

The Fish Skin Road

Mapping
Indigenous
Knowledge
from the Lower
Amur River to
Sakhalin Island

Elisa Palomino



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The Fish Skin Road

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Abstract

This book traces the historical circulation of fish skin garments, accessories and traditional production methods among Indigenous communities of the Lower Amur River, Hokkaido and Sakhalin Island, including the Nivkh, Nanai, Hezhe and Ainu. Over centuries, trade, travel and salmon-based subsistence economies enabled the transmission of tanning, dyeing and sewing practices across the region. Although colonisation divided Native territories along Russian, Chinese and Japanese borders and restricted access to resources, seasonal harvesting cycles and fish skin technologies persisted. Fish skin garments held in museum collections preserve knowledge of environmental adaptation, gendered labour and material expertise. These Native belongings document enduring relationships between people, fish and landscape. Recognition of their technical, social and ceremonial roles highlights the expertise of Indigenous women artists and the knowledge transmitted through their work. These garments stand as masterpieces of Native art, affirming the place of Arctic Indigenous women within art history and the history of fashion.

Keywords Circumpolar Fashion. Fish Skin. Indigenous Women. Material Culture. Trade Networks. Lower Amur River Basin. Nivkh. Nanai. Hezhe. Ainu.

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Over the past decade, many Indigenous Elders have shared their knowledge with me. All meaningful work emerges through collaboration, and I appreciate the early connections that opened pathways to communities and curators. I respectfully acknowledge the Indigenous Arctic Peoples whose lands are home to fish skin traditions, as well as the Elders and ancestors who have maintained this knowledge. My sincere thanks go to Native and non-Native knowledge keepers and fish skin artists who contributed to this research. Arctic Elders are scientists within their communities, and their knowledge has formed the foundation of this work. I am particularly grateful to June Pardue, Anatoly Donkan, You Wenfeng, Sun Yulin, Shigehiro Takano, Maki Sekine and Lotta Rahme, colleagues and co-authors in fish skin research. I also thank Coral Chernoff, Joel Isaak and Peter Williams.

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to Sakhalin Island

Elisa Palomino

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To You Wengfen (1952-2026) whose generosity
and knowledge of Hezhe fish skin traditions
made this book possible

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Elisa Palomino

Editor's Foreword

Sabrina Rastelli

Chief Editor

The Fish Skin Road contributes to the scholarly aims of Ca' Foscari University's Department of Asian and North African Studies, recognised for its research work in many different fields. The volume reflects the department's commitment to examining transcultural processes across Asia and Europe, with attention to environmental concerns, cultural inclusion and the role of minorities. By focusing on Circumpolar Indigenous fish skin practices, this study brings a material culture that has long remained at the margins of dominant narratives, while addressing questions of sustainability and cultural continuity.

The book finds a natural place within the *Marco Polo Studies in Global Europe-Asia Connections* series, which promotes research on exchanges across Eurasia over extended temporal and spatial scales, engaging with themes ranging from archaeology to environmental studies. *The Fish Skin Road* examines intercultural contact from the Lower Amur River to Sakhalin Island, situating material practices, local knowledge and historical encounters within wider transregional exchanges, associated with the Silk Roads and the journeys of Marco Polo. These routes emerge as channels for the circulation of goods, techniques, materials and visual cultures, within which fish skin garments can be read as part of broader histories of contact.

The study contributes to the history of dress by examining clothing as carriers of knowledge, identity and environmental adaptation, placing fish skin garments alongside textile traditions across Eurasia. Drawing on Elisa Palomino's background in fashion design, it brings a practice-based perspective to the analysis of making processes, highlighting the role of Indigenous communities within research in the history of art in the

Department of Asian Studies. It extends fashion studies by including forms of knowledge previously excluded from established narratives.

The monograph advances a cross-cultural and interdisciplinary investigation of fish skin material culture among Circumpolar Indigenous communities. It combines historical analysis with anthropological and ethnographic perspectives, together with detailed attention to materials and techniques. This approach situates fish skin artefacts within debates on sustainability and traditional knowledge grounded in long-standing ecological relationships. The study draws on archival sources, including travellers' accounts, missionary writings and records by Indigenous scholars and engages with museum collections and visual materials produced by historical observers. The integration of visual evidence, including *Ainu-e* and Qing court imagery, documents dress and maritime life, while showing how Indigenous communities were represented within wider networks of exchange. Their analysis strengthens the historical dimension of the study and raises questions about authorship, perspective and cultural interpretation.

The research demonstrates sensitivity to cultural values. Object-based analysis is combined with engagement with communities connected to this heritage. This approach supports cultural revitalisation and decolonial research practices. The attention to material sustainability links historical evidence and past practices with present concerns. By addressing fish skin technologies and their ecological and cultural dimensions, the book offers a model for future work that connects historical inquiry with present-day challenges. The volume will be of interest to scholars across a range of disciplines and provides a foundation for continued exploration of the interconnected histories across Eurasia.

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Preface

William W. Fitzhugh

Director, Smithsonian Institution Arctic Studies Center, Washington, D.C.

These days, it is a rare event when a new technology crucial for sustaining traditional cultures around the world for thousands of years is identified, especially when its products have been known, described and collected by ethnologists and anthropologists for two hundred years. It is all the more unusual when the knowledge and skills required have been 'alive' and were being practiced, without note, in traditional societies across the globe for articles as basic as clothing, containers and various types of accessories. Perhaps more remarkable that this technology produced 'fine art' crucial to signalling social rank and personal status. Could we possibly be referring here to the technology of preparing and crafting materials from fish skin, a material most people today consider a food industry waste product? The technologies involving bark, animal hides and other natural membranes such as gut, stomach and bladder, have been known and described for centuries. Fish skin is the 'dark horse' - little known and considered trash, but in many traditional societies it is a material treasured more than its host. A component of the diet that sustained peoples around the world has escaped the attention of cultural scholars and the wider world - until now.

Elisa Palomino visited the Smithsonian a decade ago with what seemed then like an unusual request - wanting to inspect articles of fish skin. The Smithsonian's anthropology collections have been of growing interest to all sorts of scholars as access has improved with new storage, conservation, cataloguing, internet and photography. Inuit and Unangan (Aleut) gutskin garments have been widely researched and published, but never before had a researcher inquired about fish skin. Nevertheless, a quick inspection of the ethnology catalogue revealed a surprising number of items, including a series of spectacular garments collected from the Northwest Pacific and Amur River region. Several of these garments had been featured in our exhibition *Crossroads of Continents: Cultures of Siberia and Alaska* produced

jointly with Russian colleagues during the 'détente' period of the late 1980s and early 1990s (Fitzhugh, Crowell 1988). A few years later an exhibition of Ainu materials from Hokkaido (Japan) gave the Arctic Studies Center a chance to extend our research and public programs to another northern culture that made extensive use of fish skin for garments and other objects (Fitzhugh, Dubreuil 2000).

Palomino's inquiry almost two decades later stimulated a new focus on a wider range of fish skin materials from Alaska and Northeast Asia. Assisted by Stephen Loring, more in-depth collection surveys were made that resulted in a small fish skin case in 2022 in the Smithsonian Arts and Industry Museum's *Futures* exhibit. Assisted by the Arctic Studies Center's Alaska Office staffed by Aron Crowell and Dawn Biddison, Palomino organized a workshop to explore knowledge of fish skin technology among Alaska indigenous artist and crafts-persons, establishing relationships that sustained her research ever since (see *Acknowledgments*). Building on ASC connections from the Crossroads and Ainu projects, Palomino established connections with Ainu and Amur artists with whom she organized other workshops and exchanges that became the foundation for the present monograph. Concurrently, she expanded her knowledge of fish skin collections in European and North American museums, acquainting curators with their own 'rediscovered' collections, much as she had done earlier at the Smithsonian.

The result of these efforts are presented here in *The Fish Skin Road* from the Hokkaido and Amur area cultures. These peoples – the Nivkh, Nanai, Hezhe and Ainu – (and primarily their women) are the custodians who hold the richest heritage of fish skin technology and craft. Palomino has chosen to feature their knowledge, history and products in a book that is certain to be followed by others from other regions of the North, where these technologies have been practiced for thousands of years and continue today. Their presentation here is enhanced by historical and contemporary ethnographic knowledge, personal familiarity with artists, historical description and photography, information about materials, dyes and copious illustrations – all grounded in specific cultural contexts. These people are the world leaders of contemporary fish skin technology. The knowledge gathered in this extraordinary volume will not only help preserve and revive a 'lost' technology; it will provide models for sustainable materials for a more environmentally friendly fashion industry and will guide anthropological and art museum curators as they consider how best to care for and use their collections. The art and technology of fish skin has been overlooked too long. Palomino has produced a fashion-conscious, culturally sensitive and much-needed Amur ethnography worthy of honorary membership in Franz Boaz's 1897-1903 Jesup Expedition series!

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Preface

William Wierzbowski

Keeper of Collections, American Section, University of Pennsylvania Museum
of Archaeology and Anthropology

Inner skin, outer skin... gutskin, fishskin. Growing up in a second-generation American family in Detroit and helping to make fresh sausage before the holiday season, I inflated gutskin to thread onto the end of the family hand-operated meat grinder. Little did I know that gutskin was used for other purposes too. After taking my degrees in anthropology and beginning work in the museum field I discovered gutskin was used in the Arctic to make parkas and other utilitarian items. A historic photograph in the Archives of the Penn Museum shows a group of Indigenous Yupik women inflating seal gutskin to begin the process of making parkas. I was taken right back to my childhood. At the Museum the material from the Arctic (especially Alaska) forms our largest collection. This is where I also first discovered fish skin used as a material for containers. I was equally intrigued. This ultimately led to my discovery of the work of Elisa Palomino in an article in the Arctic Studies Center Newsletter in 2021. I contacted her through the Center and invited her to visit and study our circumpolar collection of 80 objects made of fish skin (clothing and utilitarian objects), especially our Amur River material which holds eight robes (some illustrated in this book).

In this publication she focuses on four Indigenous groups: the Nanai and Nivkh on the Russian side of the river, the Hezhe on the Chinese side, and the Ainu in Japan. She has carefully read all of the historical and anthropological literature and presents this material in a coherent text that is a pleasure to read. Most importantly, Dr. Palomino has tanned fish skin and knows the intricacies of the process. She has learned at the hands of contemporary practitioners of this art form (which is not something many scholars can claim). Dr. Palomino has also worked with collections of this material in 29 ethnological museums worldwide and brings a keen eye to this study.

So, I invite you (like the salmon and sturgeon) to travel the Amur River eastbound to the sea with Elisa Palomino as she explores these four indigenous cultures and their dependency on these fish for sustenance, shelter and beauty in their lives.

Introduction

This volume presents a dedicated study of the historical circulation of garments and accessories and the related technologies for processing fish skin¹ among Subarctic Indigenous communities,² spanning the Lower Amur River to the Sakhalin Island region [fig. 1]. The research draws on my combined experience in three areas. Over twenty-five years working at international luxury fashion, where I developed fish leather garments for John Galliano and Christian Dior in 2002; a decade leading the Fashion Print pathway at Central Saint Martins, London; and academic research in Arctic fashion as a Research Associate at the Smithsonian Arctic Studies Center. These overlapping roles have shaped my views on Indigenous ecological practices, highlighting their contrast with the extractive models of the global fashion industry. At Galliano, my work involved sourcing materials globally, developing collections informed by ethnographic and archival research and pioneering sustainable design through the early use of fish leather. My academic role supported the integration of this research into workshops and higher education, while field-based research in fashion anthropology facilitated direct collaboration with Indigenous artists across Alaska, Iceland, Sweden, Northeast China, Siberia and Hokkaido. Building on these

1 In this book, fish skin refers to fish dermis processed through historical and traditional tanning methods, including mechanical working, oiling, smoking and organic agents. Fish leather is used to indicate fish skin that has undergone industrial vegetable or chrome tanning and is prepared for leather goods production.

2 Indigenous Peoples are descended from the populations which inhabited a geographical region at the time of colonisation and who retain their own social, economic, cultural and political institutions. In this book, I use the terms 'Indigenous' and 'Native' interchangeably. In some countries, one of these terms may be favoured over the other.

experiences, the study integrates Indigenist research, ethnography and fashion sustainability studies, bridging anthropology and environmental humanities while promoting Indigenous sovereignty. It features fish skin as a material shaped by spiritual and ecological relationships in salmon-based subsistence practices.

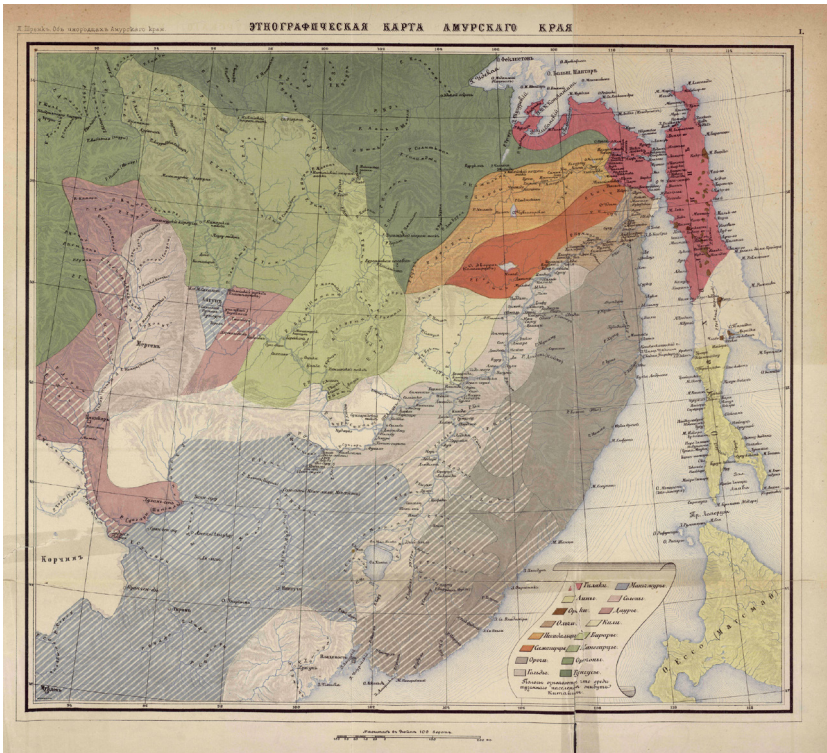


Figure 1 Leopold von Schrenck, The ethnographic map of the Amur region. *Reisen und Forschungen im Amur Lande*. 1883. Leiden University Libraries Special Collections, Leiden, Netherlands

Across the Circumpolar region, Alaska, Hokkaido, Siberia, Northeast China, Scandinavia and Iceland,³ communities refined methods of transforming fish skin into clothing, footwear and containers. Their technologies demonstrate long-standing exchanges across Eurasia and the Americas.

The geographic focus of this study is the Lower Amur River Basin, Hokkaido and Sakhalin Island, where communities including the Nivkh, Nanai, Hezhe and Ainu developed fish skin garments over centuries. While Alaska Native, Icelandic and Scandinavian Sámi communities have also excelled in fish skin craftsmanship, their contributions will be addressed in a future monograph.

The book traces the intercultural networks that circulated fish skin technologies via overland and maritime routes. The Amur River corridor connected Northeast China, Siberia, the Kuril, Hokkaido and Sakhalin Islands. These routes question Russian/Chinese divisions and reveal

3 Iceland, while geographically part of the Arctic, is the only Arctic state without an Indigenous population, as its inhabitants are descendants of Celtic and Scandinavian settlers.

long-distance material relationships where Indigenous Peoples interacted with Chinese, Manchu, Japanese, Korean and Russian powers while sustaining independent economies and material cultures. The transmission of fish skin technologies along these routes depended on trade and the circulation of knowledge.

While early accounts of Arctic material culture focused on seafaring and trade conducted by men, they largely overlooked women's roles in the transmission of knowledge. These male-centred narratives prioritised artefacts linked with exploration, such as canoes and hunting tools (Hudson 2014). Fish skin garments produced and circulated by women across these regions, by contrast, display shared techniques and motifs that reflect the transfer of knowledge through kinship, mobility and marriage. Fish skin belongings⁴ are examined as evidence of sustained Indigenous innovation, resilience and responses to colonial disruption. The research considers how colonialism reshaped relationships with salmon and land, while traditional practices have continued. Fish skin garment production reflects an interconnected process of fishing, tanning, sewing and repair, passed down through generations. Few contemporary makers retain these skills, and the anonymity of historical artists has contributed to their exclusion from art history (Palomino 2025a). This study highlights the expertise of Indigenous women artists [fig. 2], whose contribution to Arctic fashion has been historically undervalued. It challenges Eurocentric art historical frameworks that have categorised these works as craft or ethnographic artefacts and argues for their recognition within broader histories of art, design and material innovation.

Fish skin garments demonstrate advanced models of sustainability. Knowledge of local ecologies, seasonal cycles and material properties supported Arctic clothing that minimised waste and adapted to environmental pressures. As Leah Aksaajuq Otak, Igloodik curator of Inuit heritage, observed, "A great seamstress must master all trades, being at once artist, designer, biochemist, zoologist, climatologist as well as always a grandmother, aunt, sister, mother and daughter" (MacDonald, Wachowich 2018, 33). Her words reflect the range of Indigenous expertise expressed through garment production. As weather barrier and expressions of care, these garments challenge the extractive logic of Western fashion. Indigenous practices prioritised using local resources that decomposed and returned to the environment when discarded. These traditions offer alternatives to contemporary material excess and reshape how materials are understood within global exchange.

The sophistication of these practices is evident in every stage of fish skin production, a lengthy and highly skilled process. Clothing was tailored to climatic and cultural needs, layered for insulation and mobility and adapted seasonally. Women developed watertight, lightweight garments suited to coastal conditions. Fish skin was valued for its breathability and durability (Palomino 2022). When treated with seal oil, it becomes waterproof and wind resistant. These practices reflect knowledge of fish species and climate. Species such as salmon, taimen, sturgeon and catfish were used for clothing, footwear, tools and storage. Texture and colour varied according to species,

⁴ The term belongings highlights the social meaning of objects within Indigenous cultural practices, in contrast to the static connotations of artefacts. For a critical discussion of the term *belongings* see Pitblado et al. 2025.



Figure 2 Girl fishing through ice, Siberia, ca. 1900. Image no. 4126. AMNH Library Archive Records, New York, USA

sex and spawning stage. Skins were selected based on function and seasonal availability; carp and salmon were used for ceremonial garments while salmon skin was also used as translucent windowpanes (Oakes, Riewe 1998). Garments were designed for adaptability and longevity, incorporating adjustable features suited to changing conditions. Each design element served a specific functional, or spiritual purpose, enhancing durability and use. Tools employed in production were passed down or made by family members and used over a lifetime. Sewing techniques were transmitted through observation, grounded in empirical knowledge of materials and environment. Garments expressed personal and group identity, with sewing expertise recognised as a source of status and social responsibility (Oakes, Riewe 1998). Some garments retained anatomical features such as fins or scales for practical and symbolic purposes. Scales provided traction on snow, while a fin left on a boot referenced the fish's agility in water.

Arctic clothing reflects subsistence practices and environmental adaptation. Indigenous communities use locally sourced materials, animal and plant-based, drawn from the same activities that provide food: fishing, hunting and gathering. This research provides historical context to document fish skin garment construction as a living, adaptive practice. It also challenges the conventional narrative of the 'Neolithic Revolution' as a rapid shift from hunting and gathering to agriculture. Instead, it highlights a gradual transition in which marine resources and traditional fishing remained essential to community survival (Graeber, Wengrow 2021). Fish skin garments exemplify Indigenous knowledge, enabling efficient year-round use of fish remains. These practices show how land and sea resources were integrated, preserving continuity in daily life. As contemporary societies confront ecological disruption and food insecurity, historical models of subsistence inform current responses. Understanding these practices requires engagement with a wide range of historical, ethnographic and museum sources.

Systematic ethnographic documentation of Indigenous cultural practices in the Amur River Basin began in the eighteenth and nineteenth centuries through Russian, Chinese and Japanese sources, later expanded by Western ethnographers and more recently by Native scholars. While earlier studies have focused on Arctic clothing, this book examines fish skin materials in greater detail. It draws on archival research and object-based study conducted in museums across North America, Europe and Asia, presenting findings from the examination of over 300 artefacts held in 40 institutions, some published here for the first time. Where possible, museum visits were conducted with Native Elders contributing to collaborative knowledge production and to efforts to reconnect collections with home communities and wider audiences in support of heritage preservation (Krupnik 2026). Artefacts dating from c. 1830 to 1990 were examined for material, construction, use and associated knowledge. The research also includes findings from fish skin tanning workshops co-organised with Native Elders which provided practice-based learning and enabled direct knowledge transmission and intergenerational exchange (Palomino 2025d).

Researching Indigenous heritage is limited by the absence of written records, but oral histories and material culture, including clothing, reveals early practices (Dubreuil 2004). Museums of Natural History, Ethnography and Anthropology have long collected Arctic belongings to document what were wrongly believed to be disappearing cultures (Palomino, Cloud 2026). These collections, gathered by explorers and missionaries, were shaped



Figure 3 Ice hole fishing on Lake Baikal. Source: Alamy

by colonial agendas and practices of resource extraction (Kaeppler, Stone 2011). Inter-museum exchanges further dispersed these items, weakening connections to their communities of origin. Natural history museums also recorded how Indigenous communities used material culture derived from flora, fauna [fig. 3] and other elements of biocultural heritage. Over time, museums have shifted from taxonomic categorisation toward environmental awareness, reflecting the circulation of ecological knowledge. Current efforts to decolonise museum practices include institutions working closely with Indigenous communities on the interpretation and respectful representation of collections, reassessing acquisition histories and display methods (Schutz 2024). This book contributes to those efforts by supporting the documentation, transmission and revitalisation of fish skin heritage. It also builds on three decades of work by the Smithsonian Arctic Studies Center, including the return of more than 600 artefacts to Alaska and ongoing collaborations with Indigenous communities.

These collections and practices are rooted in Indigenous knowledge grounded in close observation of nature, transmitted across generations and long excluded from institutional science. Yet global environmental crises, marked by resource depletion and ecological disruption, mirror conditions experienced by Indigenous Peoples under colonisation. These parallels have prompted renewed recognition of Indigenous knowledge in sustainability discourses. From the Hezhe of northeast China to the Ainu of Sakhalin Island, ancestral practices continue to inform contemporary approaches to environmental adaptation.

The marginalisation of Indigenous knowledge was closely linked to the colonial histories of the communities discussed in this book. The Hezhe, Nanai and Ainu maintained independent economies into the late nineteenth century. Colonisation introduced borders, limited access to resources and led to impoverishment. These communities were subsequently labelled as poor Indigenous minorities and associated with a 'primitive' society and culture. Subsistence strategies like foraging and fishing were used to categorise these communities as less advanced. Early ethnographers, including Laufer, Shternberg, Lopatin, Arsenev, Batchelor, Landor and Howard, portrayed Indigenous societies reinforcing primitive stereotypes through their publications (Sasaki 2016). Contemporary research must revise these accounts to challenge such misrepresentations.

While earlier analysis of Indigenous Arctic fashion was shaped by Western interpretations, this study brings attention to Indigenous technologies. Scholarship on Russo-Chinese Japanese material, reviewed in English, Russian, French, Italian, Chinese and Japanese, rarely includes Indigenous voices, though I have incorporated knowledge shared with me by Native artists and from Native scholars where available. Supplemented by literature on shamanism and women's roles in healing, storytelling and clothing production, these materials trace the continuity of Indigenous expertise.

The book is structured by region. Following an overview of history, ethnography, ecology, tools and techniques, three chapters examine fish skin production among the major cultural groups spanning the Lower Amur River Basin to Sakhalin Island: the Nanai and Nivkh on the Russian side of the Amur, the Hezhe on the Chinese side and the Ainu in Hokkaido and on the Sakhalin Islands of Japan and Russia, respectively. Detailed technical data and field-based knowledge gathered between 2017 and 2026 are presented to support ongoing cultural revitalisation.



Figure 4
Vladimir K. Arsenyev,
Udege man fishing
in the Amur River wearing
an embroidered fabric robe.
Early twentieth century.
Grodokov Museum,
Khabarovsk, Russia

1 The Nivkh and Nanai

Summary 1.1 The People, The Environment. – 1.2 Ethnographic Records. – 1.3 Regional Ecology. – 1.4 The Fish. – 1.5 Technology. – 1.6 Tanning. – 1.7 Natural Dyes. – 1.8 Sewing Implements. – 1.9 Clothing. – 1.10 Clothing details. – 1.11 The Power of Sewing. – 1.12 Decorations in the Back. – 1.13 Embellishment Motifs. – 1.14 Footwear. – 1.15 Leggings. – 1.16 Mittens. – 1.17 Hunting Belts. – 1.18 Bags. – 1.19 Tents. – 1.20 Siberian Shamanism. – 1.21 Gender and Transformation in Amur Shamanism. – 1.22 Fish Skin Tradition Today. – 1.23 Conclusions.

1.1 The People, The Environment

The lower Amur River [fig. 5] has historically served as a cultural and economic corridor in southeastern Russia, a region referred to as the Russian Far East. Forming the boundary between Russia and Manchuria, the Amur merges with the Ussuri River near Khabarovsk before ultimately flowing into the Sea of Okhotsk (Van Deusen 1997). Stretching over 2,700 miles, it is the largest river in Siberia and shares comparable dimensions and elevation with the Yukon River in Alaska, both regions having historical ties to fish skin art traditions. Since antiquity, the river, as cultural crossroad, supported early trade networks linking China, Mongolia and the Siberian interior and connected Native communities, facilitating exchanges of artistic and technological knowledge that shaped the cultural landscape of the region (Rajagopalan, Bujis 2003).



Figure 5 Map depicting all of Siberia and Central Asia. 1871. David Rumsey Map Collection, David Rumsey Map Center, Stanford Libraries, Stanford, California, USA

In prehistoric times, settlements developed along the Amur River valley, where salmon were abundant. Semisedentary fisher-gatherer communities occupied coastal areas and the mouths of rivers and deltas across the major Siberian river basins, including the Ob and Amur and their tributaries. These groups settled in regions rich in fish, terrestrial fauna and accessible plant resources (Graeber, Wengrow 2021). The subsistence pattern based on fishing within a semisedentary framework represents an ancient adaptation. In the Amur region, it is found from the Neolithic period and in the Ob River basin from at least the Bronze Age through to the second millennium BCE (Korotayev et al. 2024). Later migrations of Manchu from northern China introduced farming, animal husbandry and metalworking to Siberia, while the lower Amur's harsher climate helped preserve Indigenous fishing and hunting traditions (Krupnik 1995). The artistic and spiritual heritage of the region is preserved in the petroglyphs at Sikachi-Alyan,¹ dating back 5,000 years and in archaeological sites such as Kondon, referred to as the 'Pompei of the Amur', which reveal continuous human settlement over 25,000 to 30,000 years (Okladnikov 1981; Doury 1999). These stone carvings demonstrate that the ancestors of today's Indigenous populations have inhabited the vast territories of the Lower Amur since time immemorial. They also attest to the development of a rich and long-lasting culture, traces of which are still visible in nineteenth and twentieth centuries fish skin embroidery patterns by the Nanai, Ulchi and Nivkh featuring motifs that directly echo the ancient petroglyphs [fig. 38] (Rajagopalan, Bujis 2003).

1 The petroglyphs of Sikachi-Alyan, north of Khabarovsk by the Amur River, remain visibly until today. According to Ulchi oral tradition, the petroglyphs originated during an era when three suns overheated the Earth. As the rocks softened, people imprinted designs with their fingertips, until a mythical hero shot down two suns to restore balance. For the mythology see Van Deusen 1996. These rock carvings depict human faces, masks, spirals, elk, swans, ducks and mammoths. For the petroglyphs' motifs of Sikachi-Alyan See Okladnikov 1981. These motifs, excluding the mammoth, recur in the fish skin decorative elements of nineteenth century Amur Native robes. For the connection of the petroglyphs' motifs and fish skin garments see Van Deusen 1997.

The Amur basin has for centuries been home to a number of Indigenous nomadic and seminomadic groups, including the Nivkh (Gilyak), Nanai (Goldi) [fig. 6], Ulchi, Uilta, Udege [fig. 4], Orochi and Negidal in Russia. Other Nanai communities reside on the Chinese side of the Amur River, where they are known as Hezhe and they are examined in detail in the next chapter (Levin, Potapov 1964; Vanstone 1985, Black 1988). Negidal, meaning '(river) side people' in Evenk, refers to communities that left nomadic life for settlement along the Amgun River, one of the tributaries of the Amur River flowing into the left bank. Upper Amgun Negidals remained semisedentary and continued reindeer herding, while Lower Negidals adopted elements of Nivkh subsistence practices but maintained their own traditions. The Ulchi share subsistence and kinship patterns with the Nivkh, Nanai and Orochi, shaped in part by cultural connections with Manchu groups of the middle Amur during the fourth to seventh centuries CE. The Uilta are an Indigenous Tungusic-speaking people of Sakhalin Island whose livelihoods traditionally combined reindeer herding, hunting, fishing and trade. Their ethnonym derives from ula (reindeer), reflecting the importance of reindeer pastoralism in their economy. Linguistically, the Uilta language is more closely related to Nanai and Ulchi than to Orochi, whose language is associated with the Udehe branch of the Tungusic languages. The Orochi inhabit the southeastern Lower Amur region between the river and the coast, while the Udege occupy territories further south. These groups practised hunting and fishing (Korotayev et al. 2024) and share linguistic and cultural ties with the Nivkh and Ainu who migrated from Sakhalin and Hokkaido Islands. Their economies and material cultures developed in interaction with neighbouring Chinese, Manchu, Japanese, Korean and Russian populations, fostering exchange and resistance to external influence (VanStone 1985).

During the first and second centuries AD, the Amur region, Korea and Japan constituted a unified cultural entity. From the seventeenth century onward, Chinese influence dominated, until the arrival of the Russians in the 1800s (Stephan 1994). Historical ties between the Nivkh and the Mongols are documented from the twelfth century (Okladnikov 1968; Stephan 1971). In 1263, the Nivkh allied with the Mongols to repel an Ainu invasion from Hokkaido (Marks 2024). Under both the Ming (1368-1644) and Qing (1644-1911) dynasties, the Nivkh became Chinese tributaries. Marriages between Nivkh women and Chinese or Manchu officials facilitated cultural exchange,² including in clothing design³ (Marks 2024). During the eighteenth century, Chinese authorities appointed Nivkh headmen to mediate governance, introducing a centralised leadership model that conflicted with traditional Nivkh societal structures⁴ (Schrenck 1881; Shternberg 1893). The Amur Nivkh, traditionally autonomous, resisted such authority, yet engaged in

² Although Chinese and Manchurian records present the marriage policy as advantageous for tribute-paying groups, Indigenous accounts indicate that Manchurian authorities requested their daughters in marriage in order to increase gains from the fur trade through kinship ties. See Sasaki 2016.

³ See Kozakand 2011 for a discussion on the Nivkh women's festival robes (*hukht*), with tapered sleeves, curved hemlines and diagonal closures, resembling Manchu robes introduced to the Chinese Qing court when they conquered China in 1644.

⁴ Among the Nivkh, there was no word for 'leader', they were all equal and authority depended on skill, intelligence and spiritual connection, particularly in hunting expeditions. Leadership was situational and non-hereditary. Similar structures existed among Arctic Natives Peoples, including the Inuit. See Bujis 1984.



Figure 6 *Jesup North Pacific Expedition*, A Nanai group, Amur River, Siberia. 1897-1902.
Accession no. 41614. AMNH Special Collections, New York, USA

trade with the Chinese. Transporting goods via the Sungari River to Sanxing (三星) present-day Yilan (依兰), the nearest major Chinese city, the Nivkh exchanged furs for Chinese silk, brocade and cotton goods (Schrenck 1881; Smolyak 1960). These textiles were then re-traded to Japanese outposts in southern Sakhalin, placing the Nivkh in a strategic position within regional trade networks. Trade with Chinese and Manchu merchants positioned the Nivkh as intermediaries in the circulation of goods between the Amur region, Sakhalin, and northern Japan (Schrenck 1881; Bujis 1984; Sasaki 2023). This role generated wealth and contributed to social differentiation. Whereas status had previously been associated primarily with successful hunters, participation in trade also became a source of influence. Japanese contact with the Nivkh began in the eighteenth century, penetrating the southern part of Sakhalin and establishing a few outposts. Nivkh traders travelled by sea and land to the Japanese trading post of Shiranushi, located at the southern tip of Sakhalin. In Nivkh tradition, their long-lasting relationships with both Chinese and Japanese were framed in kinship terms (Shternberg 1893).

Russian contact with the Amur River Native Peoples began in the mid-seventeenth century through Cossack incursions, leading to fur tribute demands. Although initially repelled by Chinese (Manchurian) forces for over 200 years, Russian expansion into Siberia and the Amur region progressed, prompting waves of settlers, Orthodox missionaries and traders in search of pelts. In 1858 and 1860, Russia formally annexed the Lower basins of the Amur River and the Priamurye region. Railroads, towns and villages were built, while Indigenous communities were displaced, losing access to hunting and fishing grounds and becoming a minority amid Russian, Chinese and Korean newcomers (Krupnik 1995). With the establishment of the port of Vladivostok in 1858, the region grew as a multi-ethnic trade hub (Diatchkova 2001). Despite the central government's efforts to encourage agriculture, the harsh climate and terrain meant that many settlers had to rely solely on fishing. In addition, Russian settlers widely ignored the territorial rights of the Native population and burned part of the taiga to turn it into farmland. Colonial policies favoured the wealthy Indigenous elites, giving them money, land and rank, being the first to adopt the Russian way of life, marginalising the poorer Native communities that soon became totally isolated and fostered cultural resistance against Russian culture and in favour of their own traditions (Bujis 1984).

Amur River Natives were once more dispossessed of their ancestral lands when, in 1928, the Soviet Union established the 'First Israel' in the Birobidzhan District as the Jewish Autonomous Region (JAR), designated as an official territory for Jewish resettlement (Vitale 2014). The region, approximately the size of Belgium and situated 320 km west of Khabarovsk, was originally named by the Natives after the Bira and Bidzhan tributaries of the Amur River (Weinberg 1988). Conceived as a socialist alternative to Zionism, Birobidzhan was intended to cultivate a proletarian Jewish culture in Yiddish (Vitale 2014). Stalin's plan to relocate Jews to this border also responded to geostrategic concerns related to possible Chinese and Japanese expansion, but it seriously affected local Indigenous populations, subjecting them to border management regimes. The creation of the JAR exemplifies colonial notions of 'empty lands' awaiting settlement, legitimising the dispossession of Indigenous Peoples and erasing their historical presence. Native communities were marginalised, their cultures reduced to static representations in museums. They were portrayed as 'people of nature',

requiring no consent for the use of their land and expected to welcome development imposed by outsiders. Yet again, Amur River Natives were excluded from territorial rights (Peshkov 2021).

The Sovietisation of the Amur region in the 1920s formalised Russian control, initially creating 'Native districts' to promote Indigenous political participation. However, the region's economic value, particularly its fish and timber, led to the dissolution of these autonomous areas (Krupnik 1995). Soviet policies toward Indigenous Peoples shifted with each regime. Lenin denounced Tsarist oppression, while Stalin's purges targeted perceived enemies, including shamans and artists. Traditional spiritual practices were suppressed and Indigenous livelihoods shifted from fishing and hunting to wage labour under Soviet modernisation, now equipped with radios, televisions and sewing machines (Black 1988). Although the state supported Indigenous crafts and subsistence fishing activities for economic and cultural purposes, these efforts were marginal. Native arts were reframed as 'folk' traditions within a paternalistic nationalist discourse (Povoroznyuk 2021). During de-Stalinisation (after Stalin's death in 1953), state-sponsored cooperatives encouraged the commercialisation of local ethnic arts and the wearing of ethnic costumes during civic festivities (Rajagopalan, Bujis 2003), with festivals forced to coincide with the anniversary of the Bolshevik revolution in November (Black 1988). Under Gorbachev's Perestroika in the 1980s, non-Russian citizens were now free to resume a 'traditional life' (Rajagopalan, Bujis 2003). Ethnographers pointed to the need for teaching to revive traditional skills (Taksami 1970), which led to the creation of workshops throughout Siberia aimed at preserving regional Indigenous art (Smolyak 1988).

Although local cultures, languages and traditions were nominally permitted, they remained secondary to socialist integration. Environmental degradation from dam construction and salmon run collapse added to Indigenous pressures. The Amur River border, sealed since 1860, has long shaped regional anxieties, especially fears of Chinese 'invasion' despite growing trade.⁵ The impact of the border is clearly evident to this day among the local fishing communities, as Chinese and Hezhe fishermen are restricted to one side of the river, while Russian and Nanai fishermen can only fish on the other⁶ (Dalles Maréchal 2020).

In response to control and environmental degradation, Indigenous groups have grown increasingly assertive (Krupnik 1995). Following the Soviet Union's collapse in the 1990s, movements for Indigenous self-determination gained momentum. Inspired by Native Inuit and Sámi initiatives, local associations emerged to reclaim language, arts and fishing

5 Since the early twentieth century, the Amur River has functioned as a largely closed border between China and Russia despite its continued role as an important commercial corridor. See Arnaud 1925. Following the end of the Soviet period, cross-border economic exchanges increased, and relations became more open in commercial terms. See Humphrey 2012. Nevertheless, on the Russian side, concerns about a perceived Chinese 'invasion', associated with Chinese migrant workers, have remained part of public discourse. See Billé 2012; Ryzhova 2012.

6 The geopolitical division of the Amur River continues to shape the livelihoods of local fishing communities. Chinese and Hezhe fishers are confined to the southern bank of the Amur River and the western bank of the Ussuri River, while Russian and Nanai fishers are restricted to the northern and eastern bank of the Amur. This enforced separation limits access to traditional fishing grounds and demonstrates how national borders continue to disrupt Indigenous fishing practices and cross-border cultural relationships.

rights. The formation of the Association of Minority Peoples of the North marked a pivotal step in cultural and political resurgence (Doury 1999). This shift enabled new expressions of indigeneity, shaped through local cultural re-engagement, including resistance to infrastructure projects. Despite continued reliance on vague legal definitions, local articulations of indigenous identity persist and evolve to this day (Varfolomeeva 2019).

The Western colonial development paradigm is increasingly being revised to incorporate local histories and Indigenous life projects (Blaser et al. 2004). During the Soviet era, Indigenous Peoples of the North were subordinated within a paternalistic framework that cast Russia as the ‘elder brother’ in a national family, prioritising unity under one language and ideology (Bujis 1984), shaping discourses on Russian identity (Slezkine 1994). Representations of Natives ranged from victims of capitalist exploitation to endangered and dying cultures (Ssorin-Chaikov 2000). Unfair policies had positioned for decades Indigenous groups as subjects of state-led missions focused on literacy, cultural reform and collectivisation (Grant 1995), transforming traditional lifestyles and nomadism (Povoroznyuk 2021).

Today, the revival of Native art and the intergenerational transmission of knowledge, in school workshops offering fish skin tanning, birch bark art and Nanai embroidery, are calling for a return to cultural roots. Whether it is a unique genetic predisposition or an unbroken connection to ancestral knowledge that transcends ideology and forgetfulness, Indigenous Peoples with no previous experience begin to make extraordinary objects after just a few lessons (Glebova 2010b). This revival of traditional art is a return to cultural roots, and it reveals a resilient thread of ancestral knowledge that, once activated, empowers even first-time practitioners to create unique artworks, suggesting that tradition endures not only through learning, but through cultural memory.

1.2 Ethnographic Records

Ethnographic research about the Indigenous populations of the Russian Far East began with early colonial incursions beyond the Urals and was shaped by the consolidation of the Russian Empire’s eastern borders (Ivanov 1989; Glebova 2010b). The earliest documentary references to the Indigenous Peoples of the Amur River basin appear in Chinese historical records dating to the third century CE. More detailed descriptions of the ancestors of the Nivkh, Nanai, Udege and Ainu were recorded following the Mongol expansion into the region in the thirteenth century and were compiled in works such as the *Liao Dong Shi*, first edited in 1433 (Sasaki 2023).



Figure 7 Evert Ysbrandsz Ides and Nicolaas Witsen, An Ostyak family fishing sturgeon, *Three-Year Journey to China*. 1710. Engraving. Leiden University Libraries Special Collections, Leiden, Netherlands

Despite their value, these early Chinese accounts received little attention from European and Russian researchers. Seventeenth-century Russian documents provide some of the earliest ethnographic observations available in European sources. These, including I.G. Spafary's *Tale of the great river Amur* and the 1639 *Inventory of rivers and names of people on which river which people live*, offer brief references to local Native groups, Nivkh, Nanai (Goldis),⁷ and Negidals, whose subsistence was based on fishing and wore garments made of fish skin (Sem 1973). Further observations were recorded in the *Three-Year Journey to China* by Evert Ysbrandsz Ides, a Dutch envoy to the Kangxi Emperor, who travelled overland accompanied by nine Russians and twelve Germans. Drawing on a map provided by Nicolaas Witsen, he

7 Goldi, Golds, Goldes and Samagir are former terms for Nanai.

described regions along the Ob River inhabited by the Ostyaks, noting the abundance of furs and fish, including salmon and pike. He reported that their clothing was made from salmon and sturgeon skins [fig. 7] (Ides, Witsen 1710). Systematic ethnographic research only began in the mid nineteenth century. The 1849-55 expedition of G.I. Nevelskoj marked the first detailed documentation of the Gilyaks (Nivkh).⁸

Richard Maak (1859), a geographer and botanist who conducted fieldwork in the Amur basin, provided some of the earliest detailed ethnographic descriptions of Indigenous communities. He described the artistic practices of Amur River Peoples, noting the transformation of utilitarian objects through woodcarving and the use of decorated fish skin garments. With the approval of Nicholas I, Thomas Witlam Atkinson [fig. 8], an English mason, stone carver and traveller, journeyed through the Asiatic territories of the Russian Empire. On his return to England, he published *Travels in the Regions of the Upper and Lower Amoor* (1861), an account of journeys undertaken between 1848 and 1852 in the eastern regions of the empire, with observations on their natural history and ethnography. Atkinson acknowledged Richard Maak's research in the foreword to the volume.

Following Maak, Russian ethnographer Ivan Alekseyevich Lopatin on his monograph *The Golds of Amur, Ussuri and Sungaria* (1922) was the first to propose a study of the Nanai Peoples of the Amur and Ussuri rivers in 1922. He noted their use of fish skin in clothing – robes, mittens, hats and footwear (Glebova 2017). Lopatin's contributions, based on fieldwork from 1913 to 1919 and subsequent research as director of the Khabarovsk museum, form the basis for later studies of Nanai material culture.⁹

Key nineteenth century ethnographers – including Shrenk, Sternberg, Pilsudsky and Lopatin – advanced Far Eastern ethnography into a more scientifically grounded discipline (Glebova 2010b) with ethnographic material of the Nivkh by Schrenck, Shternberg, Kreinovich and Taksami (Black 1973). Academician Leopold Schrenck led a scientific expedition to the lower Amur River and Sakhalin Island (VanStone 1985) and published a richly illustrated collection of Nanai, Nivkh and Ulchi artefacts, placing them among the greatest artists known to world ethnography (Okladnikov 1981). Schrenck (1881) documented Nivkh summer tents constructed from salmon skins and offered comparative analyses of Nivkh and Ulita culture, though coverage of the latter was limited (Black 1973; VanStone 1985). Russian explorer V.K. Arsenyev further confirmed the essential role of fish skin in Indigenous winter gear, including clothing, footwear, tents, sled covers and tobacco pouches (Glebova 2017).

Sternberg's studied Nivkh social organisation, including kinship and marriage. He contributed to the *Jesup North Pacific Expedition Reports* and wrote *the Social Organization of the Gilyak*, although the manuscript was never published, it was deposited posthumously by Boas¹⁰ in the archives of the American Museum of Natural History (Black 1973). Franz Boas, a key figure in American anthropology, with positive views about

⁸ The historical term 'Gilyak', refers to the Nivkh, as recognised in current usage and official Soviet nomenclature.

⁹ Lopatin 1916; 1960; Ivanov 1954; 1963; 1988; Dalles Maréchal 2020.

¹⁰ The *Jesup North Pacific Expedition* (1897-1902), led by Franz Boas and sponsored by the American Museum of Natural History, investigated cultural links across the Bering Strait, documenting Indigenous cultural practices threatened by colonialism.



Figure 8 Thomas Witlam Atkinson, A Goldi (Nanai) man, *Travels in the Regions of the Upper and Lower Amoor*. 1860. Leiden University Libraries Special Collections, Leiden, Netherlands

Soviet indigenisation policies, worked closely with Russian and Soviet anthropologists, including Sternberg, Jochelson and Bogoras (Kan 2024). The most comprehensive visual and material records appear in the *Istoriko-etnograficheskiy atlas Sibiri* (Levin, Potapov 1961), with the illustrations of objects which accompany the sections written by Prytkova and Vasilevich and Levin (1961). Taksami Chuner Mikhailovich (1931-2014), a Nivkh scholar and the first Indigenous Doctor of Science in the Russian Academy of Sciences, made major contributions to the study of Nivkh traditional culture through extensive fieldwork in Sakhalin and the Amur region. He published studies on Nivkh clothing (Taksami 1964) and artefacts in the Museum of Anthropology and Ethnography in Leningrad (Taksami 1970) (VanStone 1985).

Berthold Laufer, a nineteenth century American ethnographer and sinologist, produced one of the earliest Western studies on the decorative art of the Lower Amur (Wierbowski 2015). His writings on Nivkh material culture¹¹ (1900; 1902) are now considered inadequate due to a strong diffusionist bias. Laufer viewed Amur art as derivative of Chinese and Japanese forms and characterised Nivkh artistic expression as lacking symbolic depth and representational ability,¹² positions later critiqued for underestimating the cultural depth of Indigenous visual traditions (Black 1973). The Soviet scholar S.V. Ivanov (1961) devoted two entire works to iconography in the Amur region (Ivanov 1954; 1963). Like Laufer, Ivanov also failed to examine Nivkh art itself as a whole and to interpret the symbolism of decorative elements (Black 1973). While offering technical analyses of Nivkh artefacts, he insisted on a cross-cultural comparative method and the importance of Chinese influences (VanStone 1985).

Despite the breadth of material, Amur River fish skin collections at Russian, European and American museums remain under published (Black 1973; VanStone 1985). William W. Fitzhugh's *Crossroads of Continents: Cultures of Siberia and Alaska* (Fitzhugh, Crowell 1988) celebrating the diversity and common ancestry of the Siberian and American peoples of the Bering Straits, is the most significant Circumpolar ethnological publication of the century, including one of the first single comprehensive studies of Nivkh material culture from Lydia Black (1973; 1988) a study of the Native Peoples of the lower Amur River and Sakhalin Island based on a wide variety of secondary documents in English and Russian languages. Another important study of Nivkh material culture is James VanStone's 1985 analysis of the Pogosky collection. VanStone (1925-2001), curator of North American collections at the Field Museum of Natural History, Chicago and a leading Arctic anthropologist, documented 59 objects from the Nivkh, Ulita and Evenki of northern Sakhalin, providing evidence of female material culture (VanStone 1985).

The work of Shiro Sasaki has been instrumental in advancing the study of Indigenous communities of the Russian Far East. His studies of Japanese ethnographic research in Siberia (Sasaki 2003), Indigenous transborder activities between the Russian and Chinese empires (Sasaki 2016) and the

¹¹ The material culture studies conducted by Berthold Laufer were collected under the auspices of the *Jesup North Pacific Expedition*. See Laufer 1900.

