

Photography, Plants, and Care in a Changing Arctic

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Elin Haugdal, UiT The Arctic University of Norway

Abstract

This article develops a theoretical analogy between photography and plants, engaging with contemporary ideas on care in a more-than-human world. The analysis is based on a selection of vernacular archival images from the Svalbard region, captured by temporary settlers in the mining towns between the 1920s and 1980s, now housed in the Arctic archives and made digital available to everyone. In the High Arctic, both plants and humans live under sparse climatic and social conditions, exacerbated by the pressures of modern extraction of natural and human resources. Despite these pressures, photographs bear witness to the relationships of care established by humans and plants. The article is influenced by Joanna Zylińska's theories on posthuman photography and 'fluid archive', and engages with María Puig de la Bellacasa's concept of care, exploring its ambiguity. The photographs in the Arctic archives raise ethical considerations, particularly regarding human exploitation and domination, the troubling legacy of colonialism, and the collapse of ecosystems. The notion of *natureculture*, and proposed parallels between the lives of plants and photography, contribute to the speculation about a future Arctic with migration of plants and peoples, and of the transforming of life forms.

Keywords

Plant photography. Vernacular photography. Svalbard. Arctic Archives. Care. Natureculture

In my search for photographs of the coal extraction in Svalbard, situated around 78 degrees north, I came across some vernacular photographs which render plants in varied settings. These 'green' motifs in the world's northernmost archives stood in great contrast to the established imagery of this part of the High Arctic, be it the heroic explorer crossing remote white glaciers, or the hard working coal-black miners smiling at the photographer.¹ More precisely, the photographs that started attracting my attention expose plants, people, and habitats entangled in various relations of care, relations that seem both vulnerable, staged, gendered, and social beyond the human. As most of these photographs are put in the archival ground, I wonder what happens if we let them sprout anew?²

This article considers photography as a living organism parallel to plants, as both photographs and plants are *natureculture*, mutually reinforced when brought together.³ From the very beginning of modern photographic history there is a close material relation of plants and photography which invites us to cultivate their entanglement on a more than just speculative level. Despite the obvious analogy of being given existence by light, photography and plants for a long time did share chemical processes. Also, the physiognomy, the surface quality, of both plants and of photography is determining for identity and type. As physical entities they are vulnerable and ephemeral, easily destroyed by external forces, or kept alive through correct climate, conditions and care. Not least, singular pictures, as individual plants, are dependent on their communities to survive. Out of these commons grow my main concern: how plants and photography are entangled, how they are entangled through human care, and even in a society beyond human.⁴ This concern is foregrounded in the High Arctic where plants and people are sparse and live under marginal conditions. However, they are also transferable to other vulnerable situations in the need of environmental care.

From my first curious interest in these odd motifs in the Arctic archives, I have through years collected photographs which in some way or another make us aware of human-plant-relations in Svalbard. These photographs were captured by temporary settlers in the Norwegian, Swedish, and Soviet company towns in Svalbard between the 1920s and 1980s, a period largely dominated by the mining industry. Photography evidently supported the colonisation of this remote part of the world as a tool for discovery, annexation, exploitation, and cultural maintenance. However, photography also opposes this rationale. An increasing number of individuals during this time period used their own cameras and trained their 'photographic eye' to observe and depict details in the environment and everyday life, herein the lives of plants.⁵

As my interests in this topic evolved into research, I have delved further into available Arctic photo collections and conducted strategic keyword searches for pictures tagged with ‘flora’, ‘flower’, ‘plant’, ‘greenery’, ‘nature’. However, keywords and terminology used to identify and describe images reflect human interests and historical scopes, and, in many cases overlook more-than-human presence and agency. I have overcome such barriers in my image searches by doing extensive browsing in the photo collections.⁶

Questions of Care

These photographic images of people and plants recorded on Svalbard are evidently embedded within a network of care. I propagate varied agents in this network, be it the photographer, the humans, the plant, the picture, the apparatus, the archive, the viewer of the photography. Further, they are entangled in various situations of care: The image may depict care in human interactions with plants, expose varied practices of care-taking, or tell us about the photographer’s act of caring in the very process of recording. The picture itself may be cared for through technological or material means, and by institutional care, such as in archival storage, digitisation processes, and exhibitions. This endeavour aims to implant historical images, long hidden or not attended to, into contemporary situations, and to foreground relationships of care in a vulnerable more-than-human world. In a posthuman perspective, the question can even be raised of the self-care and self-archiving of plant and photography, beyond human interests and control.

My understanding of care is influenced by María Puig de la Bellacasa and her ‘natureculture thinking’ in *Matters of Care. Speculative Ethics in More Than Human Worlds*. Care is a key concept in recognizing the interconnectedness of humans, non-humans, and the environment. In this study of photography and plants, I find Puig de la Bellacasa’s profound arguments important: Care is not solely the agency of humans but is distributed to organic life (such as plant and soil) as well as to technical artifacts (such as the camera or the film). According to her theories, it is meaningless to ‘*separate* the entangled worlds of *bios* and *techne*’.⁷ On a deep ontological level, we all share the same matter, we all have agency, and thus participate in concrete practices of ‘world-making’ – be it vegetal growth, photography, or archiving.

Seen through the lens of *Matters of Care*, the photographs presented in this article reinforce care as a vital force that maintains life. However, Puig de la Bellacasa attends to the ambivalences of the concept.⁸ Care is understood as a condition, as a state of being that we all are into. At the same time, care is active, something that is done, a practice. Further, care is

relational, but since in care not ‘every giving involves taking, nor every taking will involve giving’, care often troubles reciprocity.⁹ Thus, she gives attention to the non-innocent and non-neutral aspects of care.

Puig de la Bellacasa has provided me with critical perspectives that reveal care as intertwined with power dynamics such as of paternalism, anthropocentrism and colonialism, which is highly observable in Svalbard – an area on Earth belonging to more-than-humans, not to humans. Settlers have intervened in the existing ecosystem, bringing with them a human-oriented approach to care that has often resulted in ecological imbalances. In the High Arctic, care is needed and occurs in vulnerable situations and often in uneven relationship, where care for humans has come at the expense of other life forms.

Rather than prescribing a particular way of caring, Puig de la Bellacasa questions care, exploring its ambivalences in theory and practice and its potential for ‘speculative ethics in more than human worlds’. To her, every distinct situation involves different practices and experiences of care. Accordingly, my focus on distinct photographic situations, as concrete practices of world-making, is a method to recognise and question care.

