Figure 202 The relations between the sites "related" to Vyg. The landscape is tilted in Google Earth. Thereby distance relations are distorted. Vyg according to leading communication lines from the Onega to the White Sea. The distance as the crow flies from the Onega carvings to the Vyg carvings are c. 300km as the crow flies and the distance to the Kanozero carvings from Vyg are c. 280km. Note that the Finnish rock paintings are not presented in this illustration. The distance from Onega to the closest Finnish rock painting, at Louhisaari situated northwest of Lake Ladoga (see **Figure 90**), is about 300km. Illustration: Jan Magne Gjerde.

The similarity in the rock art at Onega and Vyg was noticed when Vyg was found by Linevski and Ravdonikas (Linevskii 1939; Ravdonikas 1936b). This notion based on stylistic similarity has afterwards been stressed by several researchers (Hallström 1960:350; Savvatejev 1984; Savvateyev 1977; Savvateyev 1982). Hallström also saw a similarity in style between Nämforsen, Onega and Vyg (Hallström 1960:358). The characteristic Onega swans are only found on the earliest panels at Vyg, at the Besovy Sledki North panel. The similarity in the topographical situation at Vyg with the Nämforsen site was mentioned by Hallström (Hallström 1960:350). Vyg is centrally situated when it comes to communication in this generally flat landscape where the waterways were the main communication lines.

The boats at Vyg are often associated with the whale hunt. However, the large boats could also communicate their communication abilities. Some of the larger boats hold more than 10 people and must have been similar to the Umiak of the Eskimoes. The large boats and the actual journeys have been connected to the large journeys and stories of the travels and its rituals when starting or completing a long journey should not be underestimated. The journey in itself has been associated with rituals as suggested by Helms (Helms 1988; Helms 1992).

The distance from Vyg to both Kanozero and Onega is about 300km. The motifs depicted at all three places shows similarity, however they also represent different material.

The large concentration of rock art has been interpreted as a node in the landscape. Hallström interpreted Vyg, by comparison to Nämforsen, to be a node by its unique geographical location (an ideal aggregation place by its location) (Hallström 1960:XI). While Hallström explained the rock art nodes according to the unique character of place, Hagen interpreted these large concentrations of rock art, e.g. at Vyg to result from the fact that they were ecological favourable places related to hunting magic (Hagen 1969:143). Vyg has also been seen as a meeting place for a large group of people or many groups that would gather for different types of social interaction at certain times of year (Stolyar 2000; Stolyar 2001:124). The favourable location of the large rock art sites, located where coast and inland meets would have been ideal meeting-places for dispersed groups with common traditions, where they could get together to hunt, feast and perform tribe traditional activities (Hagen 1976:127-130).

The unique geographical location at Vyg would make it a node in the Stone Age highways where the rivers would have worked as important waterways for communication. The rapids at Vyg would be a natural stop on the travels along the White Sea and on the major line of communication between the White Sea and the Onega Lake. The Vyg River would have been an ideal communication line between the coast and the large inland lake. The low inclination of the river and the general landscape would have made the boats important when travelling.

When attempting to reconstruct the physical landscape, the main factor is shore displacement due to land uplift. The river estuary at Vyg in the Stone Age would have been similar to the river estuary at Belomorsk today; made up by a massive amount of islands. Belomorsk was previously named Sorokka, which directly translates to 40 islands (the place of 40 islands). The river estuary at Vyg as shown for the Besovy Sledki / Jerpin Pudas area, and most likely for the Zalavruga area, would have been unique favourable locations for the Beluga whale hunting. Similarities between the Besovy Sledki / Jerpin Pudas area with the topographic situation at traditional Beluga hunting places are striking as shown with the comparison with the ethnography from the McKenzie river delta in Canada (Gjerde 2009). The settlement record also shows that people lived in the area and the number of settlements evidence intensive use of the area. We also know from the osteological analysis at the sites that Beluga bones were found at the settlements (Savvateev et al. 1978:17).

Even if the land uplift had left the carvings at Vyg between 14.5-19.5masl, the powerful rapids at Shoirukshin was still vibrant when Linevskii came to Vyg to document the rock art. The shore displacement data and the archaeological data have shown that there were fluctuations during the land uplift and that the transgressions and regressions have left traces at Vyg. The low inclination has left the carvings, once shorebound to the White Sea, about 8km inland. The shore displacement data at Vyg is still controversial. As stated above, they do not cohere well with the adjacent settlement data. Even so, the landscape has changed due to the land uplift. It is interesting that the lowest carvings at the bay in the Besovy Sledki/Jerpin Pudas area is situated at 19.5masl. When raising the shoreline to this area, the bay would have been located in the tidal zone. The frequent settlement record on the islands in this bay (e.g. Brjussow 1957; Ravdonikas 1938; Savvateev 1977) reveals that this was a favourable area for settlement. As the sea retracted, the bay would still be there although regulated by the water-level in the Vyg River. As previously presented, Savvateev accounted for the changing landscape at Vyg by dating the rock art according to geological shore displacement data. Savvateev regarded the carvings to be made in the shoreline based on a comparison with the location of the Onega carvings[159]. Vyg River originates in the Onega Lake. The Vyg River is about 237km long (see Figure 202). The low inclination and few obstacles (e.g. cataracts), makes it unproblematic to travel by boat along the Vyg River. The Vyg carvings are located in what was the river estuary when the carvings were made between 19.5 and 14.5masl. When reconstructing the previous shoreline to c. 20masl and c. 15masl based on Russian Military maps, one can see how the landscape has gradually changed at Vyg during the time when the rock art was made (see Figure 203 and Figure 204). The bay at Besovy Sledki/Jerpin Pudas was dramatically changed when the Jerpin Pudas Island became much larger due to the land uplift, leaving the large bay as part of the river beneath the Shoirukshin waterfall. By comparing the map in Figure 204 with the 1m elevation map by Ravdonikas for the Besovy Sledki/Jepin Pudas area, in Figure 209, one can see how the minor details are not present at the large scale maps[160]. However, the general picture is presented where the area beneath the Besovy Sledki area gradually became a larger Island (Jerpin Ostrov) where the Jerpin Pudas panels are located. The two major man made changes to the area is the White Sea Canal and the large Hydro Power station. The White Sea Canal was

[159] Juri Savvateev, personal communication, 2004.
[160] Since the map is based on a map with 5m contour lines, some details are missing. The smaller Islands are then not present at the map.

built between 1931-1933, just before Ravdonikas did his fieldwork at Vyg. The Hydro Power constructions were constructed in the 1970's.

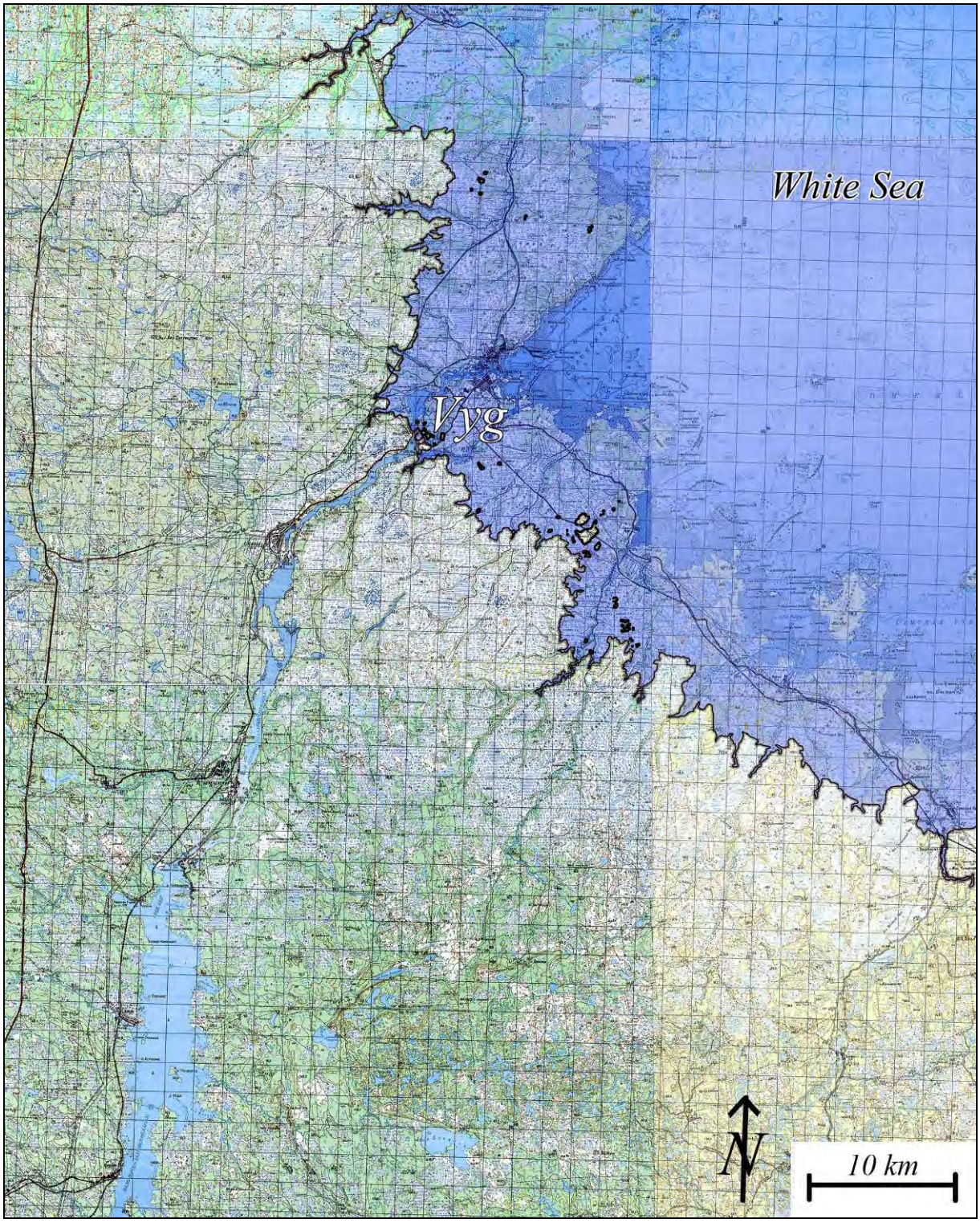

Figure 203 Reconstruction of the physical landscape at Vyg when the first carvings were made at c. 19.5masl. The present day map in the background shows how large the changes have been. The islands with the rock art is located to the left under the V in Vyg in the river estuary area. Map compiled from Russian maps from www.poehali.org with 5m elevation resolution. These maps were not available before end of 2008. Illustration: Jan Magne Gjerde.