¹² Laufer's assessment in *The Decorative Art of the Amur Tribes* portrays the Native groups as artistically limited and undeveloped, dismissing their ornamentation as poor and praising only Chinese influence. See Laufer 1902.

history of Indigenous communities in the southern Russian Far East (Sasaki 2023) have highlighted the historical connections linking peoples across the Amur and Sakhalin regions. Igor Krupnik (2026) has subsequently documented Indigenous Siberian ethnographic collections in United States museums, providing an overview of their collecting histories and current locations.

Cunera Buijs, anthropologist and curator of Arctic collections at the Wereldmuseum in Leiden, has made a substantial contribution to research on Nivkh and Ulita clothing from the pre-Soviet to the post-Soviet periods. Her work on women's material culture established an important focus within a field largely dominated by male anthropologists. Extensive fieldwork on Sakhalin Island informed both her publications and her acquisition of historical Nivkh belongings. The museum houses a significant collection of fish skin garments, accessories, sails and tent coverings from the Amur region to Sakhalin (Buijs 1984; Rajagopalan, Buijs 2003). More recent contributions include the work of Olga Smoljak, who provided interdisciplinary perspectives on history, economy, religion and politics, documenting the shifts in vernacular use and ritual life under Soviet influence (Smoljak 1962-2006; Dalles Maréchal 2020). Evdokija Aleksandrovna Gaer, a Nanai ethnographer from the Khabarovsk area, combined ethnographic training with a political career dedicated to Indigenous rights. Her monograph on Nanai rites traced religious transformations and the decline of shamanic practice in the latter half of the twentieth century.¹³ Elena Viktorovna Glebova's extensive fieldwork, alongside her curatorial collaboration with Daria Cevoli on the exhibition *Esthétiques de l'Amour: Sibérie extrême-orientale* at the Musée du quai Branly in Paris, has advanced contemporary scholarship on fish skin art from the Amur River basin.¹⁴ Cevoli's work draws on the long-standing French tradition of Siberian anthropology, particularly research conducted at the Musée de l'Homme by Laurence Delaby on Tungus shamanism, which resulted, with Marie-Lise Beffa, in the 1999 publication of an analytical catalogue of Siberian shamanic objects held in the museum. Dalles Maréchal, also involved in the *Esthétiques de l'Amour* exhibition, has produced studies on Nanai funerary rites (2010), identity reconstruction through shamanism and embroidery (Dalles Maréchal 2020), nuptial clothing practices (Dalles Maréchal 2022) and a comparative analysis between Hezhe and Nanai embroidery within heritage-making processes (Dalles Maréchal 2023). Finally, Nanai artist Anatoly Donkan's lifetime research on tanning and the production of fish skin artefacts, originally supported by Nanai historian Nikolai Batunovich Kile, has recently been documented (Buijs 2021; Donkan, Bohert 2021; Kasten 2026).

¹³ A Nanai ethnographer from Khabarovsk Krai, Gaer combined academic research with political engagement on behalf of Indigenous communities. Drawing on fieldwork undertaken between the 1960s and the 1990s, she published a monograph on Nanai rites that documents religious change and the decline of shamanic practice in the second half of the twentieth century. See Gaer 1983; 1991a; 1991b. See also Dalles Maréchal 2020.

¹⁴ Glebova's research is based on extensive fieldwork in the Amur River basin and has been disseminated through a series of publications. Her collaboration with Daria Cevoli on the exhibition *Esthétiques de l'Amour: Sibérie extrême-orientale* at the Musée du quai Branly further contributed to the study of fish skin art from the region. See Glebova 2006; 2007; 2010a; 2010b; 2015; 2017; 2019.

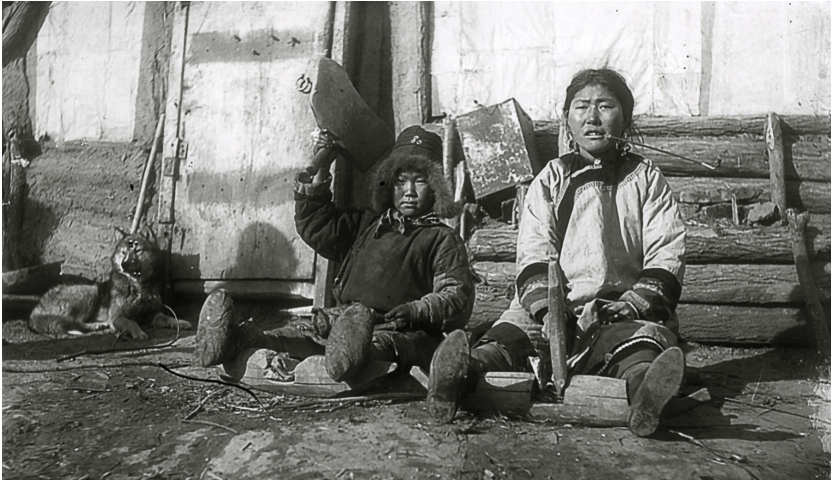


Figure 9 Pyotr P. Shimkevich, Woman and boy processing fish skin. 1896. Accession no. CC BY-NC-SA 4.0. Berlin State Museums, Ethnological Museum, Berlin, Germany

1.3 Regional Ecology

Amur Peoples [fig. 9] have long drawn their livelihoods and material culture from the natural environment (Cevoli, Dalles 2015). Fish, particularly salmon, sturgeon and carp have historically been the main source of food, clothing and other daily necessities. The veneration of these resources is reflected in rituals to worship the spirits of the water element, taboos governing fishing practices and seasonal rituals in spring and autumn. This occurred during the *keta poutine* festival, when the autumn river was filled with salmon and the Natives had to gather enough stocks to produce dried fish, their ‘daily bread’ and staple food in winter. Ceremonial offerings, including berries and fish jelly made from skins, were sent downriver in birch bark boats to the spiritual realm of *Temu*, the master of aquatic domains. Today, such traditions persist symbolically, with fishermen offering tobacco to the river before fishing (Glebova 2010b). In spring and autumn, major fishing events continue to bring people together during the spawning season from June to September, when fishing takes centre stage in these communities (Dalles Maréchal 2020). The Nivkh moved between riverbanks and coasts, with autumn marking the shift to land hunting (VanStone 1985).

The spirituality of Amur societies distinguished between humans and animals, although animals were considered to possess human qualities, entered into kinship relations with people, co-operating with one other. Animals responded to people’s needs by offering their bodies to feed them. In return, animals were given offerings (Okladnikov 1981). Though agriculture was introduced in the mid nineteenth century, dried and frozen fish remained vital for the Nivkh, who traded it with the Ainu and neighbouring groups along the lower Amur (VanStone 1985).

The environment of the Nivkh and the Ulita dominated by taiga, rivers and marshes areas along the Amur River and on Sakhalin Island, shaped both settlement and survival. Seasonal rhythms governed fishing. The rivers were frozen for much of the year and during the winter ice fishing took place,



Figure 10 Ulita house model with bark exterior and salmon skin door.
Accession no. 2003-43-122. Amur River, Siberia. Penn Museum, Philadelphia, USA

Figure 11 Leopold von Schrenck, Nanai summer tent (lower figure).
Reisen und Forschungen im Amur Lande. 1881. Leiden University Libraries
Special Collections, Leiden, Netherlands

with up to 300 fish being caught in a day. In summer, the rivers teemed with salmon, sturgeon and carp. Fish were netted, cooked, dried and stored as *yukola*, which also fed their dogs. Homes were adapted to the landscape, with winter log cabins located near forests and summer tents with fish skin coverings built near rivers. The hut's windows were also covered with fish skins over a lattice that let in the light (Lansdell 1882; Bujis 1984) a tradition shared with Sámi Natives (Palomino 2022).

Fishing was a family endeavour: men caught the fish, women and children processed it and women crafted garments from the skins (Dalles Maréchal 2020). When men were away hunting, fishing was carried out by women, children and Elders, providing sustenance and helping prevent food scarcity. They harvested only what was necessary, never stocked excessive amounts of fish and procured just enough to survive the winter. And nothing was wasted. Skins were preserved for future use, flesh sliced thin for drying, bones dried for dog food and fat extracted from heads and entrails for cooking. Even vertebrae and fish bones were transformed into toys and mobiles for children, combining practical use with recreational activities (Glebova 2010b; 2015).

1.4 The Fish

The Amur River is inhabited by over one hundred fish species, with Pacific salmon (*Oncorhynchus keta*) being the most prolific (Oakes, Riewe 1998). The Indigenous communities possessed detailed knowledge of the properties of each fish species, using this to select appropriate skins for different purposes. Most used species include chum salmon [fig. 12] (*Oncorhynchus keta*), humpback salmon (*Oncorhynchus gorbuscha*), huchen salmon (*Hucho Hucho*), Brown trout (*Salmo trutta*), Kumzha (*Salmo trutta*), Siberian giant trout (*Hucho taimen*), Amur carp (*Cyprinus rubrofasciatus*), kaluga (*Huso dauricus*), Sakhalin sturgeon [fig. 13] (*Acipenser mikadoi*), Atlantic wolffish (*Anarhichas lupus*) and Amur pike (*Esox Lucius*) (Elarbi et al. 2020; Marks 2024; Palomino et al. 2026). Depending on local availability, those skins were traditionally used in Western Siberia for summer clothing and footwear for their wind and water resistance properties and in the Russian Far East throughout the year (Georgi 1799; Hatt, Taylor 1969).

Up to the late nineteenth century, chum salmon and carp skins were sewn into large sheets to craft windowpanes, doors, tent¹⁵ coverings [figs 10-11] and boat sails (Glebova 2015). They were also used for pallets and blankets, both indoor and outside (Black 1973). Russian ethnographer Richard Maak (1859) described Indigenous dwellings along the Amur River as “stick and mud huts with wide windows” in which fish skin was sewn into a wooden lattice, the seam forming a line “similar to the edge of a saw”. In 1860, botanist K.I. Maksimovich observed only one glass window in a Nanai house near Khabarovsk; other dwellings still used fish skin parchment (Smolyak 1975). During sled travel, cargo was also wrapped in lightweight, water-tight fish

15 The Pogosky collection at the Chicago Field Museum includes a conical tent cover made from fish skin, constructed from four horizontal rows of whole salmon skins, with triangular gaps filled by additional skin inserts. Overcast and running stitches secure the seams and fish skin ties are affixed at the top. These tents, used by the Orochi throughout the year, were laboriously assembled and lacked bottom edging. As Nivkh preserved fish with the skin on, they relied on relatives, likely at the Amur's mouth or among the Ainu, for suitable skins. See VanStone 1985.

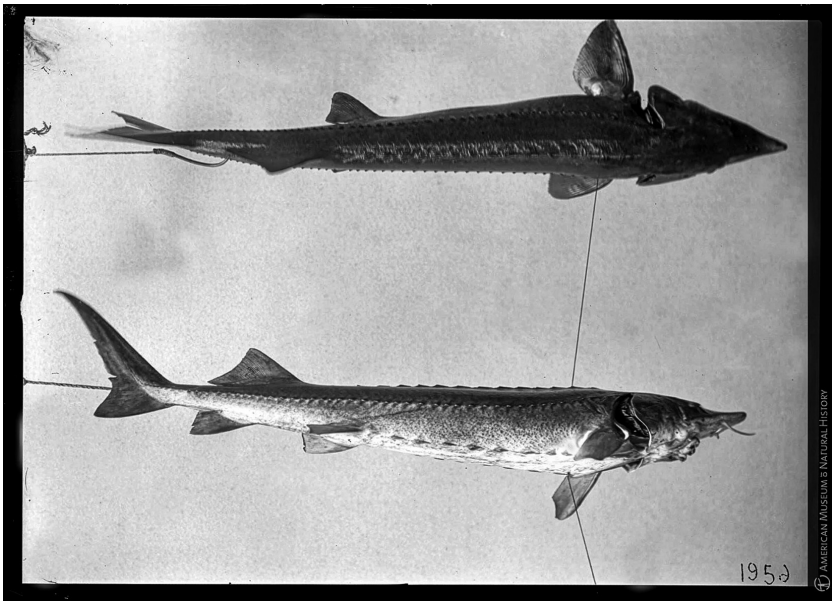


Figure 12 *Jesup North Pacific Expedition*, Nelma salmon of the Kolyma River, Siberia.
1897-1902. Accession no. 1986. AMNH, New York, USA

Figure 13 *Jesup North Pacific Expedition*, Sturgeon of the Kolyma River, Siberia.
1897-1902. Accession no. 1956. AMNH, New York, USA

skin blankets and supplemented with small fish skin bags used for storing food and securing various items transported on the sleds (Glebova 2015). Although forest-dwelling, the Udege carried fish skin tents while hunting due to their lightness and reliability (Glebova 2010b). The strongest skins from Manchurian trout, huchos, sturgeons and kaluga, were used for ski bindings, dog harnesses; knife sheaths and tinderboxes worn on hunting belts (Glebova 2010a). The exceptionally strong sturgeon skin was fashioned into *trutnitsa*, a bag used to carry fire implements or smouldering dry birch mushrooms. Storage containers for dried fish, meat and berries were also fashioned from fish skin (Glebova 2010b).

Chum salmon, wolffish and Amur carp skins, valued for their size and durability, were used for clothing. Among Amur communities, pike, with its strong skin, was used for hunters' footwear, mittens and leggings (Fontanès, Bazin 1978) and the strong skins of taimen and wolffish were used to make the lower part of shoes (Glebova 2010a). The mottled skins of different salmon species were favoured for outerwear (Cevoli et al. 2006). In bad weather, people wore wolffish skin garments, known as *kherte* in Nanai. The soft chum salmon skin was used for everyday clothes (Glebova 2010a). A particularly decorative variety of salmon, the *kumza* (*Salmo trutta*), was used for children's garments, mittens and decorative appliqués (Fontanès, Bazin 1978). Nivkh women crafted sophisticated patterned ceremonial garments using the skins of chum salmon or Amur carp. Carp skin, which has a very beautiful texture with large cells from scales, bleached in the frost or with the help of a special type of clay, was used for the most important garments, including wedding robes. These skins, valued for their pale, soft and elastic texture, were also transformed into shamanic attire and amulets (Glebova 2010b).

1.5 Technology

The making of fish skin garments was a labour-intensive process grounded on the technological and artistic skills developed by Amur Native Peoples, involving fishing, tanning, dyeing, sewing and embroidery (Palomino 2025a). Each stage required practical knowledge passed down through generations. However, the industrial revolution, the introduction of synthetic fibres, chemical dyes, mass production and changes in cultural practices have contributed to the decline of this art. Today, as very few people still tan leather, dye clothes or sew garments by hand, we lack the practical knowledge to fully interpret these objects. Without this knowledge, it can be difficult to grasp the full cultural and technical importance of these garments (Palomino 2025b).

1.6 Tanning

Unlike steppe nomads and northern Siberian Peoples, who used felt, reindeer skins or the skins of marine mammals, the Amur Indigenous Peoples dressed mainly in fish skins (Glebova 2017). Fish skin tanning was predominantly carried out by women during the spring and summer seasons. The removal of fish skin required precision and care. After air-drying fresh or thawed fish for a few hours, an incision was made at the base of the head, followed by a cut along the belly from head to tail [fig. 14]. The fish was eviscerated and the



Figure 14 Elisa Palomino,
Salmon skin tanning process

skin around the head was carefully cut in a circular motion. Side and tail fins were removed [fig. 17]. Using bone or wooden knives to avoid tearing, the skin was gently separated with the aid of the fingers and peeled off. The dorsal fin was then carefully removed. The skin was turned over, and all traces of meat and fat were thoroughly scraped off, a crucial step to avoid bad smell and the skin turning yellow [figs 15-16]. The cleaned skin was rinsed under water and then in ash water to degrease and deodorise it. It was gently squeezed, laid flat on a surface and left to dry in a ventilated space, away from direct sunlight (Glebova 2010b). The skin was then carefully removed, stretched between stakes and dried in the sun or near the hearth. Skins were removed post-drying, stretched on barn walls and pressed under weights before final drying. Once fully dry, the skin resembled stiff cardboard and required kneading with a specialised wooden artefact or by hand. To absorb residual grease, rotten willow wood, dry ash (Glebova 2010b), rhododendron, or mugwort was sprinkled over skins during the softening process, serving as natural absorbents for fat and odour removal (Hatt, Taylor 1969).

To enhance skin softness, Nanai and Ulchi used a combination of part smoking and part fat tanning¹⁶ methods (Fontanès, Bazin 1978) rubbing into the skin substances like masticated fish roe, fish stomachs, fish broth or bird eggs, to lubricate and condition the skins (Hatt, Taylor 1969; VanStone 1985). Vasilevich (1969) describes a method involving the use of fish liver oil followed by folding, scraping and kneading. Continued kneading improved pliability and the underside was then scraped to remove subcutaneous fibres. For a suede-like texture, scales were removed diagonally along the natural scale line from belly to back, creating a specific surface pattern (Glebova 2010b). For further softness the skin was stretched manually and rubbed with volcanic pumice stone (Glebova 2010a). Smoking, when employed at the end of the process, served to obtain different brown shades, lend strength, watertightness and preserved the skin from decay (VanStone 1985; Saito 2015). Bleaching was achieved by exposing the skins to the cold tundra air, which also favoured the eventual absorption of dyes (Saito 2015).

Softening tools varied, in addition to hinged jaws, the Amur Peoples used wooden platforms with narrow slots where skins were repeatedly hammered [fig. 9]. Hammer designs included carved symbols representing animal and plant spirits, intended to boost hunting and fishing success by hammering fish skins with them (Hatt, Taylor 1969; Oakes, Riewe 1998). Wooden platforms, including the *uksu* (hoe) and *dele* (loom), were used with skins crumpled and struck repeatedly to achieve softness (Glebova 2010a; 2010b). Richard Maak described how pike skin was softened using a simple tool called a *khairga* – a wooden bar with a hollow centre. The fish skin was tightly rolled, placed in the hollow and pounded with a rounded wooden hammer (*kungku*) to remove scales and soften the skin (Glebova 2010b).

The skin of a caught fish is not removed immediately. Having disembowelled the fish, it is hung up on a drying rack, where it stays for a day or two and only then the skin is removed. The raw skin is pinned to dry on the wall of a barn, having previously stretched it as much as possible. After two or three days of such drying the skins are removed from the wall

¹⁶ Oil or fat tanning, one of the earliest traditional methods used by Indigenous groups, involves the penetration and oxidation of fatty substances such as brain, fish oil, roe, or seabird eggs into the dermal fibres, creating a durable, softened skin. See Mathur 1927.



Figure 15 *Jesup North Pacific Expedition, Processing fish, Siberia. 1901 .Accession no. 1654. AMNH Library, New York, USA*

Figure 16 *Jesup North Pacific Expedition, Woman drying fish, Siberia. 1901. Accession no. 1655. AMNH Library, New York, USA*

and, having put them all one over another and having pressed them with something heavy, left them to dry finally in the wind. After that the dry skins are crumpled on a special wooden artefact. The device consists of a hoe and a loom, which has a hollow in the middle part, where the skin is placed and at the ends - notches, where the tanner places her feet to press the artefact. Work consists of pounding the skin, crumpled into a lump, with a hammer and frequently turning it. When dressing fish skin, fish roe and animal brains are used. The skin is greased several times with these substances and then it is crumpled and finally kneaded by hand... (Lopatin 1922, 23)

Finished fish skins were stored at the top of barns until needed. Rooted in ancestral knowledge and ecological principles, fish skin tanning practices among the Lower Amur Indigenous Peoples showcase a philosophy of minimal waste and reverence for all living beings. From the use of animal substances such as fish roe and seabird eggs to increase suppleness, to the application of natural absorbents like rotten wood and ash for degreasing and deodorising, each stage reflects an integration of environmental knowledge and sustainable material use.

1.7 Natural Dyes

Among all the Indigenous Arctic and sub-Arctic groups known to have used fish skins in garment production, the Amur Peoples of the Russian Far East stand out as having developed the most sophisticated tradition of natural dyeing for the decorative fish skin patterns on their garments. Historically, the natural hues of animal skins provided early access to colour, inspiring Arctic Native artists to create elaborate designs by combining earth-toned shades from various fish species (Palomino et al. 2024; Palomino 2025b). The inherent patterns and colours of fish skins rendered additional dyeing unnecessary. The production of clothing and footwear involved careful selection and matching of skins by colour and texture, paying close attention to subtle chromatic variations, combining skins to create nuanced visual effects (Beffa, Delaby 1999; Cevoli et al. 2006). The skilful arrangement of fish skins, expertly using the natural fish colour palette with their brown gradients and pearlescent highlights, created depth effects resembling fur surfaces (Cevoli et al. 2015).

While Arctic Native groups such as the Alutiiq, Yup'ik, Athabaskan, Ainu and Hezhe, have retained the fish skin's natural earth tones - ranging from creamy whites to silvery greys and muted browns - the Amur River Peoples, including the Nivkh, Nanai, Ulchi, Udege, Orochi and Negidal, developed a vivid chromatic palette. This included hues of black, blue, green, yellow and red derived from local flora, minerals and traded materials (Palomino 2025b). The explorer R.K. Maak, in his account *Journey to the Amur*, remarked upon the artistic sensibility of local inhabitants, noting that "none of the other inhabitants of Eastern Siberia has such a well-developed artistic instinct" (Glebova 2017, 100). Atkinson (1860) in his *Travels in the Regions of the Upper and Lower Amoor* noted that the Nanai employed coordinated colour combinations and favoured vivid colour clothing and that communities along the Amur River applied similar principles to household furnishings and architectural decoration.

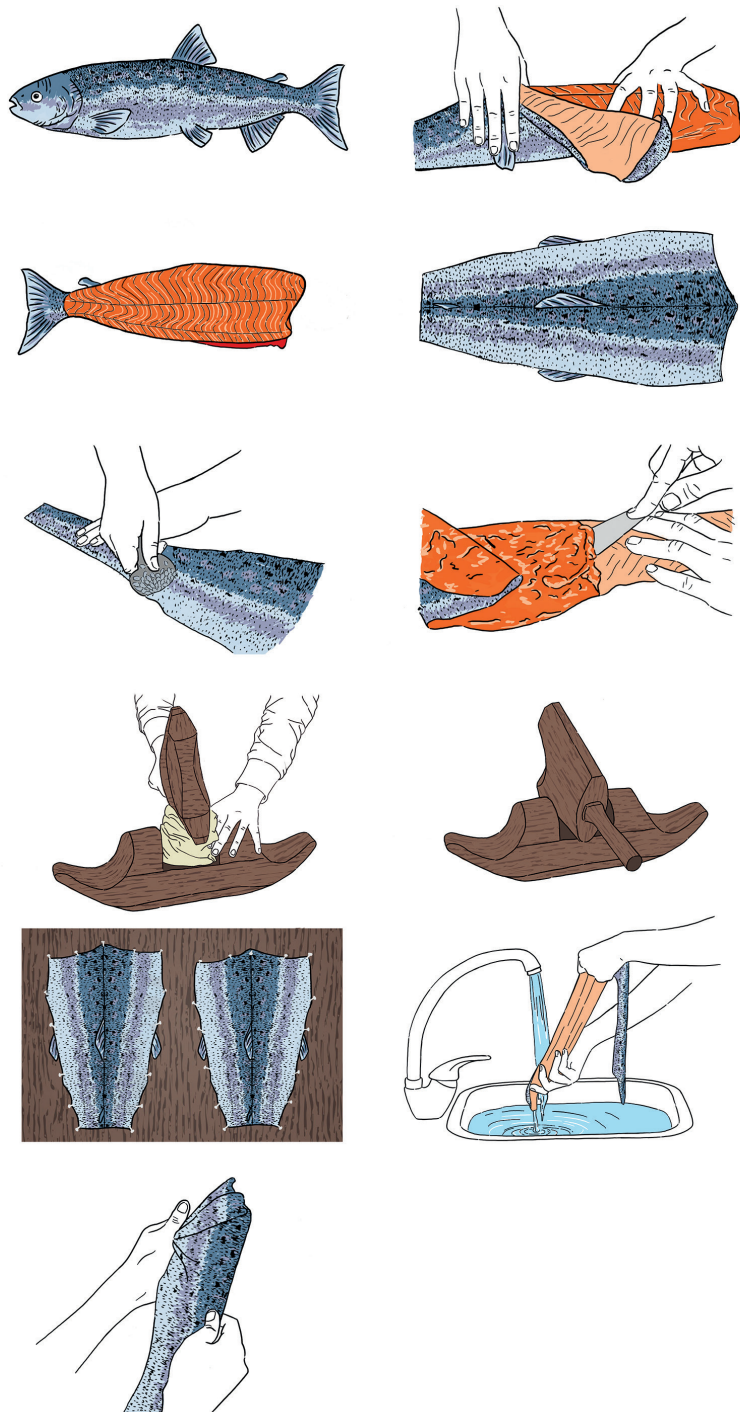


Figure 17 Mechanical processing of fish skins. Illustration: Laura Fernández. Ethnographer Ivan Lopatin, in his 1922 study, provided a comprehensive account of Nanai fish skin processing

The dyeing of fish skins connects creativity, spirituality and environmental stewardship. Over generations, these practices evolved in response to the availability of resources and the artistic, functional and ceremonial needs of daily life. As a result, the fish skin artefacts from the Amur region reveal advanced technical skills and a chromatic richness among other circumpolar fish skin traditions (Palomino 2025b). White served as a decorative background, black was used for borders and hems and blue or grey for undergarments (Oakes, Riewe 1998; Rajagopalan, Bujis 2003). Women's clothing employed bleached carp or salmon skins [fig. 19], as the perfect canvas to apply dyed decorations in blue, red and yellow. In contrast, men's garments retained the natural shades of fish skin (Cevoli, Dalles 2015). Everyday garments were usually undecorated, whereas ceremonial attire featured ornated elements crafted from dyed fish skin (Glebova 2010a).

As specific shades became desirable, Amur communities developed dyeing techniques based in local ecology. Natural resources such as mineral pigments, berries and bark were processed through maceration, fermentation, or boiling to produce dyes [fig. 18] (Black 1973; Hurcombe 2014; Palomino, Rahme 2021). Tannins extracted from bark were among the earliest dyeing agents in humankind, valued for their dual tanning and colouring properties. Mineral pigments, such as orange-red ochre [fig. 21], were mixed with fish blood or fish roe and heated to produce stable colourants, while black dyes were derived from soot¹⁷ (Fitzhugh 1997; Glebova 2015). Safflower (*Carthamus tinctorius*), introduced via the Silk Route by the third century CE, provided vivid reds, although its yellow components were discarded due to poor lightfastness (Han 2015; Kite 1999). Mordants such as alum, ash and earth were employed to fix dyes (Cardon 2007).

Natural dyes were key for artistic and for spiritual and medicinal reasons, as they gave clothes protective and healing properties linked to the plants they were derived from (Geminiani et al. 2024). The dyeing process involved immersing skins in solutions obtained from decocted or macerated plant parts, producing a wide spectrum of colours. Fish glue, prepared from skin, scales, swim bladders, or viscera, served as both adhesive and pigment binder (Georgi 1799; Black 1973).

Festive garments, particularly those worn for ceremonials and bridal attire, were traditionally crafted from light, nearly white fish skin. White carp skin, highly valued for its smooth, silky texture, was especially favoured. To achieve the desired pale tone, prepared skins were either exposed to freezing temperatures or treated with a fine white clay. The clay was applied to the surface of the dried skin and left for several days before being rubbed off, in conjunction with the application of animal brain, which further enhanced the bleaching effect (Saito 2015; Glebova 2015). Additionally, the degree of whiteness achieved was influenced by climatic conditions during the drying process, with exposure to cold air – such as in tundra environments – serving as a natural bleaching method (Rajagopalan, Bujis 2003). This whitening not only improved the appearance of the skins but also enhanced their capacity to absorb natural dyes more effectively (Saito 2015). The almost white tone obtained was then decorated by using the dyes directly through painting on the skins or with cut-out fish skin motifs [fig. 23], dyed in blue, red and yellow tones used in appliqué embroidery (Cevoli, Dalles 2015).

17 Fine carbon particles from burning bark.



Figure 18 Elisa Palomino, fish skins bark
tanned by Swedish fish skin artist Lotta Rehme

One of the earliest records of natural materials used for skin dyeing comes from Georg Steller, who accompanied Vitus Bering's expedition.¹⁸ Steller documented a stable black pigment [fig. 19] made from soot from burnt bark collected from the bottom of cooking cauldrons, mixed with chewed or dried and ground salmon roe (Glebova 2010a; 2015; 2017). This dye was applied both to fish skins and to birchbark ornaments (Glebova 2015). Additional black dyes were created using tannin-rich plant materials combined with iron mordants (Tamburini 2022). The Amur River region provided a wealth of botanical resources. Its forests yield berries, medicinal herbs and edible plants gathered primarily by women and children. These included cranberries, raspberries, huckleberries, elderberries, rowanberries, rose hips and bird cherries (Black 1973; Bujis 1984; Oakes, Riewe 1998). Berries were stored in birch bark containers and frozen for use in winter, serving both nourishing and ritualistic purposes, as well as being used as dyes.

Brown dyes were derived from rotten wood crumbled and diluted in water (Glebova 2015). Specific brown shades were obtained from alder and pine bark decoctions, with skins smoked in the last stages providing additional colouration, water tightness and preservation (Glebova 2015; 2017). Yellow dyes were produced using the Amur cork tree (*Phellodendron amurense*), native to the Amur River basin, yielded bright lemon-yellow tones due to its inner bark being rich in berberine. These colourants are highly water-soluble and require no mordant (Tamburini 2022). The bark's antimicrobial and spiritual properties, owing to its high content of plant alkaloids – including berberine, limonin and phellodendrine – make it one of the foundational herbs of Traditional Chinese Medicine, connecting within East Asian dye traditions (Luo et al. 2022; Han 2015). Safflower (*Carthamus tinctorius* L.) florets also produced yellow shades (Zanoni, Schofield 1983), though these were less resistant to fading (Han 2015).

Red dyes were obtained from a range of natural sources, valued for both their chromatic qualities and spiritual connection. Alder (*Alnus*) bark was used to produce red and brown hues, boiled with water or with the juice of cranberries, or blueberries (Glebova 2010a; 2015). In some traditions, alder bark was decocted in urine, enhancing dye extraction (Saito 2015). The tannin content of alder bark made it suitable for both dyeing and tanning, with red-dyed skins playing an important role in the spiritual world of the North (Chaussonnet, Driscoll 1994; Saito 1992; 2015). Throughout the region, red was symbolically linked to blood, life and death and was featured in shamanic attire as a medium connecting human and spiritual realms (Chaussonnet, Driscoll 1994).

18 Georg Wilhelm Steller was a German physician, botanist, zoologist and explorer who accompanied Vitus Bering, a Danish sea captain sailing for Russian Tsar Peter the Great, on the Second Kamchatka Expedition in 1740, with the goal of exploring and cataloguing the largely unknown territories between Siberia and North America. See Steller 1999.



Figure 19 Nivkh robe. Salmon skin with black pigment on hem, ca. 1900. Accession no. 626-1905. Lower Amur River near Vladivostok, Siberia. Victoria and Albert Museum, London

Red ochre¹⁹ (hematite) [fig. 21] was another key earth pigment. It was dug, burnt, or mixed with fish blood to intensify its hue, then applied to robes [fig. 20], boots and bags.²⁰ Ornamentation of arabesques and red surfaces were achieved with red ochre (Schrenck 1881). Archaeological evidence of red ochre-covered earthenware fragments from ancient settlements on the banks of the Amur suggests its early use in material decoration (Okladnikov 1981). Fish roe was used, mixed with ochre, as a decorative medium. When unsalted, it provided nourishment on long marches (Taksami 1967). This dual function demonstrates how animal-derived substances could act both as natural dyes for fish skin embellishment and as practical resources to quench thirst or sustain energy during travel.

Safflower (*Carthamus tinctorius* L.) produced vivid reds through carthamin and precarthamin compounds. Though initially bright, the dye fades over time with light exposure (Kite 1999). It was introduced to ancient China from the West in the Han Dynasty and became widely regarded as a quintessentially Chinese dye (Tamburini 2022). In Japan, fabrics dyed with safflower were worn next to the skin since the Heian period to promote healing (Shimoyama, Noda 1996; Taylor 1997; Kite 1999). Processing traditionally involved an ash lye bath or acid treatments to yield red or pink tones (Tamburini 2022; Hofmann-de Keijzer, de Keijzer 2023).

19 Red ochre play material, economic and spiritual roles across the Athapaskan region. Its excavation followed strict gendered rules; among the Ingalik, men alone collected it, as the presence of a woman could make the ochre sink into the earth. Among the Kutchin, collectors left offerings of sinew or valuable items at the site. Ochre also signified wealth and had commercial value comparable to trade beads and dentalia. See Chaussonnet, Driscoll 1994; Osgood 1936, 1940.

20 Osgood 1936; McKennan 1959; Snow 1981; Hadleigh West 1963.



Figure 20 Nanai Robe. Late nineteenth century. Salmon skin with brown carp neck appliqué.
Accession no. 71-12-4. Penn Museum, Philadelphia, USA

Figure 21 Elisa Palomino, Red Ochre (hematite)
an earth pigment used to dye fish skin



Figure 22 Elisa Palomino, Indigo dyed fish skins

Blue dyes [fig. 22] in the Amur River region were derived from both local flora and imported plants, offering hues that differed from the earth tones associated with Indigenous Arctic and sub-Arctic fish skin artefacts. One source was Asiatic dayflower (*Commelina communis*), whose light blue petals, rich in anthocyanins, produced a vivid ultramarine dye. According to Nanai Elder Anatoly Donkan,²¹ the petals were used to stain fish skins in blue shades (Glebova 2015). Historically, the dye was also used by eleventh century Japanese artists to stain kimono textiles with techniques later known as yūzen-dyeing and in woodblock printing (Ulyanova 1998). Another source of blue dye was indigo, a blue dye extracted from *Polygonum tinctorium* widely cultivated in China and Japan (Kite 1999) and introduced into the Russian Caucasus in 1835 (Fitzhugh 1997). Indigo was one of the earliest and most outstanding natural blue dyes, valued for its dark hue (Hurcombe 2014). Dyeing required the long process of fermentation of the leaves, allowing the enzymes to transform into blue indigotin and the use of ash lye and mild heat to provide the oxidation that causes the blue colour to

²¹ Anatoly Donkan is a Native Nanai artist whose work preserves traditional fish skin art. His practice rooted in local knowledge includes an ichthyological understanding of the specific fish species used in traditional tanning techniques, plant-based dyes and the construction and stitching methods unique to each fish skin item.



Figure 23
Stencilled and indigo-dyed Nanaï
fish skin robe. Late nineteenth century.
Accession no. 2003-439.
Amur River, Siberia.
Penn Museum, Philadelphia, USA

appear (Bechtold, Mussak 2009; Tamburini 2022). Indigo became especially valued for its colourfastness and intensity, used to decorate Nivkh and Nanai fish skin robes and boots. While synthetic indigo – chemically identical to natural indigotin – was developed in the late nineteenth century, its use on these fish skin garments is unlikely given their earlier dates (Kite 1999). Green was produced by over-dyeing yellow with indigo, as few natural green dyes are stable (Hofmann-de Keijzer, de Keijzer 2023). Double-dyeing and copper mordants were also employed to achieve desired green shades (Tamburini 2022).

Russian zoologist and ethnographer Leopold von Schrenck observed fish skin robes decorated with blue-black painted stripes around the neck, shoulders and sleeves. He mentioned that these long-lasting bands, which were unaffected by rain, may have been produced with Chinese ink mixed with fish or seal oil (Schrenck 1881).

The introduction of synthetic dyestuffs on the market in the mid nineteenth century (van Bommel et al. 2007) marked a shift in the material practices of Amur Peoples. Although natural dyes remained in use among Natives and ceremonial practitioners, synthetic aniline dyes – first synthesised in 1857²² – began replacing plant-based dyes in commercial settings from the mid nineteenth century onward (Zanoni, Schofield 1983; Tamburini 2022). The timeline of their diffusion into remote regions such as the Amur Basin remains unclear, but most historic fish skin garments held in museums nowadays were likely produced before the end of the nineteenth century, before synthetic dyestuffs became widespread. Ultimately, the shift to synthetic dyestuffs altered aesthetic choices and technical approaches. While traditional embroidery on appliquéed fish skin once dominated, it gradually gave way to painted or drawn decorations (Cevoli, Dalles 2015). Despite this transformation in technique, garments continued to feature intricate motifs, with styles and methods varying by each Native group.

1.8 Sewing Implements

Once tanned and dyed, fish skins were sewn into garments using different specialised tools and techniques connected with cultural and spiritual traditions. Among the Nivkh and other communities along the Amur River, sewing tools, knives, scrapers, awls and needles, were very precious items in women's lives and were always carried on her belt (**fig. 24**) (Schrenck 1881). Men also wore hunting belts equipped with sewing implements, enabling them to mend clothing while away on hunting expeditions (**fig. 30**). Long narrow-bladed knives were used to skin fish, while shorter blades were employed to cut intricate curvilinear decorative patterns. Handles were carved with stylised animal and plant motifs to facilitate communication with protective spirits (Black 1973). Scrapers, both dull and sharp, were used to soften skins – dull scrapers broke bundles of connective tissue, while sharp scrapers removed a thin layer of fascia of fibrous connective tissue for

²² The discovery of the first synthetic dye, mauveine – also known as aniline purple – by William H. Perkin in 1856 marked the beginning of the synthetic dye industry. Commercial production of mauveine began in 1857 and by 1897, 404 new synthetic dyestuffs were introduced in the market. See van Bommel et al. 2007.

a finer finish (Oakes, Riewe 1998). These tools were multifunctional, their blades sharpened as needed.

Needles and awls were made from fish, bird and reindeer bones, ivory, or hand-forged iron. Needle sizes varied according to the thickness of the skin; smaller ones were used for fish skins, while larger ones were used on thicker hides such as walrus or moose (Hatt, Taylor 1969; Black 1973; Oakes, Riewe 1998). Modern steel needles came to replace these traditional tools (Rajagopalan, Bujis 2003). They were acquired from the Russians and from the Japanese via Sakhalin (Schrenck 1881). Women wore skin cylinders on their index fingers to protect them while sewing (Hatt, Taylor 1969). Needle cases, made from bone or ivory, held thread, thimbles and awls. These were stored in birch bark or reindeer skin sewing bags [fig. 49], which also carried bundles of sinew thread, beads, buttons, pieces of skin and fabric, decorative trims, small bells, amulets and other sewing essentials (Black 1973). Each cultural group had its own style of bag decoration, with brass bells included as spiritual protection from illness or harm. Following a death, bells were silenced for a period – four months for women and five for men – to honour the deceased (Popov 1966; Golovnev 1994).



Figure 24 Nivkh belt made of seal skin with fish knife, iron presser, sturgeon pouch and ivory needle case. Accession no. 71-12-1F. Amur River, Siberia. Penn Museum, Philadelphia, USA

Women worked on personal cutting boards or work planks, which were passed down through generations and were reserved exclusively for skin preparation and sewing (Rajagopalan, Bujis 2003). Such boards were used across the lap for cutting fine geometric motifs and trimming seam allowances. Pressers made of iron, wood, bone, or ivory helped to iron seams flat and to press sole seams to fit the shape of the foot. Tools such as cutting boards and scrapers were attributed spirits and considered protectors of the hearth. They enabled spiritual journeys, transporting people and shamans, to different worlds in the universe (Sem 1993). Due to their spiritual value, tools could be used to locate a missing hunter. By tossing a bone scraper and observing how it lands, a woman could determine the direction of her lost husband, guided by the tool's connection to the skins it had previously processed (Popov 1966; Oakes, Riewe 1998; Karapetova 1997). Sewing



Figure 25
Nivkh fish skin robe, hand painted and bearing several repaired patches. Late nineteenth century. Accession no. 2003-43-8. Amur River, Siberia. Penn Museum, Philadelphia, USA



Figure 26 Nanai Fish skin robe bearing heart inserts
used to conceal holes left by removed fins.
Late nineteenth century. Accession no. 71-12-4.
Amur River, Siberia. Penn Museum, Philadelphia, USA

tools were regarded as practical implements and sacred objects. Women, endowed with innate powers through their reproductive skills, avoided stepping on them in order to protect the spirits they housed. Upon their death, women were buried with their sewing utensils and sewing kits so that they could continue their important work in the afterlife (Balzer 1980; Murashko, Krenke 1996). In some traditions, mourners refrained from using sharp tools for several days after the death of a relative. This protected the departed soul of the deceased, which may still be clinging to the living, from being hurt (Golovnev 1994).

1.8.1 Threads

Before sewing, women prepared thread from either animal sinew, fish skin, or plant fibres such as nettle and hemp. Reindeer sinew, prized for its strength and moisture absorption properties to the same degree as skin clothing, was the most commonly used. Collected from along the spine or legs, leg sinew was preferred for summer skin boots since it lasts longer when wet. One reindeer could yield enough sinew to sew a full robe. In the absence of reindeer sinew, materials for thread were collected from moose, seals, walruses and whales (Hatt, Taylor 1969; Sem 1997). Thread made from braided bowhead whale sinew was used for sewing covers on walrus skin boats (Karapetova 1997b). The sinew was cleaned, dried, softened and divided into fine strands using a bone comb or the woman's own thigh, with hard-working women being recognised by the right leggings worn smooth from continually twisting the sinew (Hatt, Taylor 1969). When ready to sew, the sinew was twisted, moistened with the lips and threaded through a bone or iron needle; Women rubbed the end with wood pitch to ease threading (Sem 1997).

As riverine people, the Nivkh and Ulita used fish more optimally than other cultural groups (Rajagopalan, Bujis 2003). Fish skin thread was prepared by softening processed skins with fish broth, wrapping them in damp cloth, then cutting long, narrow strips with a specialised knife (*girsu*) and board (*hudèn*). The strips were twisted by hand and teeth into strong, circular threads, then dried and stored with sewing kits and sticks of fish glue, which was used to attach ornaments or reinforce seams (Glebova 2015). The stitching was done using bone needles and the seams were reinforced with fish glue, known for its excellent adhesive properties (Glebova 2017). Moisture was applied to the seam edges to tighten stitches, making them almost invisible (Glebova 2010b). Fish species used for thread included humpback salmon, Amur carp and wolffish (Glebova 2015).

Plant fibres were widely used in the Taiga, where nettle (*Urtica*) and hemp (*Urtica cannabina*) were abundant (Rajagopalan, Bujis 2003). After harvesting in late autumn, nettle stalks were peeled, carded with clamshells, buried in snow and soaked to soften fibres before spinning into thread used for sewing fish skin garments (Black 1973; VanStone 1985). Though less durable than sinew, nettle thread was more accessible and served in sewing and netting (Palomino 2025c).

Embroidery on festive fish skin garments was executed with silk and cotton threads acquired through trade with China, highly prized for decorating fish skin garments (Rajagopalan, Bujis 2003). Their use reflects the extent of trade networks that reached the remote Amur River basin (Marks 2024). Unlike their Chinese trading partners – who favoured darker,

more muted tones – the Nivkh preferred bright coordinated colour schemes, rejecting greys and deep blues in favour of lighter, more varied combinations (Schrenck 1881).

Likely considered heirlooms that required years to complete, these garments were passed down from mother to daughter over four or five generations (Palomino 2025a). To preserve their freshness, they were maintained through meticulous mending practices (Glebova 2017). Examination of international museum collections reveals that some richly ornamented fish skin robes include small, irregularly shaped patches [fig. 25] used to fill damaged areas (VanStone 1985). These patches differ slightly in texture and colour from the main garment. Their careful application suggests close attention to garment condition to maintain both their function and appearance (Palomino et al. 2026).

Such later additions should not be confused with the small, round inserts used to conceal holes left by removed fins (Beffa, Delaby 1999; Cevoli et al. 2006). During tanning, fins were evenly cut, and the resulting apertures were lined from the inside with tonal skin patches, producing a rhythmic surface decorated with round, oblong or even heart shaped [fig. 26] *trompe l'oeil* loops (Cevoli et al. 2015). However, fish skin garments could not be washed, as this would cause shrinkage and loss of form (Glebova 2017). If soaked, they had to be dried in warmth but away from fire. Despite its resilience, fish skin required attentive care. Festive robes were stored in birch bark trunks with dried wormwood or sprigs of marshmallow. Birch bark, acting as both absorbent and aromatic, protected against damp. Everyday clothing was likewise shielded with birch bark plates (Glebova 2010b). These conditions demanded preventative care and attentive handling, requiring a depth of material knowledge necessary for the preservation of such garments. The labour and skill involved in making and maintaining these garments demonstrate careful use of animal materials and the transmission of knowledge across generations. Each patch and repair extended the life of the garment and formed part of everyday practices of making, use and care.

1.8.2 Fish Glue

Fish glue [fig. 28] was a vital adhesive used by the Amur Peoples for attaching ornaments [fig. 27] to garments and footwear prior to stitching, ensuring precision during garment construction (Glebova 2010a). It was used as well for crafting household items, skis, boats and birch bark tarps (Black 1988). Glue was made from boiled fish skins, heads, scales (especially from crucian carp), or the swim bladders of kaluga, prized for their purity and transparency (Black 1973; Georgi 1799).

Best raw material was fresh and strong skins of chum salmon, Manchurian trout and pike. The fish glue from the skins of raw fish turns dark and could stain lighter materials, so great care was taken not to leave traces. Sometimes even fish skins scraps from sewing or cutting out ornaments were used to make glue, revealing an ethos of zero waste. To make a clearer adhesive, these dry trimmings left from sewing were boiled in the same way. Once thickened, the glue was cooled, cut into strips, dried and stored. Fish glue followed a meticulous process: skins were cleaned, boiled, filtered, reboiled to thicken and then cooled into a jelly. The jelly was poured into shallow containers, cut into thin ‘pancakes’ and dried out of direct sunlight.

Once sufficiently hardened, the glue was shaped into strips, threaded with a large needle and hung to cure before long-term storage. The highest quality glue came from swim bladders of sturgeon and catfish, producing a transparent slab melted at low heat and cut into fine sticks for detailed decorative work (Glebova 2015).

When ready, the glue is hard and amber in colour. The glue sticks were reactivated by wetting the tip with saliva; the bonding effect is achieved by combining the enzymes in the saliva and the fish glue. Women bit or trimmed the tip before use, applying it gradually to the reverse side of the ornament, which was then pressed down with the warmth of the hands to ensure a strong bond (Glebova 2010b). For precision, the stick was kept flat and sharp, especially helpful when gluing intricate patterns.

An improvised adhesive could be prepared directly in the field: fresh fish skin was wrapped scale-side out around a stick, held over a fire and rotated until the scales melted into a sticky resin. This glue was applied while still warm and pressed directly into place (Glebova 2010b). Such methods enabled hunters to repair garments on the spot, preventing exposure and reducing the risk of freezing. The ability to generate such solutions in the absence of tools or shelter is a reminder of a self-sufficiency few of us maintain today – being able to mend a garment while hiking in sub-zero temperatures, with nothing more than the materials at hand, is no longer a common skill.

1.9 Clothing

Fish skin garments from the Amur River region, housed in museum collections, date from the late nineteenth to early twentieth centuries (Marks 2024). Brought back by travellers, explorers and missionaries, these artefacts are unique for their rarity and for the sophisticated craftsmanship they exhibit (Cevoli et al. 2006). They incorporate materials sourced directly from the local environment, reflecting a pragmatic response to the region's cold, humid and rapidly shifting climate. Despite extensive contact with outsiders and access to imported goods, Amur women in the late nineteenth century remained accomplished artists, maintaining their traditional skills in fish skin preparation. Fish skin was highly prized by the Indigenous peoples of the Amur and Sakhalin regions for its exceptional properties: it is lightweight, durable, water-tight and capable of retaining heat – attributes essential in the harsh climatic conditions of the Russian Far East. Knowledge of the qualities of different fish species enabled women to select skins judiciously for specific uses (Glebova 2015).