Fluid Archive

Joanna Zylinska’s *Nonhuman Photography* shifted my focus from the humans to the plants. Her thinking has encouraged me to understand the photographic image as a medium and a process existing in a dynamic set of entangled relations. Moreover, Zylinska considers photography to be a medium of life, a ‘life shaping force’.¹⁰ Combined with her understanding of the archival practices in the digital age, the photographs in this study are to be considered in different stages of growth or change. In the digital age, where photographs can be endlessly replicated, altered, and disseminated, Zylinska argues that traditional notions of the archive as a static repository of fixed cultural artifacts no longer hold.¹¹ Instead, she suggests that the archive is fluid, constantly in flux, and subject to ongoing reinterpretation and recontextualization. This fluidity challenges the idea of a singular, authoritative historical narrative and opens up possibilities for new forms of engagement with the photographic material.



Fig. 1: Arctic Mouse-ear. *Cerastium arcticum*, Autochrome/ Giclée print photo. Photo: Hanna Resvoll-Holmsen (1908), reprinted in Ulla Schildt, *Flowers from Svalbard*. Exhibition, Bærum kunsthall (2020)

Three photographs capturing plants at different stages in their existence – blooming, withered, and petrified – illustrate the concept of a ‘fluid archive’. Despite originating from very different contexts and emerging from dissimilar photographic processes and media, these images are now digitised and disseminated with Svalbard as their origin. While they may not fully align with Zylinska's notion of ‘posthuman photography’, these images focus on the plants themselves and decentre the human agency. Thus, they complement the main images chosen for this study, which more directly depict the relationships between plants and people.

The first is a botanical photograph, and actually one of the earliest colour photographs ever recorded on Svalbard, made by the female botanist Hanna Resvoll-Holmsen in 1908 (fig.

1). She used the autochrome technique the very year after it was commercialised.¹² On her autochrome glass of coloured starch potato grains, a cluster of the quite common flower Arctic Mouse-ear (*Cerastium arcticum*) were exposed. Thus, Resvoll-Holmsen's colour photograph inscribes the flowers on this remote archipelago in the history of photography, as well as in the history of biology. One of her glass positives was reproduced and recontextualised in the exhibition *Flowers from Svalbard* in 2020 as a tribute, and as a practice of care of photography and plant in art.¹³

The second photograph shows a withered potted plant inside a house in Pyramiden. This former Soviet mining town in Svalbard was abandoned in 1998. The plant has climbed a tiled wall, helped by the inhabitants' arrangement of pins and strips of tape (fig. 2). The withered plant had been hanging here in this common room for almost twenty years when photographed in 2019 by The Norwegian Polar Institute, watermarked with their emblem, and incorporated in the Polar archive as a digital file. Through this documentary recording act and the archival care-taking, the plant is preserved as a witness of former life in the mining community, and as a sign of care both for the inhabitants' well-being and for the plant itself.



Fig. 2: Pyramiden, Svalbard 2019. Photo: Ann Kristin Balto, Norwegian Polar Institute, Tromsø.

The third photograph is a digitised closeup of a petrified plant found in the Longyear Valley in Svalbard (fig.3). It was taken by Herta Grøndal half a century ago, and the 'original' imprint is from the geological time when Svalbard was tropic zone, and probably is fossilized leaves from a primeval tree (*Metasequoia*, in the cypress family) which in the Tertiary was

widespread over the northern hemisphere as far north as Svalbard.¹⁴ In my last section, I will return to these three photographs in their temporality and changing conditions of care.



Fig. 3. Photo: Fossil, Svalbard. Probably 1960s or 70s. Herta Grøndal, The Arctic University Museum of Norway / The Lampert Archive, tsnd 42345.

The Poppies in the Photograph

Svalbard is the northernmost habitable area on Earth, both for plants and for humans. The archipelago is dominated by mountainous terrain covered with glaciers, and less than ten percent of the total land area has biological productivity of any importance. Low temperatures and permafrost, the three months long polar night with complete darkness, and the equally long period of midnight sun, has resulted in a specially adapted fauna and flora. There is no

indigenous human population on Svalbard.¹⁵ The humans entered the Arctic ecosystem at the beginning of the 17th Century and set the stage for ruthless exploitation of available resources at sea and on land, of animals and raw materials. During the 20th Century the Svalbard Archipelago came to host the northernmost coal mines in the world, and for over a hundred years and until recently (2023), coal mining from deep inside the mountains has been the main industry.

In the mid 1920s, a decade that saw immense extraction and colonisation, the sensitivity to environmental protection seems to have been left to individual concern. One person working for protection was Hanna Resvoll-Holmsen, through her research, writing and photography. Her comprehensive research on Svalbard's flora, and her work advocating for protecting nature, were instrumental to the first environmental law, The Norwegian Svalbard Act of 1925.



Fig. 4: Svalbard poppy in Svea, Svalbard. (Approximate date 1924-1925). Photo collection after Erik Andersson (1901–1994), Spånga, Stockholm. Svalbard Museum / SVF 27963.jpg.

Also, the miners seem to care for their environment, as evidenced by a few photographs in the Arctic archive. One photography is a black and white photograph of a man kneeling in front of a group of small flower plants, at first sight seemingly picking them (fig. 4). This

picture was taken in the coal mine settlement Svea. The material signs on this black-and-white paper copy of 6 x 4 cm, the scratch marks and dust from the reproduction, are evidence that someone has taken care of just *this* photographic object before it has been handed over to Svalbard Museum, digitised and tagged with the key words ‘nature’ and ‘flora’. The photographer’s perspective is from above, incorporating the kneeling man into the rocky ground. The small flowers are Svalbard poppies (*Papaver dahlianum*), a perennial species, with yellow or white flowers. Their habitat are places with rock and gravel, like here, outside the barracks in Svea. The Svalbard poppy is the flower plant that grows furthest north. This photograph inspired me to read long scientific articles on the differences of the *Papaver* species, learning that the species is weakly competitive and can only establish itself in places with low cover of other plants. Its blooming depends on the long period of midnight sun, and the poppy turns their heads towards the sun. In recent years the Svalbard Poppy has been protected and red-listed from human intervention. Yet, the reindeer and the birds still graze on it.

