reliance on the animal is so large, that we cannot exist without them. Gwich’in were originally a semi-nomadic people, following the caribou, which we depended on for food, shelter, clothing, tools, and weapons. My aunty vividly remembers living on the land with her grandparents for months at a time and all of her clothing being made out of caribou hides, from her shirt to her jacket to her pants, and even her toboggan, and watching her grandfather make snowshoes from caribou sinew and willows.

Other animals and plants harvested for Gwich’in sustenance were and still are big game such as moose, waterfowl such as ducks, geese and swans, as well as small game like ptarmigans, rabbits, and grouse, including an abundance of beloved berries such as cranberries, blueberries, and cloudberries. No part of an animal is ever to be wasted and there is to be no disrespect when it comes to harvesting and handling an animal, including when it comes to the care of the land.

The decline of the caribou due to over-hunting, climate change, mining exploration and development, inefficiency and or absence of harvest management and land-use planning, are all grave threats to the survival of the caribou, and therefore also to us Gwich’in. Critical calving grounds inside the Arctic National Wildlife Refuge are threatened by development in Alaska.

Different caribou dishes loved and enjoyed include caribou marrow, ribs, heart, intestines, soup, stew, and dry meat (nilii gaih). Two different recipes that I would like to share are itsuu (pemmican) and nilii gaih (dry meat).
I have chosen these two dishes for their cultural and personal significance. *Itsuu* is traditionally a ceremonial dish, gifted during a period of mourning and *nilii gaih* is a personal favorite of mine, prized for its taste and unique flavor. Both dishes are prepared seasonally by either men or women, and predate flour. They are also favored due to their convenience when travelling long distances.

*Itsuu* is more commonly known by the Cree word ‘pemmican’ and is a traditional Gwich’in ceremonial dish. *Itsuu* is a sweet tasting and filling comfort food and the animal fat in the dish is very sustaining. Traditionally, *Itsuu* is made with frozen caribou fat mixed with left over caribou dry meat with local berries. A contemporary way to make *itsuu* is with boiled caribou meat, grounded up with added sugar and berries with melted margarine then formed into meatballs and frozen.

A story that I have about *itsuu* is when my uncle’s common-law partner passed away, my father gifted him *itsuu* and this was one of my first traditional Gwich’in teachings.

*Nilii gaih*, or dry meat is another beloved delicacy made by slicing any wild meat (specifically caribou meat) very thinly and then drying it on a rack, turning it over periodically. Some people prefer to pound the meat to make it softer.
ATHABASKAN: MOOSE BLOOD AND DRY MEAT SOUPS

BY KARRIE BROWN
The Athabaskan peoples, residing in Arctic and sub-Arctic Alaska, U.S.A., and the Yukon Territory and Northwest Territories of Canada have traditionally occupied a vast geographic area of approximately 3 million square kilometers. This enormous region has been continuously occupied by Athabaskan peoples for at least 10,000 years and includes three of North America’s largest river systems (Mackenzie, Yukon and Churchill Rivers). It also includes large areas of both tundra (barren lands) and taiga (boreal forest) as well as North America’s highest mountains (Mount McKinley and Mount Logan) and the world’s largest non-polar ice field (St. Elias Mountains). The southeastern boundary of the Arctic Athabaskan peoples’ traditional territories includes portions of provincial northern Canada.

The ancestors of contemporary Athabaskan peoples were semi-nomadic hunters. The staples of Athabaskan life are caribou, moose, beaver, rabbits and fish. Athabaskan peoples today continue to enjoy their traditional practices and diet.

Except for south-central Alaska (Tanana and Eyak) and the Hudson Bay (Chipweyan), Athabaskan peoples are predominately inland taiga and tundra dwellers. Collectively, the Arctic Athabaskan peoples share 23 distinct language and live in communities as far flung as Tanana, Alaska and Tadoule Lake, northern Manitoba, nearly 5400 kilometers apart.

Shäkat is the Southern Tutchone name for summer, harvesting season. This was an annual activity I did with my Grandparents, gathering a vast list of traditional food from the land for the long winter ahead. Starting in mid July through to September we fished for salmon, picked berries, and hunted for moose, which we call Kanday. This was a major food supply

Moose hunt. The authors grandmother, Audrey Brown and cousin, Matthew Brown. Photos: Karrie Brown
for the Dän, the people. Before my time all the food was gathered, and this was about survival for your family as there were no grocery stores in the days of my great-grandparents.

Most times it would just be me and my grandfather together out hunting. Skinning and cutting 1000 pounds of moose meat was a lot of work for just the two of us. He always had stories that had important lessons for me. He talked highly of his father and how they would be traveling a long way on foot in the cold weather, and to warm up they would drink moose blood soup. Taking several hours to skin and pack up we were usually home at night and grandma would be worried about us. After hanging the meat for a full day it was time to process and make cuts and dried meat. I always asked my grandma to retell me the story of when her family went through a hard time. Her father had been gone one week following moose tracks and her mom and four other siblings had been harvesting squirrels for food. They were very lucky that a moose circled back close to the cabin. Moose blood soup and dry meat soup were always my favored meal growing up and I cook them often in return for my grandparents.