Compared to reindeer hide, fish skin offered a lighter material option, particularly suitable for summer wear (Oakes, Riewe 1998). During the warmer months, fish skin robes were worn as outerwear for both men and women (Rajagopalan, Bujis 2003). While fish skin is flexible, water-tight and durable, its limited warmth meant that it was less effective for winter wear on its own. Women, whose domestic roles were largely indoors, found fish skin garments more suitable, while men reserved them for summer use, wearing shorter versions. In winter, fish skin garments were worn on top of other fur garments to protect against wind and damp (Bujis 1993; Rajagopalan, Bujis 2003; Cevoli, Dalles 2015).



Figure 27 Nivkh fish skin robe with ornaments attached using fish glue. Late nineteenth century. Accession no. 2003-43-9. Amur River, Siberia. Penn Museum, Philadelphia, USA

Figure 28 Glue made of fish bladder. Amur River, Siberia. Néprajzi Múzeum, Budapest, Hungary

Elaborated fish skin robes were worn as ceremonial garments (Dalles Maréchal 2020). Among the Nivkh, they were used during the bear festival²³ (Ivanov 1963; Krejnovich 1988; Melnikova 2005). During such events, women wore these garments while performing ritual dances and playing the musical beam, turning their backs to the bear (Geblova 2015).

1.9.1 Hunting Gear

As in other Arctic regions, decorative elements on hunters' garments had the power to appease the spirits of the animals, essential for successful hunting, since they surrendered only when properly honoured (Kuzmina 1988; Oakes, Riewe 1998). Both clothing and tools were displayed before and after the hunt, forming part of a ritualised cycle of preparation and gratitude (Black 1988). Both the skill of the hunter and the spiritual and artistic work of the women who crafted the hunting attire determined the success of the hunt (Bodenhorn 1990). Each woman strove to create unique hunting garments for her husband or son; no two garments in a village were alike and the individuality of each piece was a reflection to a woman's skill and creativity, so men cherished women's craftsmanship (Smolyak 1988). Among the Nanai and Udege, hunting departures were public rituals that showcased women's talents. Hunters, travelling in groups of five to seven, would leave the village at a predetermined time, accompanied by family members. Clad in elaborately embroidered fish skin robes, colourful hats with plumes, helmets, aprons, mittens and decorated footwear, the men paraded ceremoniously through the village. This procession was both a farewell and a celebration of women's artistry. However, once they reached the hunting grounds, the hunters would carefully remove these ornate garments before beginning the actual hunt. Upon their return, they would again don their ceremonial attire before entering the village, pulling sleds filled with game. The return was met with communal celebration, where the splendour of their clothing stood as a symbol of the women's vital contribution (Oakes, Riewe 1998).

1.9.2 The Wedding Robe

The Nanai worldview is based on a system of reciprocal exchange between humans and spirits. Marriage represents an important moment of transition, not only socially but also spiritually. Nanai weddings involved a series of meetings between the families to negotiate the bride's dowry, culminating in the wedding day, when the bride would leave her natal village to join that of her husband (Smoljak 1980b; Gaer 1991a). The making of the wedding robe formed part of the preparatory phase of the marriage rite; from an early age, the bride-to-be and her female relatives would assemble the trousseau, including this protective garment (Dalles Maréchal 2022). Young women prepared multiple fish skin robes in anticipation of their wedding.

23 During bear festivals, where the bear was venerated as a powerful spirit master and provider of game, a bear captured as a cub and raised by the clan was ceremonially killed. In these ceremonies, women danced with their backs to the animal and the embroidery on the back of their robes served to protect them from the dangers associated with the bear.

The number and quality corresponded with the bride's social standing and the skill of the embroiderer. Unlike men, Nanai women wore special clothing for the wedding ritual, as they were the ones undergoing a clan transfer. The wedding robe played a critical role in protecting the bride during this transformation – from daughter to wife and from one clan to another (Schrenck 1881; Melnikova 2005). The transitional state of the bride rendered her particularly vulnerable. During her boat journey, lasting several days, from her father's home to that of her husband, she was no longer under the protection of her natal clan's guardian spirits and had yet to come under the guardianship of her husband's. This liminal period was particularly spiritually dangerous.²⁴

The bridal robe worn specifically on the day the bride departed her father's household, was a garment that would serve as a shroud. The embroidery on the robe was meant to protect the bride from malevolent spirits, particularly those that might attack from behind. The most potent motifs were scale-like patterns on the back of the robe, forming a symbolic armour [fig. 23]. These represented the scales of the dragon *mudur*, a spirit associated with lightning and revered across the Amur region by Nanai, Manchu and Chinese communities as a protective force. This is supported by the Nanai saying: 'when the dragon *mudur* appears in the sky, the demons hide wherever they can'. For physical ailments such as back pain, dragon motifs were even sewn onto patients' backs (Beffa, Delaby 1999). For the Nanai, the bridal attire could also showcase a tree of life motif embroidered or hand painted. These bridal garments, designed for a time of heightened ritual vulnerability, encapsulate the Nanai iconography of the female life cycle (Dalles Maréchal 2020). On the wedding day, the bride would wear several layers: a ritual undergarment, a fine woven dress, the richly embroidered ceremonial fish skin robe, along with a bib, ruffle, hat and earrings. As with other ritual garments among the Nanai, the embroidery carried protective functions alongside its decorative qualities. The technical execution of embroidery was thus part of its ritual efficacy (Ivanov 1954; Gaer 1991a; Smoljak 1991).

²⁴ Wedding journeys between the bride's natal village and her husband's could last several days by boat and formed part of the marriage ceremony. See Shirokogorov 1935; Smoljak 1980b; Gaer 1991a; Dalles Maréchal 2020.





Figure 29 Nivkh fish skin robe.
Late nineteenth century.
Accession no. 2003-43-9.
Amur River, Siberia. Penn Museum,
Philadelphia, USA



Figure 30 Leopold von Schrenck, Woman wearing a fish skin robe and man wearing a hunting belt.
Reisen und Forschungen im Amur Lande. 1881. Leiden University Libraries Special Collections,
Leiden, Netherlands

1.9.3 The Funeral Robe

Among the Nivkh there is no fear of death. When death approaches, the dying person is held upright by close relatives, and a continuous vigil is kept with two lamps lit at night. All members of the lineage are notified, and many family members attend the wake, crowding the dwelling (Taksami 1967). The body is not washed but dressed in specially prepared garments by members of the next of kin. Nivkh funeral garments are made of white cotton or silk cloth and are sewn with very large, loose stitches, as tight stitches are considered sinful. Animal skins, including fish and marine mammals, are forbidden to be worn on the corpse to prevent contamination of the funeral pyre. Elaborately decorated garments are also excluded, as they would confuse the soul on its way to the underworld. Prestigious skin garments are displayed outside the dwellings and when it is time for cremation, those are heaped on the deceased, in multiples of three for a male and two for a female (Black 1973).

In contrast to the Nivkh, among the Nanai, the wedding robe, that has been kept by the bride in the attic, serves, as on the wedding day, to mark a woman's transition, this time from the living to the dead (Sternberg 1933; Bulgakova 2013; Dalles Maréchal 2022). The body is dressed in fine clothes, with shoes, hat and gloves. The face is covered with a white cloth, formerly a fish skin, but the eyes are not closed (Lopatin 1960). Embroidered pieces of cloth or fish skin placed on the coffin function as symbolic maps to the world of the dead. Embroidered with the tree of life or her clan-associated animal at the foot of the tree, they guide the woman on her journey to the afterlife and narrate her identity by revealing her clan origins (Dalles Maréchal 2022). This piece of cloth fulfils a guiding role usually performed by shamans. Nanai women are responsible for sewing funeral garments both for others and for themselves. Sewing practices are governed by kinship: daughters or sisters may sew for fathers or brothers, but wives and mothers may not. These garments, which may take years to complete, incorporate traditional Nanai embroidery techniques (Dalles Maréchal 2022). Materials used vary by region, reindeer skin for hunters, fish skin for riverine communities (Dalles Maréchal 2020). Garments are closed on the left side, in contrast to garments for the living (Smoljak 1980a; 1988). For the Nanai, the soul of the deceased remains among the living until it reaches the world of the dead, *buni*, located to the west. Each clan has its own symbolic route to this realm, known only to the shaman, who learns it from spirits during funeral rites (Dalles Maréchal 2020). Life in *buni* mirrors that of the living but in reverse: it is night when it is day and the dead, like the living, gather in clans to hunt and fish as they did when they were alive. The inverted fastenings of the funerary garments reflect this reversal (Gaer 1991b).

Hunting implements for men and sewing utensils for women were placed in the coffin. Women were buried with their sewing tools (without the scissors) such as, needles, thread and cloth, to support the deceased in the afterlife (Lopatin 1960). Men were buried with an axe, a knife and a tinder box tied to his belt. Objects were broken and left on the grave, a practice which helped as early as the 1950's to distinguish Nanai graves from Russian ones (Gaer 1991b).

1.10 Clothing Details

Garments were custom-made for each wearer. While men's and women's fish skin robes were similar, women's were longer and more elaborately decorated (Margolina 1997; VanStone 1985). Men's robes ended just above the knee (Prytkova 1961b) and their only decoration consisted of contrasting fabric trim along the left lapel, hem and sleeve openings with a pocket sewn into the right lapel (Black 1973). All robes featured a diagonal closure with the wider left flap fastening over the right (Rajagopalan, Bujis 2003) with three buttons made of copper, brass or fish skin and fastened into fish skin loops [fig. 31] (Kite 1999) near the neckline, with some also featuring an additional knot and loop closure at the waist (Bearden 2016). The position of the opening on a robe could indicate its purpose: a right-sided opening suggested daily wear, while a central opening denoted ceremonial use (Chaussonet 1988). Women's robes had collarless necklines, although some incorporated a small stand-up collar (Black 1973). The dress of the Nivkh and the Orochi featuring an opening at the front and a flared silhouette with tapered sleeves, bears resemblance to nineteenth-century Mongolian and Manchurian garments (Bujis 1984). The Manchurian elements were probably absorbed into Nivkh garments after their women were obliged to marry Manchu officials (Beffa, Delaby 1999; Marks 2024).

1.10.1 Hems and Borders

Fish skin robes presented an austere front, interrupted only by decorative elements along the left and right sides. From the hem upward, broad black painted and applied borders [fig. 19] framed each side of the garment, terminating at the waist in scrolling motifs. Both men's and women's robes featured edging in a contrasting colour (Rajagopalan, Bujis 2003), particularly at the openings of garments – collar, hem, front overlap and wrists – areas regarded as points of vulnerability to malevolent forces. These borders helped define the silhouette and articulated the garment's structure. Black borders also outlined the neck, front overlap, hem and sleeve edges. While these painted elements may have served to reinforce areas prone to wear (Palomino 2021), they may also have held a protective, symbolic function acting as spiritual safeguards, warding off harm (Chaussonet 1988). These borders served to demarcate the thresholds of the garment. Contrasting edges with volute or stylised motifs were applied to seal these vulnerable openings. The framing defined both the outline of the robe and the spatial boundaries within which all decorative representations were placed (Cevoli, Dalles 2015). These motifs emphasised the lines of the arms and torso (Dalles Maréchal 2023). A plain cotton band, dyed with indigo and embroidered in chain stitch could also be used to frame and highlight the edges. In some instances, this indigo thread in visible contrast stitching, acted as protective boundary and was achieved through subtle interventions. These techniques transformed raw skins into protective robes, wrapping the human body in tones of light and shadow (Cevoli, Dalles 2015).



Figure 31 Leopold von Schrenck, Portrait of a Nivkh woman wearing a fish skin robe. *Reisen und Forschungen im Amur Lande*. 1881. Leiden University Libraries Special Collections, Leiden, Netherlands

1.10.2 Metallic Pendants

Women's fish skin wedding robes were trimmed with metallic pendants [figs 29-30] to repel evil forces through their movement, sound and reflected light. These metal discs or coins produced a sound as the wearer moved, audibly signalling her presence and serving an apotropaic purpose. As the bride walked, the small metal charms at the hem of her robe produced a soft tinkling sound to deter unseen malevolent spirits (Dalles Maréchal 2020). They formed a symbolic barrier along the base of the robe and were densely layered on aprons, enhancing both the garment's protective function and the wearer's prestige and status (Cevoli, Dalles 2015). The motifs they bore were highly stylised, incorporating abstract patterns such as comma-like shapes with shamanic associations and interlaced curves arranged within geometric frames. The metal discs – sometimes referred to in ethnographic literature as 'mirrors' – carried symbolic value. Some bore mask-like designs resembling those found in the motif panels of fish skin jackets. These discs functioned as shields and spiritual vessels, offering protection and serving as dwellings for divinatory spirits. Pendants could also represent celestial bodies such as the sun (a full disc) [fig. 32], or the moon (a crescent) (Beffa, Delaby 1999). Among the Nivkh and Orochi, they were regarded as protective amulets.

The lack of metal plates at the bottom of the hem of a fish skin robe betrays that belongs to a man, but metal objects were used by shamans. Mirrors and other charms were suspended from the front or back of a shaman's robe, signifying their role in spiritual mediation. Copper coins of Chinese origin were used, each pierced and tied to the garment to form dense, resonant rows. When in motion, the coins created a rhythmic, jingling sound. These garments, adorned with medals, discs and crosses, formed a protective armour, heavy and musical in nature (Beffa, Delaby 1999). Garments worn for visits or religious festivals – whether made of fish skin or cloth – were lavishly adorned, in contrast to the untrimmed workwear of daily life. Cotton robes were edged with wide contrasting borders and along the hem, women wore two rows of thin copper discs or Chinese coins attached with short leather thongs [fig. 30]. Borders could also feature shells (Rajagopalan, Bujis 2003) while collars were sometimes decorated with glass beads (Black 1973).



Figure 32 Nivkh fish skin robe with metallic pendants at hem. Late nineteenth century. Accession no. 2003-43-9 Amur River, Siberia. Penn Museum, Philadelphia, USA



Figure 33 Nivkh woman wearing a robe with metallic pendants at hem. Sakhalin. *Reisen und Forschungen im Amur Lande*. 1881. Leiden University Libraries Special Collections, Leiden, Netherlands

1.10.3 Linings

While fish skin remained a primary material for clothing, cotton was widely used for linings and lower garment borders (Black 1988). The high cost and scarcity of fabric made it particularly valuable among Amur women. Maak,²⁵ in his *Journey to the Amur*, like several of his contemporaries, expressed admiration for the material knowledge of Native communities. He was struck by what he perceived as a disparity between the skill evident in embroidered fish skin garments and the ease with which these garments were exchanged: “for a small piece of chintz they willingly gave their clothes carefully and very skilfully embroidered with dyed fish skin” (Maak 1859). Similarly, Maksimov noted that Amur communities eagerly accepted worn-out shirts and fabric scraps, repurposing them for clothing (Maksimov 1871). These commentaries on the apparent undervaluation of this work reflect a limited understanding of the Amur Native Peoples, for whom the creation of art was not a separate domain, but an integral part of everyday life. Their desire to decorate their garments and tools and their ‘artistic instinct’, served as a protective barrier against anything negative (Glebova 2010b).

The Penn collections provide tangible evidence of this practice. Fish skin robes, admired for their fine embroidery and vibrant colours, feature linings made from a patchwork of repurposed textiles [figs 34-35]. These fragments, possibly from shirts, or worn-out garments, were sewn together, forming the interior of festive garments, which took years to complete (Glebova 2010b).

25 Richard Karlovich Maak, geographer, botanist and traveller, described his 1855 expedition along the Amur River in *Journey to the Amur*, made by order of the Siberian Department of the Imperial Russian Geographical Society in 1855. Written in the form of travel notes, the text conveys a close observation of daily life along the river. See Glebova 2010b.



Figures 34-35 Nanai fish skin robe lined with indigo dyed cotton fabric. Late nineteenth century.
Accession no. 2003-43-7. Amur River, Siberia. Penn Museum, Philadelphia, USA



1.11 The Power of Sewing

Among Lower Amur Peoples, girls were taught sewing from a young age and continued to practise it throughout their lives (Glebova 2017). Technical skill in stitching and appliqué was highly recognised (Rajagopalan, Buijs 2003). The role of the embroiderer extended beyond craftsmanship and a highly skilled woman would become a figure of influence within the household and community. Mastery of embroidery reflected skill and experience, contributing to the household's material stability and confirming her recognised position within the family. Her ability to create garments that protected, healed and brought good fortune positioned her as a counterpart to the shaman. Embroidery was a domestic skill and a spiritual practice, ensuring balance between visible and invisible worlds. This tradition persists today, as embroidery continues to be used in rituals helping the souls of the deceased find their way to the afterlife²⁶ (Cevoli, Dalles 2015).

The making of animal skin into garments required secular and spiritual knowledge. Women acquired this expertise through intergenerational transmission (Glebova 2017). They learned to prepare soft materials for domestic furnishings and to sew clothing, as they would be responsible for producing the garments and household items of their future home. This role included relations with a spiritual dimension regarded as potentially dangerous. Protective motifs were placed on clothing and household containers to avert harm. The fiancée's dowry, composed of the finest objects and garments prepared since childhood, demonstrated her abilities as a future wife. The size and quality of the trousseau reflected family wealth and personal ability. The dowry shaped the marriage arrangements, which involved pelts, fur coats, garments, silk fabrics and silver. These possessions secured the young woman a degree of independence within her husband's family. She could also set aside part of her dowry for her funeral, providing for her well-being in the afterlife (Cevoli, Dalles 2015).

A delightful example in the Penn Museum is a mother [figs 34-35] and daughter [fig. 36] robe set adorned with hand-painted floral motifs framed by black borders extending from the hem to the collar. The rougher almond-shaped flower designs, symbolising fertility, suggest the hand of a young maker, perhaps the daughter practising the skills taught by her mother (Palomino 2025a).

Women transformed animal skins into garments imbued with symbolic power (Chaussonet 1988; Rajagopalan, Buijs 2003). In Nanai folklore, heroes must 'grow into' their clothes before embarking on their quests, symbolising their evolving strength and readiness (Van Deusen 1997). Just as masks facilitate spiritual metamorphosis, clothing would transform the wearer, granting them the attributes of the animals represented (Oakes, Riewe 1998). The act of embroidery, especially among the Nanai, functioned as material artistry and spiritual armour, conveying luck and warding off harm (Ivanov 1963; Okladnikov 1981; Gaer 1991b). In one account, three girls attempt to reach the summit of an icy mountain to confront the Wind Master. Two of them wear garments made from Chinese silk, while the third,

²⁶ The protective power attributed to her craft continues to function as a parallel to shamanic practice. This is reflected in the use of embroidery in funerary rituals, where embroidered motifs guide the deceased towards the world of the dead, particularly in situations where no shaman is present to perform the ritual passage. See Cevoli, Dalles 2015.

Belye, did not wear fine textiles, but her dress was covered in embroidered images of birds, plants, snakes, tigers and the river and she covered her dress with an old fish skin robe. When storms rise, sent by the Wind Master, the girls in silk are thrown from the mountain, but Belye reaches the top (Van Deusen 1997). In this account, the embroidered images on Belye's dress represent helpful spirits, capable of protecting her from harmful ones. These designs shield her from the storm and the intentions of the Wind Master who favour expensive imported fabrics. In this sense, clothing serves as a means of survival as well as fulfilling practical and decorative functions. Valerie Chaussonnet's work on the spiritual roles of clothing has been highly influential in Arctic fashion research. In *Needles and Animals: Women's Magic* (1988) and *The Bleeding Coat: The Art of North Pacific Ritual Clothing* (with Bernadette Driscoll 1994), she examines the role of skin and decoration in the making of protective clothing.

Sewing rituals were linked to childbirth and fertility. Embroidery and sewing were employed after repeated miscarriages or stillbirths as protective measures. Among the Nanai, the soul of an infant who died shortly after birth returned to the tree of life, where it awaited reincarnation before entering a new life. Through embroidery, a woman could assist in this transition. The mother would wrap the infant's dead body in cloth and sew duck feathers onto it to assist its flight to the sky (Cevoli, Dalles 2015). A dried segment of umbilical cord might be kept in a fish skin sewing kit as a protective item. Embroiderers also used thread or cloth tactically to deflect harm. A woman who had lost several children used a thread from her work bag to mislead the spirits. Clothing sewn by a woman with many children would also bring good fortune. A mother who had experienced multiple losses could request fabric scraps in sets of seven or nine from such a woman or ask her to sew the garment herself. Newborns were protected with fish skin amulets, including sun-shaped disks or dried fish heads (Beffa, Delaby 1998; Ivanov 1963) and elements such as predator hides or animal claws, were stitched to clothing or cradles to keep evil spirits at bay (Gaer 1991b). Other examples include hedgehog quills along the back, snakeskin at the collar and cloth from an elderly woman's dress at the hem (Cevoli, Dalles 2015). A newborn baby might be hidden in a bag made of fish skin and placed in a box or dragged gently across the floor in a sack before being covered with swept-up dust and stepped over. These actions were intended to distract the attention of spirits (Smoljak 1962). Fish skin was also used in traditional medicine; special fish skin headdresses were worn to alleviate headaches, while fish skin bands were wrapped around wrists to relieve muscle pain (Glebova 2015). These practices demonstrate the embroiderer's role as caregiver and ritual actor, capable of influencing wellbeing and misfortune through her work (Cevoli, Dalles 2015).

Sewing practices were governed by numerous taboos. Embroidered motifs offered protection, reinforced social bonds and mediated transitions such as birth, marriage and death (Glebova 2017; Dalles Maréchal 2020; Gaer 1991b). Prohibitions against sewing during pregnancy, funerals, or hunts highlighted the potency of these gestures (Šternberg 1933; Black 1973; Smoljak 1962). Pregnant women were not permitted to attend funerals, sew burial garments, or prepare food for the dead. If participation was unavoidable, a protective girdle could be worn to guard against miscarriage (Gaer 1991b). Pregnant women were considered particularly vulnerable to such contact, as the soul of the unborn was thought to be exposed to

interference. Precaution extended to the unborn child's belongings: clothing and cradles were not made until they were born to avoid attracting spirits. In the final weeks of pregnancy, women avoided sewing, tying, gluing, or mending, due to the risk that such actions could interfere with the birth (Gaer 1991b; Šternberg 1933). The gestures of sewing, piercing and closing, were thought to mirror bodily states and could affect the outcome of labour. While certain gestures were restricted, others were used to protect and restore fortune.

As the role of embroidery changed, so did the recognition given to its practitioners. Nanai embroiderers continue to work with inherited motifs, reshaping these forms in response to present conditions. Recognition of embroidery as a form of artistic practice developed during the expansion of museum activity in the 1920s, aligned with the goals of the socialist state (Teryukova 2014). During the Soviet period, as museum collections expanded, embroiderers began to be acknowledged more visibly as artists. Before the 1950s, individual makers were rarely mentioned in ethnographic records. From the 1930s, however, censuses led by state institutions and Indigenous researchers began to record embroiderers' names (Dalles Maréchal 2023). Today, those regarded as most skilled are formally recognised as master artists by the Professional Union of Artists of Russia.

1.12 Decorations in the Back

Fish skin garments consistently feature rich decorative elements on the back. These motifs were created through multilayered positive-negative fish skin appliqué in varying shades. On garments from the Siberian Amur, the most symbolically charged embroidered elements were placed on the back and along the spine (Cevoli, Dalles 2015).

Among the Nanai, these rituals are preserved in oral traditions. The decorative motifs on the back of women's robes protected them from invisible dangers, as working next to the hearth with their backs to the door made them vulnerable. Traditionally, women did not look directly at guests, but instead displayed their elaborately decorated backs, communicating social meaning beyond facial expression (Jude 2016). This position required protection, which was provided by the decorative motifs on the robe (Van Deusen 1996). The applied motifs also communicated the social taboos that governed interactions between the genders. The act of an elderly Nanai woman turning her back on guests was respectful and served as a visual narrative. Her robe symbolised lineage, personal history and collective cultural memory, transforming the garment into an ancestral 'story dress' carrying overlapping meanings (Doury 1999).

The front of women's robes was restrained in design, while the intricate embroidery of the back featured spirals, birds, fish, the tree of life and other forms passed down through generations. Members of the wider community could distinguish one family from another through these designs (Buijs 1993), which functioned as a visual language encoding the wearer's lineage, territorial origin and clan identity. The motifs were placed along garment openings, as well as on hats, boots, trousers and mittens. Upper borders symbolise the upper world and offer protection from above; hems represent the underground or underwater world; and the midsection signifies the human realm (Van Deusen 1996).



Figure 36
Nanai fish skin robe. Hand painted.
Late nineteenth century.
Accession no. 2003-43-11. Amur River,
Siberia. Penn Museum, Philadelphia, USA

1.13 Embellishment Motifs

The designs on Amur fish skin garments [fig. 37], belong to an artistic tradition linked to the 5000-year-old petroglyphs of Sikachi-Alian [fig. 38], which depict human faces, spirals, elk, swans, ducks and fish motifs that remained present in nineteenth century robes. Early scholars, including Laufer (1900, 1902) and Ivanov (1961), wrongly attributed Amur decorative traditions to Chinese influence, overlooking their Indigenous origins. While Laufer's studies reinforced primitivist theories, they also documented the uniqueness of Nivkh designs. Later research by Okladnikov (1981) traced these motifs directly to Amur petroglyphs, demonstrating their evolution in embroidery, fish skin appliqué and painted birch bark. Despite historical ties to China, Amur material culture remains unmistakably Indigenous. Before the twelfth-century Mongol invasions, the region's cities and trade routes fostered craftsmanship. The motifs' connection to ancient petroglyphs, with spirals and curved patterns, symbolises the communion between Amur communities and their environment.

Rich embroidery or hand painting motifs serve as ethnic identifier of various Native groups in the Amur River region. The Negidal favour floral patterns; the Nivkh make greater use of fish skin decorated with blue stylised motifs; and the Nanai are known for the 'Nanai eyes', two symmetrical swirls facing one another (Dalles Maréchal 2023). Among the Nivkh, reptilian and aquatic designs such as turtles, toads, lizards, snakes and fish dominate, rendered in bold and stylised forms. Representations of birds and deer also vary in style from neighbouring groups (Black 1973). Designs are inherited matrilineally and retain unique cultural features. Nivkh spirals are stronger and more defined than those of the Nanai and their motifs more stylised and expressive than those of the Negidal (Black 1973). Embroidery functions as a means of cultural self-representation, allowing artists to define what it means to be Nanai or Nivkh on their own terms (Dalles Maréchal 2023).

Over time, such regional variations have diminished due to cultural proximity, the exchange of techniques and the adoption of new decorative methods, occasionally involving imported Chinese or Japanese materials. Economic connections through fishing and regional fairs, where women's embroidered items were traded, also contributed to a gradual homogenisation of visual elements across both continental and island Amur communities (Cevoli, Dalles 2015). Fish skin products were part of inter-ethnic exchange and regional economies (Glebova 2010b). The Nanai village of Torgon was renowned for skilled women artists whose embroidered fish skin garments were sought as far as Sakhalin. Evenks, although fishermen, purchased fish skin items, such as *pondo* shoes, from Nanai makers, adopting their terminology (Smolyak 1975). These transactions demonstrate the circulation of fish skin artefacts as a valued commodity, as well as the expertise involved (Dalles Maréchal 2020).

Embroidered designs traditionally served to invoke and appease the spirits of the natural world (Oakes, Riewe 1998). Common motifs include rivers, the tree of life, fish, plants, ducks, swans, eagles, tigers, bears and solar symbols, all part of shamanic mythology (Van Deusen 1996). Spiral patterns were interwoven with plant, animal, or mythical motifs (Rajagopalan, Buijs 2003). Scrollwork on Amur robes varies with occasion, from minimalist designs, such as a single wave along the spine to symbolically seal the access point of the

garment, to elaborate compositions structured across three planes, covering most of the garment's back (Cevoli, Dalles 2015). The stylised portrayal of birds, fish, snakes and water reflects the value attributed to nature and animals employed in garment design (Rajagopalan, Buijs 2003). Embroiderers interpret and narrate these motifs, using them as visual storytelling devices.

Salmon skin served as material for clothing, leggings and boots and also as a surface for ornamental appliqué. Decorative strips were coloured, stencilled and stuck with fish glue before being sewn using nearly invisible stitches (Glebova 2015). Ornamentation was achieved by cutting motifs from fish skin, generally dyed blue [fig. 29] and sewing them with fish skin thread onto backing pieces of similar material, carefully shaped to accommodate the motif. These components were arranged in symmetrical sequences across the garment's surface (Laufer 1902). Among the Nivkh, decoration took the form of layered appliqué using fish skin in alternating colours, creating a multicoloured visual effect.

1.13.1 The Tree of Life

The tree of life appears as a motif on the back of Nanai wedding robes, rendered in stylised, symmetrical embroidery. This vertical figure maps a tripartite conception of the universe onto the bride's body, a gateway to the worlds above and below passing through the terrestrial realm. Horizontal bands divide the garment into three tiers: roots symbolising the underground, the trunk representing the human realm and branches denoting the celestial sphere. Each layer features animals associated with its respective domain, fish, lizards and amphibians below; forest creatures such as reindeer in the middle; and birds above (Van Deusen 1997; Rajagopalan, Buijs 2003; Dalles Maréchal 2022). In the upper panels, birds represented unborn children and almond-shaped flowers symbolised fertility. Further down, animals interwoven into the tree of life referenced the husband's protective role. At the base, the roots signified the realm of ancestors, with animals such as the snake (order and harmony), the lizard (speed) and the deer (abundance and earthly wealth) standing out against a dark ground that evoked regeneration. All were embroidered with brightly coloured silk threads imported from China on carefully tanned Amur fish skins (Doury 1999). A Nivkh wedding robe from the Penn Museum displays a three-part structure arranged horizontally: a lower section that represents the underworld, a central band extending from the sides of the robe and an upper section. A metal-pendant border is attached to the hem, positioned beneath parallel red and blue lines [fig. 29] (Delaby 1997).

Across the Amur Basin, this motif is linked to a cycle of life that begins with a tree with branches laden with birds. This cycle involves the return and reuse of souls from a shared pool comprising the spirits of clan ancestors. For the Nanai, the concept of soul is expressed through three terms: *omi*, the soul yet to be born, also associated with infants under one year; *fanja*, the soul of the dead; and *uksuki*, the shadow of the living body. The *omi* waits on the clan tree for the start of a pregnancy; the *fanja* joins the collective realm of the clan's dead; and the *uksuki* stays near the person during life and disappears after death. During rites to address infertility, a Nanai shaman travels to the clan tree, passing through layers of cloud blue, white, red and storm-bearing, before retrieving an *omi*, described as a small bird and

returning it to earth. The mother's dream of a bird confirms the success of this journey (Cevoli, Dalles 2015). The tree of life may also incorporate clan animals and shamanic objects like mirrors and bells referencing the myth of the *Three Suns*, represented by small circles and commas attached to the tree branches²⁷ (Dalles Maréchal 2020; Shternberg 1933). The tree of life's trunk is embroidered in stem stitch, with a strip of birch bark placed beneath the cotton threads to give the trunk its structure. The use of bark makes the tree more realistic, with the trunk formed from the material it represents. Birch bark is used for the protective qualities associated with betulin and for its resistance to damage and decay. When birch bark is unavailable, cardstock may be substituted. This technique provides support and incorporates the healing properties associated with birch²⁸ (Dalles Maréchal 2022).

1.13.2 Snout Motifs

In several Nivkh and Nanai garments, snout shapes are cut, stitched, or outlined directly onto fish skin [fig. 37] across a number of garments and accessories. Composed of two opposing spirals with a more horizontal scroll beneath, the motif symbolises the snout of a wild animal and it is generously interpreted as a bear, tiger, or dragon (Ivanov 1963; Beffa, Delaby 1998; Melnikova 2005). The precise animal association is secondary to the broader evocation of a beast's mouth, associated with protection against harmful spirits (Cevoli, Dalles 2015; Dalles Maréchal 2020).

These motifs are found across various media and techniques, including painting, stencil work, appliqué and chain stitch. Traditionally rendered in black on white fabric for everyday garments, black being considered a protective colour, the snout motif is presented in indigo blue, red or black on fish skin robes. It appears at the base of the neckline, particularly in men's hunting attire, to shield the wearer from malevolent spirits of the taiga (Dalles Maréchal 2020). Snout motifs have a rich historical lineage, traceable to Neolithic petroglyphs and pottery from the Sikhote-Alin region [fig. 38]. These early mask-like images, featuring spiral 'eyes' and prominent noses, appear stylised on garments and metal discs sewn to the hems of women's clothing, continuing a long-standing decorative tradition (Okladnikov 1981; Rajagopalan, Bujis 2003; Laufer 1902). The bear plays an important role in these representations. Revered as a former human and master of the mountain world, it appears in embroidery associated with ancestral spirits who control the game given to hunters (Beffa, Delaby 1999; Van Deusen 1997). Bear festivals involving ritual and sacrifice were part of a cultural tradition extending across the Amur, Sakhalin, the Kuril Islands and Hokkaido. This tradition was grounded in dual-clan structures and symbolic social exchange (Okladnikov 1981).

²⁷ In this myth, life on Earth becomes unsustainable when three suns appear, prompting the spirits to appoint the first Nanai shaman to shoot down the excess suns. During his journey through the layers of the sky, he reaches the spirit world and encounters a great tree bearing birds and shamanic objects, including mirrors worn around the neck and bells attached to the belt to hold souls during healing rituals (Dalles Maréchal 2022).

²⁸ This embroidery technique produces a rigid surface, using birch bark for the stem. Birch is preferred for its durability and its chemical properties: it contains *betulin*, a natural fungicide with antibacterial and regenerative effects and methyl salicylate, a natural analgesic and anti-inflammatory that is the same compound found in aspirin. See Dalles Maréchal 2022.

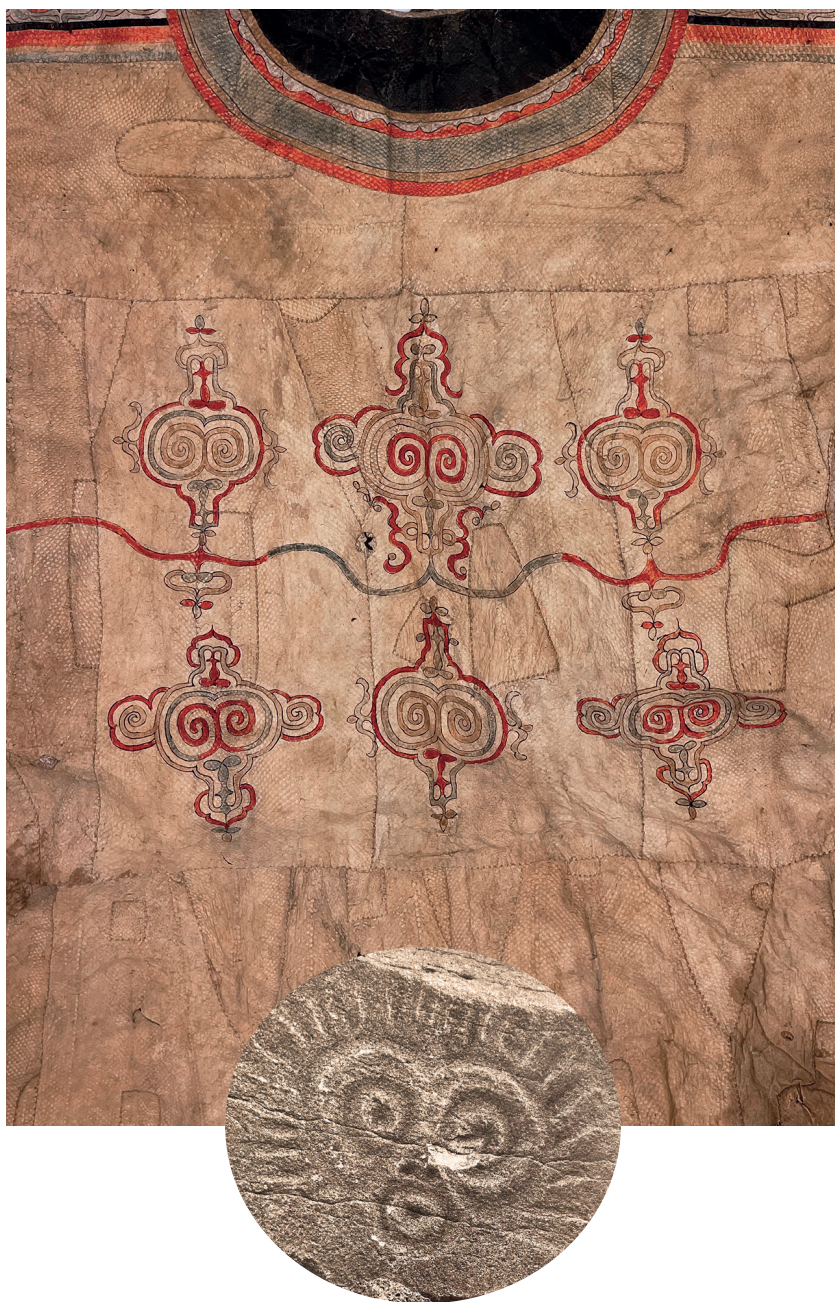


Figure 37 Nivkh Fish skin robe with snout motifs inspired by petroglyphs of the Ussuri area. Hand painted. Late nineteenth Century. Accession no. 2003-43-8. Amur River, Siberia. Penn Museum, Philadelphia, USA

Figure 38 Alexei Okladnikov, 1971. Aurockart.ru. Petroglyphs of the Ussuri area depicting an oval mask with 'radiance' and 'fish shape eyes'. Incised on a basalt cliff. Fourth-third millennium B.C. Sheremetyevo, Khabarovsk territory, Russia

1.13.3 Bird Motifs

Birds, ducks, swans and geese, are shown in stitched or appliquéd form, sometimes with wings spread in flight and are positioned in relation to other animals or plant forms (Rajagopalan, Bujis 2003). In accounts of creation from the Amur region, birds hold specific roles in the formation of the land. Diving birds are described as having created the earth by bringing up sand and soil from the sea floor. In a Nivkh account, a duck is said to have formed the land using its own feathers²⁹ (Sangi 1967; Rajagopalan, Bujis 2003).

Birds are connected to the soul. In the tree of life, those nesting in the upper branches are souls that have not yet been born. An unborn child is a returning soul. On wedding robes, bird motifs represent the future, unborn children of the bride, their number indicating the family's wishes for future children (van Deusen 1997). In oral traditions, eagles and swans are messengers from the upper world and female figures from that realm appear in the form of swans, such was the case with the wife of the Nivkh boy who emerged from a swelling on his mother's knee and grew into a great hero (Van Deusen 1997). These motifs follow the tripartite cosmology of the world tree, which connects the celestial, terrestrial and subterranean realms.

1.13.4 Water Symbolism

Water, both river and sea, is named in songs, carved in wood and evoked in embroideries as an active force. In local legend, crossing water marks a threshold between life phases, serving as a metaphor for transformation (Van Deusen 1997). Rivers are rarely named explicitly, but their presence is implicit, carrying characters to new lives, dreams, or states of being. In Nivkh and Udege creation myths, water is portrayed as the primordial element. In the Udege version, a brother and sister who survive the great flood go on to renew the human race (Van Deusen 1996).

Water is also linked to rebirth and healing. In Udege and Ulchi narratives, hunters marry sea creatures, follow them underwater and use red water or blood to restore them, guided by ancestral or spiritual figures. These stories associate water with lifeblood and continuity across realms. The Amur River itself plays a prominent role in Nanai stories, while the sea dominates in Nivkh and Udege traditions. Water deities are invoked at the start of the fishing season with ritual offerings. These deities represent aspects of a unified natural force that encompasses water, mountain, earth and fire (Van Deusen 1996).

The symbolism of water is also visible in embroidery. Spiral and curvilinear designs on garments mirror the flowing forms of rivers, resembling vines, veins and even the faces of animals such as bears or tigers (Rajagopalan, Bujis 2003). Some of the embroidered borders of fish skin robes are a representation of the river, filled with animals and spirits (Van Deusen 1997).

²⁹ In several oral traditions from the Amur River region, the duck is described as creating the first land by pulling out her own feathers to form a nest upon the surface of the water, from which the earth gradually emerged. See Sangi 1967.







Figures 39-40 Salmon skin robe featuring scale-patterned embroidery. Hand painted, ca. 1900. Accession no. 626-1905. Eastern Siberia. Victoria and Albert Museum, London, UK

1.13.5 Fish Motifs

Fish play a key role in the tree of life, alongside birds and fur-bearing animals. The branches may merge with flowing water patterns, waves, spray and wriggling fish, referring to the fertility of the river as a source of life. They appear in the roots or the lower panels of compositions and in some cases, follow the trunk into the world of the living, replacing humans and evoking the relationship between prey and fisherman. Fish are also shown in the beak or belly of seabirds or fused with them in the form of a fledgling bird with fins in place of a tail. These configurations, birds containing fish or hybrid fish-birds are symbols of newborn life (Cevoli, Dalles 2015).

Fish also possess a divine aspect in Amur River mythologies, assuming human form. In one Ulchi tale, a man marries a taimen, heals her and she transforms into a woman. The two of them settle together on land, eventually making their home along the Amur River (Van Deusen 1996). These narratives showcase fish as liminal beings, creatures that traverse and connect multiple realms, associated with transformation, healing and continuity between species and worlds.

1.13.6 The Fish Scale Wedding Robe

Some bridal robes in the Amur region feature scale-patterned embroidery [fig. 40], creating a protective layer for the bride as she moves from the spiritual care of her natal clan to that of her husband's family. These scale motifs, usually placed across the upper back of the garment [fig. 39], serve as a form of ritual armour (Cevoli, Dalles 2015).

The scale motif draws on multiple layers of symbolism. In its most literal form, it refers to fish scales, metonymically linking the bride to the salmon, a primarily subsistence species. In broader cosmological terms, it echoes protective motifs found throughout Amur iconography, including snake and dragon skin, figures associated with water, earth and sky. Stylised representations of these creatures are reflected in chequered or rhombic friezes (Cevoli, Dalles 2015).

Each scale is cut from fish skin and reinforced with a bias strip to preserve shape and prevent fraying. Motifs such as dragon mouths, shamanic birds and 'Nanai eyes', two spirals facing each other, are embroidered using stem stitch at the centre of each scale. Once embellished, the scales are arranged in an overlapping pattern that mimics the natural layering of salmon scales, creating a surface that moves fluidly over the bride's shoulders (Dalles Maréchal 2020; 2022; Palomino 2021).

The completed tiling of scales is then affixed as a single element to the back of the robe, forming a relief-like epidermis. This carefully structured arrangement transforms the robe into a materialised threshold space, designed to safeguard the bride on her passage through social and spiritual transformation. The motif also carries regional syncretic meanings: in Nanai, Manchu and Chinese traditions, dragon scales are linked to lightning and associated with protective spirits. Motifs of bear snouts may also appear at the cuffs or lower back, adding further layers of spiritual defence (Ivanov 1954; Beffa, Delaby 1999).

1.13.7 Serpent, Spiral and Dragon Motifs

Spirals and zigzags, found in Amur petroglyphs, pottery and embroidery, relate to serpent and dragon figures described in Amur oral traditions. Okladnikov (1981) reads the spiral as a Neolithic symbol of the sun and the celestial serpent, a form also echoed in Evenk dance rituals and associations with rebirth and transformation (Van Deusen 1997).

In Amur mythology, serpents are creators and protectors. According to Nanai legend, the earth was once smooth and submerged until a giant serpent carved valleys into it, allowing water to recede and land to appear (Oakes, Riewe 1998). Serpents are seen as guardians of mountain spirits (Nagishkin 1980) and benefactors who bring fertility, wisdom and healing. In shamanic traditions, snake forms appear in clothing and ritual belts, coiled or interlaced in dynamic patterns (Van Deusen 1996).

Dragons, legless and snake-like, are linked to serpent imagery. In Nanai iconography, they are rendered in symmetrical scrolls or snout motifs and associated with scales and protective power (Ivanov 1963; Dalles Maréchal 2020; 2022). Motifs on robes may include dragon mouths or interlocking triangles that reference dragon skin, which acts as shield (Cevoli, Dalles 2015). Dragons also connect with Chinese and Manchu traditions, particularly the water dragon or *mudur*, to safeguard rivers, fish and the souls of the drowned (Shirokogorov 1935; Laufer 1902; Ivanov 1954). The Amur River itself, *Heilongjiang*, ‘Black Dragon River’, refers to this connection.

1.13.8 Reindeer Motifs

Terrestrial animals also appear in Amur embroidery and ornamentation. On fish skin robes, these motifs are incorporated into the tree of life design, along the middle world (Rajagopalan, Bujis 2003). The reindeer is one of the animals most often depicted. Local communities value this species for its cultural and nutritional purposes. Its body provided meat, skins for clothing and bones for tools, while its image carried spiritual meaning and affirmed tribal identity. Among the Samar clan of the Nanai (Samagir), the reindeer retained an important role in funerary traditions. Karger and Koz’Minskii (1929) recorded that the dead travel to the next world on a reindeer sledge, although the Samagir were no longer engaged in reindeer breeding at the time they were documented by ethnographers.

Okladnikov identifies the elk, or moose, as a cosmic figure, an embodiment of the universe. In the mythology of the Siberian tribes, the elk is the zoomorphic representation of both earth and sky. In one narrative, the cosmic elk is pursued by hunters in bear form; its death marks the end of the world, signalling Earth’s rupture (Okladnikov 1981). The elk also appears in oral stories as a benevolent celestial being. In one tale, two baby moose are sent from the upper world to aid a heroine in defeating an evil dog-spirit (Van Deusen 1997).

1.14 Footwear

The act of sewing footwear has many symbolic meanings (Oakes, Riewe 1998). Making boots was associated with support, strength and the

conditions for a successful life. Among the Evenki, footwear was regarded as one of the foundations of life and was described in human terms, as a point of contact between sacred and everyday domains. Oral traditions link the act of sewing boots with shamanic power. In one story, a spirit enters the shaman's dwelling while his daughter sews a pair of boots; through the sound of her stitching, echoing the beat of the shaman's drum, she expels the spirit (Sem 1993; 1997). In Nivkh funerary practice, fish skin footwear assists the dead in their journey to cross into the other world (Black 1973; Oakes, Riewe 1998).

Skilled women drew patterns directly on skins by eye and hand, or reused patterns from dismantled boots on paper, or birch bark (Sartagov 1996). Hand measurements were widely employed: a handspan marked the height of a boot shaft, while a bent thumb or extended finger provided increments for width (Black 1973). Footwear decoration varied across the Amur. Nivkh artists used dyed fish skin cut into curvilinear forms, glued onto contrasting fish skin grounds [fig. 41]. Nivkh embroidery uses Chinese silk thread, cloth strips, dyed birch bark and hair from reindeer, moose, or dog (Black 1973). Women's footwear, made from fish skin, was supple and thin, therefore suitable for work in and around the house across seasons (VanStone 1985). They wore stockings, sometimes named 'inner boots', with fur turned inward against the skin. During winter, the Nivkh insulated their boots by placing dry grass insoles between the stocking sole and the boot for added warmth, a practice broadly used among other northern Indigenous groups (Schrenck 1881). Grass was carefully selected, combed and layered, essential to comfort and protection. The proverb, "A great beast pastures in a deep fold", warned against poorly laid grass that could injure the foot (Rajagopalan, Buijs 2003).

Among the Nivkh, women's boots followed the same design as those worn by men, though unlike men, who frequently went barefoot in warm months, women wore theirs year-round. Boots made from fish skin, especially from chum salmon (*Oncorhynchus keta*) and pink salmon (*Oncorhynchus gorbuscha*), were lighter and more breathable, qualities that made them better suited to women's domestic tasks and more practical during summer (Schrenck 1881). Men's winter footwear included fish skin boots.