While the poppy is native, the man in the photograph is not. Most likely he came from Sweden and worked in Svea as a miner, as probably also the photographer did.¹⁶ Most of his time, the miner uses his sledgehammer to break coal deep inside the mountain. This outdoor situation, however, brings forth his vulnerability and his care – his protective handling of the poppy, with his bare hands, his leg bent in the soil, absorbed or transcorporeal in his doings. Is he digging up the poppy? Or is he gathering plants to arrange a kind of garden? The following accession number in Svalbard Museum’s collection is a closeup of a cluster of poppies, which can easily be interpreted as an effect of the former: a cluster of flowers in a bed as the result of the man’s digging in the soil and careful gathering of plants. How do photographs like these expose practices of care-taking?

In her chapter titled ‘Touching Visions’ in *Matters of Care*, Puig de la Bellacasa explores sensorial modes in caring practices and care thinking.¹⁷ She delves deeper into *touch* as a relational and reciprocal act, and as a mode of proximity and intimacy crucial in many care practices. The miner touching the flowers with his hands, and the proximity between the body and the soil, literally entangled, exemplifies a caring practice of tactility. The importance of touch as sensorial mode, rather than vision, is well known in gardening. However, touch is also a valuable quality in photography, as emphasised by scholars such as Elizabeth Edwards.¹⁸ We may wonder if the scratches on this photocopy from Svea are traces of repeated tactile interactions with the photograph as physical object.

Until the 1950s, the settlers living temporarily in Svalbard were mainly men of all ages separated from their native homes and families. We can speculate on their need to

establish a life that went beyond mere survival. Making kin with more-than-humans, such as the vernacular poppies in the photograph, appears to be a strategy of self-care. The miners, on their own hand, bring about care in their Svea-world, so that they ‘can live in it as well as possible’.¹⁹ The photographer, on the other hand, highlights details in their everyday life and bears witness to settler’s intimate environmental connections, which they attended to and cared for. Consequently, the recording situations themselves reveal practices of caretaking.

Healing Nasturtium

A couple of photographs from the same time and place, the 1920s in Svea, show a staged setting in contrast to the ‘outdoor absorption’ in the poppy picture. Inside the miner’s artificially lit living room there is a climbing and blooming nasturtium, a cress plant with light grey leaves and flowers rendered black by the orthochromatic film of that time (fig. 4). Another name for this plant is Indian cress, which testifies to global connections, as it was introduced to Europe in the 17th century from the Andes, from Bolivia north to Colombia. The nasturtium is described as a warm-weather annual plant or a short-lived perennial which does not tolerate frost. The miners put the large seed in a deep pot inside, and provides darkness during germination, followed by bright light, to let it grow and sprout as an exotic alien in Svalbard. The cress plant is cultivated as an ornamental plant for its attractive leaves and red or yellow flowers. However, most of the plant is also edible, and it has a lot of medicinal effects; amongst other it is used to heal wounds. Most important in this context is the use against scurvy, owing to its very high level of vitamin C. The fact that this deadly disease, which was very common on Svalbard during overwintering, is caused by a lack of vitamin C, became clear a year before this picture was shot.²⁰ The plant obviously is a sign of care – and a source of care – of health, well-being and healing. Despite the centrally placed plant body in the image, the keywords given by the Svalbard Museum to describe the photographic motif are highly anthropocentric: ‘Person. Adult. Male’.

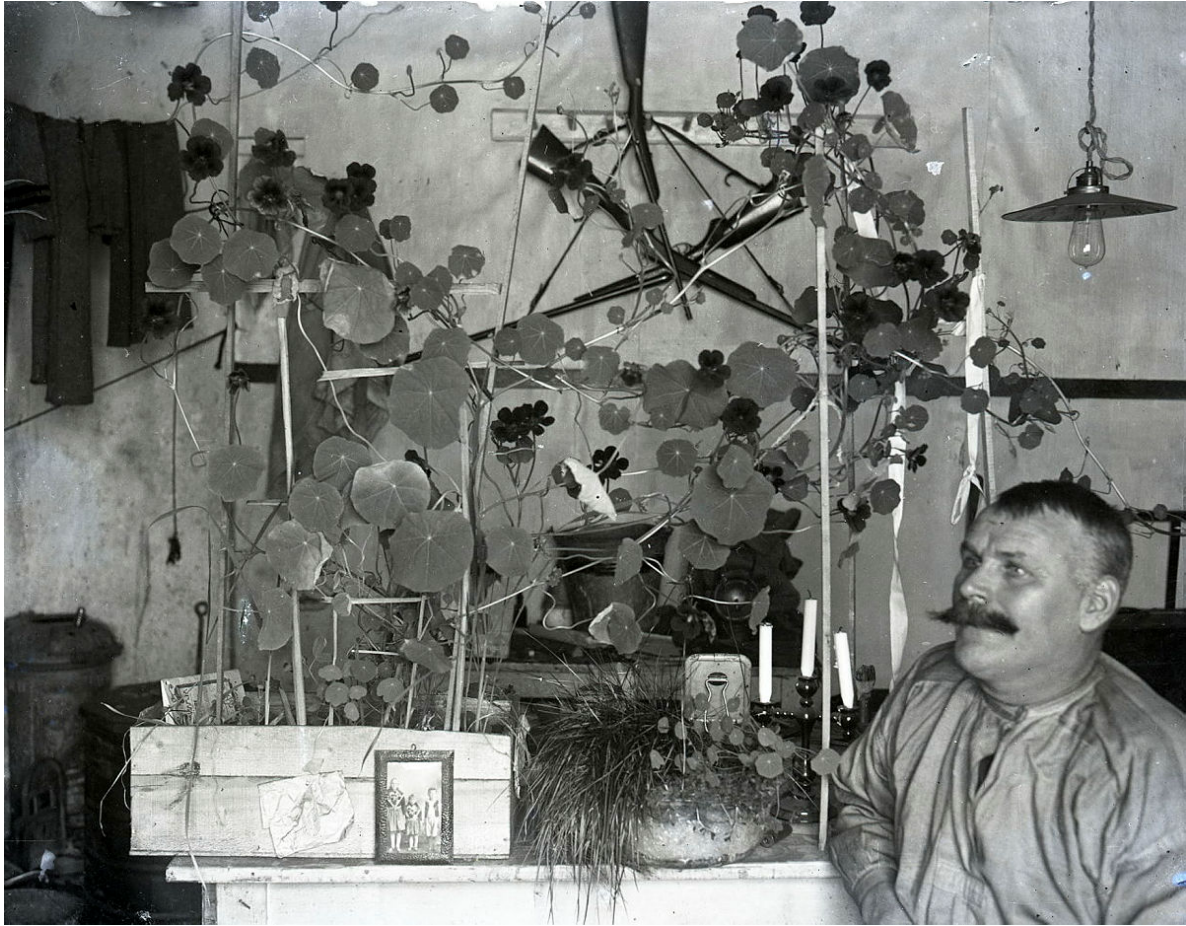


Fig. 5: From Svea Mine, Svalbard, 1924-1925. Photo collection after Erik Andersson. Svalbard Museum, SVF 28005.tif. (The image is flipped in the archive).