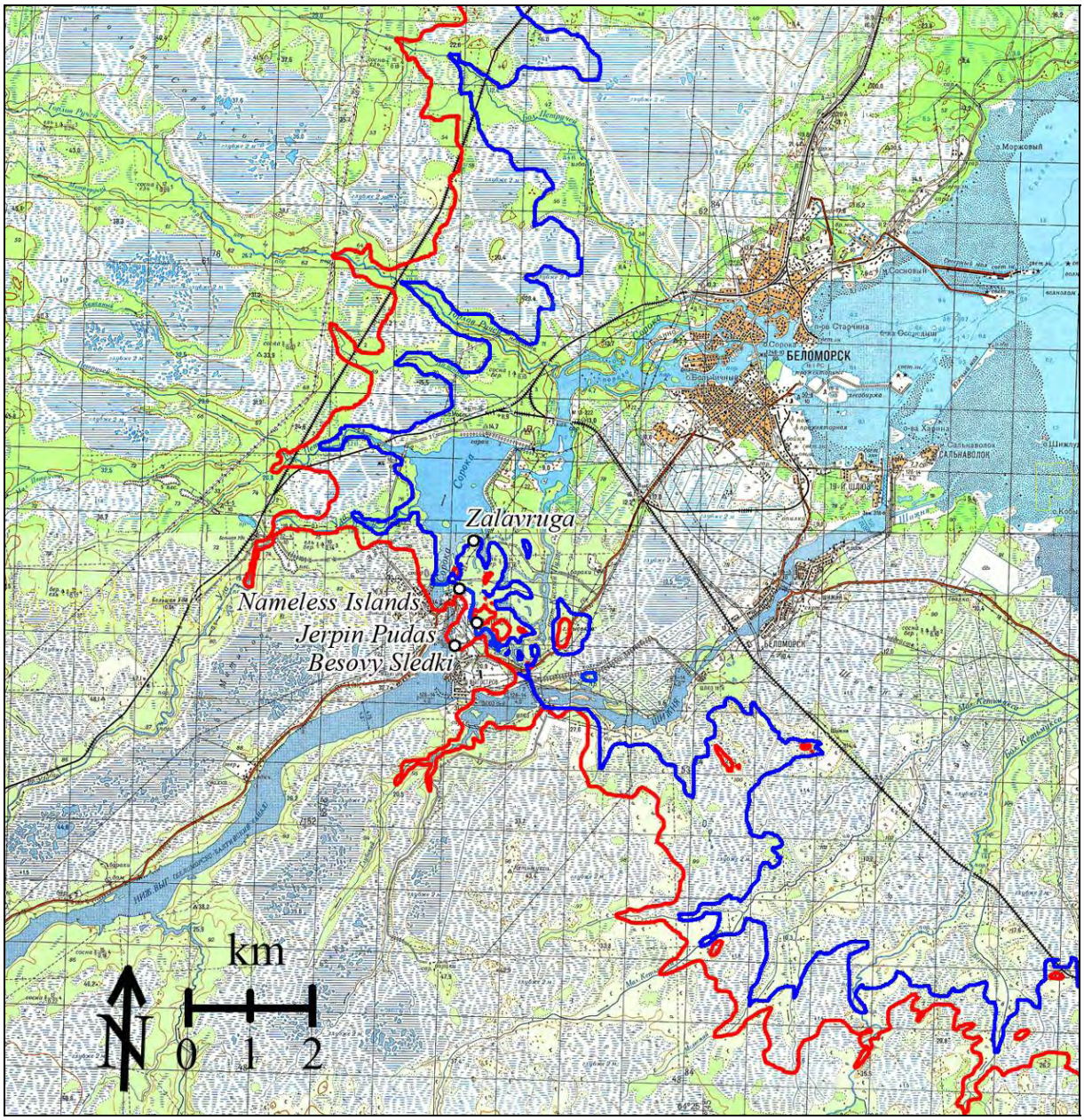

Figure 204 Reconstruction of the physical landscape at Vyg when the first carvings were made at c. 19.5masl and when the last ones were made at c. 14.5masl. The red line marks the 20m elevation curve and the blue line marks the 15m elevation curve. The present day map in the background. Map compiled from detailed Russian maps from www.poehali.org with 5m elevation resolution. These maps were not available before end of 2008. When looking at the difference between the 15m curve and the 20m curve one can see how the area between the Jerpin Pudas island and the Besovy Sledki area looses its direct connection to the White Sea. Illustration: Jan Magne Gjerde.

Revisiting the Vyg site with a landscape bias is somewhat strange since the main character of the landscape, the massive rapids and the river estuary is not part of the present context at the site. The Hydro Power constructions have left the area dry. This has changed the whole area, and it is therefore difficult to imagine how the landscape was like previously. The problematic map-situation in Russia have also left few maps of the area before the building of the White Sea Canal and the Power plant with connected dams. Good maps of the

Vyg area are still hard to get hold of, and it is only in the latter years that some of them have been made available. I have previously claimed that this could be one of the reasons why landscape studies have not been performed in Russia by archaeologists; maps were simply not available to them[161] as I have also experienced. The situation where maps were held back, and even manipulated, in the previous Soviet Union, has recently been discussed (Book 2008; Gentile 2008; Lundén & Elg 2008).

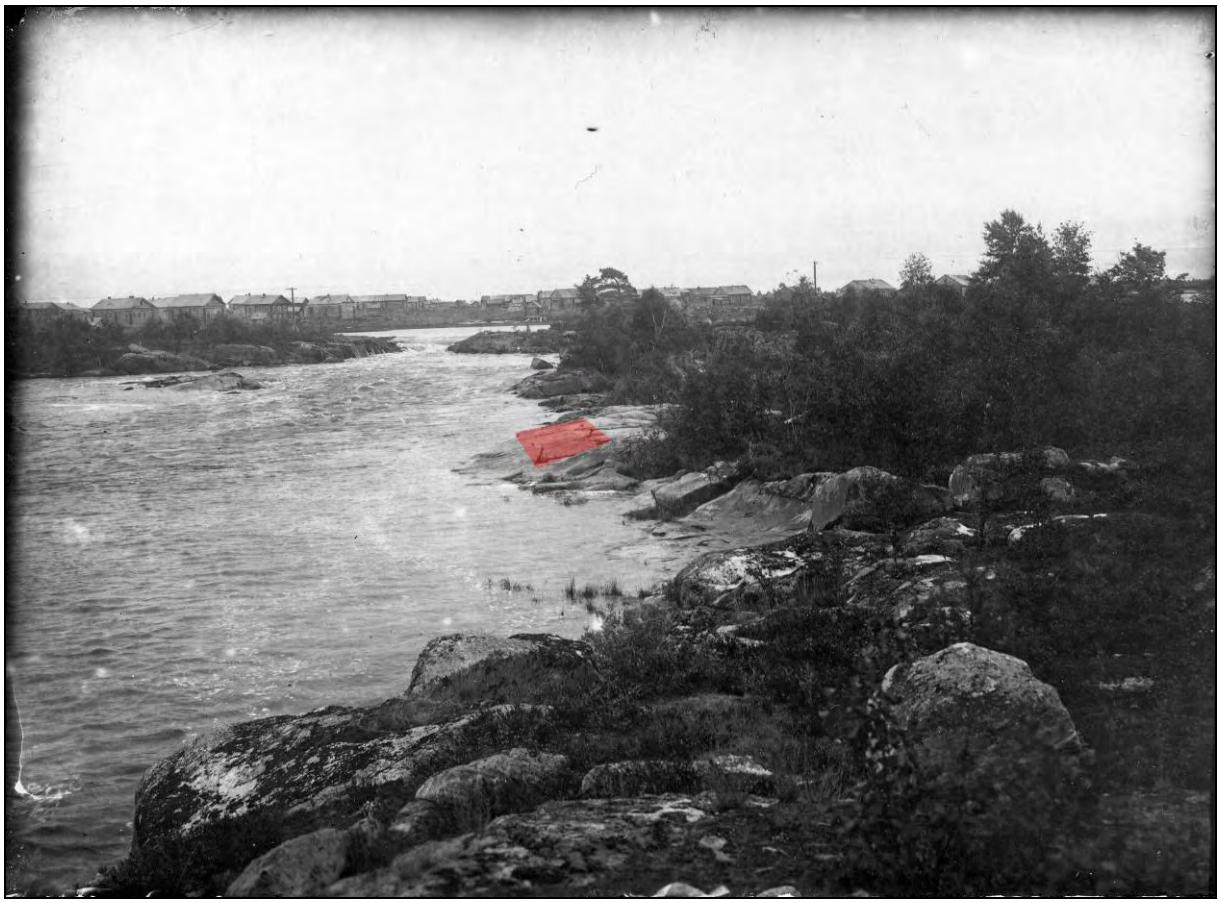

Figure 205 Photo of the Besovy Sledki North after Ravdonikas from Abram Stolyars private collection. The rapids is the one in the middle of **Figure 206**. The carvings are found on the rock slope marked with red colour in the middle of the panel. Location information from Ravdonikas (Ravdonikas 1936b:plate 62). The water from the river flows over the carvings at times. The village Vyg Ostrov can be seen in the background. The photo is also published by Ravdonikas (1936b:plate 62). Illustration: Jan Magne Gjerde.

Few photos exists from the time before the Hydro Power constructions was built. However, a few landscape photos from the Vyg River was taken by Ravdonikas when documenting the rock art at Vyg in the 1930's, showing the powerful river and the bay at the Shoirukshin waterfalls. These photos are stored in the Ravdonikas collections in Kunstkamera, the Institute for Material Culture in St.Petersburg and in the private collections

[161] Juri Savvateev, personal communication, 2005.

of Abram Stolyar[162]. Even though most of the photos focus on the actual figures, a few of the photos hints towards the general riverine landscape in which the rock art was made. The photographic record from the large excavations at Vyg led by Savvateyev is at present in his private collections[163]. However, since the landscape had changed dramatically due to the building of the White Sea Canal and the Power Plant constructions, few of these photos hints towards the landscape, hence, they focus on the rock art figures and the actual labour at the sites uncovering the rock art at Jerpin Pudas and at Zalavruga. The once vibrant and strong Shoirukshin waterfalls are today covered by the Hydro Power construction. The old photos give an impression of the powerful rapids and the physical landscape that today is hard to approach (see Figure 205, Figure 206 and Figure 207).

Figure 206 Photo of the Shoirukshin rapids from the western shore of the River Vyg by Ravdonikas from the 1930's Ravdonikas (1936b:plate 36). Notice the small ponds (miniature lakes) with water and miniature rivers in the lower left of the photo. Photo after (Stolyar 2000:fig 154).

[162] I am very greatful for the help by Anton Murashkin, Vladimir Shumkin and Abram Stolyar for their help making these photos available to my research.
[163] I am greatful to Nadezhda Lobanova and Jurij A. Savvateyev that made it possible for me to explore the photographic record from Vyg in Savvateyev's private collections.