**KANDAY DÄL TADHÄL — MOOSE BLOOD SOUP**

Add moose blood to 4 cups of boiling water  
Take moose fat and fry  
Add fat and grease to the soup  
Add few TBLS of flour if you like to thicken  
Boil 40 min  
Stir often

**ÄTHANÄGÄN TADHÄL — DRY MEAT SOUP**

Soak dry moose meat in water over night  
Take moose fat and fry  
Boil 40 minutes  
Add rice and onion for flavor.
The author’s grandmother, Audrey Brown, butchers a moose. Photo: Karrie Brown
APPENDICES

Notes on the Authors

Adams, Eilene (Iñupiat). Eilene is Iñupiat from Barrow, Alaska. Eilene has learned Indigenous Knowledge from her families and communities all her life. Today, her family continues to collect, process and consume their traditional foods.

Antipina, Elena. Director of the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia.

Avelova, Svetlana (Evenki) Svetlana is from a reindeer herding family, living in the village of Khatsytry, in the Republic of Sakha (Yakutia). She completed her postgraduate studies in the Evenki language at the Institute of the Peoples of the North at the Herzen State Pedagogical University. She is currently working for the International Centre for Reindeer Husbandry.

Avevkhay, Roksana (Koryak) comes from the village of Verkhny-Paren’ in the Magadan region, in the Russian Far East. She is a second-year student at the Bachelor program of Education and Native Languages in the Institute of the Peoples of the North at the Herzen State Pedagogical University in St.Petersburg. Roksana is very keen on science and research work and in the future would like to work in academia. In her free time Roksana likes to make traditional handicrafts, namely beading and embroidery.

Batkhishih, Burmaa (Dukha) was born in the Tsagaannuur soum center of Khuvsgul province of the Northern Mongolia. She is married to a reindeer herder and lived in the East Taiga as a reindeer herder before she became a student at Mongolian University of Agriculture in Ulaanbaatar majoring in Economics.

Bayandalai, Khoschimeg (Dukha) was born in the Tsagaannuur soum center of Khuvsgul province of the Northern Mongolia. She is from a reindeer herding family who lives in the West Taiga of the Khuvsgul province. Both of her parents are famous reindeer herders who own the largest herd in the region. Khoschimeg is a 3rd year student at the Kindergarten teacher’s school in the Mongolian University of Education in Ulaanbaatar.

Binder, Lloyd (Inuvialuit, Sámi) is the owner of Canada’s only reindeer herd and is a descendent of the first Sámi family that made the journey to Canada over 80 years ago, as part of a US and Canadian program designed to alleviate hunger. Binder lives in Inuvik, NWT.

Bolotaeva, Olesya (Koryak) was born in the North East of the Kamchatka region in the small village of Achayvayam (in Koryak language - Echg‘eyvezem ‘river without sand’), in the Olyutorsk district. Olesya comes from a hereditary family of reindeer herders - Kekket and K’oyan’. At the behest of her grandmother K’oyan’, Olesya entered the Institute of the Peoples of the North at the Herzen State Pedagogical University in St.Petersburg and after graduation began working in the same institution. Currently she is a teacher and an Associate Professor of Paleo-Asiatic languages, folklore and literature. Since 1993 she has taken part in the folk theater-studio Northern Lights, performing the music and dance of Indigenous Peoples of the North, Siberia and Far East of Russia.

Buljo, Máret Rávdná (Sámi). Máret was born and raised in Guovdageaidnu, Norway. She has been living in Nordland for the last 11 years, with her husband and three children. Her daily life is based on all the elements of reindeer herding: her family, traditional foods, handicrafts and reindeer.

Burgess, Philip. Born and raised in Ireland, Philip has been working for the International Centre for Reindeer Husbandry since 2006. With a Masters in Arctic Studies from the University of Lapland, Finland, he has a passion for the Arctic and exploring how best to outreach the work of ICR in word, image and film.

Brown, Karrie (Champagne Aishihik). Karrie Brown lives in Haines Junction Yukon, Canada with her partner Zachary and son Cashis. Living and growing up with her grandparents Audrey and Fred Brown who were very active on the land and always taking Karrie along with them, she learned the landscape of her country and what the plants and animals provided for food. Fishing for salmon and making dry fish from the Yukon River in the summer, picking a variety of plants and berries, her favorite was Moss berries, and collecting tree sap and juniper bush. Karrie is very familiar with the trap line she inherited from Fred. As a kid most weekends in the winter were spent with her grandma Fred skidoosing the line, cutting trails, setting conibear traps and camping at the cabins her grandpa built before she was born. Many times it would be just her and her grandpa skinning and packing up a moose to take back to the family. Currently Karrie works a seasonal position with Parks Canada as a Renewable Resource Technician. During the winter she is working slowly on getting her trap line up and active like her grandpa. Karrie spends a lot of time beading and making Mukluks, skills she learned from her Grandmother Audrey at the age of five, she is very thankful such an amazing skill was passed down to her.
Cheboksarova, Vera (Yukagir). Vera was born in the village of Zyrianka, Verkhneolomskyi district in the Republic of Sakha (Yakutia). She graduated from the Institute of the Peoples of the North at the Herzen State Pedagogical University in 1999 with specialization “Preschool pedagogy and psychology” with an additional qualification in “Philology” and as teacher of the Yukagir language. Since 2005 she has worked at Herzen as a teaching assistant at the Department of Paleo-Asian languages, folklore and literature. Her scientific interests include word creation, lexicon and lexicology, phonetics of the Yukagir language, language nomination, folklore of the peoples of the North, and literature of the peoples of the North. Vera has 20 scientific publications including 3 educational methodologies. The subjects of her scientific work correspond to the main scientific direction of the Institute of the Peoples of the North and the profile of the department.