The spatial and narrative layers in this picture are manifold. In the foreground, a man with a bold moustache marks his proud belonging to the place and the plant on the table. Entangled in this narrative is the Swedish almanac stuck into the planter box, and further intimate signs of self-care, such as the small table mirror, clothes put up to get warmth from the iron stove in the corner, candles and an electric lamp hanging from above. Foregrounded is also a framed portrait, perhaps of the miner's three children back home in Sweden. In the background, several guns have been hung on the wall in a star shaped arrangement.

The information on the photographer in the archive is sparse: Erik Andersson, originally from the outskirts of Stockholm, was born in 1901 and in his mid-twenties at the time of taking the photograph. The collection after Andersson in Svalbard Museum counts 240 pictures, and some of them are staged portraits like this, depicting both younger and elder men. There is no information in the archival sources about how the photographer worked, but most probably he established his own darkroom in Svea and developed his films there. At the beginning of the 1920s, an average of around 200 men worked in Svea, most of them

employed on one- or two-year contracts, with no possibilities to leave during the long wintertime due to frozen harbours.²¹ There are a lot of letters and stories telling how the miners felt isolated, sometimes depressed, longing for home and family – and perhaps sent pictures like this one to those left back home in Sweden.

Another photograph in the Andersson collection portrays seven Svea miners posing in the same living room, gathered around an exotic cress plant (fig. 6). Their bare faces are illuminated like ‘petals on a wet, black bough’,²² seemingly as vulnerable in the Arctic as the plant itself. Also notable in this photographic motif are the white sticks and thin strips of clothing that the miners have attached to the plant to support its growth – a simple technology reminiscent of a bandage, associated with healing wounds and aiding growth, and a concrete sign of the miner's care.

The photographs themselves were created under marginal conditions on Svalbard in this period in terms of the effort, patience and care that went into the moment of making the photographs, and the expertise, equipment, and costs needed to develop them. Thus, the photographers were engaged in care-taking practices. Their photographs are acts of care in a triple sense; for the survival of the living plant, for the self-care of the miners, and their concern for those far away. These many forms of care, some unnoticed and ephemeral, are important to look for and to uphold, to acknowledge the vulnerability of humans and more-than-humans in the barren nature and under the harsh mining industry. Care in this case is expanded beyond human agency. In this limited Arctic world, not only the men's care, but also the plants', and even the photographs' care, ‘interweave in a complex, life-sustaining web’, to refer to Berenice Fisher and Joan Tronto's understanding of care, quoted and elaborated on in Puig de la Bellacasa's *Matters of Care*.²³



Fig. 6: From Svea Mine, Svalbard, 1924-25. Photo collection after Erik Andersson. Svalbard Museum, SVF 28006.tif

In the post-coal mining landscape of Svea, the most ambitious environmental project on Svalbard was initiated in 2017. After almost a century of coal production the Norwegian Government decided to remove all traces of mining industry and of human activity and return the landscape to its original state. The decision was based on the Svalbard Environmental Protection Act (2002), which promote the rights of nature, and which states that every human is a visitor and should leave no traces behind.²⁴ From 2018–2023 planners and architects worked to return the Svea landscape as far as possible to its ‘original appearance’, to its ‘natural state’. The landscape restoration was partially based on photographic records from the first decades of mining activity.²⁵ This major landscape healing project contrasts the 100 years old image of the poppies in the gravel (fig. 4), as well as the indoor scenes (fig. 5 and 6) and make us aware of the limited time span of humans and plants.

‘My Flower Window Towards North’

As have I sifted through the archives of Arctic photographs, I have noticed an increasingly common motif from the 1950s onwards: private homes adorned with flowers and green plants. One particular and recurrent motif is a large flower window, sometimes featuring one or more persons in front of it, a women and her children (fig.7). This image is from a home identified as the parsonage in the largest settlement in Svalbard, Longyearbyen, and it was repeatedly photographed in the late 1950s. The creator is the pastor and amateur photographer Erling Nødtvedt, who studied these potted plants in different lights and explored the nature of photography.²⁶ The cultivator was the pastor’s wife, Ranveig Nødtvedt. The plants are blooming in natural light during the summer and kept alive under fluorescent light bulbs during the dark periods.



Fig. 7: 'Flower window towards north in Svalbard church'. Longyearbyen, approx. 1959. 400 Diapositive. Photo: Erling J. Nødtvedt. Svalbard Museum, SVF 10651.tif.

The motif comes as a surplus and surprise in the Arctic archive, indicating something has changed in the post-war era. Svalbard saw the transition from a male dominated society to a family society in the company towns, as the ‘upper-class workers’ were allowed to have their spouse with them and establish a family.²⁷ The mainland’s gender roles were challenged when arriving Svalbard, however still the main task for these married women were to take

care of the household. This is also the case for the pastor's wife depicted in front of the green parsonage window.