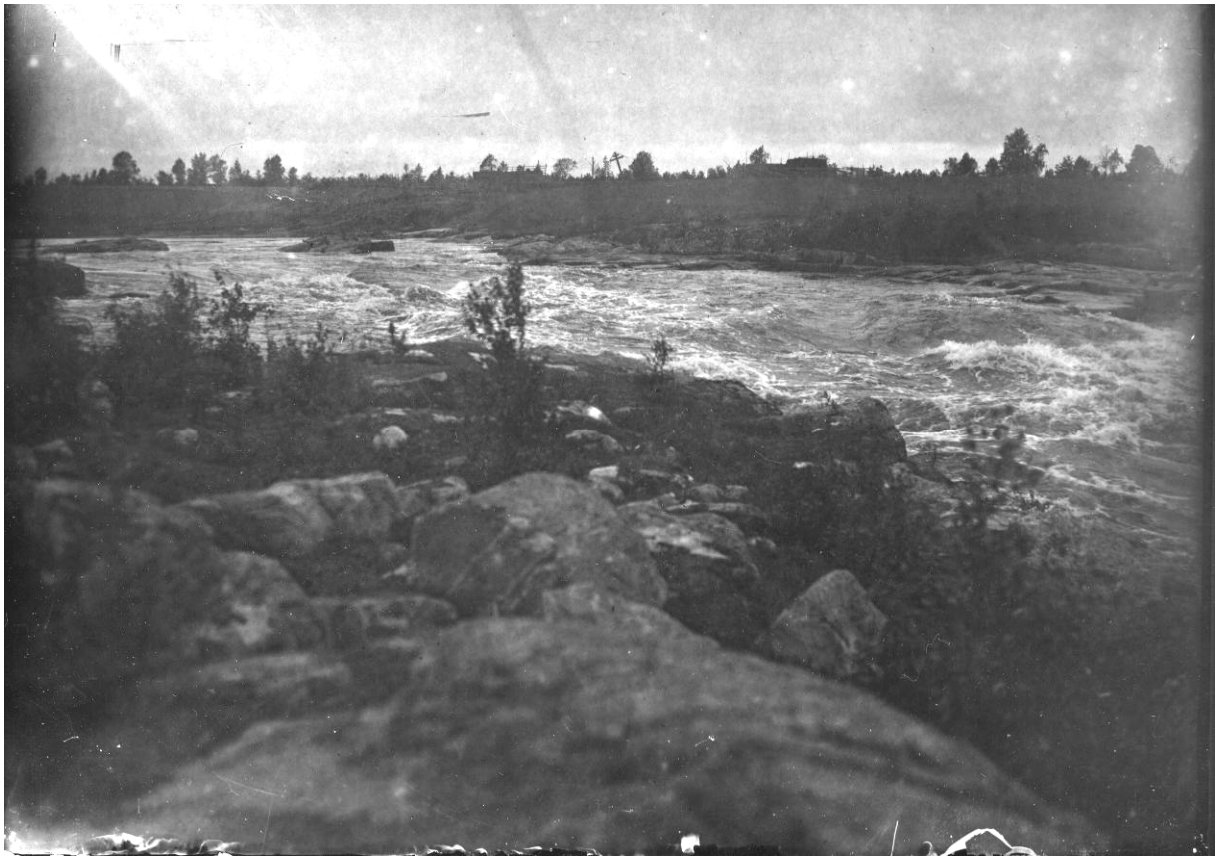

Figure 207 Photo of the Shoirukshin rapids towards the western shore of the River Vyg by Ravdonikas from the 1930's. Photo from Stolyar's private collections. Compare the photo to the map of the Besovy Sledki / Jerpin Pudas area (**Figure 209**).

Figure 208 Photo of the Besovy Sledki / Jerpin Pudas bay today from the roof of the building covering Besovy Sledki North. The Jerpin Pudas 3 site is marked with red colour in the middle of the photo. The area is unrecognisable from the time when Ravdonikas visited the site. However, one can see flat landscape in the horizon and the shallow bay that would have been between the Besovy Sledki area and the Jerpin Pudas area. Compare with map (**Figure 209**). Photo: Jan Magne Gjerde.

A reasonable good map of the Besovy Sledki / Jerpin Pudas area presented by Ravdonikas offer a fairly good presentation of how the area looked like in the 1930's (Ravdonikas 1938:14). With a raised shoreline due to the land uplift, the Besovy Sledki/Jerpin Pudas area would have been situated in the river estuary in the shoreline area. The tide would have influenced the water-level in the bay. The flat area at New Zalavruga would make this area fill in by the tide since the carvings are made in the upper tidal area. Thereby the area with rock art would be dynamic; a living landscape. By reconstructing the landscape with a raised shoreline to the level of the lowest carvings in the Besovy Sledki / Jerpin Pudas area, it would have been a massive river estuary with narrow streams, divided into a complex of narrow channels running between shoals, bars, and small islands or islets (see Figure 209). To the north in this bay, the Shoirukshin rapids would have been an obstacle that in many ways closed the bay. An obstacle when people were moving along the Vyg River in boats. The powerful rapids would have made people carry the boats past the waterfall. The carvings at Vyg are today easy to approach. Due to the massive Hydro Power Station, one can walk along the old river bank, in the areas between the rock art sites (see Figure 208). The carvings at Besovy Sledki South are however not available at present since they are situated under the road of the connected dam as part of the Hydro Power construction. The Besovy Sledki North was protected by a large concrete building that was built to safeguard the carvings. Later it proved to be problematic since concrete fell onto the panel destroying some of the carvings[164]. The site is today covered by a c. 1.5m thick layer of sawdust and planks to protect the carvings. I have therefore not been able to study the Besovy Sledki sites first-hand. The macrolandscape at Vyg changes by the seasons. The waterfall would have been powerfull during summer, and the islands in the rapids area would have been hard to approach at times.

To get an impression of how the Vyg area could have been like today, the rapids in the river estuary by Belomorsk at the outflow of the River Vyg today hints towards how the landscape with the carvings would have been (see Figure 210 and Figure 211), even if the Shoirukshin waterfall / rapids would have been more forceful than the rapids in Belomorsk.

[164] Juri Savvateev, personal communication, 2004.

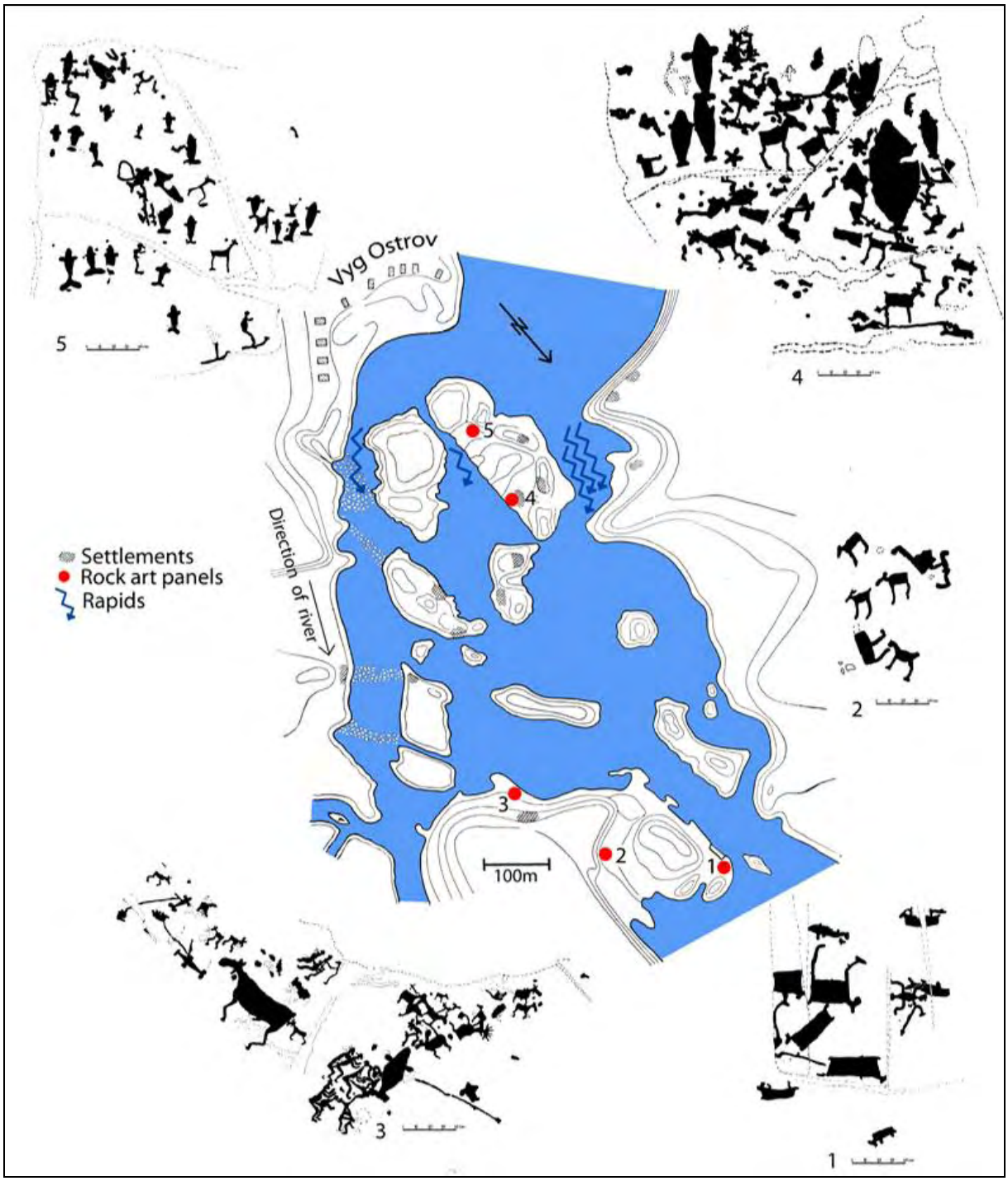

Figure 209 Beluga Landscapes at Vyg. The Besovy Sledki/Jerpin Pudas area. Base map modified from Ravdonikas 1938:14, plate 4 with added information. The different sections in tracing nr. 1 (Jerpin Pudas 1) have been put together in Photoshop (Ravdonikas 1938:plate 20). Tracing nr. 2 (Jerpin Pudas 2) is made from photo with scale in Photoshop. Tracing nr. 3 (Jerpin Pudas 3) is from Savvateyev 1977a:72 figure 15. Tracing nr. 4 (Besovy Sledki North) is a section of the panel from Ravdonikas 1938:plate 22. Tracing nr. 5 (Besovy Sledki South) is a section from Ravdonikas 1938:plate 32. All the tracings are made into the same scale to make it easier to compare the different sites and figures. The scale under each tracing is a total of 40 cm. Illustration: Jan Magne Gjerde.