Nivkh boots were cut to fit closely around the calf, fastened to keep out snow and water (Black 1973). Salmon and pike skins were favoured for being light and offering grip on ice (Smolyak 1988). Seal, fish, or moose soles were pleated to form a pointed, slightly upturned toe with a Y- or T-shaped heel seam, varying by region and period. Larger points were created by pleating seal or moose skin soles while wet, moulding them into position, then drying them hard; smaller points also relied on pleating. Soles were shaped wet, pleated and dried firm, while vamps could be triangular or tongue-shaped, with central seams. Vamp width varied by group; Nivkh preferred narrower vamps than Nanai. Some had a centre seam, and a skin flap was sewn around the ankle. Designs, curvilinear and sometimes zoomorphic, were applied to the vamp and ankle flap before assembly using applique, painting, embossing, or embroidery [fig. 41]. Nanai artists outlined their motifs with fine black lines. Undecorated boots were used for workwear. An extra row of stitching is placed on the sole about 2 cm below the vamp-sole seam on some boots from Sakhalin Island. Shin-high and knee-high leg sections were cut from haired seal skin, fish skin, dehaired moose hide, or assembled from fabric pieces. These were decorated with stained skins, trimmed with fur



Figure 41 Nivkh boot made of fish skin and reindeer hide. Hand dyed. Late nineteenth century. Accession no. 71-12-3B. Amur River, Siberia. Penn Museum, Philadelphia, USA

or fabric and sewn to the boot with a centre front opening. One side of the opening wrapped over the other and was secured with a boot tie threaded through holes at the ankle, then wrapped around the leg section (Hatt 1916).

Nivkh women on Sakhalin wore wraparound boots cut in one piece, with fish or seal soles and skin shafts tied at the ankle. This variation featured a vamp and sole cut from a single piece. The heel had a Y-shaped seam and the toe an elongated T-shaped seam arched toward the ankle. Pleats were formed around the toe. The shin-high leg section was made from linen, though fish and seal skin were also used. It had a short centre front seam that opened down the front and was folded around the ankle and fastened with ties or leggings (Hatt 1916; VanStone 1985). This sole design also appeared with leggings and knee-high sections (Oakes, Riewe 1998).

Across the Amur, footwear styles reflected exchange between groups. Tungus-speaking Ulita, Udege and Ulchi adopted features from Evenki hunters, while also borrowing elements from Nivkh and Yakut traditions. Nivkh styles, by contrast, showed fewer connections with Tungus neighbours, reflecting their riverine orientation (Oakes, Riewe 1998). Today, although most people use manufactured boots, traditional fish skin footwear remains valued for its durability and heritage (Smolyak 1988).

1.15 Leggings

Leggings [fig. 42] were worn throughout the year by both men and women beneath their robes (Taksami 1970). Fish skin leggings were worn by men during winter travel, particularly when riding sleds or moving on skis through the taiga. Fish skin leggings were made from salmon or carp skin and were softened through pounding. Each legging required three full fish skins, joined with two rectangular strips at the top and smaller infill pieces at the bottom, while a narrow strip of unpounded skin from another fish, likely salmon, was applied around the base. They were stitched with nettle fibre using overcast and running stitches. Women's leggings were more decorated than men's. The upper section was made from cotton, followed by a broad band of printed blue cotton bordered with narrower bands in red, brown, blue, or black. This band could carry curvilinear thread embroidery. Decorative cotton tapes fastened the leggings at the ankle and above the embroidered section and a pair of cloth ties at the top secured them to a belt. The interior was lined with white cotton, with seams sewn using standard thread (VanStone 1985).

Leggings provided insulation and protection from wind and insects, particularly in summer, when the lower edge was secured below the knee with leather ties to seal the leg pieces. At the upper edge, straps attached the leggings to a belt worn around the waist (Cevoli, Dalles 2015).

1.16 Mittens

To prevent snow from entering the sleeves, the Nivkh secured wide armbands made of cloth or fish skin tightly around the wrists. Gloves, usually mittens [fig. 43], were fastened directly to these bands. Each mitten featured a concealed slit near the wrist, covered by a flap, allowing the wearer to extend their hand outside the glove when needed (Schrenck 1881). Mittens were made from a variety of materials including dog, deer, fox,



Figure 42 Leopold von Schrenck, Fisherman wearing leggings. *Reisen und Forschungen im Amur Lande*. 1881.
Leiden University Libraries Special Collections, Leiden, Netherlands



Figure 43 Pyotr P. Shimkevich, Nanai wearing traditional robe, headpiece, shoes, mittens and fishing gear, ca. 1925.
Accession no. CC BY-NC-SA 4.0. Berlin State Museums, Ethnological Museum, Berlin, Germany

sable, reindeer and fish skin. A pair of mittens and a belt completed a regular outfit (Beffa, Delaby 1999). Some had a separate index finger and a combined ring and little finger, these sometimes were made of red fabric embroidered while working mittens were made for practical use with an opening below the thumb made of fish skin, which allowed the hand to be withdrawn without removing the mitten, useful when handling a fishline or trapline (Black 1973; VanStone 1985).

Women's mittens were made from fish skin or cotton lined with dog fur, with sealskin trims and layered appliquéd bands in various colours. Their patterns align with those documented by Taksami (1970), who noted that mittens without flared cuffs were more traditional. Some examples were sewn with coarse thread and adorned with embroidered curvilinear motifs in red and black (VanStone 1985). Among the Nivkh, the inside of the fingers could be tinted with alder bark for ritual purposes (Beffa, Delaby 1999). Decorative mittens were worn during ceremonies, while simpler, slit-cuffed mittens were reserved for daily use.

1.17 Hunting Belts

Among the Nivkh, the belt was considered the most important item of a man's clothing [fig. 47]. Made of seal skin, it carried the tools required for daily life and hunting. These included a knife or dagger, a fish knife, wood-carving knives, a piercing tool for untying knots, a skinning knife, a flint in a small tinder pouch, a tobacco pouch, a pipe cleaner, a needle case and amulets related to wellbeing and survival (Rajagopalan, Buijs 2003). Among the implements was a large knife, used interchangeably for eating and self-defence. It was made with a broad blade and a short wooden handle, occasionally inlaid with copper or silver arabesques and engraved motifs. The scabbard was fashioned from thick seal leather (*Phoca barbata*), decorated with embossed coloured patterns. A second knife was also worn. Smaller and pointed, it featured a sturdy wooden grip, finished with a knobbed end for stability. It was stored in a rigid alder wood scabbard tipped with wood or bone. This knife was used for woodworking and the production of both rough and fine tools (Schrenck 1881).

Fire-making tools were also secured to the belt: a flint and tinder container, along with a striker.³⁰ These pouches [fig. 44] were made from Amur sturgeon (*Acipenser schrenckii*), a species recognisable by its long snout and retained scale pattern after tanning. Histological studies identify the specific alignment of collagen fibres and dermal plates as the source of its durability and characteristic stellate texture. The black upper layer and rigid bony plates [fig. 45] made it ideal for crafting small hunters' fire-starting containers (Palomino, Cloud 2025). These pouches were composed of two overlapping pieces of sturgeon skin, that fit into each other and were wrapped with sinew, which prevented them from separating. The corners folded inward shaped into spiral ends. The construction helped protect the fire-making materials from damp conditions (Schrenck 1881). Worn on the belt alongside knives, pouches and personal items [fig. 23], they were both utilitarian and protective. In addition to their practical function, they connected with spirit forces. Depending on the purpose, they might house a

30 The tinder box contained tinder, flints and a fire striker. By striking the iron against the flint, sparks were produced to ignite the tinder, which was highly flammable and used to start fires.

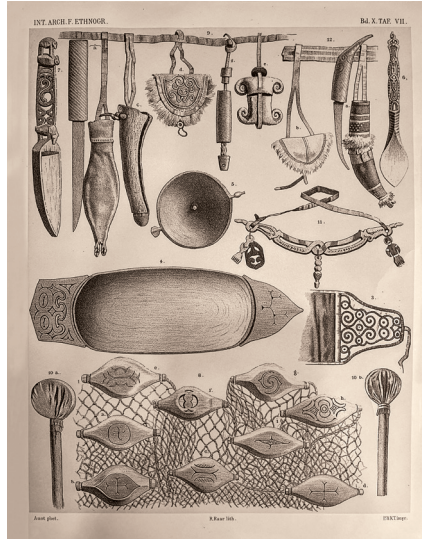


Figure 44 Leopold von Schrenck, drawing of a sturgeon skin pouch. *Reisen und Forschungen im Amur Lande*. 1881. Leiden University Libraries Special Collections, Leiden, Netherlands

Figure 45 Nivkh tobacco pouch. Sturgeon skin. Late nineteenth century. Accession no. 71-12-8B. Amur river, Siberia. Penn Museum, Philadelphia, USA

Figure 46 Henry Lansdell, illustration of Henry Lansdell wearing a Nanai fish skin robe. *Through Siberia*. 1882. Leiden University Libraries Special Collections, Leiden, Netherlands

Figure 47 Friedrich Grabowsky, a Nivkh hunting belt ensemble from Sakhalin Island, A collection of ethnographic artefacts from the Nivkh of Sakhalin Island. 1897. Leiden International Archive for Ethnography. Leiden University Libraries Special Collections, Leiden, Netherlands



Figure 48 Studio photograph of Henry Lansdell wearing a Nanai fish skin robe and a belt with a sturgeon tobacco pouch. Through Siberia. 1882. Leiden University Libraries Special Collections, Leiden, Netherlands

spirit or act as a medium for engagement with it, attracting warrior spirits capable of influencing fishing or hunting outcomes (Palomino, Cloud 2025). Suspended from the belt were additional items, including a length of tinder moss and a curved, pointed metal rod used for various tasks such as perforating leather, loosening knots, or cleaning arrow shafts. This tool, also made from horn or bone, was decorated with small, finely carved motifs. Other personal objects such as boar tusks, antelope horn, or pieces of deer antler, were also attached (Schrenck 1881).

The practice of smoking and snuff originated in seventeenth century China, spreading first among Mongol and Manchu populations before reaching Indigenous communities in northern Siberia via expanding Russian contact. Both men and women adopted the practice. By the twentieth century, tobacco use, alongside alcohol and narcotics, had become linked to broader patterns of disruption brought about by colonisation, economic dislocation and the erosion of established practices. These developments contributed to persistent addiction-related challenges, echoing patterns observed among Inuit communities in North America and Greenland (Wereldmuseum 2025a). In parallel, efforts to introduce Western medicine were largely unsuccessful. As Lansdell observed, vaccination campaigns in the Amur region suffered from poor-quality vaccine supplies and a shortage of trained personnel. In one settlement of 375 individuals vaccinated, 40 had died (Lansdell 1882).

Women's belts carried other items and were more beautifully decorated. Needle cases contained needles, thimbles and thread. They were made from metal, bone or ivory and were shaped and decorated. They were attached to belts or sewing bags to keep them secure while moving and setting up camp (Black 1973). Among the Nivkh, needle cases suspended from the belt consisted of a hollow bone tube threaded with a strap and fitted with two plugs. The lower plug remained fixed, while the upper could be slid to release the strap and push the needles out of the tube. The design allowed for secure storage and ease of access (Schrenk 1881).

The belt was also an indispensable part of funeral clothing (Black 1973). Hunting belts with tools such as axes, tobacco pouches and fire-starting implements were placed in men's coffins, while sewing belts and related materials were placed in women's. These tools, specific to the activities of the deceased, were ritually broken and arranged in the grave so that they could reach the person in their entirety in the afterlife (Dalles Maréchal 2020).

A drawing by Grabowsky, held at the International Ethnographic Archive in Leiden, depicts a complete Nivkh hunting belt ensemble from Sakhalin Island [fig. 47], illustrating practical everyday tools. British missionary and geographer Henry Lansdell also acquired and documented such items during his travels. While in Tyr, he purchased a Nivkh fish skin robe for eight shillings, noting its elaborate embroidery and painted decoration across the back. According to Lansdell, the robe, worn closed at the front and secured with a belt, supported various personal items, including a sturgeon skin pouch and a hunting knife [fig. 47]. A particularly refined example of such a pouch was later given to him in Nikolaevsk by the region's senior civil official (Lansdell 1882). In an existing studio photograph [fig. 48], Lansdell poses wearing the same fish skin robe and sturgeon pouch, a reminder of how Indigenous belongings were appropriated and displayed by missionaries and travellers as evidence of their journeys.

1.18 Bags

Nivkh women's handbags [fig. 49] for carrying needlework were made from birch bark or fish skin. They also carried needle cases and decorated panels for embroidery (Glebova 2017). Constructed from rectangular panels of contrasting fish skin, these bags were edged with leather strips and varied in form and function. Women's bags held sewing implements, while men's bags were used for hunting tools, tobacco supplies and possibly small game. Larger bags used for storing flint, tinder and knives were crafted from fish skin and reindeer skin (VanStone 1985). Sewing bags and baskets held needle cases, bundles of sinew thread, beads, buttons, pieces of skin and fabric, decorative trim, small bells, amulets and other materials. Women with large reindeer herds usually made reindeer skin sewing bags, while women in the south, with smaller herds, made bags from cedar roots and birch bark. Flat, purse-like birch bark containers were also used in the Amur region to store elaborately decorated panels (Black 1973). Decoration varied across groups, some examples feature decorative treatments, including painted symmetrical motifs in red and black and coloured edging. Brass bells were attached to sewing bags as protection from illness or harm. After a death, bells used on reindeer, clothing and sewing bags were muffled for four months in the case of a deceased woman and five months in the case of a man (Golovnev 1994; Oakes, Riewe 1990, 1996; Sartagov 1996).

Fish skin was also employed for food storage bags, which held grains, dried fish, meat and berries (Glebova 2010b). In Lower Amur fishing settlements, similar containers were used for storing millet, salt and tobacco (Glebova 2017). Travelling bags made of stitched fish skins arranged in geometric compositions, were used to carry provisions or to secure sled cargo. These were wrapped in lightweight fish skin sheets and fastened with a harness, preventing displacement when traversing uneven terrain. They had a secondary use as a tent panel.

1.19 Tents

Fish skin was also used for boat sails and tent coverings, where its lightweight and resilient properties were particularly valued. The summer tent, assembled from upright wooden poles arranged in a circular frame and secured at the top, was covered with fish skin panels [fig. 10]. Inside, a framework of slats supported basic domestic tools, including a hook for suspending cooking pots. During the summer months, the Ulita and Nivkh relocated from their primary dwellings to seasonal riverside settlements, comprising either stilted houses or these lightweight tents. Proximity to water facilitated fishing, which dominated the seasonal economy. While primarily used at summer fishing sites, these tents were also taken on hunting expeditions. Fish skin was favoured for the tent coverings due to its light weight and ease of transport (Wereldmuseum 2025b).

1.20 Siberian Shamanism

In the Lower Amur region, clothing functioned as protection from the weather and as a means of regulating relations between humans and animals.





Figure 49 Negidal fish skin, reindeer and birdskin bag. Late nineteenth century.
Accession no. 2003-43-34. Siberia. Penn Museum, Philadelphia, USA

Animal skins, particularly when left whole, would confer the abilities of the animal, vision, hearing, strength, onto the wearer (Chaussonnet 1988; Van Deusen 1997). Hunters, embroiderers and shamans alike relied on this transformative power, expressed through carefully crafted garments that carried spiritual symbols and magic (Beffa, Delaby 1999).

Human-animal relations were based on equality. Hunters honoured prey with rituals and women respected the spirit of the animal when preparing garments from animal remains (Rajagopalan, Bujis 2003; Oakes, Riewe 1998). Sewing, wearing and ornamenting clothing took place within a system where humans, animals and spirits interacted through reciprocal exchange with nature's master spirits (Black 1973; Kreinovich 1929; Glebova 2015).

Nanai and Ulchi shamanic traditions include processes of selection, initiation and the making and use of ritual garments (Van Deusen 1996). Some embroidery patterns were received in dreams and served as protective forms of communication (Cevoli, Dalles 2015). Shamans were spiritually elected, sometimes following childhood illness or trauma and mediated between worlds using spirit helpers capable of transformation (Shternberg 1904). Just as shamans were 'chosen' by spirits through illness and visions, many renowned embroiderers shared similar life stories, experiencing vision, childhood sickness, dream-inspired motifs and a compulsive need to create (Dalles Maréchal 2023). Stitching patterns received in dreams contribute to the protective and spiritual dimension of the garment (Dalles Maréchal 2020; 2023). Female shamans held heightened spiritual potency due to their inter-clan roles through marriage, their responsibility in domestic protection and their involvement in life-cycle rituals.³¹ The embroidered wedding robe, marked with the Tree of Life, is associated with a woman's cosmological role, while funeral garments serve as offerings for safe passage into the ancestral realm (Van Deusen 1996). Oral narratives describe heroines whose clothing and tools enable passage across thresholds. Sewing implements take on active roles, transforming into protective objects or spaces. Embroidered motifs guard the body and careful stitching produce safety and success, while careless work can result in harm (Van Deusen 1996; 1997). The contents of a woman's sewing kit, including scissors, needles and stencils, held talismanic value and could be used in rites to protect members of the clan (Gaer 1991b; Cevoli, Dalles 2015). In oral accounts, heroines used thimbles and needles to defeat harmful spirits, revealing the embroiderer as both protector and ritual agent³² (Van Deusen 1997). These narratives place shamans and women artists in related roles. Both manage the spaces between the human and spirit worlds through forms of making and care that involve technical knowledge, social responsibility and attention to materials (Chaussonnet 1988). Amur traditions portray heroines who defy adversity through skill, courage and magical garments. Women in tales live alone, are self-sufficient in hunting, fishing and sewing, before being thrust into transformative adventures. Some marry supernatural beings, while others are transformed from sea creatures into human beings. These stories reinforce the tradition that sewing carries protective and transformative qualities alongside its domestic functions (Van Deusen 1996).

³¹ Gaer 1991b; Bulgakova 1996; 2013; Van Deusen 1996; Delaby 1998.

³² A tale features a heroine escaping danger with a sewing bag whose contents, needles, thread, knife, thimble and comb, when thrown behind her, transform into obstacles like mountains or forests delaying her pursuers. See Van Deusen 1997.

Fish skin played an important role, used in shamanic costumes and amulets (Glebova 2010b). Decorative fish skin garments and ritual objects [fig. 50] would protect the wearer and repel spirits (Beffa, Delaby 1998; Ivanov 1963; Gaer 1991b). In trance, shamans wore clothing adorned with motifs representing celestial bodies or spirit animals that enabled transformation and facilitated movement across worlds, supported by the presence of their spirit allies (Chaussonnet, Driscoll 1994; Jochelson 1926). Shamanic practice included healing [fig. 51], exorcism and the recovery of lost souls (Black 1973). By the 1970s, the decline of these rites, alongside the passing of elder shamans, had produced a period of disruption. In recent decades, new forms of practice have emerged in response to ongoing social and economic change (Lopatin 1960; Smoljak 1991; Dalles Maréchal 2020).

1.21 Gender and Transformation in Amur Shamanism

Amur shamanic practice includes fluid boundaries across genders and spiritual realms. Accounts of intermediate types, among shamans, documented by Bogoras (1975) and Serov (1988), describe transformations within these roles. Maria Semionovna Pimgun of Nikolaevsk recounted a family story about her 'aunt', a powerful shaman who was born female, lived as a boy during youth, was recognised as a woman for most of her life and was found after her death in 1937 to have the body of a man (Van Deusen 1996). Such accounts are told quietly and with caution, as certain topics may disturb spirits. Some subjects, such as a shaman's ancestry, are avoided at night and shamanic songs are not sung in spring, when spirits are said to be in flight.

Many shamans have adopted feminine clothing and behaviour if male, or masculine clothing and behaviour if female. Fluid gender identities carry particular skin sewing knowledge. Sewing and clothing production are now associated with women, but Arctic shamans traditionally sewed their own attire, which they needed to survive in winter and to repair when damaged.

Ethnographic accounts describe the androgynous nature of shamanic life as expressed in ritual, trance, worship and healing. Shamans have been described as 'intermediate types', mediating between the material and spiritual worlds. In this role, the merging or transcendence of male and female qualities creates access to other states of being. This androgynous dimension in shamanic practice it is especially explicit. The ambisexual shaman, as healer, oracle and ritual leader, mirrored the presence of non-binary deities. The path to becoming a non-binary shaman could begin in childhood, recognised through visions or other signs. Initiation involved ordeals or vision-quests, followed by a public ceremony in which the community acknowledged the shaman's alternate gender and spiritual role (Merom 2006).

Non-binary deities are also present in Siberian oral traditions and appear in shamanic narratives, epics and folktales. They do not conform to fixed gender categories or locations. A deity may appear male in one tale and female in another and may move between the upper and earthly worlds. Some appear as siblings or couples. Storytellers also adjust details such as gender and geography according to audience and situation. Amur deities are not strongly defined by gender, as their identities are tied instead to natural forces and the spirits of land and animals. This perspective continues in the



Figure 50 Pyotr P. Shimkevich, A shaman's tools. 1896. Accession no. CC BY-NC-SA 4.0. Amur River, Siberia.
Berlin State Museums, Ethnological Museum, Berlin, Germany

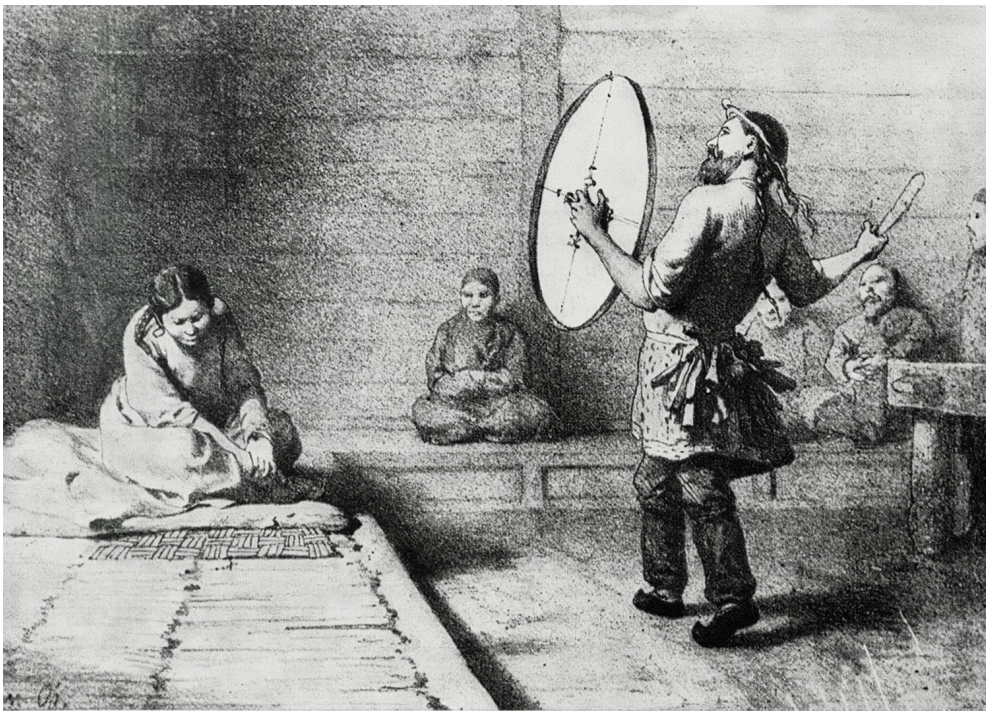


Figure 51 Leopold von Schrenck, A shaman treating a sick woman. *Reisen und Forschungen im Amur Lande*. 1881.
Leiden University Libraries Special Collections, Leiden, Netherlands

names and roles of deities. Scholars have interpreted shifts from female to male deities as reflections of social hierarchies, but such readings do not account for the parity of gender roles within many Amur communities and are rather a Western view of Indigenous culture (Van Deusen 1996).

1.22 Fish Skin Tradition Today

With the arrival of Russian settlers in the nineteenth century, cotton and silk gradually replaced traditional fish skin garments due to their accessibility and reduced labour demands. Nonetheless, Native women, as custodians of fish skin processing, were slower to adopt Russian clothing (Smolyak 1975). Museum collections show that symbolic motifs adapted with this shift, such as the use of black fabric in place of blue pigments on fish skin (Dalles Maréchal 2023). Despite Soviet repression, women's artistic and ritual knowledge endured through domestic practices. Embroidery remains a key medium for preserving shamanic motifs, linking clothing with ancestral memory (Van Deusen 1996). While male traditions were more visibly disrupted during the 1930s, women maintained intergenerational continuity, now leading cultural revitalisation efforts (Van Deusen 1996).

Even as modern textiles replaced fish skin in everyday wear, ceremonial garments continued to hold symbolic importance. High-status individuals wore elaborately adorned fish skin robes during community rituals, reinforcing their connection to spiritual traditions (Glebova 2017). Today, the resurgence of Indigenous arts, storytelling and clothing design reflects an ongoing commitment to cultural preservation. Artist-storytellers remain at the forefront of this movement, ensuring that the knowledge of past generations is carried forward into the future (Van Deusen 1996).

1.23 Conclusions

The Amur region fish skin artefacts discussed in this chapter function as garments and as elements within rites that mark key stages in a woman's life, including marriage, childbirth and death. These robes serve as powerful agents in rites of passage, shaping a woman's transition. At a wedding, a woman moves from the status of daughter to that of wife and mother; in death, she enters the community of the dead. These garments are used in such events because of their active role in the ritual process. Fish skin robes act as protective and preventive garments, simultaneously serving as visual narratives, with their power grounded in the material qualities, the images they carry and the properties of the embroidery.

The efficacy of these robes lies both in their symbolic content and material form. Embroidery performs a decorative role and invokes protective entities such as dragons, fish and celestial motifs, encoded through colour, contrast and composition. These visual lexicons form a coherent system of signs, designed to shield the wearer against misfortune and spiritual harm. The robe, closely fitted to the body, functions like a breastplate: a protective epidermis that is both aesthetic and apotropaic. The selection and arrangement of these designs reflect the wearer's status, community and spiritual affiliations.

Techniques are used to make the garment last, whether through tanning processes or storage in birch bark trunks in domestic attic spaces. Motifs are made clear through visual contrast and the use of colour, contributing to a system of visual coding. Each robe is the result of extended learning, technical skill and ceremonial knowledge, work that spans the length of a person's life, whether bride or deceased.

The production of these robes requires technical mastery and ritual knowledge. Embroiderers, women with inherited expertise, spend years learning the processes that transform fish skin into supple, durable material. Their labour, combining skill and spiritual intent, is an investment in the transformation and well-being of the wearer. Shaped by tradition, resilience and time, the making of each robe parallels the life course of the women who wear them. Their durability, achieved through specific tanning techniques, allows them to be preserved for generations. This longevity ensures that they remain active as ritual objects throughout a woman's life and beyond, serving as a protective shroud in death, reinforcing the idea that the robe accompanies its wearer across both physical and metaphysical journeys. The time and labour invested in each robe, whether worn by a bride on her wedding day or placed with the deceased in burial, mirror the duration and gravity of the life cycle itself. Each robe is both a culmination of technical skill and a carrier of narrative memory, inscribed into the fibres of the fish skin itself.



Figure 52 Owen Lattimore, Hezhe in a canoe, along the edge of the Sungari River surrounded by tall grass.
Accession no. 2010.5.35777. © President and Fellows of Harvard College, Peabody Museum
of Archaeology and Ethnology, Massachusetts, USA

2 The Hezhe

Summary 2.1 The People, The Environment. – 2.2 Ethnographic Records. – 2.3 The Fish. – 2.4 Gender and Making. – 2.5 Tanning. – 2.6 Natural Dyes. – 2.7 Sewing Implements. – 2.8 Clothing Materials. – 2.9 Clothing Technology. – 2.10 Embellishments. – 2.11 Footwear. – 2.12 Leggings, Mittens and Hunting Belts. – 2.13 Fish Skin Painting. – 2.14 Hezhe Shamanism. – 2.15 Funeral Rituals. – 2.16 Fish Skin Tradition Today. – 2.17 Conclusions.

2.1 The People, The Environment

The Hezhe are one of China's seven small ethnic groups, alongside the Tatar, Gaoshan, Luoba, Dulong, Oroqen and Menba and they remain among the smallest officially recognised minorities in the country (Man 2023). The Hezhe (Hezhe: Nanai; Chinese: Hezhe; Manchu: Heje; Russian: Nanai, Goldi), were originally part of a single group with the Nanai to the north-east around Khabarovsk and now live in China's Heilongjiang province. As of 2010, the total Hezhe population in China and Russia was estimated at approximately 17,000. Of these, only 50 individuals reported speaking the Hezhe language, which is part of the southern branch of the Tungus language family and closely related to Manchu. In contrast, in Russia – where Hezhe is taught in some schools – more than 3,000 speakers were recorded. The language has no traditional written form. A written version was first developed in Russia during the nineteenth century, with the earliest vocabularies and dictionaries compiled by P. Protodjakonov¹ (Walravens 2022). Hezhe

¹ In 1884, missionary Prokopy Protodyakonov published The Goldi alphabet for teaching Goldi and Gilyak children.

communities in China are concentrated in Heilongjiang Province, along the northern border with Russia (Guo et al. 2017). This ‘Three-River Basin’ area encompasses the northeastern Sanjiang Plain, formed by the confluence of the Heilongjiang (Amur), Songhuajiang (Sungari) and Wusulijiang (Ussuri) rivers, as well as the slopes of the Wanda Mountains. This region is renowned by its abundance of rivers, lakes and wetlands, which have provided the Hezhe with a livelihood shaped by the cyclical abundance of fish and game. Agriculture, including the cultivation of millet, barley and other crops, has a long history in the region, although fishing and hunting remained important economic activities. The landscape encompassing the Raohe, Hulin, Fuyuan and Tongjiang counties, marked by fertile soil and rich ecosystems, continues to support daily life offering nourishment and materials for clothing and tools (Hezhezu Jianshi Editorial Team 2009). The region’s interconnected waterways and mountainous terrain have defined Hezhe life for generations and remain integral to their historical presence in the area.



Figure 53 Jean-Baptiste Bourguignon D'Anville, map of China and Central Asia for du Halde's *Description géographique de la Chine*, the first geographic survey of the entire Chinese Empire by a team of French Jesuits. 1735. Leiden University Libraries Special Collections, Leiden, Netherlands

The earliest documented use of the term ‘Hezhe’ appears in a Qing dynasty edict from 1663 during the reign of Emperor Kangxi, which mentions a tribute of sable furs done by the Hezhe² (Zhang, Saengthong 2024). Historical records also refer to their ancestors under varying names depending on the period: Sushen or Jishen during the pre-Qin era, Yilou in the Han-Wei period, Wuji during the Northern and Southern dynasties and Mohe in the Sui-Tang period. Among the Mohe, the Heishui tribe, located furthest north,

2 Sable tribute at the Qing court marked political rank, making Indigenous hunting communities and their territories in the borderlands strategic to sustaining the hierarchy of the Manchu elite (Chia 2018).



Figure 54 V.V. Lanin, Shaved Hezhe. Album Amur and the Ussuri Region. Vol. 3. 1875-76.
Imperial Public Library in St. Petersburg, Russia

is regarded as the direct ancestors of the Hezhe (Hezhezu Jianshi Editorial Team 2009).

Prior to the Tang and Song dynasties, Chinese sources referred to the Hezhe with the derogatory term *Yupi dazi*, meaning ‘fish skin Tartars’ (Yu 2021). This name was also used by Jesuit missionaries [fig. 53] sent to the lower Amur by the Peking court during the eighteenth century (Du Halde 1735). The naming and classification of related groups in the lower Amur region has long been shaped by the assumptions of outsiders recording the region and its peoples. Schrenck’s³ investigations and other early ethnographers described varying subgroups, some partially assimilated into Manchu society. Terms such as ‘Shaved Hejên’ [fig. 54] and ‘Unshaved Hejên’ referred to varying degrees of Manchurianisation and were applied differently across historical periods and sources. The term ‘Goldi’ itself was introduced by Western ethnographers, who had adopted it from northern neighbours of the group. Chinese sources, relying on self-designations, transliterated the name ‘Hejên’ into various forms, including *Hei-chin*, *Ho-chê* and *Ho-chên*. Japanese sources, encountering these groups primarily via Ainu intermediaries in southern Sakhalin, applied their own ethnonyms: the Goldis were referred to as *Korutkekke*, the Ulchi as *Santan* and the Gilyaks as *Sumarenkuru* (Wada 1938). These names were recorded by Rinzô Mamiya during his fieldwork in the lower Amur region and later published by Siebold (1833). They reflected cultural differences recognised in the region and closely resemble the classifications later adopted by Schrenck. These overlapping classifications obscure the Indigenous groups’ social realities, showcasing the geopolitical perspectives of those doing the naming. Ling Chunsheng⁴ publication *The Hezhe People of the Lower Reaches of the Songhua River* (Ling 1934) marked a shift in the academic recognition of the term ‘Hezhe’ to identify the communities inhabiting the Three-River Basin. The ethnic classification campaign launched in 1950 by the People’s Republic of China formally adopted ‘Hezhe’ as the official designation, interpreted as ‘people living in the east and lower river reaches’ (Zhang, Saengthong 2024).

Closely related groups including the Nanai, Ulchi, Orochi and Udege, inhabit the north-eastern Russian side of the lower Amur valley and the northern Maritime Region. Although today formally divided across national borders and into separate ethnic categories, their shared material practices, decorative motifs, religious and oral traditions link them across time and territory. Their cultural unity with the Pacific Northeast Asian peoples, especially the Ainu, indicates their ethnogenetic role in the cultural development of the region (Zgusta 2015). These indigenous groups interacted with each other through exchange networks stretching across Northeast Asia to present-day Sakhalin Island, Hokkaido and eventually Alaska (Pulford 2019).

³ Leopold von Schrenck (1826-1894), a German naturalist and ethnographer, led a major 1854-56 expedition to the Amur River and Sakhalin, producing multi-volume works on the region’s biodiversity, oceanography and Indigenous Peoples.

⁴ Ling Chunsheng’s 1930’s fieldwork in northeastern China, carried out under the Institute of Social Sciences, is regarded as China’s first formal ethnological investigation. His book about the Hezhe became the earliest scientific ethnography in China and shaped anthropological practice at Academia Sinica as a reference for scholars studying frontier ethnic groups.

Long before Russian and Chinese settlements expanded in the region, groups such as the Ulchi and Orochi hunted the surrounding forests, while the Nanai and Hezhe sustained themselves by fishing the rivers. These waterways were sources of subsistence and formed the basis of ritual and social life (Pulford 2019). The Hezhe of China and the Nanai of Russia, who once formed a unified group, have been divided by political borders. Their separation, determined by the demarcation of the border between China and Russia, is both geopolitical and material. Throughout the twentieth century, their relationship with state power was shaped by ongoing material exchange, ranging from imperial tribute and socialist redistribution to cross-border trade and incorporation into separate states (Pulford 2021). Prior to these divisions, the Hezhe and Nanai shared fluid movement along the Amur, Ussuri and Sungari rivers, speaking dialects of the same Tungus language. The gradual onset of Sino-Russian colonisation in the mid-nineteenth century resulted in the bifurcation of the group: the northern segment known as the Nanai became increasingly Russified, while the southern group, known as the Hezhe, was absorbed into the Chinese state (Pulford 2019).

The Hezhe's recorded history is linked with the expansion of larger powers in northeast Asia. Their lineage has been traced to the Sushen (or Jishen) regarded as predecessors of Tungus peoples. By the third century BCE, a broader Tungus tradition had begun to form through the amalgamation of groups including the Yilou, Wuji and Mohe, together with neighbouring Turkic and Mongol populations. During the Tang dynasty (618-907 CE), the region came under Chinese control with the establishment of the Heilong military outpost. At this time, the Hezhe were part of the Heishui Mohe federation, located along the Amur River (Schwarz 1984).

Hezhe oral tradition recalls an early settlement at Baicheng (白城) (White City), near present-day Harbin (哈尔滨). Following displacement by Chinese forces, they retreated to the Greater Xing'an range, adopting hunting and fishing before migrating by river to the Amur. There, they established settlements along its course. After conflict with the Nivkh, many were driven southwards and resettled along the Sungari River between Sanxing (三星) and the Amur (Schwarz 1984). Communities maintained a preference for the eastern banks, following older ecological and social patterns. To the east were similar riverine societies; to the west, they would have encountered forest-based nomadic groups (Lattimore 1964).

In the early seventeenth century, the Manchu consolidated power and established the Qing dynasty, which expanded to include Korea, Mongolia and China. The Hezhe came under Manchu control during this period (Olson 1998). Despite shared ancestry, they did not follow the same path of state formation. While the Manchu developed formal administrative and military structures, the Hezhe remained outside these institutions, although they were viewed as suitable recruits (Lattimore 1964). Military conscription began in the seventeenth century and by the eighteenth century, Hezhe men were engaged in river patrols and other auxiliary roles (Schwarz 1984).

During the seventeenth century, the Nanai and Hezhe entered tributary relations with both the Qing Empire and the Russian state. Cossack authorities collected *iasak*, a tribute in the form of sable furs, from Amur communities, including the ancestors of the Hezhe. This process served to legitimise Russian territorial claims and provided a source of revenue. Tribute functioned as ceremonial submission and a system of extractive governance. Both the Qing and Russian regimes sought similar goods and



Figure 55 Hezhe family in traditional costumes. Amur River basin.
Russian Ethnographical Museum. REM, St. Petersburg, Russia

connected tribute collection to regulated trade. In 1860, the Sino-Russian border was formally established. The trade routes linking the Amur basin, Sakhalin and East Asia were subsequently affected by the Sino-Russian Treaty of 1860 and the Russo-Japanese agreement of 1875. By the 1880s, the Qing tribute system had largely ceased to function (Pulford 2021).

Under Japanese occupation from 1931 to 1945, Hezhe communities [fig. 55] were forcibly relocated to work in mines and on railways. Concentration camps, food scarcity and opium use led to deaths on a large scale. By 1949, their population had declined to around 300, a near-collapse that threatened their recognition as a separate group (Fan et al. 1987). Soviet-style policies had already affected the Nanai on the Russian side. By the early twentieth century, alcohol dependence was widespread. Vodka was viewed locally as a ritual good and its sudden restriction during the First World War triggered a material and spiritual crisis (Shternberg 1933; Lopatin 1960; Pulford 2021).

After the founding of the People's Republic of China, resettlement programmes were introduced to repair the effects of war and occupation (Sun 2020). Collectivisation followed, drawing the Hezhe into fishing cooperatives and replacing seasonal practice with state-directed extraction, which depleted stocks on both sides of the border (Pulford 2019).

Mid-century ethnic classification, shaped by Soviet models, designated the Hezhe as one of the PRC's fifty-five minority nationalities. As with the Nanai in the Soviet Union, formal recognition provided limited autonomy, and policies framed the Hezhe as in need of integration. Settlement schemes and administrative restructuring were introduced under similar logics in both states (Pulford 2019). Until the early twentieth century, Hezhe livelihoods focused on fishing. Abundant stocks encouraged commercial fishing, which replaced communal practices with private ownership of boats, nets and wage labour (Olson 1998). After 1945, the Hezhe came under Communist administration earlier than many groups (Schwarz 1984). Collectivisation expanded in the 1950s through multiethnic fishing cooperatives that brought Hezhe into shared work units with Han, Manchu and Korean settlers and increased intermarriage. These measures worked to dismantle autonomous Indigenous practices and incorporate the Hezhe into socialist structures (Olson 1998).

By 1967, the Jiejinkou Revolutionary Committee had abolished ethnically defined fishing teams and reorganised the population into mixed work units (Huang 2012). Anti-Soviet campaigns restricted contact with the Nanai in Russia, reinforcing their administrative separation. Mobility declined and industrialised fishing contributed to ecological damage (Pulford 2019; 2021). In both China and the Soviet Union, sedentarisation relocated communities into permanent villages and tied labour to fishing brigades, increasing pressure on forests and rivers (Pulford 2019). During the 1970s, industrial pollution further damaged the Amur watershed, reducing fish populations and undermining Hezhe livelihoods. Environmental decline, expanding infrastructure and intensified resource extraction prompted protest. Following China's economic reforms and the Soviet collapse in 1991, extraction accelerated as coal, gas, timber and mineral exports became state priorities, further limiting room for subsistence economies (Olson 1998).

Within China, Hezhe arts - birch bark, fish skin and fish bone work - were recast as national heritage. Museums collected works by makers such as You Wenfeng and Sun You (Huang, Huang 2009). Exhibitions framed pre-1949 Hezhe life as impoverished and contrasted it with post-1949 development. Displays presented fishing tools as steps toward economic progress and positioned the

Hezhe as revived by socialism, with little reference to Nanai history (Pulford 2019). Hezhe communities remain concentrated in Heilongjiang Province, where fishing continues under the constraints of state planning and long-term environmental degradation (Hezhezu Jianshi Editorial Team 2009).

2.2 Ethnographic Records

Drawing on Chinese, Russian (Pulford 2021) and Western sources (Schwarz 1984), this chapter traces how ethnographic records across dynasties consistently portrayed the lower Amur region as inhabited by peoples whose identity was shaped by their relationship to fish – both as food and as material resource. *The Classic of Mountains and Seas* [fig. 56], also known as *Shanhai jing*⁵ refers to the ‘Black-legged People’ who wore garments made from fish skin, an early reference to groups later known as the ‘Fish Skin Tartars’ (Wada 1938). Fish skin also appears in the text in connection with sacrificial rites, indicating its role in early ritual practice (Pan 2021). Similar references in the *Dongyizhuan*⁶ describe winter hunting on wooden skis and clothing made of dog and fish skins. These records likely refer to Ainu and Hezhe groups living in the Amur estuary and Sakhalin, suggesting a broader early Pale-Asiatic presence (Wada 1938).



Figure 56 Guo Pu, *Classic of Mountains and Seas*. Vol. 5. A compilation of mythic geography detailing the unique flora, fauna and legendary creatures. National Library of China, Beijing, China

⁵ The *Shanhai jing* (*Classic of Mountains and Seas*) is a compilation of early Chinese geographic knowledge, with its origins dating to the fourth century BCE. The text served administrative purposes in the Qin and Han periods, mapping resources and territorial affiliations through rituals at sacred sites.

⁶ The *Dongyizhuan* (*Records of the Eastern Barbarians*) compiled by court historians from the late third century onwards, it functioned as a handbook of intelligence on eastern non-Han groups, providing detailed accounts for use in foreign relations and territorial governance.

During the early Qing dynasty, Wu Zhenchen (1664), writing under the name Suhuan, included detailed observations of the Hezhe in Ningguta jilüe (1722) (Walravens 2022). Based on his time in Ningguta (modern Ning'an, Heilongjiang), Wu described the geography, climate, flora and fauna, population and Hezhe clothing practices, noting garments made from fish skin (Gao 1995). Compiled later in the Qing period, the Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*),⁷ includes hand-coloured illustrations of each ethnic group known in China at the time, showing one man and one woman, accompanied by brief captions in both Chinese and Manchu (Walravens 2022). The text describes the Hezhe, depicted in both text and illustration wearing fish skin and deer skin robes decorated with bells [fig. 57] (Xu 2022). The text reads:

By nature they are hard and violent and believe in demons and goblins. The men make hats from birch bark; in winter they wear sable hats and fox fur clothing. The hats of the women are similar to helmets; as for the clothes, they make them from fish skin and line them with coloured cloth. At the hem hang many little brass bells and they resemble chain shirts. For subsistence they catch fish and hunt animals. In summer they travel with large boats, in winter when the ice is solidly frozen, they travel in dog sleds [fig. 58]. Their native language is called the Heje-language. Every year, they pay tribute in the form of sable pelts. (Walravens 2022, 110)

Late Qing poets also expressed admiration for the visual and tactile qualities of fish skin, describing it as “as soft as that of any other animal” with colours that “reflect the magnificence of the sunlight.” Clothes and socks made from it were described as “the brocade bestowed on fishermen” (Xu 2022). The *Draft History of Qing* Qingshi gao⁸ summarises Hezhe subsistence through year-round hunting and fishing, with fish skin used for clothing, for warmth and as covers when travelling by sledge (Pan 2021). These texts, from the earliest classics to the Qing compilations, document the historical continuity of fish skin as a valuable material (Wada 1938).

Among the earliest European observers of the Nanai and Hezhe were French Jesuit missionaries dispatched by the Qing court in the early eighteenth century, whose mission in China included detailed map-making [fig. 53]. Drawing on European cartographic techniques, missionaries collaborated with Qing authorities to document frontier regions, recording local subsistence practices, spiritual customs and dress (Cams 2014). Jesuit Jean-Baptiste du Halde, although he never travelled to China himself, compiled these materials in his 1735 *Description géographique, historique, chronologique, politique, et physique de l'empire de la Chine et de la Tartarie chinoise* – a four-volume encyclopaedic work based on reports from seventeen Jesuits active in the field. His account included detailed descriptions of the so-called Yupi dazi, or ‘fish skin Tartars’. Writing at a time shaped by the elaborate dress culture of Louis XIV’s court, du Halde

⁷ The Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*), compiled around 1769, functioned as an ethnographic record of Qing imperial authority. It catalogued the empire’s ‘tributary’ peoples through portraits focusing on their costumes and brief descriptions, serving to promote a vision of universal rule through artistic and ideological means.

⁸ The Draft History of Qing, *Qingshi gao*, compiled after the fall of the Qing dynasty documents its legacy during China’s political transition and the collapse of China as an Empire.



Figure 57 Portrait of the Qileng, located on the Amugun River wearing deer skin garments and fish skin leggings. Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*). 1769. Library of Congress, Washington, D.C., USA

Figure 58 Portrait of a Hezhe couple with the woman wearing a fish skin garment on a sledge pulled by dogs. Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*). 1769. Library of Congress, Washington, D.C., USA

described fish skin garments with particular attention to their refinement and craftsmanship. Jesuit missionaries travelling along the Ussuri and Amur rivers described Nanai and Hezhe settlements in fish-rich environments [fig. 59], where the resource served as a staple food and a primary material for clothing. Fish skin was described as processed with care – stitched finely enough to resemble silk – dyed in multiple colours and tailored with precision into garments worn by both men and women. Women's clothing was adorned with bells and small ornaments, while their hair was decorated with reflective trinkets, rings and beads. While similar to Manchu attire, these garments were distinguished by coloured borders and ornamental bells and were noted for their intricate construction (Du Halde 1735; Pulford 2019). Missionaries also observed sable furs being transported upriver to the Manchu administrative centre at Ningguta (modern Ning'an, Heilongjiang), a practice still recorded by Russian ethnographers over a century later (Arsenev 2004).

Earlier still, Jesuit Athanasius Kircher's *China Illustrata* (1677) [fig. 60], presented a generalised view of the Tartar world, portraying it as spiritually isolated and framing missionary activity as a civilising project. Kircher described the region as vast, wild and poorly mapped, reinforcing European perceptions of its inhabitants as remote and in need of Christian instruction (Kircher 1677).

Although the lower Amur had long been described in Chinese historical records, detailed ethnographic studies of Indigenous communities following European scholarly conventions were not undertaken until the mid-nineteenth century, when Russia intensified its expansion into the Far East. One of the earliest Russian efforts came from Leopold von Schrenck, who travelled the Amur in 1850s. He recorded the geographic distribution of groups he classified as Orochi, a category that included the present-day Orochi, Udege and Tazy, distinguishing those less influenced by the Manchu, located along the upper Ussuri and Amur, from southerly groups near St Olga's Bay who had adopted Manchu customs and language. Schrenck described tribute relationships with the Qing authorities but noted that some Nanai and Hezhe groups retained autonomy (Schrenck 1881; Pulford 2021; Arsenev 2004).