Some of the flower photographs were published in a popular women's magazine in Norway at that time, and here Ranveig Nødtvedt writes about her more than seventy individual potted plants that she cared for, mentioning many of them by their Latin names. She shares her comprehensive knowledge of the plants, and individual stories of their life and growth under the Arctic conditions. Her cultivation is drifted, she tells, out of a sort of defiance or need to fight the long, cold, dark polar night. But as a good pastor's wife, her feature in the women's magazine ends in the recognition that: 'We humans can plant and water, but God alone gives growth.'²⁸

The indoor plants that Nødtvedt nurtured in Svalbard largely originated from the Botanical Department at the University of Bergen in the southwestern part of Norway. Sent more than two thousand kilometres north by boat in 1957, they found a welcoming home inside the church, which also was a significant social gathering place for the inhabitants of Longyearbyen. Pictures in the photo archives indicate that Ranveig's plants continued to thrive in the church for years after the Nødtvedt family left Svalbard in 1960.²⁹

The care for these potted plants is part of the repetitive and uneventful aspects of everyday life, in which Puig de la Bellacasa identifies caring practises traditionally upheld by women.³⁰ When examining vernacular photographs from Svalbard, there is an increasing number of images that represent the everyday and the mundane, showing greater attention to the rhythms of daily life, both indoor and in the nearby outdoor environment. In some of these images, we can identify a longing for fertile soil in the land of snow, permafrost, and mining, and a longing for the 'pace of ecological care' which Puig de la Bellacasa elaborates on in her chapter 'Soil Time'.³¹ These photographs of plants and humans direct attention to soil as a source for humans, but also an understanding of soil as part of a larger sense of living, especially in light of today's ecological crisis.

The Frontier Pansy

The photographs of the flower window in Svalbard church reveal a cultivation of ornamental plants which was only possible to the privileged few. Probably, that was also the case in regard to the colourful photograph of a home-made cold frame garden in Longyearbyen with blooming pansies (fig. 8). Pansies are cool-weather plants and one of the earliest spring-flowering annuals. In care of the kneeling woman on the picture, these flowers blooming in Longyearbyen in the late 1960s or early 70s are real frontiers as they have extended the

northern limit of growth. The woman, and ‘gardener’, is the wife of the Commissioner of Mines in Svalbard, and in a privileged position to cultivate in the interest of beauty. Her pose, gesture, and smile present her cold frame as a kind of holy shrine in the cold Arctic summer. The strong will towards growth, against all the odds, is striking. The ‘gardener’ was probably asked by the photographer to take place beside her home-made frame, to show ownership, and to fit into the composition. We see how her colourful apron matches the pansies, and her knitted cardigan harmonises with the snow-flecked mountain backdrop, thus contrasting with the plastic sheet and the muddy foreground, not to forget the aerial rope with coal wagons squeaking its way over the settlement.



Fig. 8: Cold frame garden in Longyearbyen. Photo: Herta Grøndal, between 1966 and 1973. The Arctic University Museum of Norway / The Herta Lampert Archive, tsnd 41968.

The motif is naturalised through colours and gestures, and the woman and her flowers are entangled in an aesthetic photographic whole. However, the photograph is a sign of colonisation, celebrating human appropriation of a place, and human efforts to extend the boundary or frontier of where this type of flowers thrive and are cultivated. The picture has been used as the cover illustration of the book *Gardens towards north: Utility and beauty through three centuries*, and further to illustrate book chapters on gender and everyday life in Longyearbyen.³² In this way, the photo from the archive has bloomed anew and represents positive values, in the perspective of the Norwegian colonisation of Svalbard and the human well-being there.

We know that the photographer of this picture, Herta Grøndal (later married Lampert), was employed by the Norwegian coal company in the 1960s and 1970s to document the company's activity both inside and outside the mines. She left behind 15–20 000 photographic recordings, most of them digitised by archival caretakers, The Arctic University Museum of Norway and Svalbard Museum. At the same time as Herta Grøndal's influence as a photographer is immense, her enormous photographic documentation causes her potential intentions or agency to be subsumed, so it seems, by the recording technology of the camera. To leave the strong agency of the photographer behind, opens the photography to be likened to the 'non-conscious intentionality' – like those of plants, according to the philosophical ideas of Michael Marder's plant-thinking, where meanings proliferate without the intervention of conscious representations.³³ Besides, a lot of Herta Grøndal's photographs were multiplied and disseminated, and thousands of pictures lived on as offshoots in private homes, in tourist's albums and in public media. Further, through the digitisation of her photo collection, every single picture, regardless of quality or informational value, is made available to everyone, however uprooted from its unknown original environment and intention (if any).³⁴

As Herta Grøndal's nature photographs were widely distributed, her pictures of polar bears, birds and flowers influenced on human awareness for wildlife, and thus contributed to the laws of protection of fauna and flora in Svalbard. However, her extensive photo-documentation is at the same time continuing the (often unconscious) colonial photographic practices in the Arctic. This is particularly evident in Grøndal's affiliation to the main mining company in the 1960s and her thousands of pictures of mine activity. Her photographs of exploited land and built settlements were signs of progress, civilization, and modernisation. This double is commented on by Joanna Zylińska half a century later, where the conflicting role of photography is stated in her introduction to *Nonhuman photography* (2017): 'In its

conjoined human-nonhuman agency and vision, photography thus functions as both a form of control and a life-shaping force'.³⁵

The Tulip and the Colonial Wonder

The Cold War period saw a spatial and visual contestation between the strictly divided Norwegian and the Soviet settlements on Svalbard. This contestation was primarily mediated through photography.³⁶ Pictures of the huge coal-heated greenhouses in the Soviet settlements, Barentsburg and Pyramiden, made deep impressions on the residents of the Norwegian settlements. These greenhouses gave space and warmth to cultivate vegetables and flowers which kept the inhabitants self-sufficient throughout the year. Thus, the greenhouses manifested the Soviet colonisation, and it was also seen as a sign of care for the Soviet inhabitants so far away from their homelands. The photographs of this wonder were sent back home to show what life could be in the Arctic.



Fig. 9: Pyramiden, wall painting depicting Sputnik II, and imported grass from Siberia in front. Photo: Herta Grøndal, probably in the mid 1960s. Svalbard Museum / Grøndal foto, no_sj_p_gf_0172_dpj_00807.jpg

The conspicuous visual culture of Soviet triggered the release button of visiting Western photographers, however their motifs were strictly controlled. In public and private archives there are pictures of colourful street posters promoting Soviet State programs, like the ‘Agricultural program’ and the ‘Space program’, which seems a bit misplaced in the High Arctic settlements.³⁷ The motif of a mural in Pyramiden (fig.9), showing an astronaut propelling Sputnik II into outer space, is but one example. In this context, the notable detail in this photography is the circular field of grass in the front. It is evidence of how the Soviets imported tons of soil and grass seed from Siberia and enriched it with manure from their local barns and chicken houses. Photographs from Pyramiden document fields of grass that were planted in the period from the 1940s to the 1980s to embellish the public places and the gateways and to make the inhabitants feel at home.³⁸ The colourful photographic images from Pyramiden show the ‘greening’ and colonisation of the harsh Arctic. In the largest Norwegian settlement as well, the mining company early in the 1980s established a project called ‘Longyearbyen grønnere’ (Greener Longyearbyen) and planned for plant fields between the houses ‘to increase people's well-being’.³⁹ Today, this imported soil and grass are part of the growing problem of alien plant species in Svalbard that follows in the footsteps of humans. Thus, a main task for Arctic biologists is to develop new visual mapping methods to monitor these invasive species in polar regions.⁴⁰