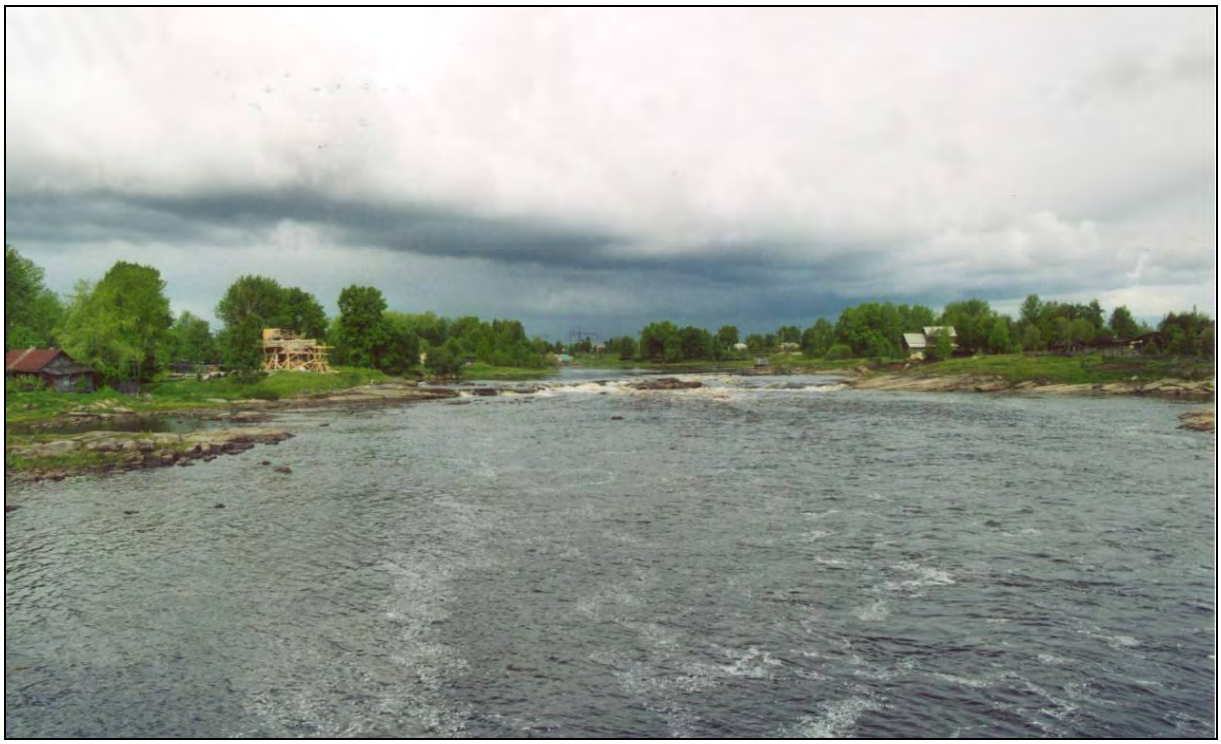

Figure 210 Photo of the last rapids of Vyg in Belomorsk where the river Vyg enters the White Sea today. Notice the extremely flat landscape where the river becomes a major geographical reference. Photo: Jan Magne Gjerde.

Figure 211 Photo of the Vyg River estuary where it enters the White Sea today. Notice the extremely flat landscape where the river is the geographical reference. The houses on the island in the middle of the photo where the settlement is located at the waters edge, like it was also in the Stone Age at the River Vyg. Photo: Jan Magne Gjerde.

When looking at the Beluga whale, the ethnographic descriptions of the traditional hunt are important. I have not come upon good descriptions of this for the Russian Arctic. The best ethnographic record which describes ”traditional” Beluga hunting is from Northern America. The ethnography and archaeology in these areas is therefore also interesting. There are a few places where one still can observe the traditional Beluga hunt or Beluga drives (Arnold 1995; Friesen 1999; Lucier & VanStone 1995; McGhee 1974; Savelle 1995). The topographical setting would dictate whether Beluga drives or individual hunts would be the best hunting strategy (Lucier & VanStone 1995:80). A landscape that is favourable for the hunting of Beluga Whales can also be seen other places (Friesen & Arnold 1995; Lucier & VanStone 1995; Savelle 1995).

One of these large hunting places, or “Beluga landscapes”, is in the McKenzie River Delta area in Canada. McGhee has described the whale hunting and the related landscape, and according to his study from the McKenzie River: “The estuary narrows rapidly upstream, and divides into a complex of narrow channels running between shoals, bars, and flat silt islands. This estuary is rich in fish which is attracted by food carried in the warm fresh water, and the fish in turn attract herds of beluga which can be seen feeding in the bay almost daily during the summer months. This situation forms a unique whale trap which when used by a large and well-coordinated hunting team, could yield a great supply of whale meat and oil with little outlay of effort” (McGhee 1974:19). Whale meat and fish are cached (dug down) to last during winter time thereby securing a year round supply of food (McGhee 1974:22; Stefansson 1914). This place is defined as perfect place for whale hunting. However, the landscape has been changing in this area due to the river estuary changes. Two of the bigger sites were abandoned because the Beluga whale could not penetrate further up the river due to these changes[165]. They most likely moved to Kittegaryumiut because channels were filling up and the topographical conditions were not the same anymore (McGhee 1974:85). There also exists ethno-historical evidence for this. A local informant told (to Stefansson) that when the Beluga no longer penetrated upstream to the villages they moved the villages (McGhee 1974:91; Stefansson 1914). This also shows that shifts due to a change in the topography are likely to have happened several times through prehistory. This is for example seen where settlements have been moved due to changing shorelines. Such changes also occurred due to the land uplift and the changing landscape in the Vyg area.

[165] These sites are dated by ^{14}C to 1030AD-1900AD. Beluga bones and hunting equipment are found on the sites and there is a continuity between the sites. The Radio Creek site (^{14}C 1350AD-1630AD) was abandoned after about 300 years of use.

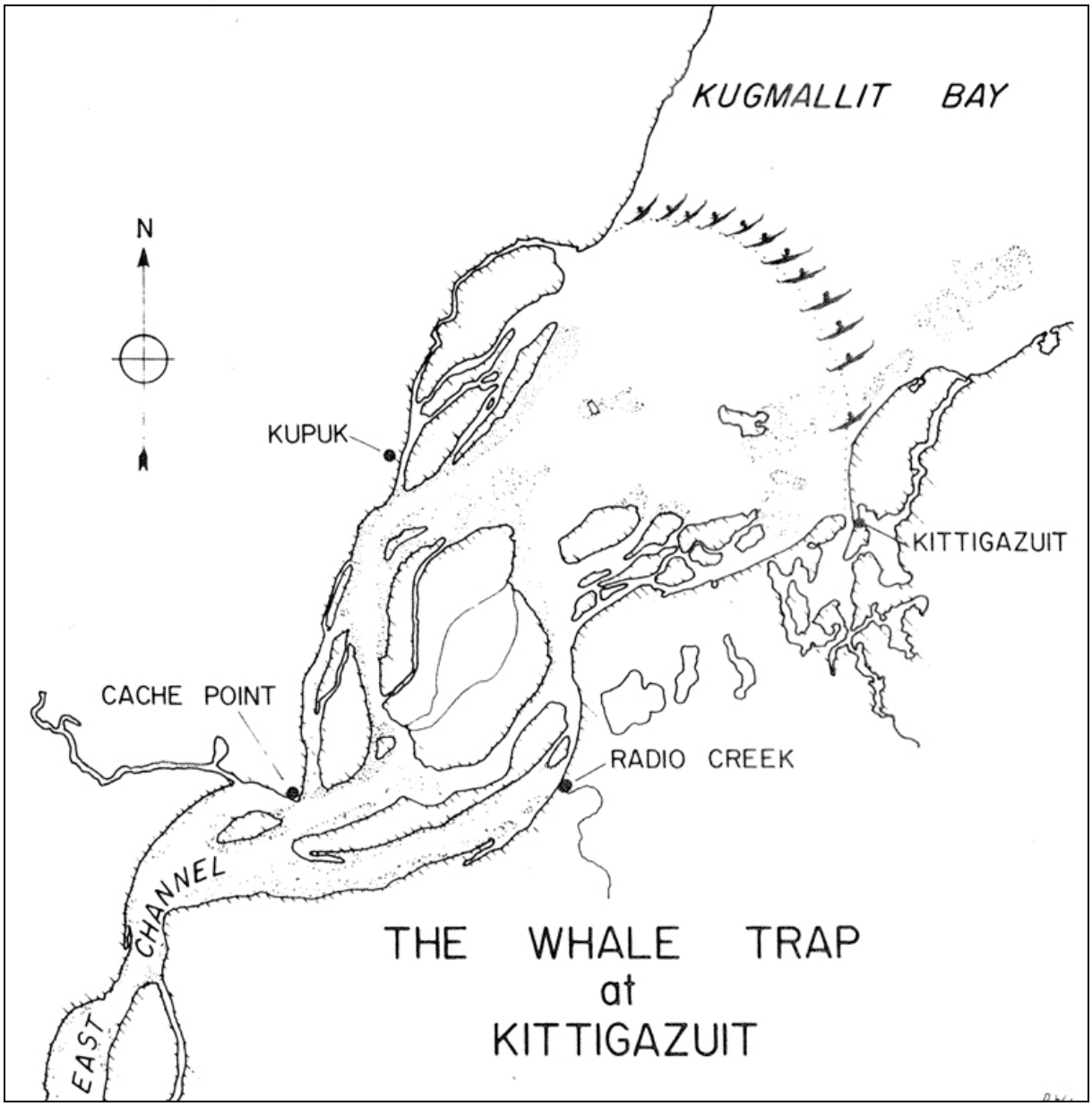

Figure 212 The Beluga Landscape in the McKenzie River Delta. After McGhee (McGhee 1974:21, map 3).

Returning to Vyg, the topographic situation in the Besovy Sledki/Jerpin Pudas area shows a striking recemblence to the topographic situation in the McKenzeie river Delta (compare Figure 209 with Figure 212). Several places could have worked as *cul de sac* places for the Beluga hunt in the Vyg area. The "natural" whale trap would be the area between the rock art sites, Besovy Sledki North and Jerpin Pudas 3, in the bay of shallow water where the waterfalls would be a major obstacle that would have hindered the Beluga whales in going further upstream. The evidence for a direct connection between the topographic situation and the actual presence of Beluga and Beluga hunting is also strengthened by the distribution of the motifs. The panels at Jerpin Pudas 3, Besovy Sledki North and Besovy Sledki South also include Beluga and Beluga hunting scenes, while the rock art site at Jerpin Pudas 1 only

include a depiction of a single Beluga whale and Jerpin Pudas 2 only elk depictions, a human figure and a swan. Hence, the rock art panels that are not facing the hunting places do not have representations of the actual whale hunt. There seems to be a visualization of the whale hunt where it actually happened. This means that there would be a "direct" link between the place of action (the whale hunt) and the action in the rock art (Gjerde 2005; Gjerde 2009).