Further study was conducted by Margaritoff in the 1880s, under the auspices of the Amur Province Scientific Exploration Society during which he travelled extensively in the Orochi region, collecting ethnographic objects, including shamanic regalia and clothing. Although his work contributed to early anthropology of the region, his methods reflected extractive practices (Fraser 1894). Scottish anthropologist James George Fraser,⁹ who translated early Russian ethnographies, including Margaritoff's volume on *The fish skin Tartars*, relied primarily on missionary correspondence and imperial reports (Fraser 1894). Around the same period, Veniukov, of the Russian Geographical Society, noted linguistic similarities between the Orochi and the Goldi (Nanai/Hezhe), suggesting close connections among Amur Tungus-speaking groups (Fraser 1894). The historical ethnographies

⁹ James George Fraser was best known for *The Golden Bough: A Study in Magic and Religion* (1890), in which he proposed a theory of cultural evolution progressing from magic to religion and finally to science. His work shaped early comparative mythology and anthropology. The *Golden Bough* has since faced criticism for its imperialist, classist and racist assumptions.



Figure 59 Du Halde, *Description de l'Empire de la Chine et de la Tartarie Chinoise*. 1735. Leiden University Libraries Special Collections, Leiden, Netherlands



Figure 60 Athanasius Kircher, *China Illustrata*. 1667. Leiden University Libraries Special Collections, Leiden, Netherlands

compiled by Julius von Klaproth¹⁰ in *Tableaux historiques de l'Asie* offer further detail on the populations inhabiting the mountainous regions of northeast Asia. In one passage, Klaproth refers to the Hezhe, noting that they withdrew into mountain caves during the harsh winters. Heavy snowfall made sleds necessary for mobility. Fishing remained their primary subsistence activity and garments were made from fish skin. Alongside this, the region supported a thriving trade in furs; sables and martens were plentiful, and hats were made from fox and badger pelts (Klaproth 1826). In the decades that followed, Ivan Lopatin's ethnographic writings documented similar Nanai/Hezhe funerary rites in the 1920s and 1930s, observing the blending of shamanic rituals with Chinese and Russian elements, including the use of printed paper, Chinese food offerings and Russian coffins and vodka (Lopatin 1922) as evidence of sustained politico-material entanglements (Pulford 2021). By the mid-twentieth century, scholars such as Shirokogorov acknowledged that Tungus ethnography remained underdeveloped due to limited Chinese records.

Russian explorer Vladimir Arsenev recorded his journey toward the shores of the Ussuri River combining diaries, maps and drawings of local costumes [fig. 61] made by Orochi, Udege, Nanai and Ulchi communities. His material enables readers to clearly trace the routes and sense the landscapes and conditions encountered (Arsenev 2004). His book *Dersu Uzala*¹¹ (1923) narrates his experience travelling with a Nanai hunter in the early twentieth century. He described the difficulties Tsarist officials faced in integrating Nanai/Hezhe communities who, while nominally under Russian administration, maintained tributary relations with the Qing in exchange for trade access (Arsenev 2004; Pulford 2021). In 1930, American sinologist Owen Lattimore travelled through Manchuria under the Social Science Research Council. He recorded observations of Hezhe communities near Tongjiang and Jiejinkou (Lattimore 1964; Pulford 2021). At that time, he encountered two other Chinese ethnographers Ling Chunsheng and Shang Zhangsun whom he referred to in his fieldwork. From the 1950s, Henry Schwarz began documenting ethnic minorities in northern China, with focus on Communist policies toward these groups. He lamented the continued lack of scholarly attention to such populations, both in China and abroad (Schwarz 1984).

Systematic study of Hezhe fish skin culture began in China during the 1920s, with Qing-era texts documenting Hezhe surnames, subsistence practices and material life. Fieldwork conducted by Ling Chunsheng¹² and Shang Zhangsun in 1934, covering the region from Yilan (依兰) to

¹⁰ Klaproth, a self-taught Sinologist and polyglot and cartographer – occasionally publishing under the pseudonym Louis de l'Or – joined a Russian embassy to China before undertaking an expedition to the Caucasus. He spent the final two decades of his life in Paris, supported by a sinecure professorship from Bonn and was a co-founder of the Société Asiatique de Paris.

¹¹ *Dersu Uzala* (1923) is a memoir by Russian explorer Vladimir Arsenyev recounting his expeditions through the Ussuri basin in the Russian Far East alongside the Nanai hunter Dersu Uzala who guided his surveying crew and saved them from starvation and cold. Arsenyev portrays him as an animist who sees animals and plants as equal to man.

¹² Ling Chunsheng after graduating from Dongnan University in 1923, studied in Paris under Marcel Mauss, professor of sociology at the Collège de France. With the support of Paul Rivet, director of the Musée de l'Homme in Paris, he was invited by Cai Yuanpei to join the Department of Ethnology at Academia Sinica. Ling conducted fieldwork among the Hezhe in northeast China, marking the first scientific ethnographic research in the country. His monograph on the Hezhe established a model for ethnological fieldwork in China.

Fuyuan (抚远), was published in 1934 as *The Hezhe People of the Lower Reaches of the Songhua River* (Ling 1934). This early adoption of Western ethnographic methods drew national attention and framed Hezhe fishing-hunting culture as shaped by local ecology. Ling made racist statements on how areas closely to Chinese population were deemed artistically ‘advanced’, while more remote groups were seen as less refined (Ling 2012). During this same expedition, he reported the visible impact of alcoholism and opium in communities along the Amur and Sungari (Pulford 2021). Ling’s method, treating Indigenous cultures as living sources of ancient history was underpinned by nationalist ideology (Walravens 2022). In the late 1950s, state-led interest in ethnic minority heritage spurred research on fish skin craft, culminating in the Social Survey of the Hezhe Ethnic Group, which addressed earlier gaps and became a reference point for subsequent scholarship (Man 2023).

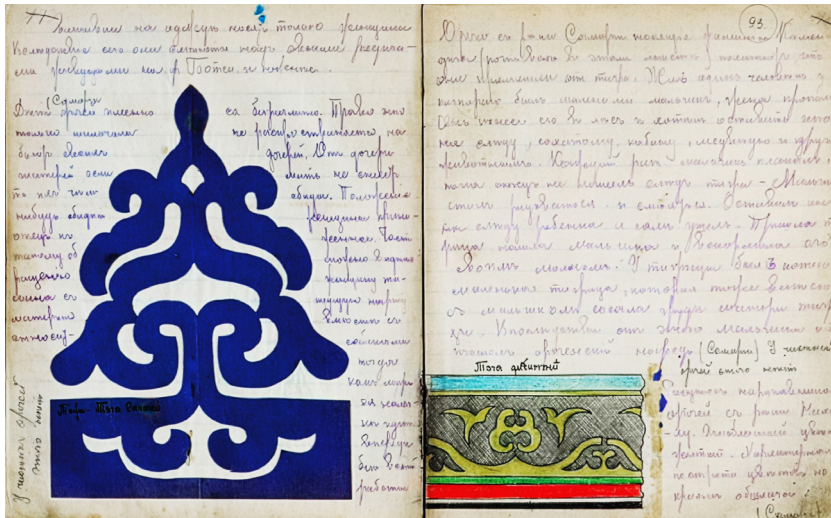


Figure 61 Vladimir Arsenyev, Nanai/Hezhe fish skin ornament from the travel diary toward the shores of the Ussuri River. 1908. Russian Geographical Society, Society for the Study of the Amur Territory, Vladivostok, Russia

Research into Hezhe culture continued through the work of Huang Renyuan, a former cultural cadre in Heilongjiang. His studies linked the group’s fishing-based economy to customs such as eating raw fish, fish skin garments and tree burials. He also documented how Hezhe were relocated from semi-subterranean wooden homes into Han-style rural dwellings during the Cultural Revolution (Huang 2012). Huang’s field access observed how borderland minorities were absorbed into the autarchic logic of their respective socialist states (Pulford 2021). Despite its long history, today fish skin culture remains poorly disseminated beyond Heilongjiang. While most research institutions and student projects are concentrated in the province, limited public engagement has constrained its national recognition (Man 2023).

2.3 The Fish

The Hezhe developed a riverine economy rooted in fishing, which continues to differentiate upstream and downstream communities along the Amur. Their fishing practices date back to the Neolithic (Man 2023) and, long before the arrival of Russian settlers or the Qing state, they fished these waters for subsistence and trade (Pulford 2019).

Du Halde describes the Hezhe as relying on fish for oil, daily food and winter provisions. In the absence of salt, fish was dried in the sun. Dogs pulled sledges across the frozen rivers and sturgeon, considered the most valuable catch, was eaten raw. He also describes another prized fish with red flesh, which he compares to tuna and notes that it was rarely seen. Boats were constructed from tree bark, tightly joined to keep out water (Du Halde 1736).

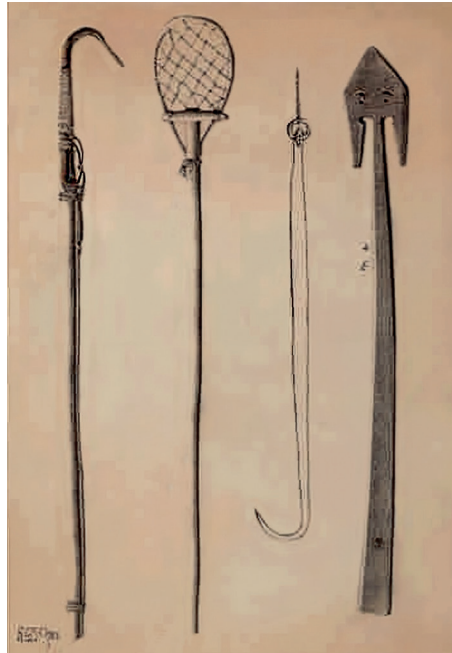


Figure 62 Leopold von Schrenck, Hezhe fishing implements. *Reisen und Forschungen im Amur Lande*. 1881. Leiden University Libraries Special Collections, Leiden, Netherlands

The Hezhe fished from both banks and boats, using nets, lines and harpoons [fig. 62]. Fishing followed a seasonal rhythm: small fish were caught in spring, nets and equipment were repaired during summer and autumn brought the main harvest – salmon, sturgeon and wolffish. The Hezhe lived in a region where the Amur remained frozen for over seven months, with ice reaching up to two metres thick (Chen 2012). Fishing methods responded to river conditions. In winter, they fished with dry hooks and long trawl nets set beneath the ice, harpooning fish at night by luring them with torchlight. During thaw, nets were drawn in semicircles from boats. Later in the year, Hezhe stake traps in Y-shaped formations were used. Nets varied in size according to depth and current. Larger fish were dragged ashore, while



Figure 63 Richard Maak, Album of Drawings from the Journey to the Amur, undertaken by the Siberian Department of the Imperial Russian Geographical Society. 1859. General Research Division, The New York Public Library. Manguny. The New York Public Library Digital Collections, New York, USA

others were taken from conical nets that prevented their escape (Ling 2012). Sturgeon were caught from birch-bark canoes [fig. 63], with the harpoon head detaching to allow the fish to tow the canoe until it tired, after which it was struck again (Lattimore 1964).

Seasonal migrations of salmon shaped work rhythms. Chum salmon (*Oncorhynchus keta*) and pink salmon (*Oncorhynchus gorbusha*), travelled upriver in three waves, each separated by short intervals. The first, starting around mid-June, remained close to the sea and produced the best-quality fish, fresh, firm and ideal for salting. The second wave, appearing in late July, travelled further upstream but showed signs of physical deterioration, with duller scales, discoloured gills and declining flesh quality. By late August, the third wave, larger but in poorer condition, pushed far upriver. These fish, visibly altered by the spawning process, were darker, misshapen and had tougher flesh that spoiled quickly in the sun (Fraser 1894).

Fishing and hunting formed the basis of daily life. Diets combined fish with deer, bear, wildfowl and other game. Meat and fish were boiled, roasted, or smoked and dried strips were stored for later use. Favoured foods included fish heads, deer tendon and squirrel brain (Ling 2012). Fish were stored in wicker cages placed at the river's edge, though this practice varied. Elevated drying racks and wooden storage huts protected food and tools and offered shelter in warm months. Drying racks were erected in spring and autumn when cooler winds protected the fish from insects. Large fish caught on set lines were hung beneath raised storehouses or eaves, left to age despite complaints from neighbouring Chinese communities about the smell (Lattimore 1964). Salmon and other lean species were cut and dried. *Yukola*, or cured fish, served a role comparable to bread in Russia (Fraser 1894). Some prepared it by chewing and mixing it with berries for guests. Raw fish dishes, made from sturgeon, carp, or whitefish, were prepared with local vegetables, berries, or later market spices (Huang, Huang 2009).

Dwellings ranged from temporary bark shelters used on hunting and fishing trips to permanent timber houses. The yurts, composed of a few poles, fish skin and birch-bark [fig. 64], gave protection from rain and snow, but not from cold and wind. Permanent houses followed Manchu designs with south-facing layouts and fish skin¹³ windowpanes (The Vanishing 'Golden Horde' 1944; Ling 2012).

13 The Hezhe took advantage of the windproof and translucent qualities of fish skin for the construction of windowpanes.



Figure 64 Kay Donner, Birch bark yurt. Kay Donner's Siberian expedition 1912. Accession no. K74. Finnish Heritage Agency, Helsinki, Finland

2.4 Gender and Making

Hezhe stories describe women as companions and, at times, as helpers in war. In daily life, men hunted and fished, while women maintained the household and worked alongside them within extended family settings (Sun 2020). Women cooked, gathered fuel, managed the home and joined fishing when required. Lattimore described Hezhe men of his time as largely idle, though he linked this to disrupted economic roles rather than inherited custom. Earlier generations had travelled widely for hunting, fishing and trade, leaving women responsible for all household and small-scale cultivation. With declining game and the growing presence of Chinese settlers, men lost much of their former work. Seasonal hunting persisted, yet commercial fishing no longer provided the same economic stability. Hezhe fishermen stopped once they had met their household needs, following a subsistence approach to river resources. Chinese competitors fished for the market, worked longer hours and sold the best part of their catch. This contrast between subsistence fishing and commercial extraction reduced the economic opportunities available to Hezhe men and left many without steady occupation, while domestic responsibilities remained largely with women (Lattimore 1964).

2.5 Tanning

Transforming fish skin into pliable, wearable material is a demanding, multi-stage process long- practised by Hezhe women along the Amur River. The stages include scaling, skinning, drying, tanning, hammering, softening, sewing and decoration. The practice, transmitted matrilineally, has been maintained for generations (Guo et al. 2017; Pan 2021).



Figure 65 Portrait of a Hezhe woman tanning fish skins, wearing a fish skin robe, surrounded by tanned skins.
Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*).
1769. Library of Congress, Washington, D.C., USA



Figura 66 Hezhe woman tanning fish skins. Kayano Shigeru Nibutani Ainu Museum, Nibutani, Hokkaido, Japan

This labour-intensive art is represented in Qing court imagery. In the Qing Imperial Illustrations of Tributary Peoples (*Huang Qing zhigong tu*), a woodblock image shows a Hezhe woman, hatchet in hand, wearing a fish skin robe while surrounded by freshly tanned skins [fig. 65].

Preparation begins with removing the head, internal organs and tail. Once gutted, the fins are cut off as close as possible to minimise damage. The entire skin is then carefully separated from the flesh and bones using a bamboo blade, which protects the delicate membrane from tearing. Any residual flesh is scraped away with a birch knife to avoid rot. Depending on the intended use, scales may be retained or removed to produce different textures. The cleaned skins are nailed flat onto barn walls, stretched taut with straight grain alignment. The skin is then air-dried, stiffening it for the next step. Fish skin is particularly fragile and must be dried or lightly smoked soon after peeling to prevent damage. After two days of drying, they are removed, stacked in layers and pressed under weights before being air-dried once more (Palomino 2022).

At this stage, cornmeal is applied. Fine grains absorb oils, while coarse grains act as abrasives to mechanically soften the material. Cornmeal is rich in phospholipids, which not only aid tanning but also draw in additional fats necessary for preserving suppleness (Hurcombe 2014). The skins are layered flesh-to-flesh and scale-to-scale, with cornmeal scattered between each. Up to eight skins are rolled together, wrapped in cloth and softened using a wedge-shaped press. The device, known as *muhe* in Chinese and *gejikou* in Hezhe [fig. 66] resembles a large wooden scissor. The wrapped skins are repeatedly beaten with the wooden hoe while being turned to ensure even softening (Palomino 2022).

After unrolling, residual scales and tissue are then scraped away using smooth stones, clamshells, or dull metal blades. The skins are then kneaded, twisted and rubbed against each other with cornmeal [fig. 67] over two consecutive days, a step that whitens, stretches and further softens the material while removing any remaining flesh. Traditionally, Hezhe and Nanai tanners deodorised skins by rinsing them in ash water and wrapping them in fermented bark, which was then pounded to neutralise odour (Glebova 2010b). Artists such as You Wenfeng [fig. 69] have described how repeated application of cornmeal during softening gradually removed residual grease and reduced the persistent fish smell (Xu 2022). To replenish oils, fish roe or animal brains are crushed and massaged into the skin by hand (Glebova 2010b). Sandstone may also be used for additional smoothing and lightening (Palomino 2022).

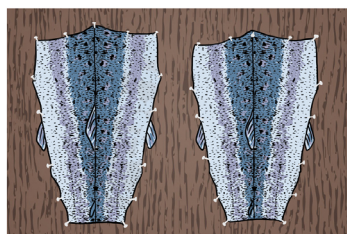
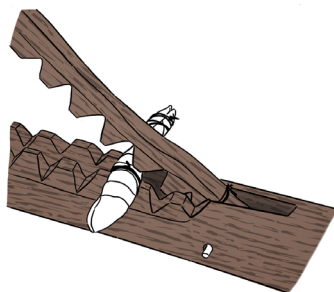
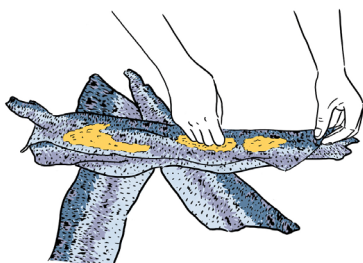
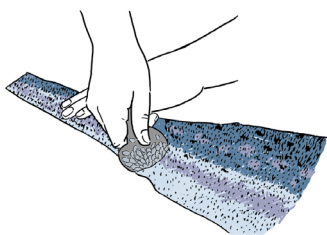
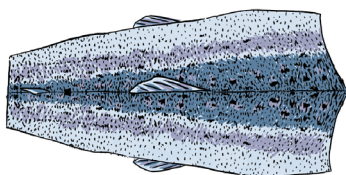
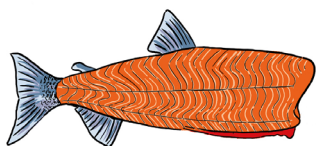
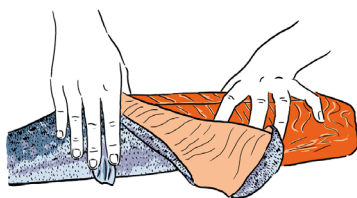
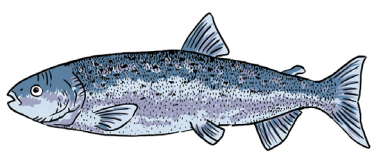


Figure 67 Hezhe cornmeal tanning. Illustration: Laura Fernández

2.6 Natural Dyes

Earlier Hezhe fish skin clothing shared design features with Nanai and Nivkh garments and displayed decorative coloured surfaces. More recent examples tend to remain undyed, relying on variations in the natural fish skin shades to create visual contrast [fig. 69]. Colour was applied selectively to garments according to age and gender, particularly on upper clothing, footwear and gloves. Shaman robes were dyed in red, black and blue (Pan 2021). Coloured motifs were used to create patterned effects, with red motifs used on bride's robes and blue on groom's garments. For elder men bark dyes created darker brown tones, while garments for elderly women used lighter brown shades. The dyeing process relied on locally available materials, including plant extracts, flowers, leaves, animal blood and charcoal to colour fish skin. Orchid grass produced blue hues, while rhododendron yielded red. The addition of alum fixed the colours, reducing fading (Man 2023).

2.7 Sewing Implements

Hezhe craft relied on a variety of bone and antler tools, including awls, scrapers, clamps and needle cases. These cases were carved from horn or hollowed wood, fitted with lids and small loops for hanging and decorated with incised patterns (Ling 2012). Eyed bone sewing needles were crafted from the bones of fur-bearing animals such as bears and wolves. The bones were first stripped of their outer layer, then carved to a fine point using knives and hatchets and finally sharpened into needles (Xu 2022). Women also used bones from tigers and large fish for this purpose [fig. 68].

Animal hides were sewn with sinew thread, while fish skin clothing was stitched using thread made from fish skin for added durability (Hezhezu Jianshi Editorial Team 2009). Threads were made from the skins of fatty fish such as silver carp (Ehrlich 2015). The preparation involved soaking the skin, scraping it clean, splitting it into strips and shaping one end into usable thread (Pan 2021). Buso sturgeon skins were also used, softened with liver oil, then folded and stretched into fine threads. Decorative elements were affixed using glue derived from sturgeon swim bladders (Jiao 2012). You Wenfeng's adhesive is made by scraping the gelatinous membrane from fish scales and roasting it over a charcoal fire until it forms a semi-melted substance. Once cooled, it solidifies and can be stored for future use as glue for assembling decorative elements (Xu 2022).

During the early Guangxu period, the Hezhe traded pelts, tendons and carp bones at Yilan Hala for millet, which was used as a type of porridge (Hezhezu Jianshi Editorial Team 2009). Today, cotton thread has largely replaced traditional fish skin threads and embroidery needles have supplanted bone needles.



Figure 68 Elisa Palomino, fish bones used for awls, scrapers, clamps and needle cases prepared by Sun Yulin. Jiamusi, Heilongjiang, China

2.8 Clothing Materials

The Hezhe inhabited an environment abundant in fish and fur-bearing animals, rich in salmon, sturgeon, sable, deer and crane (Zhang, Saengthong 2024). Hezhe folk artist Han Fude's 1960s poem celebrated Ussuri River Hezhe identity through a litany of leather garments - trousers, robes, girdle, hats - crafted from elk and deer hide and fish skin (Lin, Young Choi 2022). Along the Ussuri and Sungari Rivers, roe and deer hides predominated, while in the lower Heilongjiang, fish skin was the principal material (Hezhezu Jianshi Editorial Team 2009).

Fish skin garments were common in summer and animal skin in winter. Hunting provided skins for winter garments from otter, fox, squirrel, sable, roe deer and wild boar. Sable, valued for its pelt, was caught using a collapsible tubular net trap. Although sable was formerly used for hats, trade costs rendered it rare and deer fur predominated (Schrenck 1881). Roe deer were hunted year-round, with their pelts used to make fur socks and greatcoats. Although summer pelts were thinner, they were considered more durable. In addition, hides were tanned and sewn into robes, trousers and leggings. Reindeer were known to the Hezhe but were never domesticated;

instead, their hides entered regional trade networks, particularly in Fuchin (present-day Fujin, 富锦) and Harbin (哈尔滨), where boots with the hair side facing out were sold. Tiger hunting was rare and not accompanied by any specific ceremonies, though the animal occasionally featured in shamanic practice (Lattimore 1964).

Pelts and antlers were exchanged for tools and supplies. During the Ming period, Hezhe traded at horse markets. In the Qing Dynasty after fulfilling tribute duties, they bartered at locations like Sanxing (now Yilan 依兰), which became a stronghold and trade centre by the late Kangxi era (Hezhezu Jianshi Editorial Team 2009). Sable, fox, otter pelts and roe deer formed the basis of regional trade. Roe deer were captured using a noose trap rigged to a bent sapling that lifted the animal when triggered. Elk, deer, bear, wild boar and two types of seal were also hunted for fur and food. Sea lion hide was used for durable straps. The bear was regarded as dangerous, while the boar was prized as game. Dog skins were worn in winter, and many dogs were raised solely for this purpose (Fraser 1894).

Though bark was not used for Hezhe garments, it was fashioned into hats, especially from elm and birch, resembling animal skin. These trees were identified by feel and processing potential: pale, pliable, easily stripped and usable after dyeing. Bark was softened in fire or mud and pressed into shape, then stitched into accessories and tools. Shirokogorov noted its use among the Manchu-Tungus, who lacked textile weaving (Shirokogorov 1929). Bark was also used in shoes and fishing equipment and in children's garments worn during summer fishing. Bark clothing must be worn over an underlayer; it could not be worn directly on the skin. Thus, Hezhe people lined the inside of bark clothing with fish skin or soft plant fibres (Ling 2012).

Cotton cloth was also introduced through trade, along with other textiles and sewing implements like cotton thread and needles (Fraser 1894).

2.9 Clothing Technology

Fish species used by the Hezhe for clothing included salmon, pike, carp, sturgeon, catfish and taimen. Skins were selected according to toughness, thickness and flexibility. Male fish skins were used for durable garments such as trousers and boots suited to winter wear, while softer female skins were used for lighter garments such as summer jackets (Palomino 2022).

Smaller species with spotted patterns were suited to children's garments. Otter skin was also dyed and cut into decorative borders for garments (Ling 2012). The skin of the Kaluga, once reserved as imperial tribute, served both for clothing and for the production of adhesives. Its swim bladder produced glue used to attach appliqué elements. Stories of the Kaluga dragging boats underwater, gave rise to accounts describing fish capable of eating humans¹⁴ (Zhang et al. 2020).

¹⁴ The Kaluga, known as the river beluga, is a large predatory sturgeon native to the Amur River between Russia and China and waters near Hokkaido, Japan. Reaching 5.6 m in length and weighing up to 1,000 kg, it is among the largest sturgeon species. The species has been heavily exploited for its roe and has declined significantly in the wild. Accounts describe Kalugas overturning fishing boats and drowning fishermen, although there is no evidence that the species hunts humans.



Figure 69 Elisa Palomino, Hezhe fish skin artist You Wenfeng dressed in a fish skin jacket fished, tanned and sewn by herself. Jiamusi, Heilongjiang, China

Fish skin garments were worn throughout the year: cool in summer and warm in winter, they were lightweight, flexible, wind-resistant and thermally efficient, qualities well suited to extended fishing seasons and forest hunting in sub-zero temperatures (Xu 2022). However, they were considered unsuitable for summer fishing due to their insufficient water resistance. In colder months, they were worn beneath heavier animal skins as an insulating inner layer, allowing for greater ease during hunting expeditions (Fraser 1894).

The Hezhe wore fish skin garments as formal dress when receiving guests at home (Xu 2022). While both men and women used fish skin clothing, complete suits were worn primarily by women and children. Men made extensive use of fish skin for boots and leggings (Fraser 1894). The construction and shape of these garments also reveal changes in



Figure 70
Elisa Palomino, Hezhe fish
skin jacket made
by You Wenfeng, Jiamusi,
Heilongjiang, China

style through time. Some designs referenced nineteenth-century Manchu clothing, characterised by long bodies and short sleeves (Ling 2012). While drawing influence from Manchu and Han Chinese clothing styles, these garments remained materially and structurally grounded in local traditions (Malloy 2008). Fish skins were carefully selected to match pattern, texture and scale direction, to ensure an even and coordinated overall appearance (Pan 2021). The skins retain their natural colouring, white from the belly and dark from the dorsal side, which are deliberately arranged to create visual contrast [fig. 70]. This contrast defines the jacket's shape and surface design, with symmetrical joints and tonal balance achieved through precise placement of the fish skins. Matched skins were assembled and tailored to the wearer's body shape. Jackets were short, with diagonal plackets and standing collars (Ling 2012). Women's jackets opened at the side; men's opened at the front. Both wore trousers. Women's jacket had a standing collar, a diagonal placket extending from the collar to the right side of the waist and hem slits. It featured cloud [fig. 72] or nature motifs along the placket, collar and cuffs. The hems, cuffs and slit were finished with lighter-toned fish skin, such as pike, cut into decorative *découpé* motifs. Assembling each garment required careful hand-cutting, without rulers or standardised patterns. Stitching came only after matching colours and aligning the layout, and it was done with deer tendon or fish skin thread (Palomino 2022). Closures were secured using buttons made of brass or fish skin, as well as fish skin fastenings. Seams were trimmed with black-dyed deer skin (Ling 2012).



Figure 71 Elisa Palomino, Hezhe fish skins tanned by Sun Yulin. Jiamusi, Heilongjiang, China



Figure 72 Elisa Palomino, Hezhe carp skin jacket made by You Wenfeng.
Kayano Shigeru Nibutani Ainu Museum, Nibutani, Hokkaido, Japan



Figure 73
Elisa Palomino, Hezhe salmon skin jacket made
by You Wenfeng, Kayano Shigeru Nibutani Ainu Museum,
Nibutani, Hokkaido, Japan

Large fish such as catfish and taimen, which may reach two metres in length, provided skins for trousers (Wertmann, Bai 2025). Trousers were also made from the skin of large male salmon,¹⁵ which at around 50 kilograms provided thicker, more durable skins. Male skins were preferred for their resistance to scratches and environmental wear. Tailoring differed by gender (Zhang et al. 2020). Men's trousers were wide, lined at the upper section and trimmed with black trim along the legs. They were especially suited for winter hunting, providing insulation and withstanding repeated kneeling. Yu Wengfen's women's trousers followed traditional female tailoring, with a central front seam and mirrored use of the dark dorsal skin [fig. 69]. A woman's full set of jacket and trousers required 50 fish; a man's, 56. Tailoring for children followed adult patterns with minor adjustments (Xu 2022). Funerary practices included burial in one's best fish skin attire, with hunting cuffs placed beside the deceased for use in the afterlife. Wedding garments made of fish skin were worn for three days during the marriage ceremony and then stored and preserved for burial (Heilongjiang 2019).

2.10 Embellishments

Hezhe embroidery, developed over long winter nights, featured geometric and nature-inspired motifs sewn onto clothing, shoes and pouches. Traditional decoration involved glue made from yellow croaker or Kaluga swim bladder to attach motifs, followed by stitching. Cuffs and lapels were edged with stylised animal or plant forms. Motifs, cut from fish skin [fig. 71], included stylised waves, mountains, clouds [fig. 72] and animals such as lizards, hedgehogs (Malloy 2008), dragons, birds and celestial bodies (Fraser 1894). Water lines reflected riverine life and spiral rows framed garment edges or appeared centrally (Yu 2021). Wedding attire featured embroidered motifs such as the soul bird, said to represent rebirth and the tree of life. These designs aligned with ancestral and fertility rites (Lin, Young Choi 2022; Feng 2024). Decorative elements were closely tied to material practice, regional style and familial transmission rather than abstract symbolism.

Decoration methods included edging, piping and applique [fig. 73]. Appliques were assembled from carefully selected pieces to maintain colour and scale symmetry (Yu 2021). Decorative elements included dyed collars and cuffs, edged with coloured cloth or animal skins such as otter. Women's garments were trimmed with dyed hide and shells at hems (Lattimore 1964). Buttons and loops were fashioned from fish skin but also catfish bone (Malloy 2008). You Wenfeng recalled strict instruction from her mother, who demanded precision: the first stitch had to angle correctly, and spacing had to be consistent. "Sewing fish skin can't be rushed", she was told. Learning to sew was treated with seriousness from a young age (Xu 2022). Stitching fish skin required restraint and regularity.

15 Skins from male salmon were particularly valued for their durability, as the physical stress of spawning migrations and competition with other males produced thicker and tougher skin.

2.11 Footwear

The Hezhe crafted winter footwear [fig. 74] from fish skins using pike, bream, trout, catfish and keta salmon. These boots were favoured for hunting and fishing due to their insulating properties (Xu 2022). The boots were structured with wide openings, secured by fish skin straps and designed to prevent slipping on snow or ice (Huang, Huang 2009; Ling 2012). Earlier forms included shoes shaped like Chinese cloth socks, made from a single piece of fish skin, folded and sewn into a boot form. Some incorporated vamps and reinforced heels, cut and assembled to match the contours of the foot (Ling 2012). Fish skin boots consisted of three parts: leg warmer, face and vamp. The front section was pleated into a semicircle and attached to a 30 cm-high upper, secured with rope or fish skin ties. Socks of elk skin were worn beneath stuffed with *wula* or sedge grass, followed by fish skin leg warmers. This layering kept snow out and prevented slipping. When made from sturgeon, the skin had to be softened with water before and after use (Huang, Huang 2009). The shape extended above the ankle and was either fully fish skin or made with a skin sole and cloth upper embroidered with floral designs. Soles could be cut from boar or fish skin. Fish skin remained preferred for its non-slip and watertight qualities, particularly in thaw conditions (Lattimore 1964). The making of *wula* shoes remains largely faithful to traditional methods. The process involves selecting suitable fish skins, softening them and cutting patterns by hand. Stitching is done with sinew, and the shoes are insulated with sedge grass (Wertmann, Bai 2025).



Figure 74 Patrick Wertmann, Hezhe fish skin shoes, Tongjiang Hezhe Minority Museum, Tongjiang, China

For added warmth, Hezhe hunters lined their footwear with bird down, which compressed with movement to create an insulating layer similar to



Figure 75

Elisa Palomino, Sun Yulin. Hezhe fish skin artist creating fish skin cut-outs or paintings. Jiamusi, Heilongjiang, China

cotton (Xu 2022). Socks made from deer pelt or from *Carex meyeriana*, a sedge species native to Siberia, were worn inside for additional insulation (Huang, Huang 2009; Man 2023). *Wula* grass, a marsh plant dried and beaten to a soft fluff, was considered warmer than fur and was packed into boots to create a nest-like lining. The term *wula*, used for both the grass and the shoe, derives from the Manchu word for 'river' (Lattimore 1964).

While such boots were highly effective in cold, wet terrain, they were vulnerable to heat, limiting their seasonal use. Contact with warm dog dung could also degrade the material (Huang, Huang 2009).

2.12 Leggings, Mittens and Hunting Belts

Among the Hezhe, functional garments such as leggings, mittens and hunting belts were designed to support winter mobility and endurance. Leggings, made from fish skin or roe deer hide with the fur turned outward, resembled chaps suspended from the belt. Unlike most fur garments which were worn with the hair facing inward for insulation, these reversed leggings allowed greater freedom of movement when stalking game in snow. Their design also enabled hunters to slide forward on their knees during hunts (Lattimore 1964).

Mittens were crafted from deer hide or fish skin. Domestic-use models were simply two stitched pieces with a mountain-shaped cuff and leather strap. Hunting gloves, slightly longer and unhemmed, featured an opening beneath the thumb for quick access to weapons. More ornate versions incorporated bands with wooden toggles or brass straps (Ling 2012).

Tobacco and flint pouches were worn at the waist. Fish skin pouches were sewn from sturgeon skins with fine seams, then tied with leather cords (Schwarz 1984). Flint pouches were constructed from soft hide, with carved decoration and looped for suspension. These contained flints, char and gunpowder. Fire was made using a wooden board grooved and oiled to catch sparks from iron striking flint. Some fire-starting sets were acquired through trade with Han populations, with imported iron flints carried in belt pouches. Hezhe fire-making practices were preserved in oral traditions. They recalled earlier methods involving bamboo drills or flint with tinder, storing live coals in birch bark to maintain flame. Tools included leather-wrapped fire knives of stone or iron, carried for convenience and totemic value. Pipes, also suspended from the belt, were constructed from wood and metal with horn or bone mouthpieces. Tobacco pouches housed small pipes, with a folding flap and carved toggle closures. Carved decoration had floral, geometric, or animal motifs (Ling 2012).

Headwear included round fur hats made of roe deer winter hide, worn with the hair turned in or double-layered. Borders, made from deer hide, could be pulled down over the ears during hunts (Lattimore 1964). Fish skin, deer hide, and other natural materials were used in accessory construction, from shoes to hunting gear, reflecting the adaptive and material practices of Hezhe subsistence life.



Figures 76-77 Elisa Palomino, Hezhe fish skin paintings by Sun Yulin. Jiamusi, Heilongjiang, China

2.13 Fish Skin Painting

Among the Hezhe, the use of fish skin extended beyond clothing into ceremonial and artistic practices. Cut-outs made from fish skin once decorated Hezhe homes during the Chinese New Year, substituting traditional paper with salmon, sturgeon, or pike skin to depict protective deities or motifs marking the winter fishing season (Zhang et al. 2020). These images, inspired by shamanic rites, included animal as totems and protectors of the clan such as salmon, bear and tiger, all associated with ritual apology to the animal after the hunt (Yu 2018). One custom involved hanging fish skin amulets beside a baby's cradle as protection from evil spirits (Zhang et al. 2020).

Fish skin paper cutting became a key visual tradition. Though in the rest of China such motifs were rendered in paper, the Hezhe applied these designs to fish skin, producing bird, serpent and water motifs through techniques developed by women using knives rather than scissors (Lin, Young Choi 2022). These early cut-outs originated as embroidery patterns and were not made as separate objects (Lin, Young Choi 2022). Since 2006, Hezhe fish skin painting has been recognised as a national intangible cultural heritage (Zhang 2011).

Collage work using fish skin became a major form of Hezhe art. Artists selected skins for their natural texture and tonal variation, to create depth and shading in compositions. Motifs included landscape scenes, wildlife, or shamanic icons. Fish skin paintings have continued to evolve. Contemporary practitioners like Sun Yulin [fig. 75], who began studying under his uncle in Jiejinkou after retiring from fishing in 2000, developed the method into a commercially viable practice. After drafting a design, he separates fish skins by colour, natural white, yellow, grey, black, before assembling collages into landscape or animal compositions. His recent works feature layered, three-dimensional designs. Selling fish skin pictures locally provides him with a stable income and supports the operation of his workshop in Jiejinkou, a Hezhe town that remains one of the community's few remaining centres. Tourism has brought renewed attention, but Sun Yulin insist that the craft remains grounded in local knowledge and familial transmission. Despite invitations to relocate to larger cities, he remains committed to practicing and teaching within his home region (Xu 2020).

Paintings draw on older visual grammars, spirals, water lines and animal forms, rooted in local shamanic iconography and earlier petroglyph traditions such as those from Sakachi-Aryan (Ling 2012). The spiral motifs in early rock art continue to influence the iconography of fish skin painting.

Animals such as bear, crane [fig. 76] and tiger [fig. 77] figure prominently in Hezhe art. Bears, called Mafa, symbolised protection from hunger and were shown on garments and paintings. Tigers, regarded as ancestral figures and protectors of the mountain, were depicted on ceremonial items. Fish remained a dominant theme, associated with survival, seasonal cycles and ritual life and served both decorative and spiritual functions. Patterns evoked abundance, regeneration, or clan affiliation (Feng 2024).

Fish bone painting [fig. 78], also known historically among the Hezhe and neighbouring groups, involves the pasting of cleaned and carved fish bones [fig. 68] to create protective images. Produced to ward off evil and promote household peace, they drew on totemic animals like salmon (Zhang et al. 2020). Modern iterations of this practice, advanced by artists such as Sun

Yulin, continue to integrate these motifs into contemporary heritage and tourist products (Palomino and Boon 2020).

2.14 Hezhe Shamanism

Among the Hezhe, shamanic practice structured the relationship between humans, nature and the unseen. Spirits inhabited the sky, rivers, trees, stars and mountains, with all living beings possessing immortal souls (Schwarz 1984). Shamans were capable of mediating between these forces and human concerns, resolving disturbances attributed to deities or spirits. There were four principal forms of shamanism: seasonal rites associated with spring and autumn festivals; ancestral veneration; rituals performed before hunts to control fortune and weather; and therapeutic rites addressing illness as a state of dissonance. Healing involved trance induction, both in the shaman and the patient, to facilitate a rebalancing with nature (Lattimore 1964).



Figure 78 Elisa Palomino, Fish Bone sculpture. Jiamusi, Heilongjiang, China

For the Hezhe each person was made of three souls: one perishes with the body; another reincarnates based on moral conduct; and the third travels to the land of the dead through funerary rites. This allowed for fluid boundaries between species. A soul might return as an animal, deer, or fish. This helped in hunting, fishing and daily life. A person could change form to confuse prey and catch it more easily or take on a new shape to pursue a specific aim. This allowed people different ways to reach their goals. The three

souls governed different aspects of existence, vitality, thought and rebirth, respectively. Upon death, the life-soul vanished, the thought-soul lingered near the body or home, and the reincarnating soul travelled through realms, passing through the seven heavens for men and the nine heavens for women.¹⁶ These movements were structured through mourning periods and rituals. Spirits would appear in dreams or as shadows in the days following death (Ling 2012). The Hezhe viewed misfortune, illness, poor harvests, or unfavourable weather, as the consequence of spiritual disharmony. Objects, animals and events were explained through the prism of spirit possession. Shamans acted as mediums to resolve these disturbances. The soul was in constant exchange with the spirit world, which permeated all aspects of existence (Shirokogorov 1929). The world was divided into upper, middle and lower realms, inhabited by gods, humans and spirits. Shamans served as intermediaries, executing rites to restore balance, following commands from the gods (Ling 2012).



Figure 79 Nicolaas Witsen, Shaman of the Tungus. Nord en Oost Tartarye. 1692. Leiden University Libraries Special Collections, Leiden, Netherlands

Becoming a shaman entailed rigorous initiation and extreme physical endurance and advancement could take decades. The shaman allowed possession by external powers. This discipline distinguished the shaman as a vessel through which divine forces operated, and the shaman's power was defined by the degree of self-erasure (Lattimore 1964). The trance rituals involved sensory deprivation, rhythmic drumming, chanting and physical self-punishment. Shamans entered violent ecstatic states, culminating in collapse, after which they were cared for and later consulted for messages from the divine. In some instances, shamans emerged from trance with altered states of mind or language loss (Fraser 1894). According to Hezhe

16 Hezhe accounts describe the soul travelling after death along a path, passing through seven heavens for men and nine for women before returning to the ancestral burial ground and re-entering the lineage through rebirth among descendants. The spirit may appear on the third or seventh day first unseen, later through dreams and finally as a faint shadow. See Ling 2012.

oral tradition, shamans were originally female, however, most contemporary practitioners are male (Schwarz 1984). Women entered shamanic practice later in life and were recognised as Elder wise women (Lattimore 1964).

2.14.1 Shamanic Costume

Shamans wore ceremonial clothing followed strict taboos regarding their sacred tools (Ling 2012). Ritual rank was shown through attire with horns or antlers [fig. 79] on headdresses indicating one seniority levels or tribe. While costumes changed depending on the occasion, some elements remained consistent. The drum, made from fish skin or roe deer hide stretched over an elmwood oval frame, was indispensable for inducing trance. The skin was soaked and scraped, then stretched tightly over a double-grooved frame. Lacking a handle, the drum was suspended by four strings converging on a central metal ring and held in the left hand. The drumstick, made of wood was covered with roe deer leg skin or the tail of an otter. Larger drums reached heights of over 80 cm, with decorative motifs of snakes and fish and bells affixed at the centre (Lattimore 1964). A specific Hezhe drum was made of salmon skin with drumstick covered in frog skin, birch handles and copper bells near the grip. High-ranking shamans used elaborately adorned versions with bronze and iron fittings. Female shamans used a drum with shell decorations, also indicating rank (Ling 2012). Consistent rhythm was created by muting each stroke with the wrist that altered the mood of both drummer and listeners. Before use, the drum was warmed to preserve its resonance (Lattimore 1964). Rattles were made from dried stomach lining and filled with stones or beads. These were painted, mounted on long handles and used by senior shamans in rituals for inviting spirits (Ling 2012).

The shaman's attire [fig. 80] included front and back aprons tied at the waist, made of fish skin or cotton and decorated with multicoloured strips and copper mirrors (Lattimore 1964). These were worn for bodily protection during ritual activity (Ling 2012). A leather girdle with heavy cone-shaped iron rattles was worn over the hips (Lattimore 1964). Belts formed a key part of ritual dress. Among the Hezhe, fish skin belts, linked to water realms, were worn by initiated shamans who guided the dead across the Black River and through multiple layers of heaven to reach their ancestors. These belts were decorated with bone, bells, fur strips and carved wooden figures. Others were made from deer hide and fitted with rows of iron or copper bells, contributing to the sound of performance (Ling 2012). Other type of aprons consisted of knee-length strips of mixed animal hides stitched with cotton and ornamented with bells, mirrors, snakes, turtles and talismans, with variation by rank (Huang, Huang 2009). During ritual dance, the shaman moved counterclockwise, shuffling the left foot, stamping the right and shaking the hips to sound the bells. Bronze mirrors, worn in sets of three on the chest and back, were intended to shield the shaman from interference during trance. Smaller mirrors were also attached to the costume (Lattimore 1964).

A ceremonial headdress, worn only on specific occasions, consisted of iron antlers mounted on a circlet. Silk strips hung from the tines, with bear skin and sturgeon skin fixed at the base. The headdress was used during the Elk Spirit Dance, to influence hunting fortune, though its materials suggest



Figure 80 Owen Lattimore, Hezhe shaman wearing headdress with a simulation of deer horns, holding large flat drum. Accession no. 2010.5.35763. © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, Massachusetts, USA

broader ritual applications¹⁷ (Lattimore 1964). A fully initiated shaman bore fifteen or more antler-shaped ornaments. Older ceremonial items were inherited across generations. In confrontational settings, shamans used headdresses and belts performatively, striking the air while chanting to display power and repel threats (Ling 2012).

Shamans maintained associations with specific animal realms, either aquatic, such as sturgeon and otter, or terrestrial, including weasels, squirrels and eagles. Although tigers and bears featured in certain 'great spirit' rites, they were rarely adopted as familiars (Lattimore 1964). Ritual garments made of fish skin, known as Xike in Hezhe, were crafted from overlapping strips to evoke the appearance of feathers. These garments, originally made from reptile skins, were later adapted using dyed deer skin and appliquéd reptile motifs. They represented the shaman's guiding spirits, birds and eagles for aerial travel, tigers and leopards for forest movement, aquatic animals for navigating water and lizards for speed. Each animal represented particular attributes of strength or agility, contributing to the efficacy of the ritual. Decoration conveyed the shaman's personal vision and protective spirit (Huang, Huang 2009).

Ceremonial pouches included leather bags for charms or bones were worn at the neck or waist. Fish skin bags were used during shamanic journeys to carry food or ritual items (Ling 2012). Ritual gloves were originally made from bird or animal skin and later from dyed deer or sheepskin with spiral embroidery. Each glove featured a copper bell and a snake motif (Huang, Huang 2009). Footwear was made from frog, deer, pig, cowhide or fish skin. Ritual shoes featured stitched decoration, thick leather soles and fur lining (Ling 2012). A bell was tied at the front and the socks were made of elk or deer hide, with turtle motifs stitched in black leather (Huang, Huang 2009). Hezhe necklaces signalled the shaman's training, role and divine lineage, combining ancestral bones, talismans and ceremonial tokens. Deer hoof necklaces indicated more than a decade of practice (Ling 2012).

2.15 Funeral Rituals

Prior to Chinese influence, Hezhe burial customs were structured around the mobility of the spirit. The deceased were buried in locations selected by shamans. Coffins, introduced later, replaced wooden troughs. Children, whose souls were thought too weak to escape the earth, were placed in trees. Their mothers left home temporarily to ensure the soul's release (Schwarz 1984). Other methods involved cremation with ashes placed in trees, to reinforce the close relationship between the body, nature and the nonhuman world (Wada 1938).

Rituals involving fish also featured in spiritual life. In some funerary rites, drowned individuals were pierced with fish forks and wrapped in seal skin, suggesting transformation or spiritual continuity through aquatic forms. Other records describe a fish air bladder used as a ceremonial vessel

17 On certain occasions, Hezhe shamans used an iron headdress shaped like antlers mounted on a circlet, decorated with silk streamers, bearskin and sturgeon skin, with a silk fringe mask covering the face. It was worn during the Elk Spirit dance, a ritual associated with elk hunting intended to encourage the presence of elk before a hunting expedition, although the materials suggest it may also have been used in other ceremonies. See Lattimore 1964.

for sharing ritual drink during communal gatherings where participants sat in a circle, sang and drank together (Wada 1938).