Not a threat to the native flora, however a symbolic sign of colonial imperialism in the Arctic, are the short-lived tulips that were recorded in the summer of 1986. This year the Soviet settlement of Pyramiden was at its height with a total population – men, women and children – numbering up to 1000 people. A bag of flower bulbs that optimistically had been sent northwards from Moscow the year before, now sprouted and came into flowers.⁴¹ According to the pictures, the tulips have been planted in different containers and bloom in solitude. The tulips were photographed by the locals, and by the group of Norwegians which followed the Governor’s boat on his visit to Pyramiden in August 1986.⁴² In one picture, posted on the Facebook group ‘Gamle Svalbard’ (Old Svalbard) some years ago, four men in official uniforms have gathered around the red tulip raising in her green bed (fig.10). The scene is powerful, the man’s finger indexes the strangeness of this flower and at the same time point to the colonial wonder of this Soviet settlement high up in the Arctic. The digitised and shared photographs of this happening keep the tulip alive. But the flower is probably best known through its offshoots: the hotel in Pyramiden named ‘The Tulip’, and its wrought iron

tulip at the entrance. Both have become popular tourist motifs after this Soviet town was abandoned and left to nonhuman forces just a decade later.⁴³



Fig. 10: One of the tulips in Pyramiden, shot at the Norwegian Governor's official visit in the Soviet settlement, August 18, 1986. Photo: Per Kristian Halle, posted on the Facebook Group «Gamle Svalbard» ('Old Svalbard') in 2020.

The question of care in pictures like these is a double and troubled one. On the one hand, the photographs are witnesses of care for the settlers and their will to uphold self-sufficient and sustainable societies in the Arctic. On the other hand, the photographs function as propaganda, working in service of the colonial logic of modernity. Furthermore, the photographs which entangle plants and people in both the Soviet and the Norwegian settlements, raise questions such as: Who, in this remote Arctic archipelago is natural, and who is cultivated? Who is native and who is immigrant, indigenous or invasive? Who should be cared for, and whom should be kept out?

The ethics of care, as evolved by Puig de la Bellacasa, provides no simple answers to these questions. As an ethic in a more-than-human world, it seeks to avoid hegemonic, anthropocentric and normative frameworks, instead accepting Haraway's idea of 'staying with the trouble' as its guiding principle. Consequently, the ethics of care resists binaries such as

natural and cultivated, indigenous and invasive, encouraging us to think beyond rigid classifications and focus on the relationalities and mutual dependencies that truly exist. Care is not a selective process based on exclusionary criteria; rather, it fosters practices that are inclusive, attentive to differences, and aware of the anthropocentric power dynamics involved in determining who is worthy of care.

Trusting the Mountain – Archival Care

The archive plays a significant role in anthropocentric power dynamics, selecting, controlling, determining, and valuing. However, the archive is also built upon a variety of caring practices. These are practical tasks such as identifying photographic motifs and contexts, adding keywords and archival numbers, storing the photographs carefully and appropriately, and ensuring the safety and accessibility for the future. Within Puig de la Bellacasa's ethics of care and Zylinska's idea of a fluid archive, I have speculated about these archival photographic images that are kept like seeds or bulbs, and whether they can be brought to light, germinate again, and affect and impact contemporary societies.

This dual nature of the archive – as both a mechanism of power and a practice of care – is mirrored in the physical and symbolic spaces dedicated to preservation. Addressing the need to take care of both plants and photography, two ambitious archives have been established in Svalbard, tasked with safeguarding the vulnerable world heritage of both seeds and photographs. These archives are located deep inside the decommissioned coal mine in the mountain Platåfjellet close to Longyearbyen, where the permafrost will preserve seeds and digital files well and independent of electricity – at least as long as the permafrost remains intact despite the warming Arctic climate.

One of the archives is the Svalbard Global Seed Vault, nicknamed ‘the doomsday vault’, and the world’s largest seed depositum. The vault opened in 2008 and have since then received seeds from all over the world, with the ambition to provide long-term storage of duplicates of seeds conserved in gene banks.⁴⁴ The mountain-side entrance to the Seed Vault is marked by an artist-made portal reflecting the stone, snow and lighting conditions in the surroundings. The interior storage space is closed to the public, however available through illustrations and photographs from ceremonies as new seeds are deposited into the storage.

The other depository situated in the very same mountain is The Arctic World Archive (AWA) that was opened in 2017 in the vault of the former ‘Mine 3’. AWA’s ambition is to be a digital archive for cultural heritage, including photography, from all over the world. Along with other items, the archival photographs from Svea in the possession of the Svalbard

Museum (fig. 4, 5 and 6) are stored here. The archive's vault, located in the permafrost 300 meter inside and below the mountain's summit, is described as secure and ready to preserve and make available the world's digital memory for 'generations to come'.⁴⁵ The data is stored on special film (piqlFilm) which is presumed to be readable long after today's computer technology is obsolete. In AWA's initial announcement, the rhetoric surrounding archival care was deemed 'eternal', however subsequently adjusted to focus on preservation for '2000 years'. At the time being, the archives witness the demand of protection and care in a world of rapid changes. The 'passive' storage is trusting the mountain's cold, dry and dark inside. However, facing global warming we may question the trust in the mountain as secure and permanent storages. And, in a posthuman perspective, we may further question the role of these archives of plant seeds and photography in the future: Who are they for, if not for the human being.