Figure 213 The area of New Zalavruga. Top image: general view towards the North from the southern part of New Zalavruga. The New Zalavruga 4 panel is marked inside the black circle. Bottom left and right, photo of New Zalavruga 4 with water in front of the panel. Photo and illustration: Jan Magne Gjerde.

Microlandscape

I will now turn to the microlandscape at Vyg. Since the Besovy Sledki North and South is not available[166], I will focus on the Zalavruga area, where the majority of the carvings at Vyg is located[167]. At the time of making, the carvings at Vyg were situated on small islands in the river estuary and on the riverbanks of Vyg. Moving to Zalavruga, it has been problematic "reconstructing" the macrolandscape. We do not have good enough maps from before the Hydro Power constructions as we do for the Besovy Sledki / Jerpin Pudas

[166] The Besovy Sledki South panel is under the dam connected to the Hydro Power construction, while the Besovy Sledki North is under 1.5m sawdust due to preservation causes.
[167] Zalavruga has about 56% of all the carvings at Vyg.

area. The little information we can get from the maps from Ravdonikas (1936b:26-27, plate 5 and 6) and Savvateev (1970:27, plate 3) is not sufficient. From the excavations by Savvateev at Zalavruga (Savvateev 1977) we know that the whole area has been covered by sand making it hard to "imagine" how the landscape would have been before the minor transgression and river sediments covered the site. However, we do know that the area would have been a river estuary, and that the carvings at Zalavruga would have been on a large island. The area of Zalavruga would have been a complex maze of islands between the river banks.

Figure 214 Tracing of New Zalavruga 4 from Savvateev 1970:plate 35. Tracing is modified by marking the area with maritime motifs and figures with blue. Illustration: Jan Magne Gjerde.

The rock surface at the large New Zalavruga area, consist of virtually a "flat" horizontal area of panels where water collects in shallow pools between the panels. There are no carvings in the area where the pools are even when they dry up. There is virtually always water in these pools and it is likely to suggest that they must have been more stable when the shoreline was present. I have previously suggested that these pools were filled by the tide, making the panels with rock art appear as miniature islands (Gjerde 2005; Gjerde 2009). The whole area at New Zalavruga can then appear as an area of islands or islets. The panels with rock art could then be seen as islands[168] (see Figure 213). The panel New Zalavruga 4 would be an island. By visualizing the activities and the figures according to terrestrial and marine activities an interesting pattern occurs. The whole panel could be interpreted as if it is visualizing two islands surrounded by the sea (see Figure 214). The landscape they are depicting on the rock surfaces reflects the surroundings and could be seen as a reflection of a

[168] Not all the panels were chosen for rock art.

physical landscape. This shows that the scenes, compositions and panels could be made up of several landscapes or stories embedded with different meaning interwoven in the rock surface.

Figure 215 Elk hunt during winter. Three hunters are skiing when hunting elks. The skiing scene depicts the movement of the skiers where the ski tracks give reference to the topography. New Zalavruga 4. Photo: Jan Magne Gjerde.

Several scenes make up the composition at new Zalavruga 4. The scene to the left on the panel New Zalavruga 4 represent elk hunting during winter (see Figure 215). Three skiers are hunting elks with spears and bows and arrows. If one takes a closer look, one will sees that in the beginning of this hunt there are three ski-pole marks on either side of the track, then one sees the skiers separate to hunt one elk each. The elks are most likely an elk-cow with two calves, not an uncommon sight during winter. The skiers walked on the flat top of the surface before sliding down a slight slope, then again walking on a horizontal surface and catching up with the elks. This can also be seen by the way the ski-tracks are depicted. Short tracks illustrate walking and “long” tracks illustrate sliding. The ski marks also indicate the changing topography (Bradley et al. 2002a; Helskog 2004a:280; Janik et al. 2007; Savvateev 1970). The winter-hunt of elk on skis from the Stone Age is strengthened by finds of skies dated to the Stone Age from vast parts of northern Fennoscandia (e.g. Naskali 1999; Sørensen

1993). An important find linking the elk to skiing is the find from the site Vis 1 in Russia[169]. One of the skis have an elk carving under the back of the ski (see Figure 72). The sculpture of the elk's head is interpreted as a symbol of rapid movement (Burov 1989:393-397).

The connection between the elk and the skis are interesting since the elkhead reappears in the rock art both through the elk-head sticks and the stem of the boats. Elk head sticks have been found in graves, see (Gurina 1956). The elkhead that most likely is a stem for a boat found at Lehtojärvi in northern Finland (Erä-Esko 1958).

Moving c. 40m southeast from New Zalavruga 4 (see Figure 198), the panel at New Zalavruga 8 (see Figure 216) is made up by several figures. The scene that is most striking and which dominates the panel is the large whale hunting scene. Another scene depicts a man hunting an elk with bow and arrow. One can also see two rows of bears, a whale, two spears or harpoons, a swan, a seabird and human figures. My main focus will here be on the whale hunting scene. It is made up by 6 boats hunting a Beluga whale. The people standing in the boats have harpooned the whale. If one looks at the boats and the human figures, a large part of the area where the humans would have been represented in the boat is eroded. The original number of people most likely exceeds 50. The boats all have an elk-head in the stem. The Beluga whale is most certain a female "mother" visualized by the "newborn" calf on her right side. A thin line between the mother and calf can be interpreted as the umbilical cord[170]. At other whale hunting scenes (e.g. at New Zalavruga 13) the boats are surrounding the whale and the rock surface is virtually flat. At New Zalavruga 8 on the other hand, the boats are connected to the whale by "ropes" from the harpoon hanging behind the whale. The scene can thereby be seen as in "motion". This might give information as to where the hunt took place. A likely interpretation is that the whale hunting depicted at New Zalavruga 8 occurred in the river estuary or in the lower parts of the river. The boats were driven behind the whale by the stream of the river or small rapids while the hunt took place.

The level of inclination of the panel where the whale hunting scene is depicted is c. 10º. This means that the scene could have been placed there in order to visualize the river inclination. The area where the maritime motifs are found has running water gently flowing over it almost constantly (see Figure 216). In other words, this scene depicts a flowing river in a riverine landscape where the Beluga "mother" with her "newborn" calf is hunted while

[169] The Vis 1 site has been dated to between c. 8300BP-7000BP. Calibrated by OxCal, this means c. 7500-5800BC.

[170] From the ethnographic record of the Eskimo hunting White whale traditionally, we know that they favoured juveniles, calves and even nursing mothers. They were easier to catch and the meat of newborn calves and embryos was considered a great delicacy Krupnik, I., 1993. *Arctic adaptations : native whalers and reindeer herders of northern Eurasia*, Hanover, NH: University Press of New England..

swimming up the river or the estuary. One can here clearly see how the rock surface interacts with the rock art. The information from the behavioural pattern and the annual cycle of the Beluga also shows that this hunt must have happened during mid-summer or autumn.

The inclination of the rock surface interacting with flowing water at New Zalavruga 8 and the flat surface at New Zalavruga 13 shows how there are references to places or areas where the actual hunt occurred. The rock art is interacting with the microlandscape and most likely including geographic knowledge.

Ravdonikas initially discovered what appeared to be an insignificant line at the outskirts of his Old Zalavruga panel (Ravdonikas 1938: plate 19). Later, the line proved to continue at Savvateyev's panel 15 (Savvateyev 1970: plate 70). The composition has been interpreted both as a whale hunting scene and a river[171] (see Figure 217). The boats are connected to this line and the line is bending, twirling through the landscape as the Vyg River is. Along the river besides the connected boats different activities are depicted (see for instance the humans with elkhead poles at the lower part of the composition (see Figure 218). There are no beluga whales in this composition and only one beluga to the far right of this panel. In my opinion based on the figures and their positioning, the best interpretation of this composition is that it depicts a river. This is, to my knowledge, the only place within the hunter's art in northwestern Europe where the motif depicts a physical landscape feature. The different activities depicted along the river, and the bends and turns of the river could be places with in the hunter-fisher-gatherer landscape. This could be related to geographical knowledge of the people that made and communicated through the rock art.

[171] "Durchhaus wahrscheinlich, daß es sich um den Teil eines realen oder mythologischen Flußweges handelt. Damit läge hier eine der ältesten topographischen Skizzen vor, die zwar noch primitiv ist, aber doch monumental und von ewiger Dauer" (Sawwatejew 1984:149).

Figure 216 Tracing and photo of New Zalavruga 8. Some of the figures in the tracing can be seen in the photo. In the photo, the whale is situated slightly above the middle. One can here see the "miniature" river running over the whale hunting scene as a geographic reference to where the hunt occurred in the lower parts of the river or in the river estuary. Tracing after (Savvateev 1970:fig. 48). Photo and illustration: Jan Magne Gjerde.