Chernyshova, Svetlana (Even). Svetlana was born in the village of Kiperveem, Bilibino district in the Magadan region. She graduated from the Anadyr Pedagogical School in 1995, and from the Institute of the Peoples of the North at the Institute of the Peoples of the North at the Herzen State Pedagogical University in 2000. With a PhD in Cultural Studies, Svetlana is also an Associate Professor of the Department of Ethnoculturology at Institute of the Peoples of the North at the Herzen State Pedagogical University Herzen State Pedagogical University. Svetlana’s cultural, educational and research activities are connected with the identification and study of the status, peculiarities and manifestation of traditional culture, and the popularization of traditional artistic cultures and folklore of the indigenous peoples of the North, Siberia and the Far East. Svetlana is particularly interested in cultural and environmental activities aimed at developing relevant mechanisms for maintaining and preserving the unique cultural values and traditions of indigenous northern peoples.

Chuprina, Anna (Dolgan). Anna is a third year student in the Bachelor program in Culture at the Institute of the Peoples of the North at the Herzen State Pedagogical University. Anna was born into a family of reindeer herders in the Popigai village of Taimyr (Dolgan-Nenets) in the Municipal District of the Krasnoyarsk Krai.

Chuprina, Evgenia (Dolgan). Evgenia was born in the settlement of Sydysko in the Taimyr (Dolgoano-Nenets) municipal district in 1988. She spent all of her childhood in the tundra in a reindeer herding family with her grandparents. Today she is a student at the Taimyr College in village of Dudinka at the health care department. She also works in the Taimyr interregional hospital.

Cleveland, Sonita (Yup’ik). Sonita is a Yup’ik Indigenous knowledge holder from Quinhagak, Alaska, traditionally spelled Kuinerraq in Yup’ik. She was raised by her mother Katherine Cleveland and her grandma Annie Cleveland. Sonita learned to prepare and cook Yup’ik foods throughout her lifetime of helping her mom and grandma, embodying how Indigenous Knowledge passes on from generation to generation. Sonita enjoys fishing, gathering greens, berries, and foods from the land, and living the traditional Yup’ik lifestyle.

Degteva, Anna (Vepsian). Anna comes from the Republic of Karelia. Since 2007 she has been working with the International Centre for Reindeer Husbandry on various projects both at the national and international level, but mainly focusing on work in Russian reindeer herding regions. Anna Degteva’s scientific interests include holistic impacts assessments; knowledge systems of Indigenous Peoples; and resilience and adaptation of reindeer herding societies in the Arctic to rapid change.

Dondov, Binderiya. Bindi works as a Finance manager of an Interior Design and Construction company called «GerBridge LLC». Before joining this company, she worked at a number of international organizations, including WRH and ICR, with whom she has been interpreting and other tasks since 2004.

Dubovtsev, Andrey (Sámi). Born in 1987 in Tymen. Andrey was a student at the Lovozero Secondary School from 1993-2004. He then studied carving in Lovozero, which he followed by being a student at the Modern Liberal Arts Academy specializing in linguistics. He has also studied in Budapest. In 2013-2015 he was working as a reindeer herder at the integrated agricultural production company «Tundra», where he became an assistant manager of the «Tundra» company slaughter house. He speaks Kildin Sámi, English, Russian and Hungarian.

Eira Sara, Rávdná Biret Márjá (Sámi) Rávdná is born and raised in a reindeer herding family in Guovdageaidnu, Sápmi and is now a PhD student at the Sámi University of Applied Sciences. Her field of interest is Sámi reindeer herders food systems focusing on Sámi traditional knowledge about slaughtering processes, meat production and conservation. She has been working with the International Centre for Reindeer Husbandry since 2009. She has a Bachelors degree in reindeer herding studies from the Sámi University of Applied Sciences (2009) and a Masters degree in Indigenous Studies from the University of Tromsø (2012).