The Milky Way was described as the trail of the snowshoes of a mythical figure permitted by *Anduri*¹⁸ to search the heavens for his deceased parents, the origin of the separation between the living and the dead. The initial duties of the bereaved involved shaving the dead, covering the head and face with a dark blue kerchief and dressing the deceased in their finest clothing. Garments were then deliberately torn at the collar, knees and toes so that the dead will receive new attire upon arrival in *buni*, the unseen realm below. If the deceased had owned fine textiles such as silk or brocade, these were wrapped around the body. Regardless of status, all were encased in birch bark, in several layers, to shield the corpse from moisture. Birch bark was also placed beneath and around the body within the coffin. Alongside the body were placed personal possessions, including weapons, tools and furs, sable, otter, or fox skins, owned by the deceased. An axe and kettle were also included, with the kettle placed at the feet. Canoes, snowshoes, harpoons and similar equipment were arranged around the coffin. For shamans, the burial included their ritual equipment, though deliberately damaged before interment. Women were buried with sewing tools and personal belongings connected to their skills. The soul lingered near the home for a fortnight following death. During this period, none of the deceased's possessions were touched. Meals continued to be served in their usual place, with the individual's cup and platter filled and later taken into the forest as a libation (Fraser 1894).

2.16 Fish Skin Tradition Today

In 2006, Hezhe fish skin craft was included in the first batch of China's intangible cultural heritage listings (Xu 2020). This recognition followed a period when the tradition had nearly vanished. The decline was largely due to major shifts in Hezhe livelihoods during the twentieth century. By the 1960s, fabric had supplanted fish skin in daily clothing and fish skin garments were reserved for practical use in hunting or rituals (Jiao 2012). The arrival of cotton and commercial fabrics, introduced through trade and migration, further displaced skins. As dependence on fishing waned, the knowledge of working with fish skins faded (Hezhezu Jianshi Editorial Team 2009).

Government programmes launched after the Japanese occupation aimed to improve infrastructure in minority border regions. These included the encouragement of larger Hezhe families and access to minority education institutions (Malloy 2008). With tourism development in Heilongjiang from the 1990s, efforts to revive fish skin craft gained new momentum. Craft production became concentrated in areas such as Jiejinkou. There, local governments established folklore parks and booths to promote traditional culture. Government-backed initiatives in Tongjiang supported a tourist village and museum displaying Amur fishing tools, shamanic drums and fish skin garments, presenting them as markers of minority culture (Pulford

¹⁸ *Anduri* is described as the supreme spirit to whom prayers for food, guidance and visions are directed. The term corresponds to the Manchu Enduri and along the Amur and Ussuri rivers it denotes a supreme sky-dwelling spirit.

2020). Production shifted from daily utility to craft markets. Products were adapted for decorative or commercial use, including garments, accessories and fish skin paintings. Items were sold to museums and visitors, especially during the summer months when domestic tourism peaks (Pulford 2020). The provincial culture department also initiated protective measures between 2004 and 2005, including a specialised research group on fish skin techniques (Heilongjiang 2019).

The Hezhe fish skin tradition today depends on a small number of remaining practitioners. By the 1990s, You Cuiyu was the last known Hezhe person still producing fish skin clothing. In 1999, curator Yang Yuan from the Beijing Institute of Fashion Technology visited Jiejinkou and commissioned a garment from her. It was the final piece Cuiyu made before her death. Her daughter, You Wenfeng, continued the practice and was later recognised as an official inheritor when the practice was listed as national intangible heritage in 2006 (Zhang et al. 2020). She had more than sixty years of experience, and her work is exhibited in museums in China, Japan, Switzerland and Canada. Her garments, made from Amur pike and chum salmon, were produced to order, with costs rising due to the scarcity of large fish and the increasing price of materials (Palomino 2022). With sturgeon now endangered, traditional threads and adhesives made from fish skin and bladder had been replaced with modern substitutes. You preserves a piece of bladder glue, but only as a relic of earlier techniques (Jiao 2012). In 2017, she taught a fish skin workshop for my University of the Arts Chinese students in Jiamusi, and our collaborations continued until her death in 2026, including a documentary on Hezhe fish skin craft that won the sustainability award at the Milano Fashion Film Festival.

With growing interest in heritage crafts, You Wenfeng began training others, including her children and daughters-in-law, who initially dismissed the craft as outdated. A turning point came when a single commission fetched RMB 5,000, prompting renewed interest within her family. She has produced garments for exhibitions, including a jacket made from over fifty chum salmon for the 2010 Shanghai World Expo. Each jacket requires weeks of sewing and precise sourcing of fish skins of suitable size (Jiao 2012). Despite these efforts, few young people have taken up the skill. Most practitioners are women over fifty and much of the knowledge remains confined to private households. Documentation and transmission are now a pressing concern (Xu 2022). The Hezhe fish skin craft exists today as a specialised practice shaped by tourism, state recognition and market adaptation. Although detached from daily wear, it retains social and historical weight. Contemporary production reflects earlier uses of fish for food, clothing and ritual, even as modernisation and ecological pressures reconfigure the landscape from which these garments emerged (Pulford 2021).

The state's role remains visible in places like Jiejinkou, where Communist Party offices and military presence sit atop former Hezhe fishing grounds, now reconfigured as tourist attractions (Pulford 2021). Broader shifts, such as declining fish stocks, inter-ethnic competition over resources and the expansion of aquaculture, further complicate the transmission of craft knowledge. Nonetheless, individuals such as the late You Wenfeng played a vital role in maintaining and adapting the practice within the constraints and possibilities of its current moment (Palomino and Boon 2020).

2.17 Conclusions

The decline of fish skin art in Hezhe daily life can be traced to a series of environmental, social and economic changes. Migration from the Lake Baikal and northern Heilongjiang regions to the Sanjiang basin led to new forms of subsistence. The shift from fishing and hunting to agriculture marked a broader disconnection from the ecological conditions that once sustained the practice.

Despite the natural abundance of the Sanjiang Plain, long winters, snow cover and the presence of predators challenged traditional livelihoods. Later, overfishing and pollution reduced fish populations and by the mid-twentieth century, many Hezhe turned to tourism for survival. As cotton and silk became more accessible and as younger people left to study or seek work, fewer remained to fish or learn the craft. Fish skin garment making, being both labour-intensive and technically demanding, became increasingly difficult to sustain. Salmon once provided the primary raw material, but its availability has sharply declined due to industrial waste and unsustainable fishing practices in the Amur, Sungari, and Ussuri Rivers. As income from fishing dropped, many Hezhe adapted by seeking alternatives. Tourism emerged as one such strategy, offering a platform to share ethnic crafts with a wider audience. Yet even with renewed visibility, the tradition remains under pressure.

The shift from subsistence to market economies has contributed to the marginal presence of fish skin work. Processes that once took weeks and required dozens of skins are no longer viewed as essential life skills. Until her recent death, You Wenfeng's role as an inheritor was vital. Despite criticism from some Hezhe community members, she chose to teach the technique to anyone willing to learn. Her stance, that secrecy leads to extinction, framed transmission as a form of collective responsibility. The Hezhe case reflects broader patterns. As ecological degradation alters material availability and as social values shift, traditional arts become harder to pass on. Even where awareness is growing, such as through national heritage recognition, structural and generational barriers remain. With older practitioners ageing and few successors, the survival of the fish skin tradition hangs in a delicate balance.

The material entanglements that have shaped Nanai and Hezhe lives under Chinese and Russian state projects and what appears as art survival is also a navigation of state policies, tourism economies and cultural classification regimes. The transformation of former fishing sites into heritage destinations reflects this negotiation, where continued cultural expression depends on government's expectations.



Figure 81

H.C. White Co, Ainu fishermen. Hokkaido, Japan.
Library of Congress, Washington, D.C., USA

3 The Ainu

Summary 3.1 The People, The Environment. – 3.2 Ethnographic Records. – 3.3 Regional Ecology. – 3.4 The Fish. – 3.5 Gender and Making. – 3.6 Tanning. – 3.7 Sewing Implements. – 3.8 Clothing Technology. – 3.9 Fish Skin Robe. – 3.10 Embellishments. – 3.11 Footwear. – 3.12 Hunting Belt. – 3.13 Ainu Shamanism. – 3.14 Funeral Rituals. – 3.15 Fish Skin Tradition Today. – 3.16 Conclusions.

3.1 The People, The Environment

The Ainu [fig. 81] today inhabit Hokkaido, the northernmost island of the Japanese archipelago, known before as *Yezo* or *Ezo* (Maraini 1996). Historically, their territory, called *Ainu Mosir* – the world of humans – included southern Sakhalin (VanStone 1985), the Kurile Islands, the southern tip of the Kamchatka Peninsula, the lower Amur River region and the Tohoku region of the Japanese main island of Honshu (Fitzhugh, Dubreuil 1999; Dubreuil 2002; 2004). Although geographically reduced today, the Ainu population was once considerable, sustained by a maritime culture and a regional trade network connecting them with neighbouring groups in Northeast Asia.

The Ainu spoke their own language, separate from Japanese and developed a cultural tradition shaped by sustained interaction and respect for the environment and by regional trade networks connecting them with Chinese, Koreans, Russians, northern Indigenous Peoples of Asia and Alaska and the Yamato people, ancestors of the Japanese today (Fitzhugh, Dubreuil 1999). Ainu society was not isolated. In the north, they maintained

contact with the nomadic Ulita and Nivkh peoples of Karafuto¹ (Sakhalin). Trade with the Santan² introduced Manchurian influences, particularly through Karafuto, which functioned as a Manchurian colony shaping the Okhotsk coast of Hokkaido. To the south, contact with Japanese society was continuous (Takakura 1960).



Figure 82 Ainu couple salmon fishing in a local Hokkaido River. Kumane-kodo

The word Ainu means ‘human’ in their own language, and this is how the Indigenous people of northern Japan identified themselves (Fitzhugh, Dubreuil 1999). For centuries, speculation surrounded the origins of the Ainu. Some theories linked them to Australia, the Philippines, or Mongolia, while others suggested a European lineage. Genetic research has now confirmed that the Ainu are direct descendants of the Jomon³ people, the earliest known culture in Japan, whose history reaches back over twelve thousand years. Their artistic traditions, such as fish skin robes and elm bark *attush* textiles, emerged from this cultural lineage (Dubreuil 2002).

The Ainu lived by hunting, fishing [fig. 82] and gathering wild plants and berries (Watanabe 1979). For archaeologists, the lack of written language and reliance on foraging contributed to the marginalisation of Ainu culture, placing it within a lower tier of cultural development (Lewallen 2014). Until

1 Karafuto was the Japanese name for Sakhalin Island. The southern part of this island was annexed to the Japanese territory from 1905 (after the Russo-Japanese War) until 1945 and established as Karafuto Prefecture in 1907.

2 Through Santan trade, northern peoples living in Sakhalin exchanged goods with those living in the lower Amur River region during the Qing dynasty, between the seventeenth and nineteenth centuries, when they were required to supply products such as sable skins in exchange for Chinese clothing, ornaments, iron tools and food (Hakodate 2025).

3 The Jomon were a long-standing hunter-gatherer culture, active from around 14,000 to 300 BCE, known for rope-patterned pottery and some of the oldest ceramics in Japan. See Van Gulik 1984.

the late nineteenth and early twentieth centuries, the Ainu remained largely hunter-gatherers. While previously regarded in negative terms, there is now growing academic recognition of the sustainability of these cultural practices. As McNeill (2010) notes, societies that did not practise agriculture were more ecologically sustainable. Nonetheless, in Ainu Studies, the perception of hunter-gathering as a primitive economy persisted as a justification for cultural replacement (Hudson 2014).

Japanese sources referred to Ainu lands as *Ezochi*, while the Ainu called the Japanese *Wajin*. In the seventeenth century, *Wajin* traders began expanding into Ainu territory. While *Ezochi* remained predominantly inhabited by the Ainu, Japanese settlements in the southern parts of Hokkaido [fig. 83], became known as *Wajinchi* (Wajin land) (Library of Congress 2025).

Early contact with the Japanese was shaped by trade. As Japanese merchants began to recognise the economic value of Hokkaido's natural resources, they established small coastal settlements to support commercial activity. Over time, these interests extended beyond trade and Japanese expansion into Ainu territory took the form of organised military campaigns (Siddle 1996). By 1514, the Matsumae family had established a fortified presence in southern Hokkaido to protect against Ainu attack. The Ainu of Honshu, once powerful in the ninth century, had been nearly eradicated and by the end of the eighteenth century were assimilated. Although Japanese presence in Hokkaido dates to the late eighth century, it was not until the sixteenth century that Japanese settlers began to arrive in significant numbers. Hokkaido then became a Japanese trading colony (Takakura 1960).

In 1599, the Matsumae clan⁴ based at the south-western tip of Hokkaido, submitted to Tokugawa Ieyasu⁵ as the authority over the region. Following the establishment of the Tokugawa shogunate in 1603, the clan was granted control of the domain known as Matsumae-chi and exclusive rights to trade with the Ainu in 1604. This event marked the recognition of Matsumae authority over the region. Ainu settlement in the area was restricted to communities already residing there, while Japanese civilians were not permitted to live beyond the designated Matsumae domain in Ainu territory. It also formed the northernmost administrative region under Tokugawa control and functioned as a frontier zone between Japanese and Ainu land. The clan held exclusive rights to trade with the Ainu and established coastal trading and fishing posts. Goods such as rice, sake, tobacco, salt, knives, lacquerware, cotton cloth, needles, thread and Manchurian trinkets were exchanged for salmon, furs and items from the mainland. Chiefs known as *Kotan Korkuru* governed villages, but some leaders controlled regions with hundreds of retainers. Japanese records from 1739 describe the Ainu of

⁴ The Matsumae clan were feudal lords of the Matsumae Domain in southern Hokkaido from the late sixteenth century until the Meiji Restoration. Granted control of the region by Toyotomi Hideyoshi in 1590, they were charged with administering and defending Japan's northern frontier, including protection against northern non-Yamato populations, while also managing relations and trade with the Ainu. In return, the clan was exempted from certain obligations to the Tokugawa shogunate, including rice tribute and the sankin-kōtai system that required most daimyō to maintain residence in Edo.

⁵ The Tokugawa shogunate (1603-1868), also known as the Edo shogunate, was the military government that ruled Japan during the Edo period. It organised society under a strict class hierarchy and governed through a feudal system in which regional lords (daimyō) administered domains under shogunal authority. The regime also implemented sakoku, a policy restricting foreign contact and overseas travel, while the period saw significant economic growth and urban development.

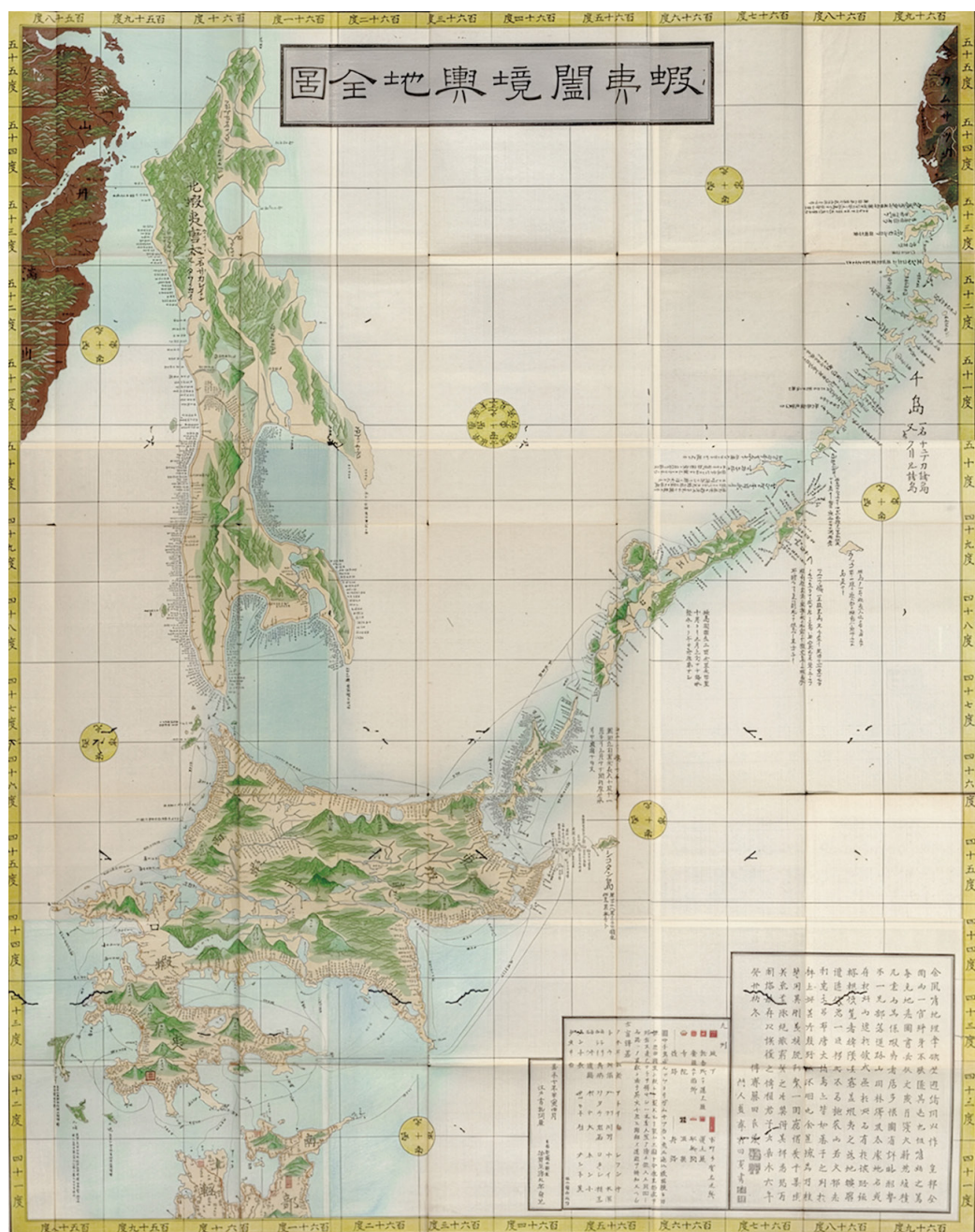


Figure 83 Ezo land-map. Japanese rare book collection, Asian Division, Library of Congress, Washington, D.C., USA

eastern Hokkaido as strong and unwilling to submit to Matsumae control (Watanabe 1979).

Tensions over trade and fisheries led to intermittent conflict. In 1669, a revolt broke out under the leadership of Shakushain.⁶ Though initially successful, the movement was undermined when Shakushain and allied leaders were murdered under the pretext of peace negotiations by Matsumae samurai. Sporadic resistance persisted until 1789, when the Ainu were defeated in what became their final military action (Dubreuil 2004).

Southern Hokkaido came under Tokugawa administration in 1799, primarily to counter growing Russian expansion. Foreign vessels, including Russian, Dutch, French and English ships, became common along the Hokkaido coast. Trading posts were fortified and staffed with Japanese officials, although internal Ainu affairs remained largely unaltered. From 1807 to 1821, northern Hokkaido, including southern Sakhalin, was also placed under direct Tokugawa control. The Matsumae regained their former domain in 1821, and Ainu continued to be employed in coastal outposts. Between 1854 and 1867, direct Tokugawa administration resumed in the southwestern region (Watanabe 1979).

The formal colonisation of Ainu lands began after 1868, following political upheaval in Japan that brought the Meiji Restoration government to power, one year after Russia had transferred Alaska to the United States. In the following year, Ezo-chi was incorporated into the Japanese Empire and renamed Hokkaido (Fitzhugh, Dubreuil 1999). Japanese settlers arrived in large numbers, forests were cleared, towns were constructed, and Ainu livelihoods were disrupted. Government policies were implemented to convert the Ainu into agricultural workers, arguing that hunting and fishing required too much land to support small populations. Although some isolated areas retained traditional practices longer, the Ainu experienced severe cultural and economic upheaval (Maraini 1974). As with other Indigenous groups around the world, the Ainu were dispossessed of their territory, resources and independence by a dominant state that incorporated them (Fitzhugh, Dubreuil 1999). Several cultural practices were prohibited, including female tattooing, the use of animal-skin clothing, men wearing earrings and the burning of homes after the death of the owner (Dubreuil 2004).

Processes that restricted Ainu access to salmon and altered traditional livelihoods had already begun in the late eighteenth century under Matsumae administration. Restrictions on salmon fishing were introduced during the early Meiji period. Ainu were prohibited from catching fish, their primary means of subsistence (Batchelor 1900) and those who did so were arrested. New licensing methods excluded Ainu fishers and traditional subsistence was replaced by forced agricultural labour. Without access to preserved salmon, many communities experienced winter food shortages. These policies undermined social structures and forced Ainu men to seek wage labour in Japanese-run fisheries (Iwasaki-Goodman, Nomoto 2001). Overfishing by Japanese authorities depleted salmon stocks and reduced Ainu access to this critical resource. Men were conscripted into fisheries under harsh conditions and the absence of husbands led to increased sexual violence against Ainu women (Dubreuil 2002). Nutritional changes and forced

⁶ Shakushain, an octogenarian Ainu chief, led some 30,000 tribesmen in a revolt against the Tokugawa regime, fighting with traditional weapons against a state of 25 million Japanese armed with firearms. After reaching a peace agreement, he was mercilessly assassinated.

labour led to population decline (Batchelor 1900). The shift from a diet based on salmon and deer to grains had measurable health consequences. Ainu leader Shigeru Kayano described his father's dependence on salmon fishing as essential for family survival (Kayano 1999). The imposed transition led to loss of dignity and independence (Kayano 1994; Iwasaki-Goodman, Nomoto 2001). During enforced labour at Japanese fisheries, Ainu were unable to store food for winter, resulting in starvation. Inland hunters were somewhat less affected, as they continued to supply hawks, feathers, skins and bear to Japanese traders. Farming initiatives did not compensate for the loss of hunting and fishing rights (Watanabe 1979).



Figure 84 Hata-no Awagimaru, Ainu fishing. Ezoshima Kikan. Japan. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

Following Japan's acquisition of the Kurile Islands from Russia in 1875 in exchange for Sakhalin Island, the Kurile Ainu were resettled in Shikotan (Landor 1893). Despite occupying a wide region, they had a dispersed population and moved seasonally between winter villages and summer fishing sites. Their trade with Sakhalin and Hokkaido was vital, particularly in sea-mammal products and feathers. Like the Unanga̓x of the Aleutian Islands in Alaska, who experienced severe population decline due to Russian exploitation of the sea otter trade, the Kurile Ainu also lost both territory and population as Russian and Japanese interests intensified. The Soviet Union's seizure of the Kuriles in 1945 marked the final expulsion of the remaining Kurile Ainu (Fitzhugh, Dubreuil 1999).

The Sakhalin Ainu had also previously occupied extensive territories in southern Sakhalin. Their location, near the Russian, Manchurian and Japanese borders, enabled sustained trade with Ulita and Nivkh communities. Their material culture, shaped by boreal forest conditions and Siberian influence differed from that of Hokkaido Ainu and they had

greater access to manufactured goods. After 1945, the remaining Sakhalin Ainu were also forcibly relocated to Hokkaido by the Russians (Fitzhugh, Dubreuil 1999).

Within a few generations, the Ainu were transformed from hunter-fishers [fig. 84], into marginalised wage labourers and subsistence farmers. The process was marked by displacement, social collapse and widespread poverty. After the Meiji Restoration, Japanese authorities viewed Hokkaido as a colonisable frontier. The 1899 Law for the Protection of the Aborigines of Hokkaidō was a source of new discrimination enforcing policies that required the Ainu to adopt Japanese language, names and customs, including intermarriage with settlers (Maraini 1996).

Today, Hokkaido remains the only officially recognised homeland of the Ainu. Some Ainu continue to conceal their identity to avoid discrimination. Although the 1997 Ainu Shinpō introduced legislation supporting Ainu culture and language, social exclusion persists and ethnic identity remains a source of stigma, even within families (Fitzhugh, Dubreuil 1999). As a result of long-standing discrimination, many Ainu concealed their ancestry for generations. Only in 2008 did the Japanese government formally recognise the Ainu as “Indigenous Peoples with a unique language, religion and culture” (Godefroy 2011). Introduced amid growing international scrutiny ahead of the Tokyo Olympic Games in 2021, the law allocated funds for the promotion of Ainu culture and eased restrictions on certain traditional practices, including salmon fishing in rivers and the harvesting of elm bark fibre from state forests for weaving textiles used in Ainu robes (Denyer 2019). However, salmon fishing in rivers remains restricted under fisheries protection laws and Hokkaido regulations governing inland fishing. Ainu communities may fish salmon only for traditional purposes and must obtain permission from the prefectural governor (Japan Times 2020). More than a century after the prohibition of traditional salmon fishing, several Ainu communities in Hokkaido have revitalised salmon rituals as part of a broader cultural revival movement (Iwasaki-Goodman, Nomoto 2001).

3.2 Ethnographic Records

The ethnographic study of the Ainu has developed over centuries, shaped by changing ideologies, political imperatives and methodological approaches. This chapter traces that trajectory, beginning with early missionary accounts, followed by Japanese geographic and ethnographic surveys, foreign travellers and anthropologists, subsequent Japanese scholarship and culminating in Ainu-led research.

The earliest references to the Ainu appear in Chinese dynastic chronicles. The Han dynasty referred to them as *Mao min*, *Mo jin* and *Je-dso*, distinguished by their appearance and location east of the East China Sea. In 659 CE, a Japanese delegation presented an Ainu couple at the Tang court. Contemporary Japanese sources also refer to Hokkaido as *Watari sima Yesso*, ‘Crossing Island’, acknowledging the strait separating Yezo from the rest of Japan (Siebold 1881). European awareness of Karafuto began with Jesuit maps of Tartary, compiled in Peking (1710) and published in 1721 by order of Emperor Chingtsu Khanghj. A copy sent to France reached who

issued a reduced version of Father Du Halde's⁷ *Nouvel Atlas de la Chine, de la Tartarie chinoise et du Thibet* (1735). The island was labelled *Saghalien anga hada*, the Isle of the black-mouthed rock, later shortened to *Saghalien* (Siebold 1881).

Christian missionaries and explorers seeking northern routes began documenting Ainu territories in the mid-sixteenth century (Abe 2005). Nicolao Lancillotto, rector of St Paul's College in Goa, noted in 1548, based on accounts from Anjirō,⁸ that *Ezo* was home to bold and warlike people with long beards and shaved heads, unafraid of death (Abad de los Santos 2022). In 1565, Jesuit Luís Fróis wrote of a densely haired people in northern Japan, possibly referring to the Ainu (Siebold 1881). His 1585 treatise provided the earliest European descriptions of Japan. According to Russian anthropologist Nikolaievitch Anoutchine in *Materials for the Anthropology of Eastern Asia* (1876), Portuguese Jesuit missionary Luís Fróis,⁹ in his *First European Description of Japan* (1585), referred to a northern people with body hair, though he did not identify them by name (Siebold 1881; Chamberlain, Batchelor 1887). Jesuits Jerónimo de Angelis and Diogo Carvalho visited Hokkaidō in 1618 and 1621. His *Relazione del Regno di Iezo* (1624) offered the first in situ ethnographic description of the Ainu, covering their economic life, natural resources,¹⁰ and prospects for conversion.¹¹ In 1622, he reported that Ainu traders journeyed to nearby islands to purchase fish skins from groups who spoke a different language. These were likely Gilyak people along the lower Amur, known for their fish skin clothing (De Angelis 1624; Bickmore 1868). Other reports include Nicholas Downtown's 1614-15 mention of the Ainu as a wild people (Siebold 1881; Foster 1939). In 1643, Captain Vries of the *Castricum* described Ainu communities in the southern region of Sakhalin. He noted Ainu tattooing and clothing fashioned from fish skin, wood fibre and animal skins, assembled from varied materials (Howard 1893; Bickmore 1868).

Ainu studies developed in three general phases. The earliest, spanning the Edo through early Meiji periods, was politically motivated by expeditions producing early geographic and ethnographic records by government officials and explorers (Yamada 2003). By the eighteenth and nineteenth centuries, *Wajin* expeditions to *Ezo* intensified for strategic and economic purposes (Library of Congress 2025). Among the Japanese explorers that recorded their travels through *Ezochi*, noting Ainu customs and social life are Mogami, Mamiya and Matsuura (Chamberlain, Batchelor

⁷ Jean Baptiste du Halde, a French Jesuit scholar who never visited China, compiled detailed accounts from missionaries into a comprehensive volume published in Paris in 1735 and later translated into several languages.

⁸ Anjirō, later baptised as Paulo de Santa Fé, was the first recorded Japanese Christian. After fleeing Japan following a homicide, he encountered Francis Xavier in Portuguese Malacca and returned to Japan in 1549 as his interpreter, assisting in the establishment of the first Jesuit mission in the country.

⁹ Europeans received reports in 1565 from the Portuguese Jesuit missionary Luís Fróis about the inhabitants of a land north of Japan "an extensive forested region of wild people, lying three hundred leagues north of the city of Meaco".

¹⁰ Jerónimo de Angelis's *Relazione del Regno di Iezo* sent to the Society of Jesus in Rome, emphasised the region's resources and trade potential, to persuade superiors in Europe of the material as well as spiritual value of founding a mission there.

¹¹ De Angelis 1624; Siebold 1881; Yamada 2003; Abe 2005; Abad de los Santos 2022; González-Bolado 2023.

Figure 85 Mamiya Rinzō, Nivkh man of Sakhalin wearing a fish skin robe and holding a pair of salmon. *Kita Ezo Zusetsu* 1855. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA



1887; Yamada 2003). Matsuura Takeshirō (1818-1888), later known as the ‘Godfather of Hokkaido’ conducted several journeys into *Ezochi*. His detailed travelogues recorded Ainu difficult life conditions under Matsumae rule and his work as a government surveyor contributed to geographical knowledge of the region (Loar 2025). Japanese cartographer Mamiya Rinzō, under Bakufu directive, explored Karafuto in 1808-09. His *Kita Ezo Zusetsu* includes sketches and descriptions of Sakhalin material life, fish skin garments [fig. 85], housing, tools and subsistence practices (Mamiya 1855). These materials are early modern examples of cartography and ethnography, shaped by Japanese understandings of the Ainu rather than Indigenous voices.

In the absence of Ainu-authored records and despite the distortions shaped by prejudice, limited information and lack of language proficiency, much of what is known about traditional Ainu life was recorded by Japanese artists in the genre of ethnographic painting known as *Ainu-e*,¹² painted ethnographic scenes of Ainu life (Otsuka 1991; Tsuda 2014a). These works offer visual records of clothing, tools, ceremonies and fishing practices, preserving details otherwise lost (Dubreuil 2004).

Following the early interest of Japanese travellers, the ‘opening’ of Japan in 1854 and the settler colonial expansion into Hokkaido after the Meiji Restoration, western attention to the Ainu intensified in the late nineteenth and early twentieth centuries. This second wave of Ainu ethnography reflected the growing presence of foreign travellers and anthropologists in Hokkaido and surrounding regions and followed two key academic trends: cultural studies and theories of ethnic origin, which placed the Ainu as an ethnic group separate from the Japanese (Yamada 2003). Many outside writers promoted the assumption that Ainu people would vanish, a belief that encouraged travellers and museum expeditions to amass large collections of Ainu material culture (Fitzhugh 1999).

Heinrich von Siebold [fig. 86], son of Philipp Franz von Siebold, travelled in Hokkaido and observed Ainu life firsthand during his journeys along the Pacific coast and in Nibutani. His writings portrayed the Ainu as a vanishing people, subject to state prohibitions against tattooing and adornment, whose traditions were fading under the pressure of modernisation. He claimed that their fate would be similar to that of Native Americans (Siebold 1881). Although Philipp Franz von Siebold assembled important Ainu collections during his visits to Japan, he did not travel to Ezo-chi (Hokkaido) himself.

American curator Albert Bickmore, principal founder of the American Museum of Natural History travelled between 1864 and 1867, visiting the Ainu and Nivkh and writing about food, kinship and religion (Bickmore 1868; 1869). Basil Hall Chamberlain, British academic and Japanologist at Tokyo Imperial University, argued that the Ainu were the true predecessors of the Japanese and compared their linguistic and mythological heritage (Chamberlain 1887).

12 *Ainu-e* is a genre of paintings created by Japanese artists depicting Ainu life. Produced over 150 years, they provide visual documentation of Ainu material culture, daily activities and maritime practices, documenting social life and cultural change shaped by regional trade and contact with neighbouring societies. See Dubreuil 2004.



Figure 86 Philipp Franz Balthasar von Siebold, Ainu settlement or kotan. Nippon. 1838.
Leiden University Libraries Special Collections, Leiden, Netherlands

John Batchelor, whose primary purpose was to convert the Ainu to Christianity, lived in Biratori, in the Saru Valley, for over half a century assembled a significant corpus on Ainu culture and language, including a trilingual dictionary (Batchelor 1938). However, his theological interpretations of Ainu religion faced harsh criticism for Christian bias.

Several Victorian travel writers, including Henry Savage Lander, Benjamin Douglas Howard and Isabella Bird, published accounts of the Ainu through leading London presses. Unmarried and itinerant, each claimed direct experience through time spent among Ainu communities. Despite differing careers and political views, all expressed openly racist and gendered attitudes toward Ainu individuals of the opposite sex. Henry Savage Lander, raised in Florence in a bourgeois British family and trained in portraiture in Paris, left for Asia in 1888, using his painting skills to record people and places when photography remained limited. In *Alone with the Hairy Ainu* (Lander 1893), he portrayed the Ainu as among the lowest of ‘primitive’ races and attributed their supposed decline to inbreeding, denying them any claim to civilisation. He also claimed sexual encounters (Hennessey 2022; 2023). His descriptions of the Kuril Islands Ainu included details of fish skin clothing, such as boots that were soaked before wearing and fastened with cord (Lander 1893). Benjamin Douglas Howard, a British medical doctor, travelled through Siberia and Sakhalin in the early 1890s to examine conditions within the penal system and documented his encounters with the Ainu. In *Life with Trans-Siberian Savages* (Howard 1893) he described Ainu women as ‘repulsive’ and overburdened with labour, simultaneously emphasised their utility and referred to a sexual encounter. He recorded the use of ceremonial fish skin garments and described salmon trout fishing, in which hundreds were hauled ashore in birch canoes. Isabella Bird’s *Unbeaten Tracks in Japan* (Bird 1880) similarly reinforced racialised and gendered bias. Her descriptions of Ainu men carried eroticised overtones, while she dismissed the possibility of Ainu resurgence as ‘hopeless’. She

characterised the Ainu as “savages in everything but their disposition”, reinforcing colonial fantasies of primitivism.

Bronisław Pilsudski, exiled to Sakhalin between 1887 and 1896, conducted fieldwork among the Ainu, Nivkh and Ulita. He produced lexicons and ethnographies, made recordings and advocated for Ainu rights. His work remains foundational in the documentation of Sakhalin’s Indigenous communities (Pilsudski 1910; Yamada 2003; Bejrowski 2019). Neil Gordon Munro, a Scottish physician, settled in Nibutani in 1930, where he conducted long-term fieldwork until his death in 1942. He operated a clinic with his Japanese wife, a trained nurse, to provide free treatment and gathered oral histories through close relationships with Elders. His book *Ainu: Creed and Cult* (Munro 1979) highlights the value of Ainu religion and challenges dominant primitivist narratives.

Italian writer, anthropologist and photographer, Fosco Maraini, supported by Batchelor lived in Shiraoi and Nibutani from 1938, collecting oral histories and artefacts. During World War II, Maraini, his Japanese wife and three daughters were interned in a concentration camp at Nagoya. His Ainu materials were safeguarded and later donated to the Museum of Ethnology and Anthropology in Florence (MacKenzie, Lowman 2023). Maraini noted that the Ainu were beginning to voice their own histories, similar to Indigenous communities in North America and Siberia (Maraini 1996). Swiss anthropologist Georges Montandon, whose legacy is now overshadowed by his collaboration with the Nazi regime (Maraini 1996), travelled to Hokkaido during the interwar period, to conduct research on the Ainu. His work *La civilisation Aïnou et les cultures arctiques* examined the Ainu connecting them with northern Indigenous groups such as the Nivkh in Siberia and the Inuit in Alaska (Montandon 1937). On his return, he deposited his ethnographic collection at the Musée de l’Homme in Paris. His more controversial study, *Au pays des Aïnou: exploration anthropologique* (Montandon 1927) focused on skull measurements and the theory of hogenesis.¹³

The third phase of Ainu studies began in the post-war period. By the late 1950s, following the death of elder tradition bearers, a generational shift led many younger Ainu to prioritise economic opportunity over cultural preservation (Maraini 1996). Responding to these changes, the Japanese Association of Ethnology initiated Japan’s first ethnological fieldwork of its kind that reframed the Ainu as a northern hunter-gatherer society. The research on the Saru River Ainu conducted by the association in 1951, revealed relationships between group structures and subsistence patterns (Yamada 2003). Hitoshi Watanabe participated in this research team, focusing on the subsistence system and ecological cycle of the Ainu in the Saru River basin. His monograph, *The Ainu Ecosystem* (1972), drew on this research to reconstruct traditional cultural practices and contributed substantially to ecological anthropology (Watanabe 1979; 1999).

Earlier in the twentieth century, Japanese scholars had already begun recording the last remnants of oral tradition. Linguist Kyosuke Kindaichi, a professor at the University of Tokyo, proposed a new academic framework,

13 Daniele Rosa’s early twentieth century theory of hogenesis, overlooked due to the absence of an English translation, has recently been reassessed for its historical relevance and connections to current evolutionary thinking, including vicariance biogeography, species individuality and branching phylogenetics.

'Ainuology', intended to formalise the study of Ainu life and language (Yamada 2003). He documented thousands of *yukar*¹⁴ epics as told by Elders (Kayano 1994). His student, Mashiho Chiri (1909-1961), an Ainu scholar, continued this work, before dying prematurely, while Itsuhiko Kubodera collected testimony on oral traditions and ceremonial life (Maraini 1996).

Sapporo became a hub for northern studies with the Review of Studies on Northern Cultures (1939-1965), published by the Research Institute for Northern and Arctic Culture at Hokkaidō Imperial University. Sakuzaemon Kodama, a Swiss-trained anthropologist at Hokkaidō Imperial University, began systematically collecting Ainu artefacts, especially garments, as they vanished from daily life. His collection remains fundamental to Ainu research (Maraini 1996; Kendall 1999). Osamu Baba focused on Sakhalin, the Kurils and Hokkaido, assembling the Baba Collection from 1930. It was designated in 1959 as an Important Tangible Folk Cultural Property of Japan (Kendall 1999).

A generational shift emerged in the late 1960s and early 1970s as young Ainu activists began openly confronting established scholarship. In 1972, at a joint symposium of the Anthropological Society of Nippon and the Japanese Society of Ethnology in Sapporo, they presented a letter condemning scholars such as Kindaichi Kyosuke, whose research was accused of serving his academic prestige rather than the Ainu themselves. He had not lived in Hokkaidō (Yamada 2003), but he maintained close ties with Ainu individuals such as Shigeru Kayano (Kayano 1994). A cultural revival followed. Young people started to appreciate ancestral traditions and began to view their ethnic identity as a source of pride rather than something to conceal. New Ainu associations formed and resumed the performance of traditional ceremonies, which gave rise to spectacular celebrations (Maraini 1996).

Since the late 1980s, Ainu studies have incorporated cultural, cognitive and ethno-scientific anthropology. Scholars such as Yamada Takako, after studying ethno-botany applied these methods to Ainu knowledge of plants, animals, cosmology, gender and spirits (Yamada 1987; 2001; 2003). A key turning point in Ainu studies was the emergence of Indigenous scholars such as Mashio Chiri. A linguist and anthropologist, Chiri documented Ainu life from within and sharply criticised non-Ainu interpretations. He was a fierce critic of John Batchelor's work, condemning his portrayal of the Ainu as 'primitive', his Christian framing of Ainu practices and his search for monotheism. Chiri found intolerable that Batchelor's English-language works were accepted globally as authoritative, including a dictionary that misrepresented the Ainu language. Chiri's pursuit of accuracy, as a minority scholar in Japan, required confronting both discrimination and academic authority, including his former teacher Professor Kindaichi (Fujimoto, Ohnuki-Tierney 1973).

From the 1980s, Indigenous leadership in Ainu cultural work grew through figures such as Kayano Shigeru, born in Nibutani in 1926. He published widely on Ainu language, oral traditions and material culture (Kayano 1978, 1994, 1999) and spent decades collecting Ainu belongings across Hokkaido. Together with his wife, Reiko Kayano, he was commissioned to produce Ainu objects for the National Museum of Ethnology in Osaka when it was

¹⁴ *Yukar* are traditional Ainu narrative chants performed in a recitative style without musical accompaniment. They include epics about human heroes and *kamuy yukar*, which recount the actions of gods and spirits.

established in 1974. His efforts helped establish Nibutani as a major cultural centre, now home to three Ainu research institutions: the Shiryōkan, his private museum; the Nibutani Ainu Bunka Hakubutsukan, supported by the city of Biratori; and the former home of Dr Munro, later developed into a research centre affiliated with the University of Hokkaidō (Maraini 1996).

Tsuda Nobuko, the first Ainu woman to receive a PhD, began studying Ainu textile traditions in her forties. Museums and elders taught her the spiritual logic encoded in Ainu craft. Her dissertation (Tsuda 2014a) and further publications (Tsuda 2018) challenged earlier male-authored studies, offering a methodology grounded in both weaving practice and museum research. Her work reframes Ainu material heritage through gendered and Indigenous lenses (Lewallen 2014; 2016). Chisato Dubreuil, an Ainu-Japanese scholar of art history and curation, reshaped museum representations of Ainu culture. The 1999 Smithsonian publication and exhibition *Ainu: Spirit of a Northern People* co-curated with William Fitzhugh, Director of the Smithsonian Arctic Studies Center (Fitzhugh, Dubreuil 1999) brought together ethnography, art history and Indigenous scholarship. It offered the most in-depth treatise available on Ainu prehistory, material culture and ethnohistory. Dubreuil advocated for the inclusion of contemporary Ainu artists alongside historical artefacts, challenging the persistent narrative of the Ainu as a ‘vanishing people’. As she stated, “We are still here and our culture is still vibrant” (Dubreuil 1999; 2007).

Methodologically, the study of Ainu clothing shifted from description to analysis. Early Japanese accounts of Ainu material culture, such as those by Murakami Shimanonjo and Kondo Jūzō during the late Edo period, combined ethnographic detail with exploration. Earlier symbolic readings gave attention to social and technical uses. Kindaichi Kyosuke, though trained as a linguist, broadened his focus to folklore and clothing terminology. Sugiyama Toshio provided comparative studies of regional garment types, distinguishing bark fibre, animal skin and imported fabrics. Takabe Fukuhira interpreted decorative motifs symbolically, drawing from Japanese folklore. Otsuka Kazuyoshi created motif taxonomies highlighting regional diversity and Sasaki Toshikazu connected motifs to oral narratives. Shigeru and Reiko Kayano documented pattern names and techniques from within the community, preserving their use into the late twentieth century (Tsuda 2014a).

Although Ainu culture, language and subsistence practices have been documented, fish skin art remains largely underexplored. While mentioned in broader ethnographies, detailed studies of technique, transmission and revitalisation are rare. The literature is dominated by male and non-Ainu perspectives, with limited focus on the roles of Ainu women in craft, storytelling and ecological knowledge. Few works consider the connections between fish skin technologies and Ainu understandings of water, animals and seasonal cycles. The research in this book has prioritised collaboration with Ainu scholars and practitioners, particularly in areas of fish skin processing, seasonal knowledge and intergenerational transmission (Palomino 2022).

3.3 Regional Ecology

Shigeru Kayano described ecological knowledge transmitted through domestic routines. As his grandmother spun bark fibre with her fingertips, she told her grandchildren stories in Ainu, interwoven with practical wisdom



Figure 87 Mamiya Rinzō, Ainu hunter wearing a fish skin robe depicted in *Kita Ezo zusetsu* (Illustrated Explanation of Northern Ezo) 1855. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

on how to live responsibly within their environment, not to cut trees without reason, not to pollute running water and to remember that even animals repay kindness (Kayano 1994). These teachings emerged from the ecology of the Saru River basin, where salmon were abundant and where Kayano recalled growing up in material poverty, but with what he later described as ‘spiritual wealth’. They provide an understanding of the regional ecology of Ainu communities.

The original Ainu territory, across southern Sakhalin [fig. 87], the Kuril islands, Hokkaido and parts of northern Honshu encompass varied ecological and climatic conditions which shaped subsistence strategies (Williams 2017). Settlements (*kotan*) remained fixed during winter with seasonal movement during the fishing season or when local game became scarce (Takakura 1960). In Hokkaido, villages were established near salmon spawning grounds (Watanabe 1972) and subsistence relied on migratory fish and deer. On the southern coast of Sakhalin, communities alternated between semi-subterranean winter dwellings near hunting areas and summer huts near the coast where herring were a key food source due to short rivers and limited salmon runs. In the Kurils, permanent settlements were located at river mouths with summer camps located inland for gathering. Subsistence relied on ocean fish, seals, sea otters and bird eggs to supplement limited salmon catches (Williams 2017).

While Ainu groups shared common cultural foundations, long periods of geographic separation produced unique regional developments. Ainu social organisation revolved around the family and settlements, usually fewer than ten households, functioning as autonomous units. Communities shared ownership of these sites and conducted fishing rituals (Watanabe 1979). Fishing and hunting territories were communally held and closed to outsiders. Access required formal membership in the *kotan*, obtained through unanimous approval and patrilineal kinship and hunting or fishing within another group’s territory required compensation (Ölschleger 1999). Violations of territorial boundaries could result in punishment and disputes between Ainu groups often concerned these rights. Kinship networks shaped territorial organisation. In southern Sakhalin, neighbouring communities maintained limited contact beyond familial ties (Ölschleger 1999). In many regions, kin-based claims to fishing and hunting grounds included entire river networks surrounding salmon runs, with community rights closely guarded (Watanabe 1972). Territorial arrangements varied regionally, on Sakhalin’s east coast, families held exclusive rights to particular fishing sites, including locations for fish weirs, fishing huts and surrounding watersheds (Ölschleger 1999), while on the northwest coast looser kin networks allowed broader access (Ohnuki-Tierney 1974). Similar practises governed coastal and inland sites in the Kuril Islands, including areas used for fish skin processing (Ölschleger 1999). Fishing was organised cooperatively. During salmon season, villagers fished together and divided the catch, with priority given to the elderly, the feeble and children (Takakura 1960).

3.4 The Fish

Spring fishing began with dace, bullhead and Sakhalin taimen. In some rivers, dace and carp marked the first catch of the year (Watanabe 1972). These early fishing activities supplied the tough skins of taimen, valued for size and abundance and suited to specific parts of garments such as boot soles.

Among the Ainu, salmon is referred to as *cep* (fish) or *kamuy-cep* (deity-fish) and was regarded as a divine gift sent each year by the deities. It nourished both humans and the gods before returning to *kamuy-mosir*, the gods realm. The Ainu describe *kamuy* as gods inhabiting a parallel realm to the human one. All natural phenomena, animals, plants, wind, rain, snow, are gods, not spirits. These gods appear in disguise as bears, salmon, or elm trees, are used to make garments and were sent to earth as gifts only if treated with care (Dubreuil 2002). The term *kamuy-cep* applies specifically to the first salmon caught at the start of the migration season (Yamada 1987). Ritual governed salmon fishing led by Elders to ensure the salmon run and return the fish spirit to the land of the *kamuy*. Chiri (1959) described the ritual held before fishing, in which household headmen offered *inaw* and sake (*tonoto*) to the river and the Fox God, patron of fishing and hunting. The headman would strike the head of a salmon with an *isapakikni*, a kind of sacred stick or *inaw*¹⁵ to return its spirit to the land of gods (Iwasaki-Goodman, Nomoto 2001). Similar rituals were performed following poor catches (Chiri 1959). Menstruating women and children were kept away from the rivers. The First Salmon Ceremony followed three stages: prayer during the wait, a welcome as the salmon entered the river and the return of the jawbone of the first catch to the water at the season's close, fulfilling obligations to the gods and ensuring a plentiful run the following year [fig. 88] (Watanabe 1972).