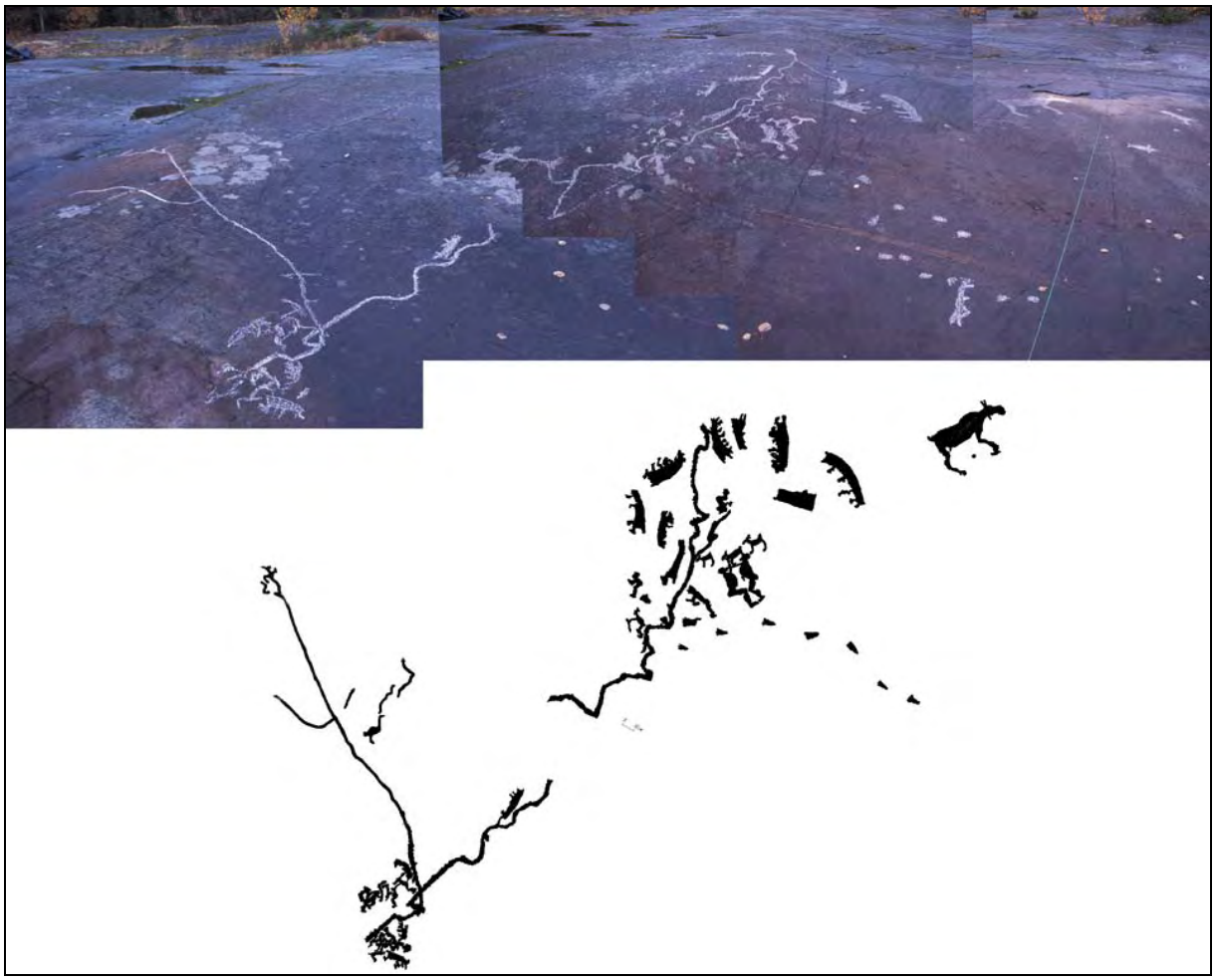

Figure 217 The "river" at Vyg. Tracing of New Zalavruga 15. Tracings from Savvateyev 1970:plate 70 and Ravdonikas 1938:plate 19. The tracings from Savvateev and Ravdonikas are reworked and joined together. The left part of the "river" is Ravdonikas documentation. One can here clearly see that Ravdonikas and Savvateev documented the carvings with different techniques. Above photo compilation of the same composition where the carvings have been marked with white chalk to make them visible on photo. Photo and illustration: Jan Magne Gjerde.

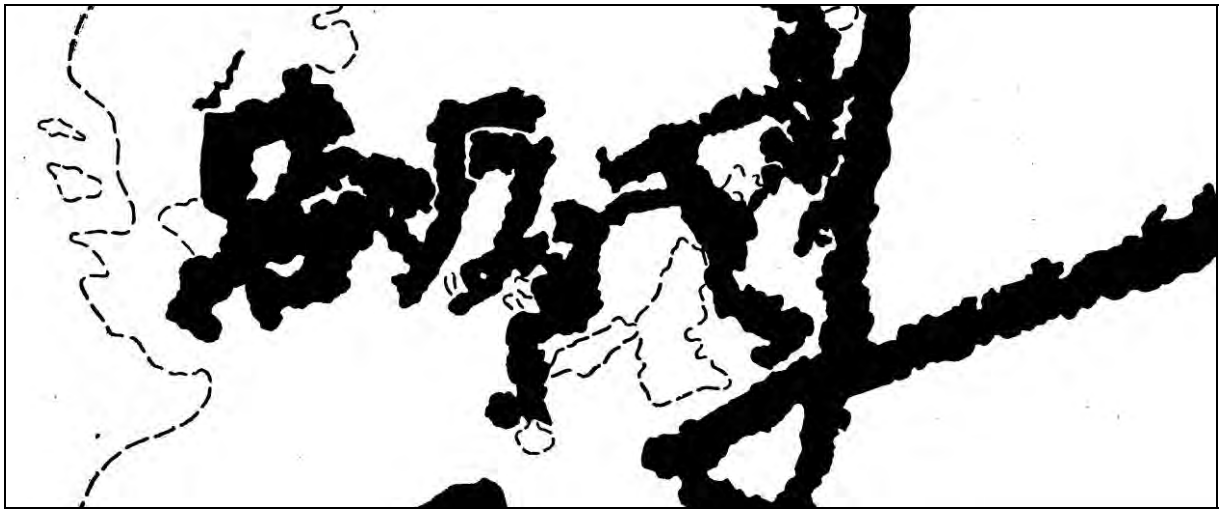

Figure 218 Human representations with elk-head sticks at New Zalavruga 15, Vyg. Tracing after Savveteev (1970:62).

Summary of the Vyg rock art

The making of rock art at Vyg, in the Besovy Sledki / Jerpin Pudas area, based on shoreline dating and the relation to the elevation of the settlement finds indicates that the first rock art was made at Vyg around 5300BC. The initial carvings were made about 5300BC and the last carvings were made around 2000BC. That is, rock art was made at Vyg for about 3000 years.

Initially around 5300BC, the Shoirukskin waterfall and the bay at Besovy Sledki / Jerpin Pudas was situated in the Vyg River estuary. Gradually, the land uplift changed the topography and the shoreline gradually moved away from the Besovy Sledki / Jerpin Pudas waterfall. Carvings were made at new places connecting the rock art to the shoreline with the final rock art being made at Zalavruga (Old Zalavruga). The Shoirukshin waterfall would still have been a landmark in the Vyg River and a place people would have to carry their boats past the waterfall. The land uplift has left the Vyg area rock art about 8km from the White Sea, however, when made the White Sea would have washed onto the rock slopes.

The Vyg River is one of the main communication lines in northwestern Russia, following the waterways connect the White Sea to the Onega Lake 300km to the east.

The rock art at Vyg is at many places deliberately placed in relation to natural features in the rocks. Some places it looks like if the natural elements of the rocks interacted with the rock art and the story told in the rocks. Some places these even have references to the wider landscape where the micro landscape or miniature landscape acts like a backdrop to tell stories of their macro topography / macro landscape, interacting with the figures and scenes. One can also see that scenes act as reference point to places in their wider landscape like the whale hunting from boat, the geese hunt from boat, the winter elk hunt and the bear-hunting.

Kanozero

Rock art at Kanozero

The first carvings at Kanozero[172] was found on the Island Kamenniy in 1997 during an expedition to the Kanozero Lake organized by Revda Museum (Likhatchev 1999). It was soon realized that this was a major discovery of rock art. An expedition to document the carvings were organized by Revda Museum and the Kola Archaeological Expedition in 1998[173]. In 2005, the documentation was a cooperation between Kola Archaeological Expedition and Tromsø University Museum. I will briefly introduce the reader to the sectioning of the material, thereby making it easier to follow the text when referring to figures, panels and sites. The sites are situated on three islands; Kamenniy, Eloviy, Goreliy and on the "mainland" rock Odinnokaya (see Figure 219 and Figure 220). I am much obliged to the Kola Archaeological Expedition for the exchange of documentation after our joint fieldwork in 2005. I have applied their naming and numbering of the figures, panels and sites at Kanozero.

Figure 219 Location photo of the Kanozero sites from helicopter. The clearing to the left of the middle of the photo is Kanozero village. Note the general flat landscape in the area. Photo and illustration: Jan Magne Gjerde.

[172] The site names applied in the text is the english version of the sites. The Russian names are: Kanozero = Канозеро, Eloviy = Еловый, Goreliy = Горелый, Kamenniy = Каменный, Odinnokaya = скала Одинокая.
[173] New carvings have been found and expeditions to document the carvings have was conducted in 1998, 1999 (2002), 2005 and 2007 by The Kola Archaeological Expedition.

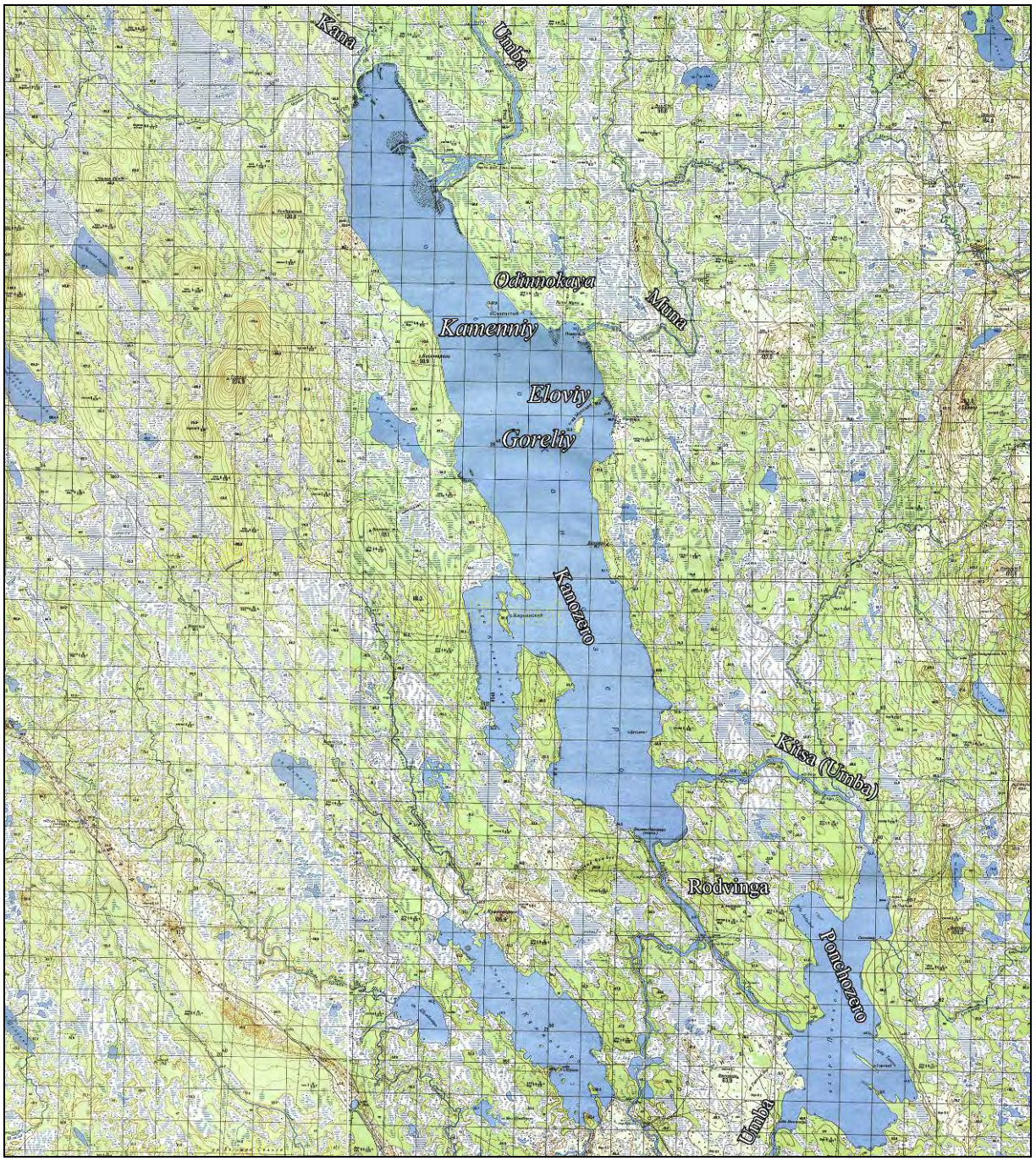

Figure 220 Map of the sites at Kanozero. Map is compiled from 4 maps from www.poehali.org. Scale: the squares are 1km in size. The lines in the map is also showing the compass points. The Kamenniy island is located above the **e** in the Kamenniy place name and the Odinnakaya is located at the shore below the capitol O in the placename. Illustration: Jan Magne Gjerde.