Fefelova, Olga Vyacheslavovna (Sámi). Olga was born in 1998 in Olenegorsk, Murmansk Oblast and has been living in Lovozero since she was born. She has finished 9 grades at the local school, and now is a student at the Northern National College. She plans to continue her education but wants to return to her village. Reindeer husbandry holds a special importance to her.
**Firth-Hagen, Jacey (Gwich’in).** Jacey is 23 years old and born and raised in Inuvik, Northwest Territories, Canada and is a proud youth representative of the Gwich’in Council International. After graduating High School she moved to Yellowknife, the capital of the Northwest Territories where she pursued education and employment for numerous years becoming an avid volunteer for local environmental and social justice organizations and also a radio show host for a youth radio show celebrating youth accomplishments and the creator of The Gwich’in Language Revival Campaign #SpeakGwichinToMe promoting the critically endangered Gwich’in language and the importance of Indigenous languages. She is currently working towards a Northern Outdoor and Environmental Studies diploma at the Yukon College in Whitehorse, Canada.

**Ganbat, Sarantuya (Dukha)** was born in the Tsagaannuur soum center of the Khuvsgul province of Northern Mongolia. She is from a reindeer herding family in the East Taiga, in reindeer herding brigade no.1 of the Khuvsgul province in Northern Mongolia. She is a student at the Ikh Zasag International Institute majoring in Foreign Trade relations in Ulaanbaatar.

**Ganbold, Bayar Magnai (Dukha)** was born to a reindeer herding family from the West Taiga of the Tsagaannuur soum in the Khuvsgul province, northern Mongolia. In 2016, he graduated from the Eco-Asia Institute majoring in Environmental management. Currently he is working as volunteer ranger in the Tsagaannuur soum of the Khuvsgul province in order to protect the nature of his home place.

**Gashilova, Lyudmila (Nivkhi).** Lyudmila was born in the village of Chayvo on the eastern coast of the Sea of Okhotsk in Sakhalin. Lyudmila studied at a boarding school and in 1978 she graduated from the Peoples of the North’s faculty of the Leningrad State Pedagogical Institute. Lyudmila graduated from the postgraduate course and defended her PhD thesis in the Nivkh language. She is currently conducting research on issues related to Nivkh language, folklore, literature and culture. She has been a teacher at the Institute of the Peoples of the North at the Herzen State Pedagogical University for 35 years, where she served as Director for 9 years. Today she is a professor and head of the department of Paleo-Asian languages, folklore and literature. Lyudmila is the author of more than 130 scientific articles and manuals on native language, folklore and literature.

**Gerasimova, Alena (Evenki).** Born in 1986 in Neryungri in the Republic of Sakha (Yakutia), Gerasimova grew up in the Evenki village of Iengra and has been migrating with her grandparents' reindeer in the taiga. She has a Bachelor and Masters degree in Chinese history from Saint-Petersburg State University, and a Masters degree in Arctic Studies from the Saint-Quentin-en-Yvelines University in Versailles. Alena is a member of the Evenki nomadic tribal community of «Oldoyo», which was created by her father Evgeniy in 1993. She still visits the reindeer herding camp, where her uncles and cousins look after the family’s reindeer. She is currently working for the International Centre for Reindeer Husbandry.

**Gerasimova, Nadezhda (Evenki).** Born in 1960 into a reindeer herding family in Iengra (in the Republic of Sakha (Yakutia)). Before going to school, she lived in the taiga with her family. In 1967, Nadezhda went to boarding school, where she learned Russian. In 1980, she graduated from the Ulan-Ude pedagogic college and began to work as a primary school teacher in Iengra. In 1982 she married and now has three children – Stanislav, Alena and Kseniya. In 1987 she received a Diploma in higher education at the Blagoveschensk Pedagogical Institute. Since 1993, she has worked as the chief specialist on Indigenous issues in the Neryungri administration. Every summer is spent in the taiga with her family, at her parents’ reindeer herding camp. Nadezhda has reindeer in the Evenki nomadic tribal community “Oldoyo”. From her parents she learned how to work with reindeer, milk reindeer, make clothes and shoes, and more. She loves cooking traditional food, and has just authored a cookbook on Evenki traditional foods.

**Gombo, Tsetseggmaa (Dukha)** was born in the Tsagaannuur soum center of the Khuvsgul province of Northern Mongolia. She is from a reindeer herding family who live in the East Taiga, in reindeer herding brigade No.1. She is a student at the Mongolian University of Agriculture in Ulaanbaatar.

**Gruben, Chantal (Inuit).** Chantal is a young Inuit woman who was raised by her grandparents and lives in Tuktoyaktuk, Canada. She was a participant at the EALLU workshop in Kautokeino, Norway in early 2017.

**Gulyaev, Maxim (Even).** Maxim is a young Even reindeer herder from Topolinoe. When he was 5 years old he was a participant of the project “Lena” and lived for one year in Norway and learned the Sámi language. Every summer he is working as a reindeer herder at the Nomadic family-clan-based obshina named after his Great Grandfather Piotr Pogodaev. Today he is a student at the Yakutsk College for Economics and Finance.