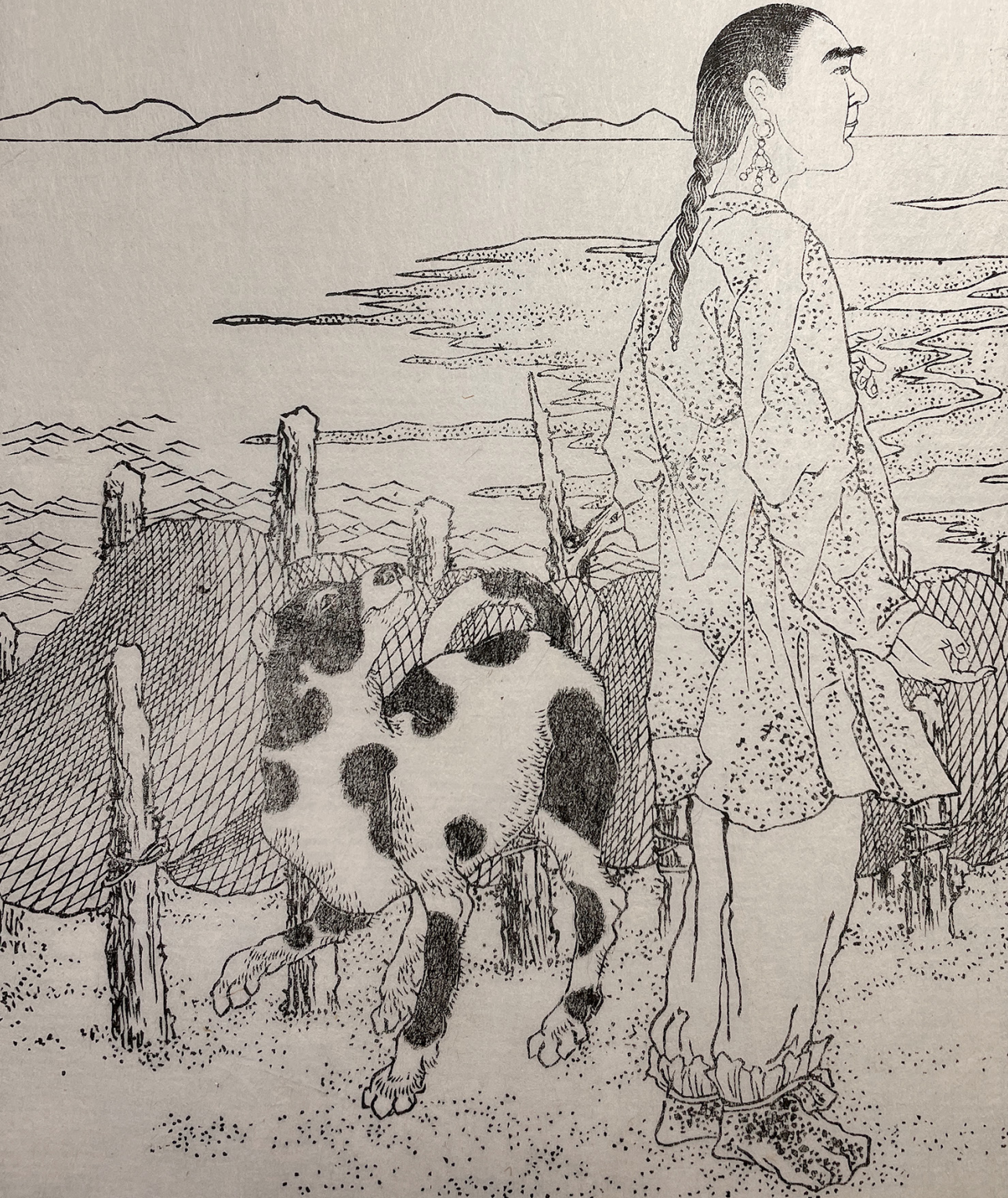
Salmon provided the principal source of protein and Ainu knowledge of their cycle was detailed. This understanding included over forty names for chum salmon [fig. 89], distinguishing sex, size, coloration and spawning stage. Autumn and winter runs were differentiated, with fishing concentrated upstream, near spawning grounds (Yamada 1987). The three salmon species in Hokkaido are anadromous, returning to freshwater on two- or four-year cycles. Migration patterns varied; in rivers with lakes, some paused for weeks before spawning. Chum salmon returned reliably to natal rivers while pink salmon showed less consistency. Cherry salmon, known to the Ainu as trout, migrated from May to September, with peak catches in August (Williams 2017). Cherry, pink and chum salmon were caught using spears, nets and weirs, from canoes or with torches at night. Most salmon was dried or smoked for storage and trade with Japanese merchants (Watanabe and Saito 1998). Salmon was indispensable in maintaining the spiritual and physical health of the Ainu (Iwasaki-Goodman, Nomoto 2001).

Life-stage terms reflect ecological change and the moments relevant to subsistence. A salmon that has just hatched and has yolk sacs are *cipor-se-ceppo* (egg-carrying small fish) or *pakkay-ceppo* (carrying child- small fish). Salmon travelling toward the sea have no specific designation but returning fish appearing offshore are *atuy-or-un-cep* (fish in the sea) or *heruran* (shining scale). Once inside freshwater, the name shifts to *pet-or-un-cep*

15 Ceremonial *inaw* is crafted from a willow branch, shaved into thin curled slinters at the top, used in Ainu prayers to the spiritual world.

Figure 88

Mamiya Rinzō, A Nivkh fisherman
of Sakhalin wearing a fish skin robe and fish skin boots.
Kita Ezo zusetsu. 1855. Japanese Rare Book Collection,
Library of Congress, Washington, D.C., USA



(fish in the river). With nuptial red spots on the sides, they become *peteci-cep* (fish at the river boiling fish). At spawning sites, names separate male and female behaviour. Males are *ikuspe-tuye-p* (pillar-cutting one) and females *mose-kar-pe* (grass-mowing one). After reproduction, salmon of either sex are *oysiru-cep* (fish with rubbed buttocks), describing their worn condition. Further classifications identify sex and size. Males are *ca*, females *os*. Female size is marked by *poro* (large) and *pon* (small), while males use *si* (parent) for large fish and *mo* (child) for small fish. Seasonal timing also produces different terms. Autumn salmon are *cukcep* (autumn salmon) or *cukipe* (autumn food) in the Saru dialect. Winter salmon with bright scales and limited roe, which remain in the lower river, are *mata-cep* (winter fish). Naming concentrates on salmon returning from the sea, whose capture at spawning grounds sustained Ainu fishing and clothing. Fry heading seaward lack specific terms, while returning adults receive detailed categorisation grounded in observable behaviour and availability to harvest (Yamada 1987).

This naming system expressed detailed ecological knowledge and was closely connected to subsistence practices. Returning salmon were prioritised for fishing and differences in terminology corresponded to their usefulness. After the catch, women prepared the skins using techniques shaped by preservation requirements and seasonal cycles. Although early ethnographic sources seldom documented these processes, they formed an important part of the salmon-based economy. These classifications also guided fishing practices and the selection of skins for specific uses. Skins from spawning fish were larger but generally in poorer condition. Fish altered by the spawning process appeared darker, misshapen and developed tougher skins. Selection therefore depended on material qualities such as toughness, thickness and flexibility. Stronger male skins were preferred for durable items because of their resistance to abrasion and environmental wear and were commonly used for winter footwear. Softer female skins were used for lighter garments such as summer robes. Male salmon skins were especially valued for their durability, as the physical stress of spawning migrations and competition with other males produced thicker and tougher skin. The mottled skins of certain salmon species were also selected for their decorative qualities in outer garments (Palomino 2022).

3.5 Gender and Making

Gender roles shaped seasonal work and artistic production in Ainu communities. These roles, maintained throughout centuries and shared by many ancient cultures, were linked to ecological rhythms and ceremonial rites. Throughout the traditional period, beginning, based on the earliest surviving artistic evidence, around the thirteenth century and continuing through the Meiji Restoration of the 1860s into the early twentieth century, the Ainu creative process was shaped by cultural rules. Artistic expression followed roles that defined gender and subject matter, materials and purpose. Men were responsible for woodworking, constructing dwellings, carving ceremonial objects including *ikupasuy* (prayer sticks), *inaw* (sacred shaved sticks) and utilitarian tools such as bowls, plates and spoons. Women were responsible for garment construction, animal skin processing, weaving textiles and their embellishment, the most visible form of Ainu artistic expression (Dubreuil 1999).

Beyond artistic labour, the gender division of work structured all subsistence. Men hunted, fished and oversaw ceremonial activity. Women gathered plants for food, medicine, thread, rope and clothing, collected bark for weaving, processed fish and helped with winter salmon fishing. Grandparents and older siblings remained in the settlement [fig. 90], looked after the children and contributed by gathering firewood, berries and smoking fish. These duties were linked to broader ecological responsibilities (Yamada 1987; Watanabe 1999; Williams 2017).

Skill instruction began around the age of seven or eight. Fathers trained boys in hunting and fishing, while mothers taught girls to sew, weave, gather and process food. Instruction was individual, adapted to each child's ability. Oral stories accompanied this training, offering examples from human relations, animal behaviour and divine figures. Stories taught children how to recognise danger and adapt their responses, reinforcing the practical skills learned through daily participation in household and subsistence tasks. Though there was no formal schooling, instruction was constant and hands-on. Once they had mastered these life skills and have demonstrated competence in essential tasks, young men and women were recognised as self-sufficient and treated as autonomous adults (Fujimura 1999).

Young girls learned domestic work through play, using miniature mortar and pestles and helping with food preparation. Girls also accompanied older women on plant-gathering trips. Still, it was mastery in garment construction, particularly in embroidery design, that defined a woman's social reputation. Each woman was expected to develop her own visual repertoire without repeating a design twice (Dubreuil 2004). Daughters learned embroidery working alongside elder women, beginning with rough samples and gradually advancing to more complex designs. Garments served as visual records of lineage and skill. Tools, techniques and clothing were passed from mother to daughter, ensuring continuity through the female line. Sewing held practical and social value. It was crucial to women's status as wife and mother and as a recognised fabric creator. Epic narratives, including *Yaoskep kamuy*¹⁶ (Song of the Spider Goddess), praised the persistence and creativity of women's needlework (Dubreuil 1999).

The *kotan*, situated along salmon runs, served as domestic and ritual centre. Its location enabled seasonal access to salmon, deer and bear. Men remained at hunting and fishing camps, while women and children stayed in the village, drying meat and storing food. Women and children might assist in salmon and deer harvesting, but bear hunting was ritualised and restricted to men (Watanabe 1999).

¹⁶ *Yoshosh-kamuy* (Song of the Spider Goddess) one of the epic narratives or *yukar*, describes the long hours Ainu women devoted to sewing and embroidery: "Doing nothing but needlework, I remained with my eyes focused on a single spot and this is the way I continued to live on and on".

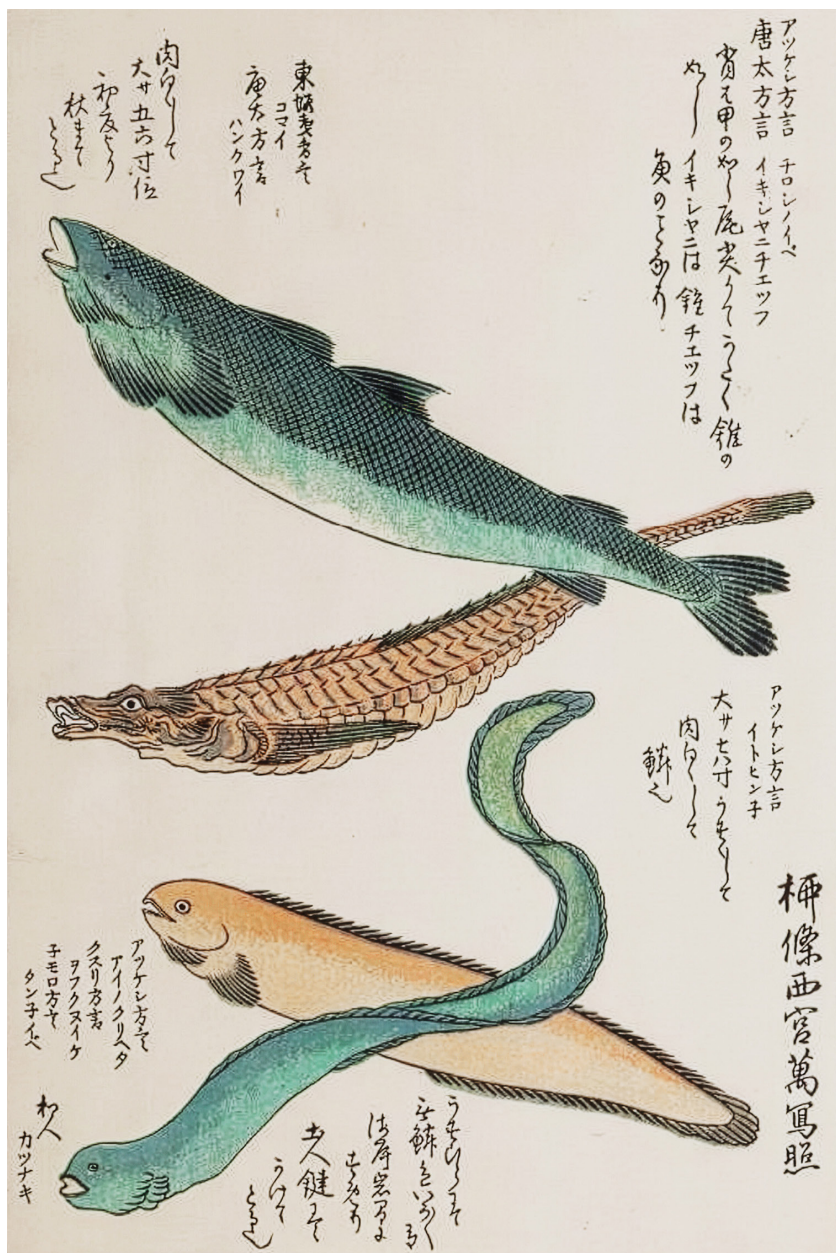


Figure 89 Matsuura, Takeshirō and Shōgo Kitano. Sakhalin fish types. Salmon and eel. Nishi Ezo nishshi 1863. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

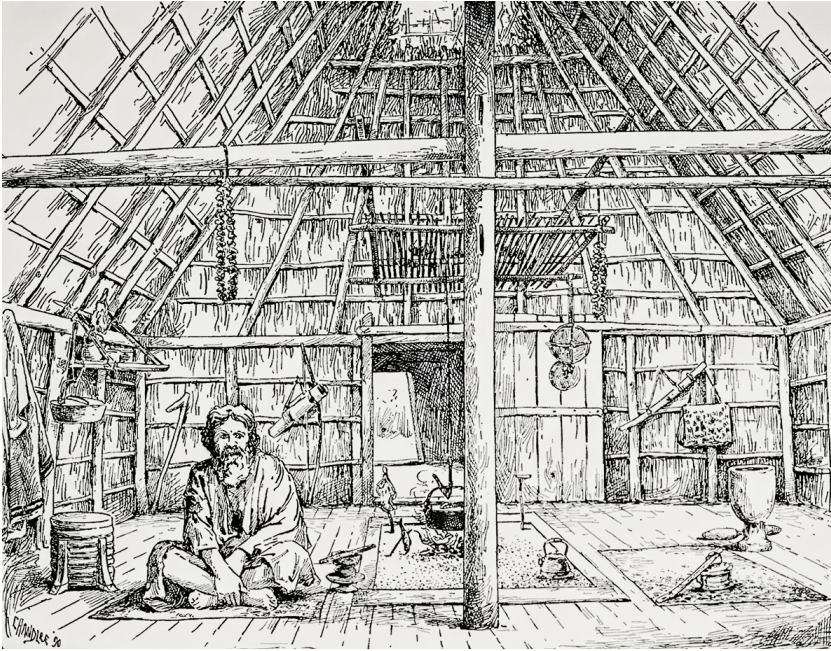


Figure 90 Romyn Hitchcock. Inside an Ainu *cise* or home, where life revolves around the central hearth. 1890. *The Ainos of Yezo Japan*. Leiden University Libraries Special Collections, Leiden, Netherlands

Seasonality structured work. Winter was men's season and summer was women's. Winter fishing intensified from late November to early December. Men caught salmon with spears or nets, after which women cleaned, smoked and dried the catch. Winter wood was cut, split and hauled. Domestic demands remained constant: tending fires, fetching water, mending garments and caring for children (Batchelor 1900). During summer women harvested nettles and silver grass used for weaving, thread-making and embroidery. By late autumn, women concluded gathering work and joined men in salmon processing. Fish skin was among the materials prepared and stitched by women during this period. The practice demanded specialised knowledge of tanning, softening and sewing techniques. Girls contributed to fish processing and gathering raw materials, nettle, bark and vine, needed for fibre and fish skin clothing. These materials, processed in summer, became the basis for garments worn through winter (Keira 1999). The organisation of work, structured around the exchange of essential goods, expressed reciprocal responsibilities shaped by gendered knowledge and environmental experience and affirmed the interdependence of men's and women's roles, grounded in kinship, seasonal tasks and shared duties to sustain life.

Just as gender shaped daily labour and artistic roles, it also structured how the Ainu described relationships between the human, natural and spiritual worlds. Deities (*kamuy*) were assigned gendered attributes drawn from everyday life. Male *kamuy*, linked to animals, represented strength and hunting; female *kamuy*, linked to plants, represented sustenance and gathering. This dual nature of deities highlighted the division of human labour. In ritual, male deities took on external and priestly roles, while

female deities were connected to domestic and mediating functions. Key rituals depended on goddesses such as the Fire Deity and the Goddess of Hunting and Fishing (Yamada 1987). These roles affirmed gendered reciprocity, not inequality, reinforcing cooperation between genders.

3.6 Tanning

The preparation of fish skin for clothing emerged from subsistence routines, shaped by the need for durable materials. These methods required detailed knowledge and regular attention to the properties of the skin throughout processing.

During his visit to Sakhalin to observe the Russian penal colony, the British physician Benjamin Douglas Howard described an Ainu settlement comprising twelve huts, one of which was larger and with a wide doorway. This building served as the communal site for processing fish and game. Skins were removed and prepared there, while in its rear chamber, meat and fish were dried, salted and smoked. Skins from different animals were processed either for domestic use or for trade. Under strict regulation, Japanese traders were permitted annual access to exchange goods, cotton cloth, rice, knives, arrowheads and tobacco, for high-value Ainu furs, including sable. Howard noted that intoxicating alcohols were strictly prohibited throughout Sakhalin under Russian administration, unlike under British rule (Howard 1893).

Fish served as both food and raw material, the flesh was consumed, while the skins were fashioned into robes and boots adapted to Northern climates (Ölschleger 1999). Tanning is a combination of science, art, botany and chemistry (White 1956) and was long practised among Indigenous Arctic communities (Hatt, Taylor 1969). In Hokkaido, Ainu methods for preparing salmon skin for footwear relied on smoking the skins [fig. 91]. Practised since the late Neolithic period, smoke tanning is an aldehyde-based method in which aldehydes released during wood combustion react with collagen amino groups to form stable bonds within the skin (Palomino, Rahme 2021). Skin removal began with shallow incisions at the head, pelvic fins and tail. The skin was then peeled by hand from the tail incision towards the head to avoid blade damage. In some areas, the fish was first dried and beaten to loosen the flesh (FRPAC 2008). Once separated, the flesh was scraped away, the fins and tail removed, and the skin washed. Small holes were pierced so it could be stretched flat with skewers [fig. 92] secured along the edges to prevent curling and suspended above low-heat smoke inside the *cise*.¹⁷ The skin was left to dry for around two weeks, after which any remaining tissue was scraped away. Partially decayed wood produced thick smoke which dried and conditioned the skin over several days. Different woods produced variations in colour, ranging from golden to darker tones. Skins were then left to rest overnight, aired and softened by hand to restore flexibility. Smoking removes moisture, reducing bacterial growth and helping to preserve the material. Compounds contained in the smoke impregnate the skin fibres, increasing water resistance and reducing the tendency of the skin to become saturated, shrink, or deform through repeated cycles of

¹⁷ During winter, the Ainu lived around the central hearth of their dwellings, or *cise*.

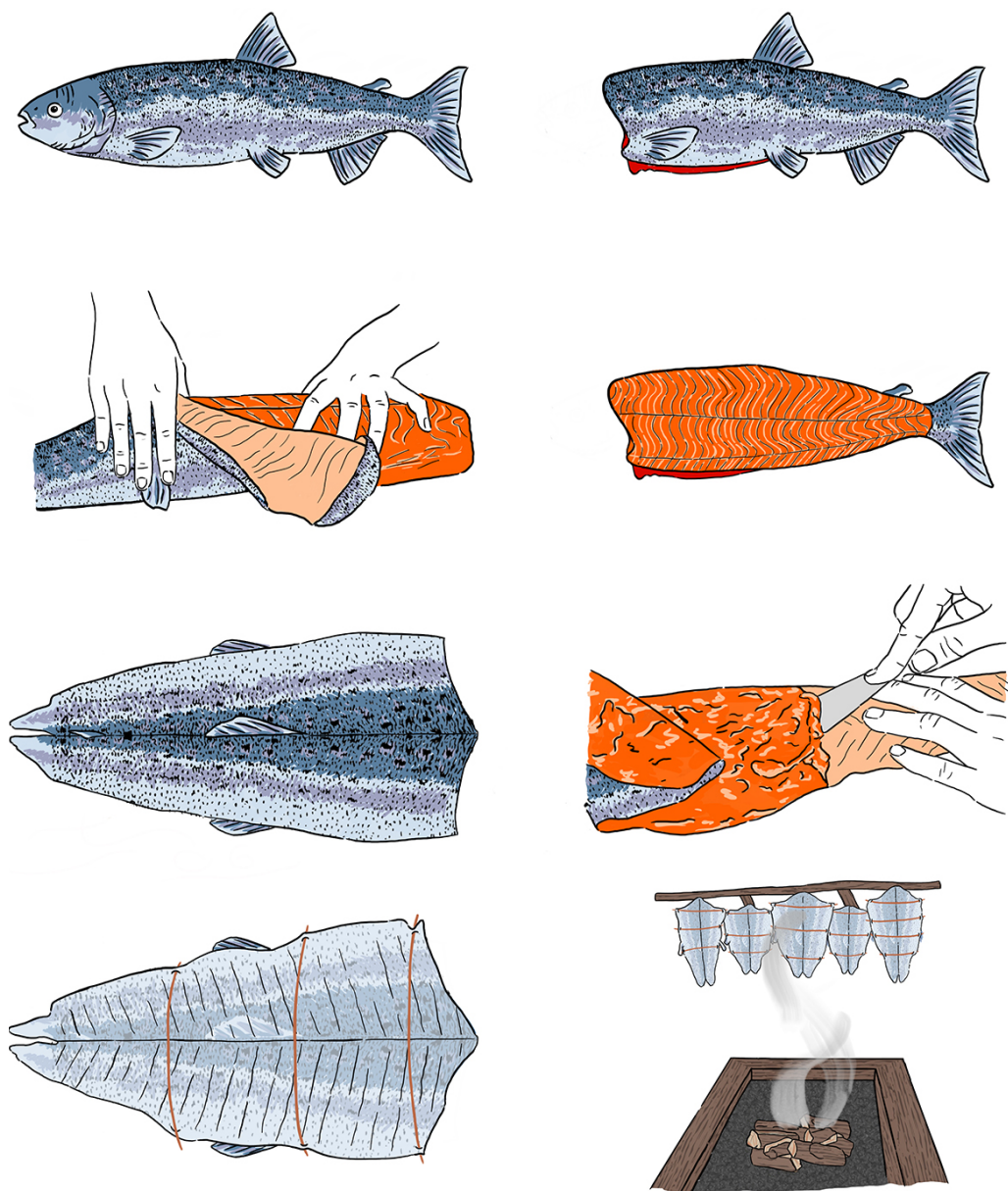


Figure 91 Ainu salmon smoke tanning in the central hearth of the *cise*. Illustration: Laura Fernandez

wetting and drying. This process contributed to the durability properties required for footwear (Palomino 2022).

3.7 Sewing Implements

Following skin preparation, sewing transformed raw material into garments and footwear suitable for cold weather. The process required appropriate tools and specific threads, adapted to different fibres and environmental conditions. In the Neolithic period, the Koushi Ainu,¹⁸ the Ainu inhabitants of the Kuril Islands, used coarse needles fashioned from eagle wing bones (Torii 1919). For winter skin clothing, sharpened fish bone needles were also used (Landor 1893). Later, iron from shipwrecks cast ashore was reworked into fine needles. In the nineteenth century, steel needles supplied by Japan replaced earlier bone versions. An iron needle was a prized possession, kept on a leather cord in a carved bone case called *Shikabi*, highly decorated and carried at all times. The Ainu also adopted a folding three-part needle case from the Kamchadal's. During sewing, a thimble cut from seal back skin was worn on the index finger (Torii 1919).

Body-based measuring methods guided pattern making. Arm span and hand length served as units known in Japanese as *shintai*shaku. The Ainu terms for measurement methods included *si-wo*, from the middle finger to the thumb tip with the hand spread; *mo-wo*, from the index finger to the thumb tip; *para tek*, from the middle fingertip to the palm base; *ik*, the middle joint of the index finger; and *emko*, half an *ik* (Tsuda 2014b).

3.7.1 Threads

Cotton thread became part of Ainu sewing production following commercial exchanges with Japan and its use spread increasingly from the late eighteenth century onwards, while expensive silk thread was also in circulation (TRC 2017). Before cotton became available, sewing different materials relied on threads derived from tree and plant fibres. Fish skin garments were sewn with sinew, nettle bast, or grass thread (Tsuda 2014b). Nettle bast was used for sewing, weaving, nets and fishing lines across Hokkaido. It possessed high tensile strength, almost double that of cotton and unlike bast from linden, retained its strength when wet (Williams 2017). Nettle bast secured garments and footwear made from seal, sea lion and salmon skins (Fukuoka 1995).

The bark of the linden tree (*Tilia cordata*) was also used to make sewing thread, strong twine and braided cord for nets (Hitchcock 1890). Ainu sewing relied on black-dyed elm fibre (Landor 1893). Elm bark was stripped in early spring or autumn, soaked in warm stagnant water for ten days, separated into layers, dried and divided into threads for later use. Sewing thread was chewed to round and compact it; in some cases it was chewed immediately after the fibre was removed from the tree (Batchelor 1900). Women twisted inner bark fibres of trees by the hearth into continuous lengths for sewing and net-making (Bickmore 1869). Fibre colour was

¹⁸ Torii (1919) noted that the Koushi Ainu, the Ainu inhabitants of the Kuril Islands referred to themselves as *Kourilsky* Ainu, because their language was mixed with Russian.



Figure 92 Elisa Palomino, Salmon smoke tanning done by Shigehiro Takano at the *cise*. Nibutani Ainu Museum

deepened using bark-based dyes (Bird 1880). To darken the material further, bark fibre was immersed in a decoction of oak and then placed in iron-rich marsh water, producing a reddish-black colour known as *kunnep* (Batchelor 1900). Black and brown dyeing was achieved using Japanese alder bark (Hitchcock 1890) while other dyes used on fibres were made from crowberry and iron-rich muds (Williams 2017).

Women used the *kagarinui* sewing technique, which was suitable for garments made from skins, salmon skin, leather and bast fibres. Its use declined and the techniques used to join seams changed from *kagarinui* to *naminui* (from a whip stitch to a running stitch) as cotton fabrics became more common, disappearing almost completely in the post-war period (Tsuda 2014b).

3.8 Clothing Technology

Clothing traditions developed alongside fishing practices, as preserved fish skins became essential components of clothing. The harsh winters of *Ainu Mosir*¹⁹ required durable protection, and dress evolved in response to the weather conditions of Hokkaido, Sakhalin and the Kurils. Ainu clothing expressed ethnic identity through the choice of material, the shapes and the embroidered motifs that referred to specific territories (Dubreuil 1999). Women gave form to this knowledge, selecting materials and constructing garments for both daily use and ceremony (Tenri Gallery Exhibition 1983). Clothing carried the rules of respect through which animals, plants and weather were understood. Salmon and the elm trees used for clothing, were received as temporary manifestations of gods (Dubreuil 2002). Pelts and plants were only deemed appropriate if they were dealt without waste and their origin was recognised (Williams 2017).

Ainu Clothing was based on two main types of materials: animal-based and plant-based [fig. 93]. In addition, a further group comprised items acquired through trade with Honshu or the Asian mainland, either as unfinished textiles or as completed garments (Kodama 1999). Early garments made of animal skins (*ûrou*) included fish skin (*akumi*), birdskin (*rapuri*) and the hides of land animals (*uri*), sewn using sinew and plant fibres (Takakura 1960). Deer, bear, fox, sea otter, rabbit and seal hides were employed across Hokkaido, Sakhalin and the Kurils (Dubreuil 2002). In Hokkaido, which formed the main region of Ainu settlement, skin clothing was produced using salmon skin and the game hides (Tsuda 2014a). In the Kurils, where hunting large land mammals was limited, skins from seabirds including tufted puffin or *etupirka*,²⁰ goose, seagull and albatross supplied waterproof clothing (Kodama 1999). The Kurilians also made garments from seal and sea otter skins, linked to the trade networks of the North Pacific (Tsuda 2014a). Sakhalin Ainu used the hides of sea mammals (such as seal, fur seal and sea lion) and fish materials (Kodama 1999).

¹⁹ *Ainu Mosir*, meaning 'land of the Ainu' or 'quiet earth where people live', refers to the Ainu homeland across Hokkaido, southern Sakhalin and the Kuril Islands.

²⁰ The tufted puffin, referred by the Ainu as *etupirka*, means 'beautiful beak'. Robes sewn from entire *etupirka* bird skins were essential for survival, worn with feathers turned inward for warmth or outward for rain and stitched with the heads facing upward to shed water effectively.

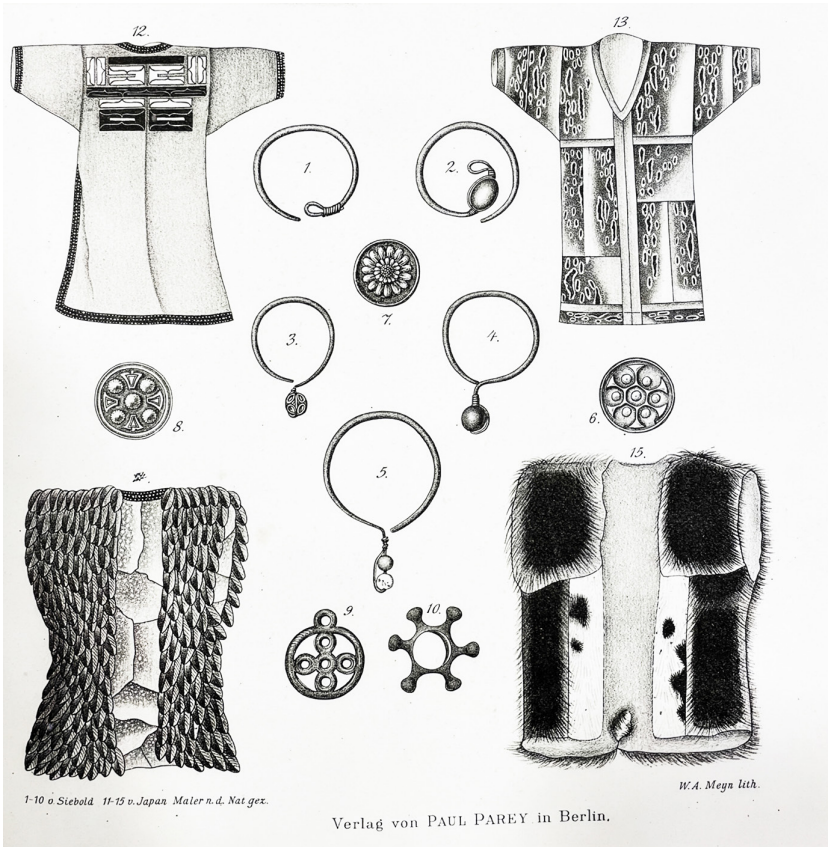


Figure 93 Philipp Franz Balthasar von Siebold, Different plant-based and animal-based Ainu garments. Nippon. 1838. Leiden University Libraries Special Collections, Leiden, Netherlands

Dog skins served for winter jackets and capes, while bear skins, regarded as sacred, were not worn, though later traded (Landor 1893; Williams 2017). Within this category of animal products, fish skins provided an important resource. Garments made from chum salmon and pink salmon, required many skins and were valued for water resistance and strength (Kodama 1999). Along the Sea of Okhotsk, these garments supplied reliable winter insulation and show parallels with clothing traditions in the Lower Amur Basin (Kodama 1999).

Garment shapes varied by region and functional need. In Sakhalin, fish skin robes featured stand-up collars, open fronts and narrow sleeves, resembling elements of European tailoring. Sakhalin Ainu clothing resembled that of the Nanai along the Amur River, indicating influence from the Asian continent (Kodama 1999). Howard described Sakhalin robes assembled from pieces of sable, bear, deer and fox, with birch bark beneath to guard against poisoned arrows used in winter hunting (Howard 1893). In the Kurils, *ûrou* garments made of animal skins, marine or terrestrial, included birdskin robes, sea lion shirts and deer skin high boots (Torii 1919).

Plant-based fibre clothing formed a second major category of Ainu dress. Elm bark, nettle and Japanese linden were used throughout Ainu territories (Takakura 1960; Williams 2017). During his 1808-09 expedition to Sakhalin,

Mamiya Rinzo observed that both men and women in Karafuto (Sakhalin) wore clothing similar to that worn in Yezo but made from nettle fibre due to the absence of elm and other trees that do not grow in their mountains. This cloth, called *tetarabé*, resembled Japanese hemp fabric. His account was later published in the 1850s under the title *Kita Yezo Zusetu* (Torii 1919). The *attush* robe was the main textile garment, woven from elm bark fibres and decorated by women with cotton appliqués after weaving (Hitchcock 1890; Montandon 1937). Winter versions incorporated animal-skin panels stitched to the back for warmth (Batchelor 1900) and embroidery motifs indicated provenance (Montandon 1937). Straw robes or *Kera*²¹ were also used as raincoats (Takakura 1960).

Garments produced through trade formed a third category. Cotton and silk did not reach Ainu communities before the early seventeenth century (Dubreuil 2002). Cotton fabric gradually became standard after 1868 and by the 1870s, it was widely used in gown construction (Tsuda 2014b). In the Kurils, garments imported from Hokkaido were traded for sea otter pelts, while otter and marten skins were exported to markets in Japan, China and Russia (Landor 1893; Williams 2017).

Garment making was shaped by purpose, women designed each piece with a specific wearer in mind, adjusting shape and size as needed and envisioning the person dressed in the final robe. A garment without a clear purpose was seen as incomplete. The ability to conceive a design that had never been made before was especially valued, reflecting both skill and the personal attention given to the wearer. Size was rarely an issue, as aside from length, men's and women's robes shared the same basic structure (Dubreuil 1999).

Meiji-era officials banned animal-skin clothing, deeming it unacceptable despite its practical and spiritual value to Ainu communities. While Japanese publicly dismissed these garments as vulgar and crude, the prohibition primarily sought to expand Japanese textile markets, promoting cotton and increasing Ainu dependence on Japanese trade (Dubreuil 1999). The adoption of cotton clothing progressed gradually; animal skins and imported fabrics continued to be worn through the late nineteenth century and, in remote areas, into the early twentieth century, where government presence was limited. Although removed from Ainu wardrobes under political pressure, fur garments became associated with luxury in the Western world, although not without controversy (Dubreuil 2002). At the same time, Ainu clothing entered Western museum collections, where curators documented robes and footwear made of elm bark, nettle, fish skin and deer hide (Kendall 1999).

3.9 Fish Skin Robe

Fish skin garments served functional needs. Compared with elaborately decorated elm bark robes, only a few surviving examples of fish skin robes show surface embellishment. Their construction prioritised watertightness and insulation during seasonal fishing activities. Given that the production of a robe required large quantities of fish, access to sufficient skins could indicate that a household had abundant catches (Dowie 2021).

²¹ Traditional rain capes made from grass, straw, or bark were replaced by plastic raincoats after World War II. They had been used for work in fields or mountains and for carrying loads.

Comparative examples from Nivkh communities show related construction approaches. Montandon described two robes collected in Siberia: a Nivkh robe with indigo blue appliqué and a Nanai example with multicoloured embroidery. He noted that, despite the Ainu embellishments were of a smaller scale, the patterns resembled Amur River work, while differing from clothing further north (Montandon 1937).

Fish skin robes were known in both Sakhalin and Hokkaido, although written documentation is limited (Otsuka 1991). Most surviving robes are attributed to Sakhalin²² due to early Russian collecting practices and the later population relocations of Ainu communities from Sakhalin to Hokkaido. Salmon skin boots from Hokkaido appear widely in museum collections, yet their origins are seldom questioned. Given that the Hokkaido and Sakhalin Ainu shared similar environmental conditions and access to salmon and trout, it is unlikely that only one group produced robes. Regional differences in artistic design are evident: Sakhalin robes are distinguished by their wide red and indigo blue bands at hemlines and openings, as well as their stitched embroidery [fig. 97]. Hokkaido styles are characterised by minimal decoration [figs 94-98] made with fish skin patches and subtle tonal variations in the skins (Dubreuil 2002). First-hand observations from the late nineteenth century support the attribution of decorated robes to Sakhalin. Howard described fish skin robes worn by both men and women in Sakhalin. Some featured coarse embroidery and reminded him of North American styles. He noted the material's durability, flexibility and thinness and acquired one of these fish skin robes during his visit (Howard 1893).

Manufacturing involved stitching together fish skins including salmon, *Ito* (Sakhalin taimen) and large trout (Sekine 2016). The women prepared the skins to preserve a surface of fine scales which, combined with the natural brown shades and gradations of light and shadow, produced a textured depth similar to that of fur (Cevoli et al. 2015). Skins were stitched with fine thread. Later examples show added embroidery around necklines and seams and occasional use of dyed cloth patches (Sekine 2016). When fins were removed, they left openings that were covered using contrasting pieces of fish skin to produce patterned surfaces, even on robes without added decoration (Motomichi 2001).

The overall look of a fish skin robe was achieved by combining the natural variations in the shape and tone of the skins. Fish skin remnants from multiple species, each with different shades, were employed as design elements. Similarly coloured fragments helped to bridge and conceal gaps between larger pieces. Dubreuil suggests that the irregular contours and tonal shifts in salmon skin influenced the development of *nuitori*, the abstract cloth appliqués with intricate embroidery found on later Ainu garments.

²² Dubreuil observes that many scholars associate most surviving salmon skin robes with Sakhalin because several early specimens were collected there and because Ainu populations were repeatedly relocated from Sakhalin to Hokkaido under Russian and Japanese administration. She also notes that Hokkaido Ainu worked salmon skin, evidenced by numerous salmon skin boots from Hokkaido preserved in museums worldwide, whose provenance is not disputed, making local production of such robes likely. See Dubreuil 2002.



Figure 94 Elisa Palomino, Ainu fish skin robe. Nineteenth century. Catalogue No. 79. Botanic Garden and Museum (HUNHM), Field Science Center for Northern Biosphere, Hokkaido University Sapporo, Hokkaido, Japan

The number of patches on a robe offers an indication of how many whole fishes were used (Dubreuil 2002). Between forty and fifty skins were required to make one robe, similar to fish skin robes by Nivkh communities [fig. 96] along the Amur River (Sekine 2016). Fish skin garments were likely limited to certain areas or used in specific situations, such as trade with Russia or activities linked to northern border patrols in Sakhalin (Otsuka 1991). Their limited appearance in historical records points to selective, situational wear rather than widespread use.

3.10 Embellishments

Undecorated fish skin robes functioned as everyday workwear, while decorated examples became ceremonial garments and were regarded as wearable works of art (Dubreuil 2004). Their ornamentation, through stitching and fish skin appliqué, expressed identity, regional conventions and the maker's skill. Decoration followed construction and strengthened the structure of fish skin garments. Openings created when the fins were removed were covered with lighter toned fish skin or small, red-dyed leather patches to reinforce weak points and create visual patterns (Motomichi 2001). Glue made from chewed salmon skin was used to attach decorative elements to the robe (Chiri 1953). Embroidery was done freehand (Kodama 1999), using techniques such as chain stitch and couching (TRC 2017). One line of thread was sewn alongside the appliqué on fish skin garments, a

過決失

總部酋長

乙箇吐壹

Figure 95

Ikotoi, chief of Akkeshi, depicted with blue bead earrings, plain skin trousers, an Ezo-Nishiki Chinese silk robe with dragons and clouds and a Russian military greatcoat. Musée des Beaux-Arts et d'archéologie de Besançon, France



technique also seen on the *ruunpe*²³ of the Hokkaido Ainu (Kodama 1999). Embroidered elements and narrow fabric strips were concentrated around collars, backs, sleeves and hems to reinforce joins and areas under frequent strain, securing edges and preventing seams from tearing (Dubreuil 1999; Tsuda 2014a). Even garments with minimal stitching show careful patching designed to accommodate areas of repeated wear (TRC 2017).

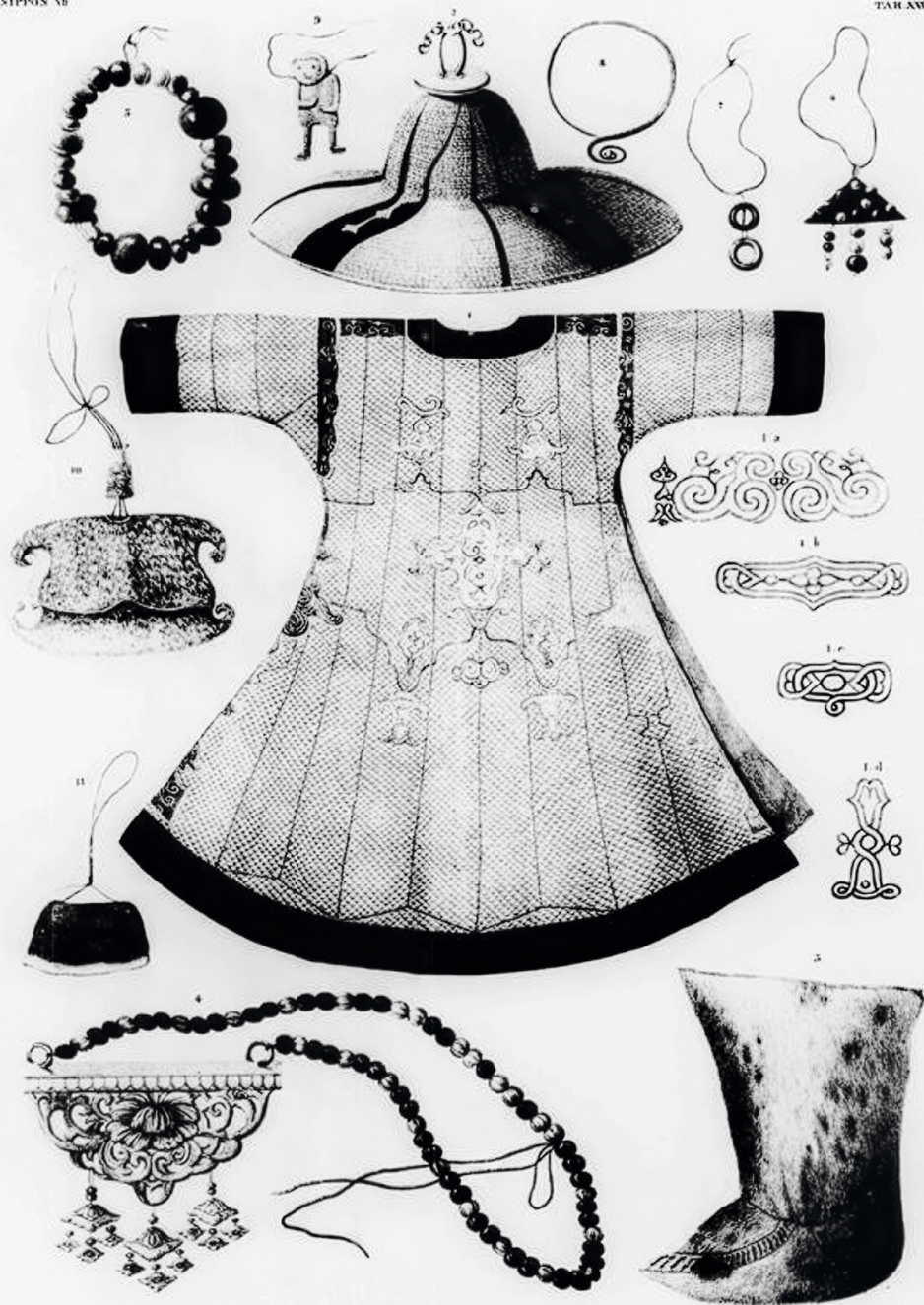
Textiles obtained through trade with Manchuria and Santan merchants were valued for embroidery and in some cases, children trained as interpreters received cloth as compensation (Dubreuil 1999). Between the seventeenth and nineteenth centuries, Santan trade connected Sakhalin communities with groups living along the lower Amur River. Under Qing rule, northern Indigenous groups provided furs in exchange for worn Chinese garments, metal goods and food (Hakodate 2025). Among these items, *Ezo Nishiki*²⁴ official garments of the Qing dynasty, were highly prized and incorporated into Ainu wardrobes and depicted in Ainu-e paintings [fig. 95] but were uncommon in everyday use (Dubreuil 2004; Hakodate 2025). Regulated exchanges included silks, brocades, cotton drills and beads traded for Ainu fox, seal, otter and marten pelts, hawk and eagle feathers and fish products (Takakura 1960; Dubreuil 2004). Known collectively as Santan wares, these materials were incorporated into Ainu dress in Sakhalin and Hokkaido. Silk remnants were cut into strips and sewn to hems, marking material value and social status (Takakura 1960).

Thread materials evolved over time. Sinew and grass fibres were initially used, with cotton introduced later through trade (Takakura 1960; Tsuda 2014b). Because of its cost, cotton thread was reserved for embroidery, particularly on Sakhalin robes rather than general stitching (Dubreuil 2002). Garments collected by Russian expeditions show indigo-dyed cotton strips secured with coloured thread embroidery to outline openings at cuffs and collars (Kodama 1999; Tsuda 2014b). Strips were first stitched in place with bast-fibre thread, then embroidered with cotton thread (Tsuda 2014b). Protective motifs included rope stitching in dark blue thread placed around the neck, sleeves and hems, a practice linked to earlier customs where mothers placed rope around sleeping infants for protection (Kayano 1978).²⁵ Embroidery was concentrated on the upper back, an area considered especially vulnerable (Dubreuil 1999). Imported cotton fabrics and threads were incorporated into decorative features that complemented existing garments while local materials continued to be used (Kodama 1999). Despite their high cost, these materials became part of Ainu clothing practices. Cotton cloth was reused until softened, then repurposed into strips for borders, a practice that minimised waste and kept usable materials in circulation long before sustainability was formally named (Dubreuil 1999).

23 *Ruunpe* translates from Ainu as ‘things that have path’ and denotes the embroidery and appliqué on the front and back of cotton garments.