Kolpakov, Shumkin and Murashkin have just presented an overview of the figures at Kanozero (Kolpakov 2008; Kolpakov et al. 2008; Kolpakov et al. 2009). The latter of these overviews states that there are 1140 figures. Of these, 291 (26%) are not identified as motifs, but are defined as vague figures. Leaving out the unidentified figures, 25% of the figures are animals, 21% are boats, 21% are tracks and footsteps, 16% are human figures (see Figure

224), 9% are “abstract” figures (wheel crosses, crosses, axes etc) and 8% are cup-marks (Kolpakov et al. 2009:246-272). Of the animal figures, 67 are equivocal. There are 67 whale figures, 11 fish figures, 25 elks, 16 reindeer. There are also bear, snakes, beaver, hare, foxes and otter amongst the animal figures[174]. The animal occurring most frequently on the panels at Kanezoro is the Beluga Whale (White Whale). This motif is also frequently depicted at Vyg. There are several hunting scenes at Kanozero (see e.g. Figure 222 and Figure 223), with the 28 Beluga whale hunting scenes from boats prevailing. One of the most impressive scenes at Kanozero, at Kamenniy 7 (see Figure 221), however, depicts a bear hunt on skies during winter (see Figure 226). There is also a fishing scene and hunting elk with spears. The largest site at Kanozero is the Kamenniy 7 site with more than 430 figures (see Figure 225).

Figure 221 Rock art at Kanozero. Section of the Kamenniy 7 panel. There are figures on this side of the outcrop, and on the top stretching to the back of the outcrop. A total of 430 figures are documented at the Kamenniy 7 panel. Compare with tracing in **Figure 225**. The dark line at the lower part of the site is the shadow of a tree. Photo: Jan Magne Gjerde.

Figure 222 Section of one of the whale hunting scenes at Kamenniy 7. The illustration is made up of 3 frotage sheets. The lenghth of each sheet is about 1m. The total lenght of this scene is about 3m. Frotage and illustration: Jan Magne Gjerde.

[174] According to Kolpakov et.al (2009:258,259), a dog is also depicted, although it seems to be a young reindeer. The few hare representations could also be questioned.

Figure 223 The large whale figure at Kamenniy 7. Lines from the whale shows that this is a large Beluga whale hunting scene. Compare with the tracing in **Figure 225**. Photo: Jan Magne Gjerde.

Figure 224 Central part of the Eloviy 1 site. Right of the large cracks in the middle of the photo one can see several human representations and elk-head boats. There are also whale figures and reindeer at the site. To the left of the cracks are reindeer, whale figures, elk-head boats and a cross-shaped figure. Photo: Jan Magne Gjerde.

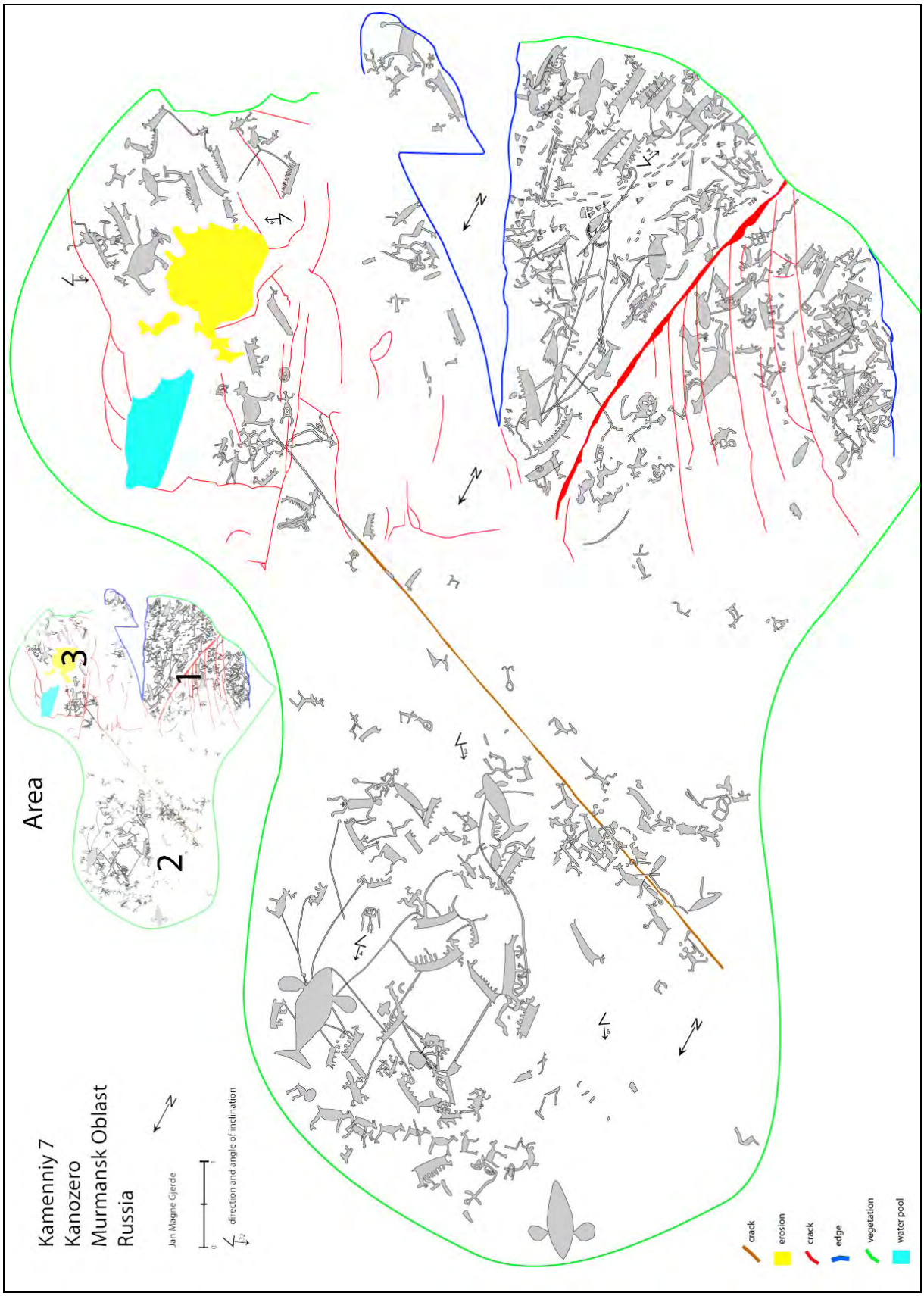

Figure 225 Tracing of the Kamenniy 7 site. The number of figures (about 430) and the amount of superimposition makes it virtually impossible to number the individual figures when presenting the site at this scale. Therefore to make it easier to follow the references to Kamenniy 7, I have divided the site into 3 areas, Area 1-3 (see middle left in the illustration). Tracing and illustration: Jan Magne Gjerde.

Dating the Kanozero rock art

There has been discussions whether Kanozero was ever connected to the White Sea. According to Møllers shoreline computer program (Møller & Holmeslet 1998), isobase 39 should be applied for the Kanozero area. A reading from Kanozero would then be c. 8000BP. However, through recent studies the computer program has proven inadequate for the Kola Peninsula (e.g. Corner et al. 1999) and can not be applied since it is inaccurate for this area[175]. Geologists have not performed studies at Kanozero Lake and the estimations based on data from surrounding areas is not conclusive. The geologist Matti Saarnisto suggest that the Kanozero lake was separated from the White Sea at c. 8600 calendar BP (Saarnisto, personal communication in Kolpakov et al. 2008:86). However, recent studies by geologist Vasilii Kolka in the Umba region shows that Kanozero was never part of the White Sea, but have always been a freshwater lake (Kolka et al. 2008f). Ruling out the possibility to apply shoreline dating for the Kanozero rock art, one is left with stylistic and comparative analysis.

Shumkin dated the rock art from Kanozero to be from a long time period based on stylistic similarities with rock art mainly from northern Norway and northwestern Russia. He found the earliest carvings at Kanozero to be from c. 6000-5000BP (Neolithic) and the latter belonging to what he calls the Saami medieval age, c. 200-300 years ago (Shumkin 2004:378). Based on similarities and dissimilarities with neighbouring assemblages of rock art, Kolpakov et.al (2008:88) has concluded that the first carvings were made at Kanozero during the Neolithic time (Late Stone Age) (2008:88). Later, a suggested date also based on similarity with Ponoj, Onega and Vyg, the rock art at Kanozero is generally dated to the Neolithic time (Late Stone Age) and the Early Metal Age (Kolpakov et al. 2009:300). The dating suggestions are based on similarity with other rock art sites; however, they do not suggest the link or why they place the rock art to such a date.

Like the Onega site, the Kanozero rock art was shore bound, however related to an inland lake. Thereby, I am left with superimposition and the never-ending stylistic problems when dating Kanozero. However, erosion should also be included in the internal dating since adjacent motifs on the same panels are differently eroded suggesting difference in age. Based on the similarity to the rock art at the better-dated Vyg site by the White Sea, I will compare the rock art Kanozero with the Vyg rock art and thereby suggest a date for the Kanozero rock art.

The clearest case of superimposition at Kanozero can be found at Kamenniy 7 (confer Figure 226 and Figure 227). When studying the panel it is evident that the Beluga whale-

[175] Jacob Møller, personal communication, 2009.

hunting scene including two fully crewed elk-head boats was made first. After this, the bear-hunting scene was made partly destroying the whale-hunting scene. This shows us that the bear-hunting scene was made last at this panel. However, the time difference can not be established.