**Hansen, Kia Krarup.** Kia is a PhD student at UiT the Arctic University of Norway in Tromsø. She is originally from Denmark, but has been living and working with reindeer herders in Finnmark and Troms for many years. Kia holds a Bachelors and Masters degree in Biology - Arctic Animal Physiology from the Department of Arctic Biology (UiT), with a focus on reindeer and reindeer husbandry. Together with students and employees at the Copenhagen Hos-
pitality School, she has developed and presented dishes based on Sámi traditional food culture for a cookbook and the food festival in Århus, Denmark 2013. Her interest in reindeer husbandry is interdisciplinary, and includes traditional knowledge and adaptation to change in Arctic societies. Over the past few years, she has been working on different projects with the International Centre of Reindeer Husbandry. She loves to spend time outdoors, mushing and hunting.

Harris, Cyrus “Naunŋaq” (Iñupiat). Cyrus is an Iñupiat Indigenous Knowledge holder from Kotzebue, Alaska. Cyrus has lived his entire life in the Kotzebue region and has spent this time living in the country and at camp with his parents, hunting, fishing, dog mushing, and gathering resources. Today, he lives in Kotzebue and passes his knowledge onto his children and grandchildren, while working to ensure that his community has access to traditional foods.

Kaurgina, Vlada (Chukchi). Vlada is a second year student at the Arctic College of the Peoples of the North, in the village of Chersky, in the Nizhnekolymsky District of the Republic of Sakha (Yakutia), Russia. She is studying reindeer husbandry.

Kaurgina, Zhanna (Chukchi). Teacher at the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia. She is also a reindeer herder.

Krasavin, Aleksandr (Sámi). Born in 1998 in Olenegorsk. He spent his childhood in the tundra, and before going to school was living on the tundra near the Kharlovka river and Nalyam lake, Murmansk Oblast. After finishing school, Aleksandr entered the Northern National College in Lovozero, Murmansk Oblast. His specialization is reindeer herding and machinery operation. Like his father, Aleksandr likes fishing, and going to the tundra on a snowmobile. Since his parents have reindeer, Aleksandr is going to work in the tundra according to the family tradition. He believes that someone has to take care and watch after their reindeer. Aleksandr is also learning from his father how to build reindeer sledges.

Krivoshapkina, Irina. Deputy Director at the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia.

Mathiesen, Svein Disch. Svein has a PhD from the University of Tromsø (UIT), in the Department of Arctic Biology and Department of Medical Biology, Faculty of Medicine in 1999. Today he is employed at the International Centre for Reindeer Husbandry Centre in Kautokeino as the institute leader of the University of the Arctic Institute for Circumpolar Reindeer Husbandry, and is also permanently employed as a Professor at the Sámi University of Applied Sciences and is Professor II at UIT Arctic University of Norway in Tromsø. Mathiesen is a member of the Norwegian Scientific Academy for Polar Research. He has supervised several masters and doctoral students. His main interest today is interdisciplinary knowledge about adaptation to climate change in the circumpolar north and how to build local expertise in Indigenous communities in the North through international cooperation.

Okotetto, Elvira (Nenets) was born into a Nenets nomadic reindeer herding family, in the very north of the Yamal Peninsula, on the Sayakha tundra. In 2011, she graduated from the Yamal Multi-discipline college, with the specialty «Informatics and ICT» and since then has been working as a teacher in Secondary school № 4 in the city of Salekhard. In parallel, Elvira has been taking higher education at the Tyumen Industrial University. In 2017, she will graduate as an expert in Computer Science and Engineering. Elvira has very diverse interests: apart from a professional interest in computer sciences and telecommunications, she devotes her time to studying foreign languages (English), psychology and local history.

Okotetto, Marta (Nenets) is from the Priural’skaya tundra, Yamal Nenets AO. She was born into a family of private reindeer herders, who maintain the traditional nomadic way of life. In the summer of 2017, Marta will graduate from the Yamal Multi-discipline College, where she studied in the Elementary Teaching School program. It is Marta’s deep wish to continue her education at the University level and to learn more about the culture, languages and social life of Arctic Indigenous Peoples. At the same time, Marta would like to contribute to the economic development of her people - the Nenets – and, therefore, has a particular interest in business and entrepreneurship.

Osenin, Nikolay (Even). Reindeer herder. He was born in 1942 in Alyssar-dakh in the Ust’-Maisyk district of the Sakha Republic. All his life he worked as a reindeer herder in different reindeer organizations. He used to be the leader of Brigade #5 of the Tomponsky sovkhoz in the Republic of Sakha. Today he is retired and lives in Topolinoe.