24 *Ezo-nishiki* are Qing dynasty silk garments that reached the Ainu through regional tribute and trade networks. Along the lower Amur, Qing authorities received valuable furs from northern peoples in exchange for recognising their rights to govern certain lands and provided goods such as silk official dress and ornaments including glass beads. These items circulated through exchange networks linking Primorsky, Sakhalin, Hokkaido and mainland Japan via Ainu intermediaries.

25 Shigeru Kayano notes that Ainu designs derived from the principle of warding off harmful forces. Rope-like embroidery placed around necks, sleeves and hems functioned as protection for the body and relate to the practice of encircling infants with rope during sleep. See Kayano 1978.



KRAFTO
KLEIDAADJE. + KLEIDENSSTÜCKE.

Figure 96 Philipp Franz Balthasar von Siebold, Fish skin robe, seal fur boots, salmon tobacco pouch and jewellery. Karafuto. Nippon. 1838. Leiden University Libraries Special Collections, Leiden, Netherlands

In 1804, British naval officer Broughton²⁶ observed that women's robes in Sakhalin differed from men's mainly in length and that robes made of seal, deer and fish skin were edged with blue cloth along hems and cuffs [fig. 94] (Broughton 1804).

Knowledge of stitching and design circulated within households. Girls learned by watching relatives and attempting small tasks, drawing pattern units in sand or hearth ash before working directly with the garment. Designs were not sketched onto the fabric or copied from patterns, women relied on memory, assembling familiar motifs into new compositions (Dubreuil 1999). Originality demonstrated competence, and each garment was expected to differ from those produced before. Designs and their names varied by region, influenced by personal style and available materials. Marriage between households and villages also led to new combinations of motifs and sewing practices (Kodama 1999).

Researchers have studied the placement of decorative motifs on garments, noting consistent structural divisions at the collar, hem and sleeves [fig. 97]. While early Japanese and European scholars focused on symbolic interpretations, later studies highlighted the practical role of motif placement in reinforcing seams and protecting vulnerable parts of the body (Tsuda 2014a). Initial theories that linked motifs to animals or natural forces were later discarded after Ainu women explained that living beings were not depicted, as doing so could cause harm. Although the Ainu lived in close relationship with nature, representing animal deities in textiles was considered taboo. Despite this, anthropologists continued to assign totemic meanings to embroidery patterns (Dubreuil 1999). Motifs were instead created to please the gods and protect the wearer against malevolent forces (Dubreuil 2002).

Parallels exist between the motifs and placements of embroidery [fig. 98] and the tattoos [fig. 99] in Ainu women's arms and hands which protected women against disease and misfortune. The curvilinear patterns seen on the back of their hands and arms would ward off evil spirits (Dubreuil 1999). Tattooing involved an infusion made from the bark of the ash tree alongside birch soot, applied three times, both valued for their healing properties. The black cloth used to dress the wounds, together with spells, reinforced this effect (Munro 1979). Similar protective intent is seen in the use of dark cotton cloth on openings such as hems and sleeves, where colour and placement served to block the entry of harmful forces (Palomino et al. 2021). Decoration persisted despite assimilation policies. As cotton clothing replaced skins in daily life, stitching practices continued in robe-making using bark fibres and traded cloth (Lewallen 2014).

²⁶ William Robert Broughton, a British naval officer, conducted a four-year survey of the Asian coast in the late eighteenth century, including the Kurile Islands, Japan and the eastern coasts of Honshu and Hokkaidō.





Figure 97 Child's salmon skin robe, before 1896. Museum Purchase, 1897. Accession number PEM E3390. Peabody Essex Museum. Salem, Massachusetts, USA



Figure 98 Salmon skin robe collected by Frederick K. Stearns in 1889-90, Hokkaido. Accession no. X1989.37. The Detroit Institute of Arts, Detroit, Michigan, USA



Figure 99 Hata Awagimaru, Ainu woman. Ezotō Kikan. Japan. 1799. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

3.11 Footwear

Fish skin footwear completed the outfit, shaping how Ainu moved through snow, ice and riverbanks. In the summers of Sakhalin, Hokkaido and the Kurils, eighteenth- and nineteenth-century images and accounts suggest that men and women went barefoot during daily tasks [fig. 86]. By winter, specialised footwear became necessary for hunting and travel (Williams 2017). Boots were made from deer or salmon skin, with fish skin preferred for icy surfaces and winter fishing (Kayano 1978).

Construction and terminology varied by region. Ainu footwear included deer skin shoes (*yukker*) and fish skin shoes (*cep ker* or *cep keri*) crafted from softening and sewing the skins into shape. Some shoes were made like moccasins, while others were completely enclosed like boots, with cords attached [fig. 100] to secure them around the ankles (Sekine 2016). In Sakhalin, long boots (*tanne tchiokap*) [figs 101-102] were used for fishing and medium-height boots (*tokoune tchiokap*) for travel across plains and mountains (Torii 1919). Montandon noted that Ainu and Amur-region footwear followed the moccasin principle, using a single piece of skin folded

around the foot, placing Ainu techniques in dialogue with those in North America and Sápmi²⁷ (Hatt 1916; Montandon 1937).



Figure 100 *Cep kerī*, salmon skin boots. Hokkaido, Japan. Accession no. A406A. Penn Museum, Philadelphia, USA

Salmon skin boots were made from fish taken at a specific stage in their life cycle. Post-spawning salmon had thicker, more durable skins, making them ideal for winter wear (Fukuoka 1995). Each pair required two skins: one for the sole and heel, the other for the upper (Kayano 1978).

Twentieth-century documentation records a detailed making process (Muraki 1994). Tanned skins were washed, dried for several days and then softened in lukewarm water. They were shaped directly on the wearer's foot. Function influenced form. Fish scales were oriented backward to improve grip on snow and mud, and the dorsal fin was often retained at the sole's centre to enhance traction and strength (Kayano 1978). Makers placed the foot so the dorsal fin line lay beneath the arch, then traced an outline to allow for the rise of the sole. Basting began near the toes to gather the upper [fig. 104], an instep piece cut from half a skin was attached and the tail-end skin was folded to form the heel without cutting away surplus, increasing strength. Ankle sections were sewn on as strips. Skins were stitched using thread made from plant fibres or animal sinew (FRPAC 2008). Tendons or muscle strands (*rit*) from whales and large seals were used (Torii 1919) while deer tendons were softened and beaten to produce thread strong enough for stress points (Palomino 2022).

Before wearing, boots were soaked to mould to the feet and tied with elm-bark cords around the ankles (Landor 1893). Laces were twisted from *ohyō* (elm bark) to the needed thickness (FRPAC 2008). Thread for sewing

27 Indigenous Sámi name for the cultural region inhabited by the Sámi people. It spans parts of northern Norway, Sweden, Finland and the Kola Peninsula in Russia.



Figure 101

A pair of fish skin boots. Karafuto (Sakhalin). Accession no. 27977. Tokyo National Museum, 1992. Library of Congress, Washington, D.C., USA



Figure 102

Matsuura Takeshirō, Two Sakhalin Ainu. The woman holding the fish wears boots made of fish skin. Nishi Ezo nisshi 1863. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

and lacing (*kaeka*)²⁸ was also made from *Tsuruume-modoki* vine fibres. The production of *kaeka* began by heating plant fibres in water, which caused them to turn green. When the fibres were prepared in winter, they were placed in snow to cool, which removed the green colour. The dried brown fibres were first rubbed by hand to remove dust, then straightened and carefully untangled. The longest fibres were selected and separated. Each fibre was folded in half to form two strands and twisted from the folded end to produce thread. During this process the thread was held between the teeth so that both hands remained free to twist the fibres. The twisting technique followed a repeated under-and-over motion, with additional tension applied as the fibre passed under from left to right in order to keep the thread even and straight (Palomino 2022).



Figure 103 Elisa Palomino, Ainu fish skin boots with grass woven socks. Botanic Garden and Museum (HUNHM), Field Science Center for Northern Biosphere, Hokkaido University Sapporo, Hokkaido, Japan

Figure 104 Elisa Palomino, Ainu fish skin boots. Botanic Garden and Museum (HUNHM), Field Science Center for Northern Biosphere, Hokkaido University Sapporo, Hokkaido, Japan

Insulation was essential. Linings included bast from Manchurian elm, as well as grasses like reed bent grass and dune grass (*keromun*), which cushioned the foot, absorbed moisture and dried quickly (Fukuoka 1995; Williams 2017). Cotton grass, straw and bast-fibre socks [fig. 103] added further warmth. Chewed bark fibres also served as padding. Even with insulated fish or deer skin footwear, travel during the colder months remained risky, as deep snow, limited daylight and severe cold restricted mobility (Williams 2017). Even well-made boots had their limitations: they were not fully waterproof, wore poorly on rocky terrain, could catch fire and were sometimes chewed by dogs (Kayano 1978). To improve traction in rough terrain, Ainu wore thick rope sandals over their boots. In deep or compacted snow, they used snowshoes, horseshoe-shaped *tesma* and gourd-shaped *cinru* [figs 105-106]

²⁸ *kaeka* was traditionally carried out by grandmothers and formed part of everyday activity, undertaken while talking with others or during routine tasks. See Palomino 2022.

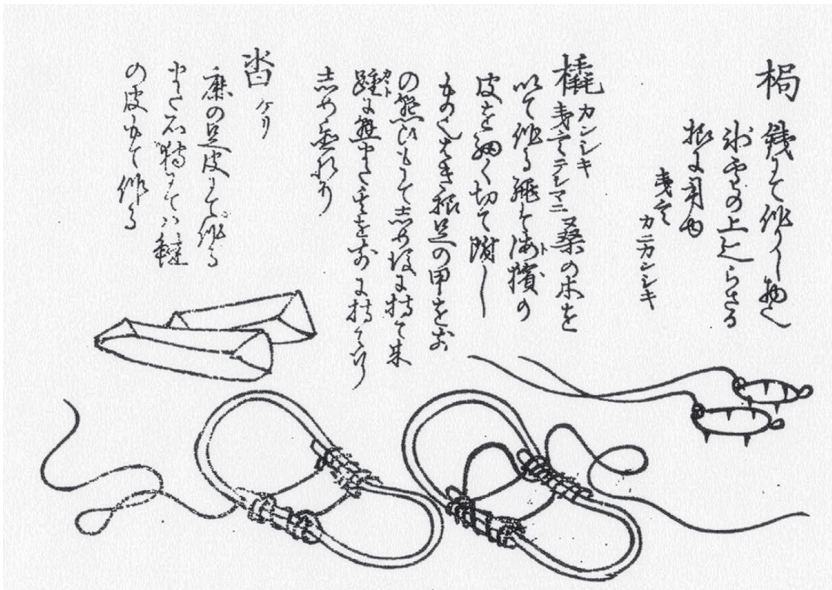


Figure 105 Romyn Hitchcock, Ainu fish skin boots, sandals and snowshoes. *The Ainuos of Yezo Japan*. 1891. Leiden University Libraries Special Collections, Leiden, Netherlands

Figure 106 Matsuura Takeshirō, Snowshoes made of wood were worn over fish skin boots to improve traction in rough terrain. *Nishi Ezo nishshi* 1863. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA



Figure 107 Cotton, plant and fish skin child boots, ca. 1882. Gift of Mr. Miyabe. Accession no. PEM E491. Peabody Essex Museum, Salem, Massachusetts, USA

constructed from bent branches from woods such as maple, amur cork tree and mountain mulberry and bast fibre. Branches were harvested in autumn, when sap levels were lower and the wood was stronger. The wood was boiled to increase flexibility, then bent and bound at the ends with leather or cords made from Japanese linden bast (Williams 2017).

Museum collections preserve both plain and decorated examples. Fish skin boots from the Ishikari River, collected by Edward S. Morse²⁹ in 1882 and now held at the Peabody Essex Museum [fig. 107], still retain their original cotton grass stuffing. These boots are unusual because the embroidery was stitched directly onto the fish skin, meaning it could not be transferred to a new pair once the boots wore out (Dubreuil 1999).

One Smithsonian boot [fig. 108] combines humpback salmon for the upper and Sakhalin taimen for the sole, stitched to form a rounded foot and puffed toe, topped with a narrow, black-dyed cotton band for reinforcement. The dorsal fins were left intact along the sole to improve traction on snow and ice. The natural variation of the skins creates a honey-brown gradient (Palomino 2022).



Figure 108 Fish skin boot. Hokkaido, Japan. Accession no. E150637. Smithsonian NMNH, Washington, D.C., USA

29 Edward S. Morse, an American naturalist, ethnographer and art historian, was among the first Americans to live in Japan, where he taught science at the Imperial University of Tokyo. His extensive collections and notes documented Ainu society and material culture during the late nineteenth century are preserved today in the Edward Sylvester Morse Collection at the Peabody Essex Museum.

Ethnographic sources also detail how boots entered collections. Stewart Culin³⁰ described purchasing a pair of salmon skin boots from an Ainu woman in Shana. The soles were made from large salmon, the uppers from trout skin, with seal fur at the top and plaited grass cords. He noted their warmth, grip and relatively high price (Poster 1999). Other pairs were documented as boots worn from winter to spring for walking in the mountains. Their soles were built for traction and lightness, with dried grass and bark fibre socks for insulation (Ölschleger 1999; Poster 1999). Isabella Bird also observed that in winter, men wore “one or two coats of skin and rude moccasins for hunting” (Bird 1885).

Contemporary reconstructions show the range of variation once present in *cep kerī* design. Cords were wrapped around soles for traction and boots featured turned-up toes and raised ankle quarters for protection (FRPAC 2008). Museum collections reveal regional and household variation in size, structure and material choice, demonstrating how the once abundant salmon helped shape mobility and survival in winter (Kayano 1978; FRPAC 2008).

3.12 Hunting Belt

Smoking tobacco spread to Ainu communities through contact, as tobacco and pipes were imported rather than Indigenous to the region. After travelling in southwest Hokkaido, Broughton noted that Ainu men wore bark cloth robes fastened with a belt that held a tobacco box, pipe and knife [fig. 110]. He described smoking as a popular leisure activity shared by men and women (Broughton 1804). Batchelor later observed that it was above all older women who smoked. Pipes and tobacco boxes were crafted from walnut wood and inlaid with small pieces of deer bone. Many surviving examples feature carved holders and fine wire tools for cleaning pipe bowls. Batchelor also recorded burial customs in which these personal items were deliberately broken and placed alongside the deceased (Batchelor 1900).

Smoking kits were paired with fire-making tools. Ainu strike-a-light sets (*piwci*) included a steel striker, repurposed from broken pots or blades, a piece of quartz and tinder made from powdered wood mushroom³¹ or charcoal. These items were carried in pouches (*karop*) used to light pipes and household fires. Tinder pouches, collected in Sakhalin were made from salmon skin and decorated with glass beads or Japanese coins [fig. 109]. These pouches hung from men’s belts alongside smoking kits, as seen in the *Ainu-e Ishu Retsuzo* [fig. 110] by Kakizaki Hakyō (1764-1826), a samurai painter from the Matsumae clan author of a series of portraits depicting Ainu chiefs from eastern *Ezo*.

³⁰ Stewart Culin, the first curator of Ethnology at the Brooklyn Museum, expanded the museum’s collections through direct field acquisitions. During a visit to Hokkaido in 1912, he collected Ainu objects, including elm bark robes, fish skin boots and carvings, contributing to the museum’s ethnographic holdings.

³¹ Tinder material was made from the processed inner fibres of the tinder fungus (*Fomes fomentarius*). Growing on dead or dying birch and beech trees, it has been used since prehistoric times to catch sparks and carry fire.

Clothing was supported by belts made from locally available materials. Sakhalin Ainu women used sealskin belts (*kaniku*) to fasten their garments and carry work knives and other sewing tools. Brass ornaments, obtained through mainland trade, were affixed to these belts and served as protective elements. Their personal importance is evident in burial practice, where belts were interred with women and in their role as sources of power for Sakhalin Ainu shamans (Wada 1999).



Figure 109 Ainu match pocket or medicine case (*piwci*). Salmon skin, glass beads. Nineteenth century. Accession no. 99.5B571. Gift of Frederick Stearns. The Detroit Institute of Arts, Detroit, Michigan, USA

3.13 Ainu Shamanism

Ainu accounts describe animals and plants as beings sent from a higher world to assist humans. These beings live in dwellings and villages like humans and provide peoples materials for daily use, such as fish skin for clothing. They also appear in stories and ritual language, where the ways they are spoken about indicate their place in both everyday life and oral tradition. Among the Ainu, however, natural entities are not regarded in the same way. While many animals and plants are used for food, clothing and tools, only some are referred to as *kamuy*, powerful beings capable of affecting human life. The bear is treated as a god. Salmon, although called *kamuy-cep* (deity fish), are not considered gods but are understood as beings sent and reclaimed by the Master of the Fish. Deer are similarly regarded as the possessions of the Master of the Deer rather than divine beings. Most plants, including herbs, are not classed as *kamuy* unless they are used in ritual contexts (Yamada 1987).

Rivers and water sources are associated with a female deity that nourishes infants from her breast. This Water Goddess, linked with the River Goddess, is thanked for providing drinking water and for allowing the salmon to return upstream. In this way, water is both essential and treated with care (Yamada 1987). The Goddess of Hunting and Fishing ends famine by asking the Master of the Fish and the Master of the Deer to release animals into the

human world. The Ainu do not pray directly to these two Masters, but appeal to *Hasinaw-uk Kamuy* to act as a mediator and bring success in obtaining game and fish (Yamada 2001). Subsistence activities were accompanied by rituals addressing both safety and success. Before setting out, prayers were offered to the *kamuy*, especially to *Fuchi*, the fire goddess (Ölschleger 1999). Hunters carried *inaw-kike*, curled wood shavings used for protection from harmful forces (Munro 1962). Animals were treated with care during and after the hunt to ensure their continued return to the human world. By the early twentieth century, these practices had largely ceased due to legal restrictions and the decline of key species such as the Sika deer following Japanese commercial hunting. Since the 1970s, some have been revived through efforts to sustain Ainu traditions (Ölschleger 1999).

While ceremonial shamanism declined earlier in Hokkaido, Sakhalin Ainu communities continued these practices into the twentieth century (Wada 1999). Sakhalin shamanism followed patterns seen in neighbouring regions. In one story, *Samaikur*³² travels through layered parallel worlds to retrieve a stolen spirit, aided by guardian beings. In a shamanistic rite or *tusu* ceremony, shamans became possessed by spirits who transmitted messages from deities or ancestors. The hearth goddess served as the link between the shaman and these spirits (Ohnuki-Tierney 1973b; Wada 1999). Séances were held in dark interiors and involved drumming, chanting, dancing and sound-making tools such as chains and carved sticks. They were conducted by a shaman in a state of ecstasy, the so-called shamanistic trance. Intoxicating drinks were also used. These practices align with those found in Siberia (Wada 1999).

Shamans were recognised after childhood illness, understood as a sign of selection. Their work included healing, protective rituals and public ceremonies. Piłsudski recorded that most Sakhalin shamans were men, whereas in Hokkaido the role was usually held by women. Wooden figures called *nipopo* (wooden babies), dressed in red or blue cloth and sacred shavings, were made to protect children or address illness (Wada 1999). Although shamanic traditions in Hokkaido were shaped by different conditions, Sakhalin records preserve detailed examples of practices concerned with health, animal relations and the use of materials in daily life.

3.14 Funeral Rituals

Clothing shaped the transition between life and death. As seen earlier, garments connected humans with the beings who sustained them; here, the use of clothing at the end of life demonstrates the continuation of that relationship. Ainu accounts describe death as a change of dwelling rather than an end. The dead continue to exist in a world that mirrors this one. To prevent hardship after burial, clothing and tools are placed with the deceased (Yamada 2001). The corpse is washed and dressed with care and funerary duties follow kinship lines. Women prepare female relatives, while

32 Ainu oral narratives include the motif of ‘wandering in the other world’, in which the hero *Samaikur* travels through a multilayered spirit realm to recover the soul of a goddess abducted by an evil spirit. His journey is undertaken by riding a cradle (*sinta*), comparable to the symbolic flight of Siberian shamans using drums and the story follows a sequence of struggles in which the hero confronts various enemies with the aid of protective spirits. See Wada 1999.

Figure 110 Kakizaki Hakyō.
Portrait of Ishu Retsuzō. Musée
des Beaux-Arts et d'Archéologie,
Besançon, France

卜羅弼

託子萬末扇部丁雙子萬乙面長





men or close paternal kin dress male bodies. Clothing is reversed to mark separation from ordinary life and to assist the soul's departure. Each woman is expected to keep a spare girdle³³ (*kut*) ready for burial, without which her soul cannot approach the ancestral spirits (Munro 1979).

Some households kept clothing made specifically for burial. Women wove attush for this purpose, or prepared fish skin robes. Later, cotton and Chinese fabrics acquired through trade were also set aside. Clean garments were essential for the journey to join ancestral spirits. Clothes worn by a dead person were avoided by the living because of fear and misfortune associated with their former wearer. Bright colours were excluded, a *kaparamip* ('thin clothes'), with white stitching was preferred and two robes were arranged with one turned inside out to remove all trace of the past, a configuration not used in daily life (Munro 1979).

Grave goods were selected according to gender. Men received weapons, fishing gear, clothing, tobacco pipes, knives and hunting utensils [fig. 111]. Tools for tobacco and fire, bowls, trays, pipe and tinder equipment, were placed by the head, while weapons and clothes lay near the feet. Women were buried with weaving tools, clothing, needles and thread, spoons, ladles and adornments. All items were broken before burial to release their *ramat* (soul/spirit), freeing the spirit of the object to accompany the spirit of its owner (Montandon 1937; Yamada 2001). Materials scarce in life, iron, beads and imported clothes, were still cut, bent, or chipped before they left the house (Munro 1979).

The production and destruction of garments at death indicate that everything possesses its own spirit and can serve its person after death. Death results from harm to the body, yet the spirit endures. Clothing is 'killed' by cutting the garment down the back, as the spine is regarded as the seat of life. Shoes, leggings and working clothes are also provided, with burial assemblages evidencing the strength of ancestral obligations. Where an elderly woman had been the primary resident of a home, dwellings were historically burned so that she would not arrive without shelter. By Munro's time, small-scaled models replaced this older practice (1979). Dreams confirmed the continued presence of the dead. Spirits were thought to appear during sleep, showing that life persisted in another place (Montandon 1937).

After funerals, the surviving spouse altered their clothing temporarily as a means of disguise before returning to ordinary dress. Widows wore a weeping cap of black cloth for several months (Munro 1979). These practices show a careful handling of presence and absence through everyday materials. Together these accounts demonstrate that clothing provided companionship into death, protective structure for the deceased and materials through which obligations were fulfilled across worlds. Garments remained active participants until burial, when they were transferred to sustain the person, they had accompanied in life.

33 Ainu women wore a hidden girdle (upsor *kut*) beneath their clothing, marking matrilineal affiliation. It remained in place during intercourse and served to prohibit relations with men whose mothers wore the same type.



Figure 111 Hata no Awagimaru, Ainu with his hunting implements. Ezoshima Kikan. 1799. Japanese Rare Book Collection, Library of Congress, Washington, D.C., USA

3.15 Fish Skin Tradition Today

By the mid-twentieth century, Ainu clothing production shifted away from materials gathered directly from their lands and waters. The use of bark fibre, animal hides and salmon skins gave way to cotton and silk supplied through trade. Hand-processed fibres and bast-derived threads were gradually replaced by imported alternatives. International museum collections reflect this change. After World War II, garments made solely from bast fibres or fish skin became rare (Tsuda 2014b). The replacement of skin garments with cotton garments stitched using imported materials was linked to broader transformations under industrialisation (Dubreuil 1999).

Despite this disruption, clothing retains narratives tied to specific makers, places and practice (Tenri Gallery Exhibition 1983). Shifts in production during the nineteenth century were driven by increased movement within and beyond Ainu territories and by a growing market for Ainu garments among *Wajin* buyers. This encouraged the making and circulation of bast-fibre clothing into the early Meiji years (1869-79). Much of what survives entered museum collections in Japan, Europe and North America during this period (Tsuda 2014b).

The revival of fish skin clothing is more recent. While salmon skin is now introduced in educational workshops, *attush* manufacture continued throughout the twentieth century and provides both income and continuation of bark-fibre knowledge today (Dubreuil 2002). The broader resurgence of Ainu textile practice began in the 1980s and 1990s, led by women including Shizue Ukaji, Eiko Ota, Kayoko Nishida, Sanae Ueda, Nobuko Tsuda and Yasuko Uetake. Through study of historical garments, museum collections, photographs and conversations with elderly Ainu women (*huci*), they restored sewing methods and embroidery patterns, teaching workshops and publishing books to support knowledge transfer. Ukaji developed Ainu folk tales embroidered on cloth (*kofu-e*), while Tsuda's museum-based work has documented sewing, basketry and braid construction (TRC 2017). Contemporary makers frame the recreation of ancestral garments as a process of learning through making, a practice that forms memory in the hands. Producing a garment as it was made historically is viewed as a continuation of values established by earlier artists (Lewallen 2016).

During my recent fieldwork, Reiko Kayano, one of the last elm-bark weavers (Palomino 2025c), described to my team of Arctic Native Elders the collaboration with Nanai artist Anatol Donkan in 1979 to produce a Sakhalin fish skin robe replica for the opening of the National Museum of Ethnology in Osaka. Because the museum held few Ainu objects, the robe was specially commissioned.

Although not Ainu, Shigehiro Takano has devoted much of his life to supporting Ainu culture. After travelling from Tokyo to Hokkaido as a young man, he settled in Nibutani with his wife and began studying traditional practices. Together they mastered more than 200 of the over 400 Ainu crafts documented by Shigeru Kayano. During a workshop held for my Japanese students in 2018, he demonstrated the making of salmon skin boots, while his wife Keiko taught how to prepare laces from fibres of the red berry vine *Tsurume-modoki* (Palomino 2022).

Tsuda has re-established techniques for salmon skin footwear by drawing on a 1988 recording of Kato Katsuyo in Teshikaga. She emphasises digital documentation as vital for sustaining transmission between generations

(Tsuda 2018). Workshops at the Sapporo Salmon Museum now teach salmon skin shoe making using fish processed for roe, linking material handling with Ainu histories of salmon use. The return of salmon skin garments, despite their rarity, marks renewed engagement with ancestral creativity. While Ainu historically possessed few goods valued as luxuries by *Wajin* and Western observers, skilled work sustained quality of life even in challenging circumstances. Elders carried knowledge forward and present artists continue to maintain, revive and innovate within this lineage (Dubreuil 2002). Tsuda has further proposed a method for reading Ainu clothing beyond its surface patterns. Garments are viewed as records of economic conditions, technical choices and individual artistry across Sakhalin, Hokkaido and the Kuril Islands. Every stitch traces relations between the maker and wearer. By analysing textiles in museums and *Ainu-e* from the eighteenth to twentieth centuries, she seeks to restore social histories to works long separated from their communities. Her approach supports reproduction as restitution, providing artists with means to renew practice where original garments remain in museum storage (Lewallen 2014).

This revival prioritises engagement with ancestral technique. Artists argue that forms and processes, including specific materials and stitching paths, must be experienced physically to retain their intent. Somatic learning is seen as necessary before creative variation can take place (Lewallen 2016). For Ainu scholar Chisato Dubreuil, although discrimination disrupted knowledge transfer, she draws on *Ainu-e* and museum holdings to rebuild practice across many fields (Dubreuil 2004). Contemporary makers describe their work as guided by affection for ancestors who created garments under restrictive conditions, with limited tools and by lamplight. Designs once valued as protective continue to convey care. Even where ideas of *ramat* (spirit) may be interpreted differently today, garments are still regarded as holding the thoughts of their makers (Lewallen 2016). Clothing and adornment strengthen community connection, shaped by prayers as well as technical skill (Tsuda 2018).

3.16 Conclusions

Ainu understandings of their environment frame plants, fish, birds and land animals as arriving from *Kamuy-mosir* to *Ainu-mosir* with purpose. These beings provide food, fuel, tools, housing and clothing and their presence is acknowledged through stories and protocols of use. Within Ainu cosmology, deities and humans are alike yet positioned differently: nature deities take human form in their own realm and appear as plants or animals in this one, while people become deities after death. This characterises continuities between human conduct, environmental use and relations with other living beings. Such ideas are consistent with northern hunting societies across Siberia and Alaska indicating shared histories of subsistence and environmental knowledge.

Material change accelerated in the eighteenth century. Cotton imported from China and Japan replaced bark fibre and fish skin as the principal clothing material, allowing new sewing methods and larger appliqué surfaces. Patterns on Ainu garments articulate protective ties to place rather than borrowing from Chinese ornament and Ainu female artists and scholars continue research to support museum interpretation for future generations.

Ainu livelihoods based on salmon fishing were reinterpreted during Japanese expansion in Hokkaidō, Sakhalin and the Kurils as economically 'primitive'. Yet environmental scholarship now recognises the sustainability of non-agricultural subsistence practices. Museum collections and oral histories show that textile techniques evolved through integration of new resources without severing inherited skills. While cotton changed garment surfaces, the knowledge required for clothing production remained grounded in relationships with land and water.

Textile making has long been gendered labour through which care is shown to family members. Contemporary makers approach garment production as a continuation of ancestral work grounded in inherited knowledge. Protective motifs, construction choices and repair practices transmit knowledge across generations. Fish skin clothing holds traces of the environments and hands that shaped it. These garments show how salmon were used beyond food and how skins taken from seasonal catches became weather-resistant dress. Wear patterns, patching and reuse record the lifespans of both garment and wearer. Lightweight seams, watertight structure and conservation of scraps reflect a material economy attentive to environmental limits. This circular system, where skins, bark fibre and imported cloth were repaired, repurposed and passed on, presents a historical example of regenerative design. Fish skin required labour and care and garments were valued through long use and inheritance. Such approaches contrast with extractive industrial production and point toward practices that keep materials in use across multiple cycles.

Concluding Remarks

The relationship between humans and fish has a long history and a fish skin culture emerged as a result. Across different periods, Amur River Native Peoples used the materials available in their immediate environments, making careful use of animal remains. Animal skins were transformed into garments to provide body warmth and into containers for food preservation.

This book has explored the role of fish and fish by-products in the material culture of Native communities from the Amur River via Hokkaido to Sakhalin Island, highlighting how fish skin was crafted into clothing, footwear, storage items, tents and window coverings, drawing on its breathability, insulation and translucency. Fish remains, including bones, bladders and oils, were made into tools, adhesives, organic tanning agents and adornments. Fish skin technologies document Indigenous responses to environmental demands, colonial disruption and material abundance across the Circumpolar North.

Fish skin garment making relied on a gendered partnership. Men supplied fish and tools while women could independently catch fish, process skins and construct garments. Tools carefully produced by men were used by women over a lifetime. Sewing skills were transmitted through female kinship lines and were essential to survival, mobility and household stability. Garments were tailored to the wearer, adapted to weather conditions and designed for repair and reuse. Fish skin belongings also structured social identity. Garment shapes and embellishments signalled age, gender and group affiliation, operating as visible expressions of kinship, labour and continuity.

Despite their shared reliance on fish skin as a primary material, the Ainu, Hezhe, Nivkh and Nanai developed different traditions of fish skin processing, garment construction and decoration. The fish species selected

varied according to local environments and cultural practices. Nivkh and Nanai makers used female salmon, whitened carp and pike, while the Hezhe relied primarily on northern cold-water fish species and the Ainu on river and lake fish including humpback salmon, chum salmon, hucho salmon and Sakhalin taimen. Processing methods also differed. Nivkh and Nanai tanners prepared skins using pounding and kneading techniques. The Hezhe used cornmeal to absorb fish oils and soften skins, while Ainu makers smoked salmon skins during the preparation of footwear.

Garment shapes reveal different histories of exchange and adaptation. Nivkh and Nanai fish skin robes followed a Manchu-inspired T-cut design with a wide overlapping front panel opening on the right side, while Hezhe garments, consisting of a jacket and trousers, reflected Han Chinese dress styles. Ainu fish skin robes incorporated wide kimono-like sleeves connected with Japanese attire. Fish skin accessories also varied. Nivkh and Nanai boots featured curved pleated toes and characteristic Y- or T-shaped heel seams, Hezhe boots were ankle-length and loosely shaped, and Ainu salmon skin boots retained the dorsal fin to improve traction on snow and reinforce the structure of the sole. Nivkh and Nanai artists produced fire-making pouches from Sakhalin sturgeon skin to carry flint lighters and other tools, while the Ainu used salmon skin for similar objects. Fish skin painting, however, is documented only among the Hezhe.

Decorative practices likewise differed. Nivkh and Nanai garments incorporated appliqué, embroidery and painting in blue, black and red, making them the only groups to develop a polychrome fish skin tradition. Motifs included spirals, scrolls and animal forms. A black-painted border running along the hem, neck, front overlap panel and sleeves was placed to protect the wearer by sealing openings through which harmful forces might enter. Hezhe garments employed tone-on-tone fish skin decoration, with motifs of mountains, waves, clouds and animals such as lizards, hedgehogs and wild pigs placed along collars, plackets and cuffs. Shells, bronze bells and fish skin fastenings further embellished garments and footwear. Sakhalin Ainu garments incorporated embroidered double-thread braids positioned along the back for protection and marking boundaries between different realms. Across all three traditions, decoration served practical, social and protective functions alongside visual ornamentation.

These variations demonstrate how a shared fish skin technology developed into regional traditions shaped by ecology, exchange and cultural practice. While all four groups relied on fish skin as a primary material, they differed in the fish species selected, processing methods, garment construction, decorative styles and protective symbolism associated with dress.

Amur River Peoples experienced sustained colonial intervention from the eighteenth century onwards, beginning with the ruling dynasties and followed by traders, missionaries and state administrations. Russian, Chinese and Japanese authorities suppressed Indigenous shamanic practices, banned animal skin clothing and imposed new borders that fragmented Native communities and economies. Colonial authorities restricted Indigenous access to fishing grounds and enforced labour regimes, affecting Ainu, Hezhe, Nivkh and Nanai communities in the late nineteenth century. These policies disrupted subsistence economies yet did not erase fish-based technologies, which continued under altered conditions. Despite these pressures, Native communities adapted by incorporating traded materials, adopting technologies and maintaining cultural practices through art.

The geopolitical division of the Amur River continues to affect the livelihoods of local fishing communities. Chinese and Hezhe fishers are confined to the southern bank of the Amur River and the western bank of the Ussuri River, while Russian and Nanai fishers are restricted to the northern and eastern banks of the Amur. This division limits access to traditional fishing grounds and demonstrates how national borders continue to disrupt Indigenous fishing practices and cross-border cultural relationships. The history of fish skin garments presented in this book serves as a reminder that rivers, fish and knowledge move across political boundaries, linking communities across the region through shared fish skin heritage.

Museums collected fish skin artefacts through colonial expeditions, missionary activity and scientific research, separating objects from their makers and surroundings. Inter museum exchanges further dispersed collections. Recent collaborative practices have sought to reassess acquisition histories and support Indigenous interpretation and access. This research builds on such collaborations to document and sustain fish skin knowledge.

The crafting of garments from fish skin illustrates a form of material innovation that predates industrial outerwear materials. This practice demonstrates the ecological knowledge and resourceful use of local materials, an economy based on material sufficiency rather than excess, with clear relevance to current sustainability debates in the fashion sector. The process of tanning fish skin with fish oil, without the use of harsh chemicals such as chrome, aligns with modern efforts to reduce toxic waste in leather production. In recent years, fashion designers and material researchers have increasingly turned to fish leather and other bio-based materials as alternatives to petroleum-based synthetics. These practices form part of a living cultural heritage as expressions of Indigenous worldviews.

Materials carry meaning and agency, and material connections were also part of the legacy of the Hezhe, Nivkh, Nanai and Ainu world, across Asia. Their methods for harvesting and preserving fish resources, their understanding of the seasonal movements of fish was part of their local ecological knowledge, a valuable resource for today's researchers and wider society. Traditional knowledge has ensured that fish are harvested to support ecosystem health. The sustainability of these practices reflects long-standing cultural practices. As the fashion industry confronts the limits of globalised production and the environmental cost of fast fashion, fish skin offers a culturally specific model of material use that is efficient, ethical and enduring. By attending to the knowledge of the use of fish skin and other by-products, as well as the cultural values that shape their transformation, this book contributes to rethinking contemporary anthropology and sustainable fashion as fields that must draw on Indigenous histories of care and ecological balance.

The Fish Skin Road

Mapping Indigenous Knowledge from the Lower Amur River
to Sakhalin Island

Elisa Palomino

Glossary

Ainu

Ainu Mosir The world of humans, including Hokkaido and southern Sakhalin.

akumi Early animal-based dress made of fish skin.

attush Textile garment woven from elm bark fibres.

atuy-or-un-cep Returning salmon visible offshore (fish in the sea).

ca Male salmon.

cep Salmon.

cep-ker (cep-keri) Fish skin shoes.

cinru Gourd-shaped snowshoes made of thick rope worn over boots.

cipor-se-ceppo Newly hatched salmon carrying yolk sacs.

cise Ainu house.

cukcep Autumn salmon or cukipe (autumn food) in the Saru dialect.

emko Traditional unit of body measurement equal to half an ik.

etupirka Tufted puffin seabird.

Fuchi Fire goddess.

Hasinaw-uk Kamuy Goddess of Hunting and Fishing.

heru-ran Salmon with shining scales.

huci Elder Ainu woman.

ik Unit of body measurement based on the middle joint of the index finger.

ikupasuy Carved prayer stick.

ikuspe-tuye-p Male salmon preparing spawning grounds.

inaw Sacred shaved wooden sticks used in ritual practice.

inaw-kike Curled wood shavings carved from ritual sticks used in Ainu ceremonies.

isapakikni Sacred stick used during the first salmon caught at the start of the migration season.

kaeka Thread used for sewing and lacing made from plant fibres.

kagarinui Traditional whip-stitch sewing technique suitable for garments made from skins.

kamuy-cep First salmon caught during the migration season (deity-fish).

kamuy mosir Realm of the deities.

kamuy yukar Traditional Ainu narrative chants recounting the deeds of deities and spirits.

- kaniku** Sealskin belt worn by Sakhalin Ainu women to fasten their garments and carry sewing tools.
- kaparamip** Thin burial garment.
- karop** Pouch used to carry smoking and fire-making equipment.
- kerá** Straw or grass rain robe.
- keromun** Dune grass used as boot lining in Ainu footwear.
- kofu-e** Ainu folk tales embroidered on cloth.
- Korutkekke** Ainu term for the Nanai (Goldi) people.
- kotan** Ainu settlement.
- kotan korkuru** Ainu settlement chief..
- Koushi Ainu** Ainu inhabitants of the Kuril Islands.
- kunnep** Reddish shade produced on bark fibre using a decoction of oak and iron-rich marsh water.
- kut** Girdle prepared by Ainu women for burial, required for the soul to approach the ancestral spirits.
- mata-cep** Winter salmon.
- mo** Small salmon (child).
- mo-wo** Unit of body measurement between thumb and index finger.
- mose-kar-pe** Female salmon preparing spawning grounds.
- naminui** Running stitch sewing technique suitable for garments made from skins.
- nipopo** Wooden figure made to protect children and ward off illness.
- nuitori** Abstract cloth appliqué tradition influenced by the appearance of salmon skin.
- os** Female salmon.
- oyshiru-cep** Post-spawning salmon.
- pakkay-ceppo** Juvenile salmon.
- para-tek** Unit of body measurement from middle fingertip to palm base.
- peteci-cep** Salmon displaying nuptial red spots along the sides.
- pet-or-un-cep** Salmon in freshwater rivers.
- piwci** Fire-making kit including a steel striker, a quartz and powdered wood mushroom tinder.
- pon** Small female salmon.
- poro** Large female salmon.
- ramat** Soul or spirit.
- rapuri** Early animal-based dress made of birdskin.
- rit** Sewing thread made from whale or seal sinew.
- ruunpe** Decorated cotton garment featuring embroidery and appliqué.
- Santan** Ainu term for the Ulchi people.
- shikabi** Decorated needle case carried at all times.
- si** Large male salmon (parent).
- sinta** Cradle used for carrying infants.
- si-wo** Unit of body measurement between thumb and middle finger.
- Sumarenkuru** Ainu term for the Nivkh (Gilyak) people.
- tanne tchiokap** Long fish skin boots used for fishing.
- tesma** Horseshoe-shaped rope snowshoes worn over boots.
- tetarabé** Nettle-fibre cloth produced in Sakhalin.
- tokoune tchiokap** Medium-height fish skin boots.
- tsurume-modoki** Vine used as a source of fibres for thread production.
- tusu** Shamanic ceremony involving communication with deities or ancestors through spirits.
- upsor kut** Hidden girdle signifying matrilineal affiliation and marriage restrictions.
- uri** Garments made from land animal hides.
- ûrou** Animal-skin garments from the Kuril Islands.
- Wajin** Japanese people.
- Wajinchi** Japanese lands.
- yukar** Traditional narrative chants.
- yukker** Deer skin shoes.

Japanese

- Ainu-e** Japanese paintings depicting Ainu people, customs and daily life.
- Ainu Shinpō** 2019 Japanese legislation supporting the promotion of Ainu culture.
- daimyō** Regional lords who governed domains under the authority of the Tokugawa shogunate.
- Ezo-nishiki** Qing dynasty silk garments that reached the Ainu through tribute and trade networks.
- Ezochi** Japanese term for Ainu lands.
- Karafuto** Japanese name for Sakhalin Island.
- sakoku** Tokugawa policy restricting foreign contact and overseas travel.
- sankin-kōtai** Tokugawa policy requiring daimyō to alternate residence between their domains and Edo.
- shintashaku** Body-based system of measurement using units such as arm span and hand length.
- Watari sima Yesso** Historical name for Hokkaido meaning ‘Crossing Island’.

Hezhe

- Anduri** Supreme spirit to whom prayers for food, guidance and visions are directed.
- Buni** Realm of the dead beneath the world of the living.
- gejikou** Wooden pressing device used to soften fish skins.
- iasak** Tribute paid in sable furs by Amur communities to Cossack authorities.
- muhe** Chinese term for the fish skin softening press.
- wula** Sedge grass used to stuff fish skin footwear.
- xike** Ritual fish skin garment constructed from overlapping strips resembling feathers.

Chinese

- Hei-chin, Ho-chê and Ho-chên** Historical Chinese transliterations of the ethnonym Hezhe.
- Mao min, Mo jin and Je-dso** Names used in early Chinese chronicles for the Ainu.
- yupi dazi** Term meaning ‘Fish Skin Tartars’ used to refer to the Hezhe with derogatory connotations.

Nivkh and Nanai

- Buni** World of the dead.
- dele** Loom used in fish skin processing.
- fanja** Soul of the dead that joins the collective realm of the clan’s ancestors.
- girsu** Specialised knife used in fish skin preparation.
- hudèn** Processing board used for fish skins.
- iasak** Tribute paid in sable furs to Russian authorities in Siberia and the Russian Far East.
- ketapoutine** Seasonal festival held when autumn rivers were filled with spawning salmon.
- khairga** Wooden softening tool with a hollow centre.
- kherte** Nanai wolf-fish skin garments worn during bad weather.
- kumza** A spotted variety of salmon (*Salmo trutta*) used for children’s garments.
- kungku** Rounded wooden hammer used for pounding fish skins.
- mudur** A dragon spirit associated with lightning, revered in the Amur region as a protective force.
- omi** Soul awaiting birth that resides on the clan tree until the beginning of a pregnancy.
- pondo** Fish skin shoes acquired by neighbouring groups.
- uksu** Wooden platform used during fish skin softening.

uksuki Shadow of the living body that remains with a person during life and disappears after death.

Temu Master spirit of aquatic domain.

yukola Dried fish prepared for storage and as dog food.

Russian

trutnitsa Pouch used to carry fire-making implements, including flint, tinder and birch fungus.

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- 48 Studio photograph of Henry Lansdell wearing a Nanai fish skin coat and a belt with a sturgeon tobacco pouch. *Through Siberia*. 1882. Leiden University Libraries Special Collections, Leiden, Netherlands
- 49 Negidal fish skin, reindeer and birdskin bag. Late nineteenth century. Accession no. 2003-43-34. Siberia. Penn Museum, Philadelphia, USA
- 50 Pyotr P. Shimkevich, A Shaman's tools. 1896. Accession no. CC BY-NC-SA 4.0. Amur River, Siberia. Berlin State Museums, Ethnological Museum, Berlin, Germany
- 51 Leopold von Schrenck, A shaman treating a sick woman. *Reisen und Forschungen im Amur Lande*. 1881. Leiden University Libraries Special Collections, Leiden, Netherlands
- 52 Owen Lattimore, Hezhe in a canoe, along the edge of the Sungari River surrounded by tall grass. Accession no. 2010.5.35777. © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, Massachusetts, USA
- 53 Jean-Baptiste Bourguignon D'Anville, map of China and Central Asia for du Halde's *Description géographique de la Chine*, the first geographic survey of the entire Chinese Empire by a team of French Jesuits. 1734. Leiden University Libraries Special Collections, Leiden, Netherlands
- 54 V. V. Lanin, Shaved Hezhe. Album Amur and the Ussuri Region. Vol. 3. 1875-1876. Imperial Public Library in St. Petersburg, Russia
- 55 Hezhe family in traditional costumes. Amur River basin. Russian Ethnographical Museum. REM, Saint Petersburg, Russia
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List of Abbreviations

- AMNH** American Museum of Natural History. New York, USA
- ASC** Smithsonian Institution Arctic Studies Center, Washington DC, USA
- DIA** The Detroit Institute of Arts, Detroit, Michigan, USA
- FIELD** Field Museum of Natural History, Chicago, Illinois, USA
- HUNHM** Botanic Garden and Museum Field Science Center, Hokkaido University, Sapporo, Hokkaido, Japan
- LOC** Library of Congress, Washington, DC, USA
- NMNH** Smithsonian National Museum of Natural History. Washington DC, USA
- NMAI** Smithsonian National Museum of American Indian. Washington DC, USA
- PENN** The University of Pennsylvania Museum of Archaeology and Anthropology, Penn Museum, Philadelphia, USA.
- PEM** Peabody Essex Museum. Salem, Massachusetts, USA
- REM** Russian Ethnographical Museum. Saint Petersburg, Russia
- V&A** Victoria and Albert Museum. London, UK

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Marco Polo

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This book is an anthropological study of the fish skin culture of the Hezhe, Nanai, Nivkh and Ainu Indigenous Peoples of Northeast Asia, from the Amur River basin to the islands of Hokkaido and Sakhalin. It also serves as a critique of modern civilisation. Drawing on meticulous fieldwork and a careful study of previous ethnographies, the author systematically describes the fish species used, the processing, tanning, dyeing and sewing methods employed to produce garments, footwear and containers and the worldviews connected with these practices. Today, these Indigenous communities are working to restore rights violated by modern states and reclaim their identity and revitalise their unique culture. The revival and contemporary application of fish skin can serve as a starting point for these efforts. The book is recommended for anthropologists, sociologists, museum researchers specialising in Indigenous Peoples and anyone interested in human life, clothing and material culture.

Elisa Palomino is Research Associate at the Smithsonian Arctic Studies Center. She has worked for over three decades across sustainable fashion, higher education and Arctic anthropology. After twenty-five years in the international luxury fashion industry, designing for John Galliano, Christian Dior, Moschino and her own label, she directed the Fashion Print programme at Central Saint Martins, University of the Arts London, for ten years. Her research examines Indigenous knowledge, material culture, fashion, heritage and sustainability in Arctic societies. She has led European research projects, including Horizon 2020 FishSkin, and held fellowships at the Smithsonian Arctic Studies Center (Fulbright), the Library of Congress, Ca' Foscari University of Venice, the Max Planck Institute for the History of Science, Fondazione Giorgio Cini, the Kunsthistorisches Institut in Florenz, Koç University ANAMED and the International Institute for Asian Studies, Leiden University.



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