Taking care of plants and photography in a changing Arctic may be illustrated by the digitised closeup photograph of one of many petrified plants found in Svalbard. (fig.3). The photograph was shot by Herta Grøndal in the 1960s or 70s, probably with her 6x6 medium format camera, and fixed on a Kodak chrome film. The warm brown colour of the stone filling the frame makes the vibrant pattern of the former living cypress present, even in its digitized version. A fossil is an image made without human interaction, a plant that reproduces and even archives itself as a photographic imprint in the stone. It demonstrates that photography is not bound to the technologies of the camera, on which Zylinska elaborates in her *Non-Human Photography*, and states: Photography has always been nonhuman "entanglement and kinship with non-human forces".⁴⁶ Rather than trusting the fixation of photography, or the permanence of the archive, she embraces the photography's affect in our 'liquid culture'.⁴⁷ As a space of care, the Arctic archives in the mountain nurse the varied photographic 'seeds' or 'bulbs', and keep them in the right condition. To take care of photography, however, does not mean to trust in the mountain's permafrost to store, freeze and hide in darkness, but to let them into the flow of the ongoing remediation, recontextualization, reinterpretation, and let them sprout and affect anew.

Let me return to the two other photographs introducing this article, first the withered potted plant in the abandoned Pyramiden, photographed by the Norwegian Polar Institute (fig. 2). This digital photograph of a dead, fragile house plant was provided with a number and keyword, thus given an identity and value of its own, independent of its former life within a society and its original care-takers. As a digital photograph in the Arctic archive, the plant has gained new life, however it demands us to ask for whom, for what reason, and for how long?

The other picture, the autochrome photograph made by Hanna Resvoll-Holmsen in 1908 (fig.1), was reproduced in the artist Ulla Schildt's exhibition in 2020, *Flowers from Svalbard*. This cluster of common Svalbard flowers was printed on Giclée print and transformed into an artwork in the caring context of the exhibition. The warm and violet appearance of Resvoll-Holmsen's picture of the blooming *Cerastium arcticum*, contrasts with Schildt's other exhibition photographs and objects, most of which thematised the human ordering of the living world, and the idea of an archive for the future. Art historian Stephanie von Spreter comments in her essay on this exhibition as a whole: '*Flowers from Svalbard* is about our capacity to artificially preserve the world while being incapable to preserve the real world.'⁴⁸

Caring for changes

I was affected by these photographs tension between vulnerability and survival of life in the harsh Arctic region of Svalbard. The relations of plants and of people direct our attention towards unnoticed phenomena in the Arctic, such as the settler's care in a world of extraction of natural and human resources. They also witness the photographers' role as caretaker, and changing photographic practices and processes. Further on, thinking with concept of *natureculture* and *care* I have come to understand this tension as a complex and reciprocal process that involves attending to the well-being and flourishing of both human and more-than-human entities. More-than-humans are not passive recipients of human agency, rather active partners of care, upholding the social and biological life-sustaining web.

These photographs are first and foremost archival entities. Despite the fact that the Svea-poppy, the healing Nasturium, the Flower window towards north, the frontier Pansy, the colonial Tulip, are not blooming anymore, they still exist as 'floating' photographs in different stages of time and media – emphasised by the petrified cypress, the withered climbing plant, and the blooming Arctic Mouse-ears. As now digitised images, their status and time are equal and contemporary, thus reminding us of our temporality in the world. The archive seen as an act of care shed new light on archival thinking, decentring the anthropocentric aspects of its 'apocalyptic ark', and highlighting the interconnectedness of all entities in deep time and at the present. Archival care is not so much of preserving, then, as caring for future changes.

As care is deeply intertwined with power relations, social structures, and ecological systems, it is obvious that the photographs in the Arctic archives raise ethical considerations particularly concerning issues of human exploitation and domination, disturbing colonialism,

invasive arts and the collapse of ecosystems. While the photographs lay bare possibilities for new forms of engagement with the photographic material and re-entanglements, they also open towards resistance, collaboration and hope for renewal. They invite us to see plants and photography as cognate through changing times, and to speculate in a future and warmer Arctic with new life forms and the migration, dissemination and floating of plants, people and photography.

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¹ Haugdal 2017, 271-72.

² Most of these historical photographs are in the care of the northernmost museum in the world, the Svalbard Museum, in the Arctic University Museum in Tromsø. A rather big amount of the photo collections is digitised and made available for everyone to search and to share, however not all photographs are equipped with metadata. Thus, they are free to describe and to contextualise, but also in the danger of misinterpretations. As a general term, I use ‘the Arctic archive’, which includes museum collections, private collections, and SoMe archives with relevance for the Nordic High Arctic.

³ For the concept ‘natureculture’, see Haraway 2003; Haraway 2007; Latour 1993; Also 2020; Puig de la Bellacasa, 2017, especially pp. 140-45.

⁴ Puig de la Bellacasa 2012 and 2017; Tsing 2013 and 2015 on more than human sociality and posthumanism.

⁵ Haugdal 2017, 261-2.

⁶ Late et.al 2024.

⁷ Puig de la Bellacasa 2017, 143.

⁸ ‘One can make oneself concerned, but “to care” contains a notion of *doing* that concern lacks. Puig de la Bellacasa 2017, 42 (emphasis in original). The concept of ‘concern’ refers to Latour's ‘matters of concern’, Latour 1993 and more.

⁹ Puig de la Bellacasa 2017, 121.

¹⁰ Zylinska 2017, ‘Introduction’, 2. To Zylinska nonhuman photography is understood as not *of* the human or not *by* the human, but also defined by a third, not *for* the human. This is a point to which I will return in the end.

¹¹ Zylinska 2010.