Oskal, Anders (Sámi). Anders is the Executive Director of the International Centre for Reindeer Husbandry in Guovdageaidnu/ Kautokeino, Norway. Oskal is a reindeer herding Sámi from Northern Norway, with a Master of Science in Business Administration specialized in Innovation Economy. He also represents the Association of World Reindeer Herders in the Arctic Council, and is an Executive Committee Member of the Arctic Economic Council. Oskal was also a co-author of the IPCC AR5 WGII released in 2014. Prior to his current position, he worked for a number of years with business development in reindeer herding. Oskal is the project leader of the EALLU project.
Pogodaeva, Maria (Even). Reindeer herder. She was born in 1952 by the Okatchan creek in the Ust'-Maisky district of Sakha (Yakutia) in a tent. She received an education in the ‘Ola Veterinarin technikum’ in the Magadan region and in the Yakutsk State University as a biologist. All her professional life has been devoted to reindeer husbandry. In 1984 she was elected to the Supreme Council of USSR and afterwards to the Regional Parliament of Sakha Republic, where she served as the Chair of the Standing Committee on Indigenous Peoples Issues. After a visit of Sámi reindeer herders to Topolinoe in 1990 she became one of the leaders of the World Reindeer Herders Association and served as the Vice-President of WRH from 1997 until 2009. Currently she is a private reindeer herder and the leader of Nomadic family-clan-based obshina named after Piotr Pogodaev.

Pogodaev, Mikhail (Even). Reindeer herder. Mikhail was born in 1978 in Topolinoe, in the Republic of Sakha (Yakutia) in a reindeer herding family. In 2001 he graduated from Saint-Petersburg State University of Economics and Finance and in 2007 he defended his PhD thesis in the same university. In 2009 he was elected as the chair of Association of World Reindeer Herders and still serves in this position. Currently he is also the vice-chair of the International Centre for Reindeer Husbandry, President of the Council at the UArctic EALÁT Institute at ICR, is Chair of the Even Peoples Association and is a researcher at the Institute for Humanities and Indigenous Peoples of the North Issues at the Siberian branch of the Russian Academy of Sciences.

Prokopjeva, Alena (Even). Reindeer herder. She was born in Topolinoe, in the Republic of Sakha (Yakutia) in 1969. She graduated from Yakutsk State University as a philologist and Moscow Pedagogical University named after M. Sholokhov as a psychologist. She used to work as a teacher at the UNESCO Arctic School for Indigenous Peoples of the North in Neryungri, also in the Republic of Sakha (Yakutia). Currently she is a teacher and leader of the branch of the Arctic College for Peoples of the North in Topolinoe.

Purevjav, Udval (Dukha) was born in the Tsagaanuur soum center of the Khuvsgul province of Northern Mongolia. She is from a reindeer herding family who live in the East Taiga, in reindeer herding brigade No.1. She is a student at the Nursing school of the Mongolian University of Medical Science in Darkhan, Mongolia.

Riddervold, Astrid is a 93 year old Norwegian who is a leading expert in food culture. Her background as both a chemist and ethnologist is unique in this context. It was originally her Master’s degree thesis in ethnology, which formed the basis for the book «Conservation of food», which was published first in 1993. In 2003 Riddervold pioneered the documentation of traditional knowledge of the smoking of reindeer meat in coproduction with Sámi reindeer herder, Inger Anita Smuk. Riddervold has written several books and articles on the preservation of food.

Sara, Elna (Sámi) works as Information Manager at the International Centre for Reindeer Husbandry in Kautokeino. She has also worked for the Association of World Reindeer Herders since its inception in 1997. From a reindeer herding family, she has worked in the field of international cooperation in reindeer husbandry since 1990. She also worked for NBR-NRL, the Sámi Reindeer Herders Association of Norway for 15 years. She lives in Guovdageaidnu/Kautokeino.

Serotetto, Nechei (Nenets) comes from a nomadic family of private reindeer herders, on the Yamal peninsula, YNAO. She is a first year Masters student at the Institute of the Peoples of the North at the Herzen State Pedagogical University in St.Petersburg, studying linguistics and pedagogy. Nechei is particularly interested in traditional knowledge related to preserving reindeer products and slaughtering. That is why she is currently doing a comparative analysis of the knowledge and technologies of reindeer slaughtering by the Sámi in Western Finnmark and the Nenets in Yamal. For this purpose Nechei has learned the Sámi language. In addition, she devotes her time to learning English and making traditional handicrafts.

Smuk, Inger Anita. (Sámi) Inger Anita is a reindeer herder from Eastern Finnmark. She has been working in international cooperation between herding peoples for many years and is currently Chair of the Board of the International Centre for Reindeer Husbandry. She has a deep knowledge on the process and benefits of suovas, the smoking of reindeer meat.

Lyubov Sidorova (Evenki). Born in 1975, she works as a reindeer herder and tent worker, as well as being the accountant for the nomadic tribal community - «In the name of Vladimir Stepanovich Sidorov». She also makes traditional handicrafts and national clothing.

Sorokin, Anatoly (Koryak) was born in the village of Tilichiki in the Olyutorsky district of Kamchatka. He belongs to the settled coastal Koryak, namely nymylan-alyutor. At present Anatoly is in his last year of a PhD program at the Kamchatka State University named after Vitus Bering, in Petropavlovsk-Kamchatsky, researching the lexical system of the Alyutor dialect of Koryak language with a special focus on reindeer herding, fishing and hunting terminologies. His main research interests are linguocultural studies and linguistics.

Tahbone, Sandy & Marjorie (Iñupiat). Sandy and Marjorie are mother and
daughter Iñupiat Indigenous Knowledge holders from Nome, Alaska. Both have spent their lives, and continue to, use their Indigenous Knowledge to obtain, process, and consume their traditional foods. Both are strong participants and provide much to keep their community physically and mentally healthy with recognition of the importance of cultural identity.

**Tokhtosova Valentina (Yukagir).** Deputy director of educational issues at the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia. Her specialization is teaching.

**Turi, Issát (Sámi)** Issát is a reindeer herder who divides his time according to the season between the village of Guovdageaidnu in Finnmark and Ráidna, an island in Troms county, in Northern Norway. He has a particular interest in the traditional Sámi way of slaughtering reindeer and preserving meat. He has worked internationally with reindeer herders in Mongolia and Russia. Recently he has been working with a special program on the outreach of traditional knowledge related to Sámi culture to European journalists and chefs.

**Unger, Suanne.** Suanne works for the Aleutian Pribilof Islands Association, Inc. She is the author, compiler and coordinator of the recently published seminal work on Aleut traditional food culture, *QAQAMIIĜUX̂*: Traditional foods and recipes from the Aleutian and Pribilof Islands. She lives in Anchorage with her family.

**Yaglovskaya, Maria (Chukchi).** First year student at the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia. Her specialization is Ecology.

**Yakovleva, Olesya (Yup’ik).** Olesya is from the clan of Lyakag’mi. Her Yup’ik name is *Ayvylik* which means little walrus. Olesya was born in the village of New Chaplino (Tasik), in the east of the Chukotka Autonomous Okrug in Russia. She studies the languages of Indigenous Peoples of the North, Siberia and the Far East at the Institute of the Peoples of the North at the Herzen State Pedagogical University in Saint Petersburg. Her PhD research topic is the system of food making in the Yup’ik – Ayvan Languages.

**Zakharova, Sofia (Dolgan).** Sofia was born in the Anabar region of the Republic of Sakha (Yakutia). She was born in a tent near the Laptev Sea and the “Utskurder” area, in the reindeer herding brigade No. 2. She has an education in agriculture, and her major is Livestock Engineer. Sofia is a mother of five children. Currently she works as a teacher in reindeer husbandry and master of vocational training at the Arctic College of the Peoples of the North, Chersky, in the Nizhnekolymsky District on the Kolyma River of the Republic of Sakha (Yakutia), Russia.

**Zolzaya, Uudus (Dukha)** was born in Tsagaannuur *soum* of the Khuvsgul province of the Northern Mongolia. She lives with her family who are reindeer herders in the west Taiga. She is from reindeer herding brigade no.2 in the west Taiga of the Khuvsgul province. Currently she is a 4th year student at the Mongolian University of Art and Culture majoring in Cultural Management in Ulaanbaatar.

**Zorigt, Zagalmaa (Dukha)** was born in the Tsagaannuur *soum* center of the Khuvsgul province of the Northern Mongolia, where she lived most of her childhood. Currently she is a student at the Dalai Van Institute majoring in Environmental Management in Murun, also in the Khuvsgul province.
LIST OF EALLU ACTIVITIES