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- ¹² The autochrome was invented by the Luminière-brothers and marketed in 1907, just one year before the botanist Hanna Resvoll-Holmsen used this technique in Svalbard. The first Svalbard flora was published in 1927, by Resvoll-Holmsen, a pioneer in nature conservation in Norway and on Svalbard. Together with the geologist Adolf Hoel, she was behind the first designation of a conservation area in Svalbard.
- ¹³ The exhibition was made by the photobased artist Ulla Schildt and took place at Bærum kunsthall in Norway in 2020. I will return to this exhibition at the end of the article.
- ¹⁴ Svalbard displays a diversity in geological formations and exposes many geological eras. There are large deposits of coal on the archipelago, and a high number of fossils from both the Carboniferous period and the Jurassic period.
- ¹⁵ Norway has been given the sovereignty of the archipelago. However, peoples from every country which has signed the Svalbard Treaty (signed in 1920) are welcome to stay, to hunt and do business.
- ¹⁶ Erik Andersson (04.11.1901–15.12.1994) from Spånga in Stockholm, accession SVB 2021-07.
- ¹⁷ Puig de la Bellacasa 2017, Chapter 3 ‘Touching Visions’.
- ¹⁸ See Elizabeth Edwards and Janice Hart, *Photographs Objects Histories: On the Materiality of Images*, London: Routledge 2004.
- ¹⁹ Fisher and Tronto 1990, 40.
- ²⁰ In 1923 it became clear that scurvy was caused by a lack of vitamin C. Experience had earlier shown that if one used a small shore plant, scurvy grass (*cochlearia officinalis*), one could avoid the illness. For medical use of nasturtium (*tropaecolum majus*), see <http://www.urnatur.no/blomkarse-tropaecolum-majus> (Access 5 February 2024).
- ²¹ The miners in Svea were recruited from Sweden, working and living there for short terms (mostly on one-year contracts, however some for a longer period) before returning to their homelands. It was hard work and a tough life for many. Helmer Johanson. *Fem år på Spetsbergen*, Stockholm, 1929; Resar-Hermann Jakobsson, *Sveagruvan på Spetsbergen*, Axplock, Vagnhäråd, 1979.
- ²² To quote their contemporary modernist Ezra Pound Pound’s imagist poem *In a Station of the Metro*, 1913.
- ²³ Puig de la Bellacasa 2017, 3. Fisher and Tronto 1990, 40.
- ²⁴ <https://www.regjeringen.no/en/dokumenter/svalbard-environmental-protection-act/id173945/> (Access 12 January 2024).
- ²⁵ Vatn and Wickström, 2023, 42. The environment project was funded with NOK 1.6 billion (2022 estimate) of the Norwegian state budget.
- ²⁶ Pastor Erling Nødtvedt’s rather large photo collection is in care of Svalbard Museum
- ²⁷ Around 1960 the number of women and children increased to around 20% of totally 700 inhabitants. Only the engineers and the civil servants working for the mining company or the Norwegian state, as the pastor, were allowed to bring their spouses.
- ²⁸ Author’s translation from ‘Vi mennesker kan plante og vanne, men gud alene gir vekst’, Nødtvedt 1960, 58.
- ²⁹ Amongst other, Ragnhild Nødtvedt’s follower, Ragnhild Wien Tysnes, got good advice, among other things on when to plant onions so that there would be flowers for Christmas. *Svalbardposten*, December No. 50, 2012, 32–33.
- ³⁰ Puig de la Bellacasa develops her care-thinking from the feminism in the 1970s onwards, and the new materialism.
- ³¹ Puig de la Bellacasa 2017, 169–215.
- ³² *Hager mot nord. Nytt og nytelse gjennom tre århundrer* [‘Gardens towards the north: Utility and beauty through three centuries’, author’s transl.], eds. Ingebjørg Hage, Elin Haugdal, Sveinulf Hegstad, Stamsund: Orkana Akademisk 2015. See also Haugdal 2017 and Anka Ryall, *Polare kvinner: norsk polarhistorie i kjønnsperspektiv*, Orkana forlag, 2023.
- ³³ Marder 2013, 125.
- ³⁴ Herta Grøndal’s daughters scanned and published a large amount of her pictures. The systematic digitisation of her collection of more than 12 000 recordings took place in The Arctic University Museum of Norway from 2014 onwards, tagged Herta Lampert, see <http://www.unimus.no/foto/#/search?q=lampert>.
- ³⁵ Zylinska 2017.
- ³⁶ Haugdal 2020.
- ³⁷ Haugdal 2017, 115–117.
- ³⁸ ‘As an unusual manifestation of caring for the employees, the village administration ordered several barges with black soil, which was laid on the permafrost of the Arctic. On the imported soil, not only the southern lawn grass sprout, but also some of the annual flowers that the inhabitants of the Pyramid landed at the houses. And now you can see the outlines of the old flowerbeds, in the southern tradition of masonry-framed bricks (...)’ Author’s google transl. from https://ukr.lb.ua/society/2016/09/22/345871_ostriv_shpitsbergen_mistse_de.html.

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³⁹ Låg 1987, 7–11, 24. The Norwegian scientist and soil researcher Jul Låg participated in this project.

⁴⁰ See the ongoing COAT projects, Climate-ecological Observatory for Arctic Tundra, which started nature monitoring on Svalbard in 2017. <https://www.coat.no/en/>. (Access 3 February 2024)

⁴¹ More than 30 specimens of the Svalbard tulip were blooming this year, according to sources. The Latin name *Tulipa Spitsbergen*, is described as a ‘very resistant flower’. The tulip bulbs named after the Svalbard deposit, given a Dutch trading-number, an Edibulbcode Edibulbcode: 80614. On Edibulb codes, called the ‘Linnaeus model’ in the ornamental horticulture industry. In all phases of the trade process, (offer, order, delivery, invoice) products of flower bulbs and tubers must be identified with their EDIBULB product tulipaner code and specified with the correct feature type values. <https://www.floricode.com/en-us/distribution/masterdata/edibulb-product-codes>. (Access 21 February 2024)

⁴² Per Kristian Halle in his Facebook post in the group Gamle Svalbard: ‘This is probably the world's rarest flower – the Svalbard tulip. Appeared in 36 copies in Pyramiden in the summer of 1986, since strongly threatened with extinction. Here admired by the host and Erik Framstad 18 August 1986 (Eldring’s introductory visit).’ [Author’s transl. from Norwegian].

⁴³ The Latin name *Tulipa Spitsbergen* described as a ‘very resistant flower’. The tulip bulbs named after the Svalbard deposit, given a Dutch trading-number, an Edibulbcode Edibulbcode: 80614. On Edibulb codes, called the ‘Linnaeus model’ in the ornamental horticulture industry. In all phases of the trade process, (offer, order, delivery, invoice) products of flower bulbs and tubers must be identified with their EDIBULB product tulipaner code and specified with the correct feature type values. <https://www.floricode.com/en-us/distribution/masterdata/edibulb-product-codes>. (Access 12 February 2024)

⁴⁴ The seed depository was established in Svalbard and in the former mine in Longyearbyen thanks to a proposal of Jul Låg. See Låg 1987, 14. The Seed Vault is now managed under terms spelled out in a tripartite agreement among the [Norwegian Government](#), the [Crop Trust](#), and the [Nordic Genetic Resource Center](#) (NordGen).

⁴⁵ <https://arcticworldarchive.org/about/> (Access 27 March 2024)

⁴⁶ Zylinska 2017.

⁴⁷ Zylinska 2010, 140.

⁴⁸ Von Spreter 2020.