• SDWG EALLIN St Petersburg/ Herzen Univ. 24-25 November, 2014
• SDWG EALLIN pre-launch, Tromsø, Norway, January 19, 2015
• EALLU/ AIPCI/ SCPAR, Kautokeino, Norway. March 19-24
• EALLU/ Reindeer Herding Anniversary in Canada. Inuvik. March 27-31, 2015
• MoUs with ICR/ AIPCI with partners in Inner-Mongolia, China. May 21-24, 2015
• EALLU/ AIPCI Biebmu - Nordic Food Festival in Copenhagen. May 28-30, 2015
• EALLU/ AIPCI Nosgecher Khatystyr, Sakha Republic. August 22-24, 2015
• EALLU/ Gávmadeapmi/ AACA, Inari, Finland. September 17-19, 2015
• CAFF Nomadic Herders Mongolia, Terelj National Park. September 18-20, 2015
• EALLU/ AIPCI/ RCN Rievdan, Kautokeino, Norway. September 20-22, 2015
• EALLU/ AIPCI Northern Sea Route Seminar, Reykjavik, Iceland, October 16, 2015
• EALLU/ AIPCI/ Nosegcher/ NF AGM, Yakutsk, Sakha Rep., Russia, November 4-5, 2015
• EALLU/ AIPCI Arctic College Chersky, Kolyma, Sakha Rep., Russia November 9-13, 2015
• EALLU/ AIPCI/ Nosegcher Uryung-Khaya, Anabar, Sakha Rep., Russia December 5-8, 2015
• EALLU/ AIPCI food event at the CAFF meeting in Kirkenes, Norway February 4, 2016
• EALLU/ AIPCI/ RCN Rievdan/ Geitmyra Food Culture Centre for Children, Food event at the celebration of the Sámi National Day, Oslo, Norway February 6, 2016
• EALLU/ AIPCI/ RCN Rievdan Indigenous Food Field Trip for International Food Journalists, Kautokeino, Norway, April 11-13, 2016.
• EALLU/ AIPCI/ RCN Rievdan International Festival of Traditional Indigenous Food Cultures, by Indigenous youth from different 7 Indigenous Peoples, Kautokeino, Norway, April 13, 2016.
• EALLU/ Nomadic Herders Sápmi International University Course on Traditional Knowledge and Biodiversity Conservation, Kautokeino, Norway, April 11-24, 2016.
• EALLU/ AIPCI Scandinavian and Russian Indigenous Food Reception, on the occasion of the Norwegian National Day May 17, Hosted at the Norw. Embassy in Moscow, May 17, 2016.
• EALLU/ AIPCI Field Workshops, Tompo River, Sakha Rep., Russia, April 2-3, 2016
• EALLU/ AIPCI Youth and Knowledge Transfer Workshops, Midnite Sun Reindeer Farm, Nome, Alaska, US, June 16-21, 2016
• EALLU/ Rievdan Food Culture Field Workshop, Khuranakh, Tomponsky, Sakha Rep., Russia, August 4-11, 2016.
• EALLU/ Rievdan food culture science workshop, with 18 young Indigenous students from Russia presenting food culture thesis and traditional food dishes. At Herzen University, St.Petersburg, Russia, September 12, 2016.
• EALLU/ Rievdan Science Discussion with Arctic Colleges of Russia on food culture and TK development. At Herzen University, St.Petersburg, Russia, September 13, 2016.
• EALLU/ Rievdan/ AIPCI food culture and business seminar Salekhard, Yamalo-Nenets AO, Russia, November 8, 2016.
• EALLU/ Rievdan/ AIPCI food culture seminar and reception Yakutsk, Sakha Rep, Russia, November 26-28, 2016.
• EALLU/ Rievdan/ AIPCI Sámi food culture demo workshop, Ávži, Norway, December 20, 2016.
• EALLU/ Rievdan/ AIPCI Knowledge and Indigenous Food Systems, Kautokeino, Norway. February 1-3, 2017
OTHER EALLU DELIVERABLES

- New Course on Biodiversity and Traditional Knowledge (10 ECTS) at the Sámi University of Applied Sciences, Kautokeino, Norway (2016-). ICR/ EALLU-related components focus on food culture and Traditional Knowledge.
- New MSc Program in Sustainable Reindeer Herding and Traditional Knowledge developed (120 ECTS). Applied from Sámi University of Applied Sciences, Kautokeino, Norway. ICR/ EALLU-related components focus on food culture and TK, economic organization and innovation.
- Course Seminars on Russian Indigenous Peoples’ Food Culture. Implemented at Herzen University, St Petersburg, Russia. EALLU-related components focus on food culture, language and TK.
- Delivered Education for Arctic Indigenous Youth. For example, First BSc Thesis in Nenets Language, on Nenets terminology, by Ms. Nechei Serotetto, Yamal. Herzen University, SPb, 2016 (also a contributor to this book).
- AMAP AACA-C Barents Report Indigenous Peoples’ Chapter. ICR/ EALLU-related components on local economic development, economy and TK.
- New Cookbook: “Traditional Cuisine of Evenki People from Iengra and Southern Sakha (Yakutia)”. Author Mrs. Nadezhda Gerasimova, Senior Evenki Herder from Sakha Rep., Russia (also a contributor to this book).

ACRONYMS

AACA - Adaptation Actions for a Changing Arctic
AC - Arctic Council AEC - Arctic Economic Council
AIPCI - Arctic Indigenous Peoples Culinary Institute
AMAP - Arctic Monitoring Assessment Program
IASC - International Arctic Science Committee
IASSA - International Arctic Social Sciences Association
ICASS - International Congress of Arctic Social Sciences
ICC - Inuit Circumpolar Conference
ICR - International Centre for Reindeer Husbandry
IPCC - Intergovernmental Panel on Climate Change
NBR - Norgga Boazosápmelaččaid Riikkasearvi
NRL - Norske Reindriftsamers Landsforbund
SCPAR - Standing Committee of Parliamentarians of the Arctic Region
SDWG - Sustainable Development Working (of Arctic Council)
UArctic - University of the Arctic
UEI - UArctic EÁLAT Institute
WRH - Association of World Reindeer Herders
EALLU - INDIGENOUS YOUTH, FOOD KNOWLEDGE & ARCTIC CHANGE

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3 generations of Evenki reindeer herders milking their reindeer. Anna Kondakova, Nadezhda Gerasimova, Anna Egorovna Kondakova and Olimpiada Kondakova in the Neryungri district, Republic of Sakha (Yakutia). Photo: Yuri Kokovin
We believe indigenous peoples food culture and the practice of food sovereignty in the Arctic is a means by which the possibilities of an economic and societal development based on our own resources, knowledge, and collective strength can be fulfilled.