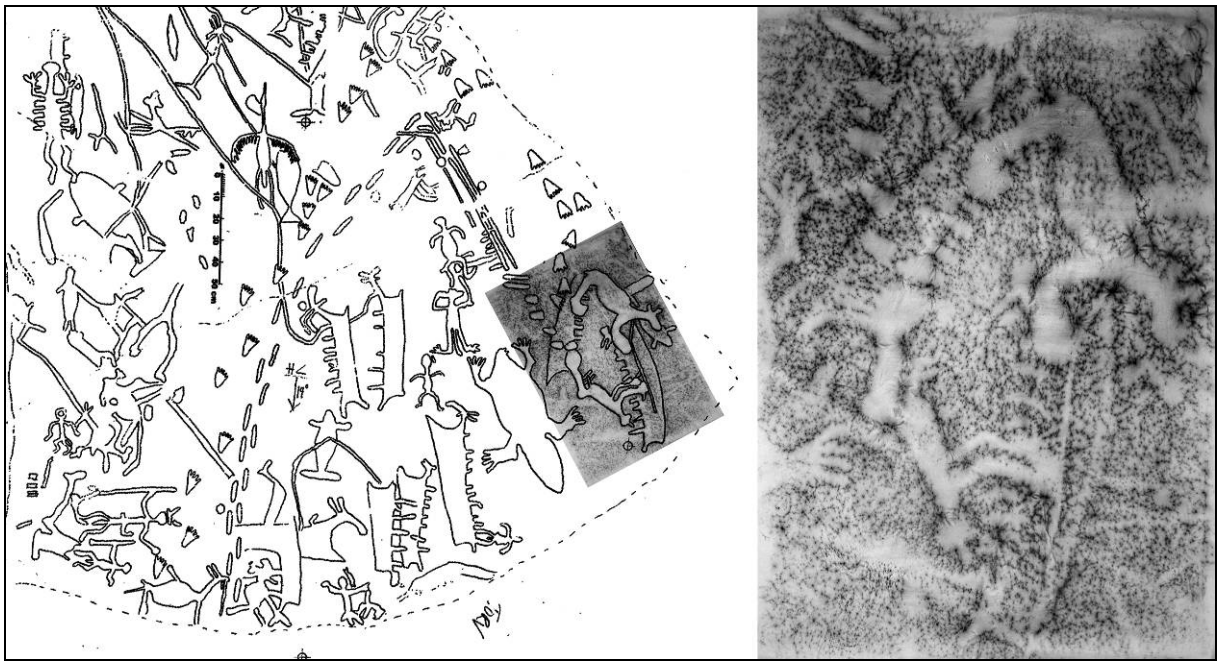

Figure 226 Superimposition at Kamenniy 7 visualized by tracing and frotage (rubbing). The tracing is fitted onto the rubbing of the bear-hunting scene. The figures are fully carved, however to better show the superimposition, they have not been filled in. Tracing, frotage and illustration: Jan Magne Gjerde.

At Kamenniy 7 there are also difference in erosion and at some places it seems like there are 3 layers of carvings. With strong erosion it becomes very difficult to discern what was made first and last at the panel (compare Figure 221 and Figure 227 and with the tracing in Figure 225). The heavy eroded figures also makes documentation virtually an impossible task (see Figure 228 and Figure 229). However, the difference in erosion indicates that figures were made at the panels for a long time. Adding to the superimposition this strengthens the notion that rock art was made at Kanozero for a considerable time. The superimposition also suggest such a proposition. Three phases of rock art can be discerned from the Kamenniy 7 panel. At Eloviy one can also discern difference in erosion that suggests difference in age.

Figure 227 Section of the Kammeniy 7 site. One can see that the bear-and the bear hunter superimpositions the Beluga whale hunting scne underneath. The photo also shows that there is a large difference in the erosion at the panel. Photo: Jan Magne Gjerde.

Figure 228 Odinnokaya with Kamenniy in the background. One can see how the water/ice have polished the rock surface and the lichen growth is only present in the striation marks. An eroded elk head-boat is seen inside the black circle in the middle of the photo (Compare with photo in **Figure 229** and tracing in **Figure 230**). Photo: Jan Magne Gjerde.

Figure 229 A footprint and an elkhead boat figure at Odinnokaya. The figures are figure 60 and 61 in tracing of the site (see **Figure 230**). Notice the smooth surface due to water and ice activity. Photo: Jan Magne Gjerde.

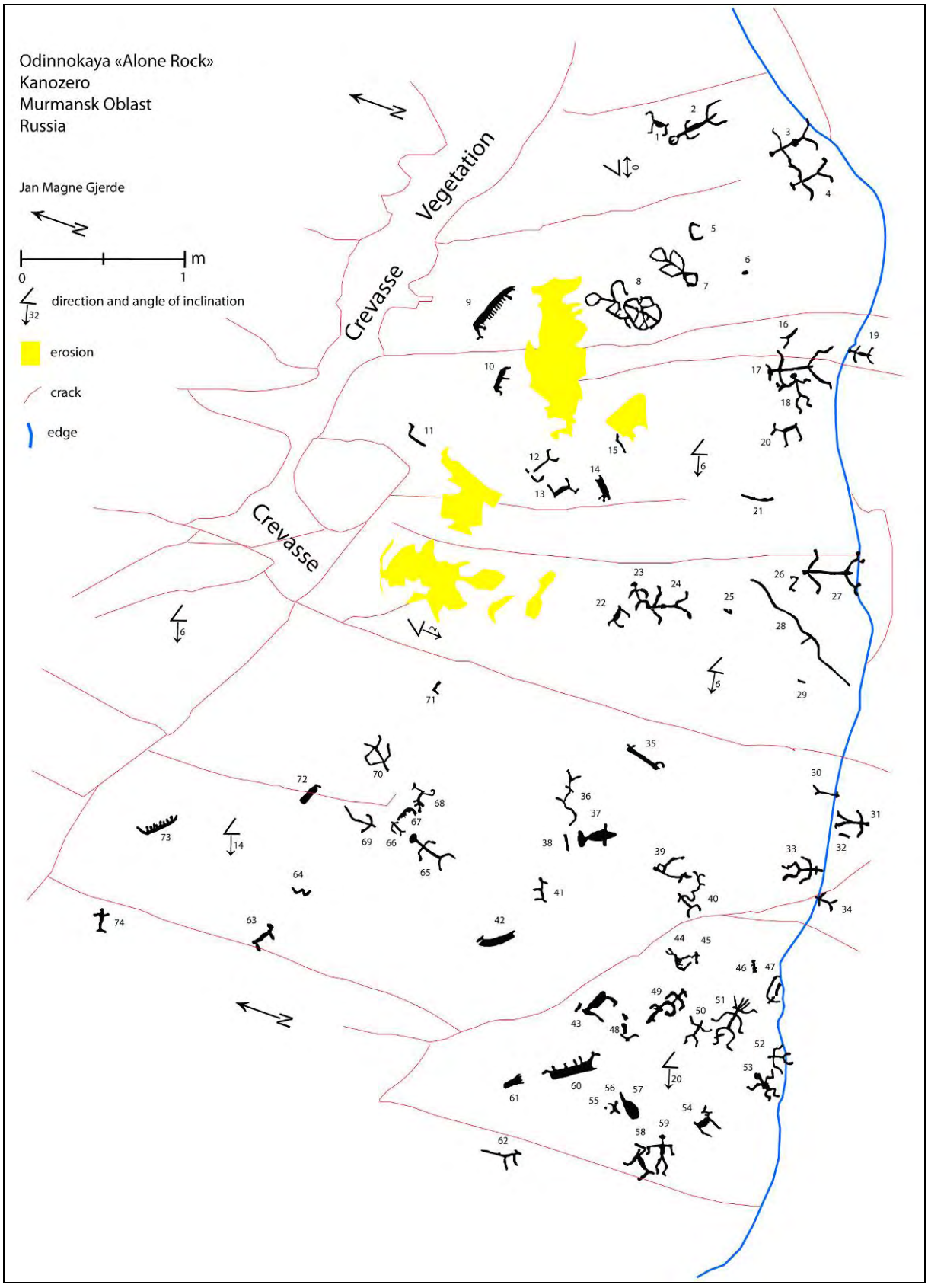

Figure 230 Tracing of the Odinnokaya rock at Kanozero. The lower area is heavily water / ice eroded. Compare the boat and the footprint in the lower half of the illustration (nr. 60 and 61) with photos in **Figure 228** and **Figure 229**. Tracing and illustration: Jan Magne Gjerde.

At Kanozero the dating of the carvings are controversial. We have to look at the comparative stylistic argument to see if there are any indicators from other sites that may aid in the dating of the carvings. The cross figures that in the material record only has its counterparts in Alta is present both at Kamenniy 7 and at Eloviy 1 (see Figure 224 and Figure 231). They also are very similar in size. This motif is in Alta dated to about 3000-2000BC[176]. The strongest similarity with the carvings at Kanozero is to be found at Vyg. The whale-hunting scenes at Kamenniy 7 evidence large boats cooperating with crew of more than 20 people. Similar whale hunting scenes are found at Vyg (e.g. New Zalavruga 8 and New Zalavruga 13), see Figure 216. The large cooperative whale hunting scenes at Vyg is dated to about 3700-2500BC (see Figure 201). Based on the similarity in the boats and the hunting scenes, the hunting scenes like the ones at Kamenniy 7 could be assigned to a similar date. Another factor is the large figures at Kamenniy 7 that superimpositions younger ones. These show a similarity with the manner in which the large elks superimposition the other figures at Old Zalavruga (see Figure 194). These large elk figures at Old Zalavruga are at Vyg dated to about 2500BC-2000BC. Based on the similarity with the rock art at Vyg, I have suggested a starting phase for the production of rock art to about 3700BC at Kanozero. However, an end phase is hard to evaluate, and the latest carvings may be fairly recent (only a few hundred years old), as suggested by Shumkin (Shumkin 2004:378). The rock art at Kanozero also suggest that the Kanozero rock art area was a place where people made rock art for several thousand years.

Even if a few flakes and a scraper was found adjacent to the Kamenniy 7 site during the fieldwork in 2005, no survey has been conducted when it comes to settlements. The finds were not diagnostic when it comes to dating. A number of Late Stone Age settlements have been excavated at Lovozero and Late Stone Age settlements have been found in the Umba region less than 15km downstream from the Kanozero Lake (Gurina 1987; Gurina 1997:plate 1B).

[176] This cross motif is dated to Alta phase 3 (3000-2000BC), but could also belong to Alta phase 2 (4200-3000BC). See Alta case study.

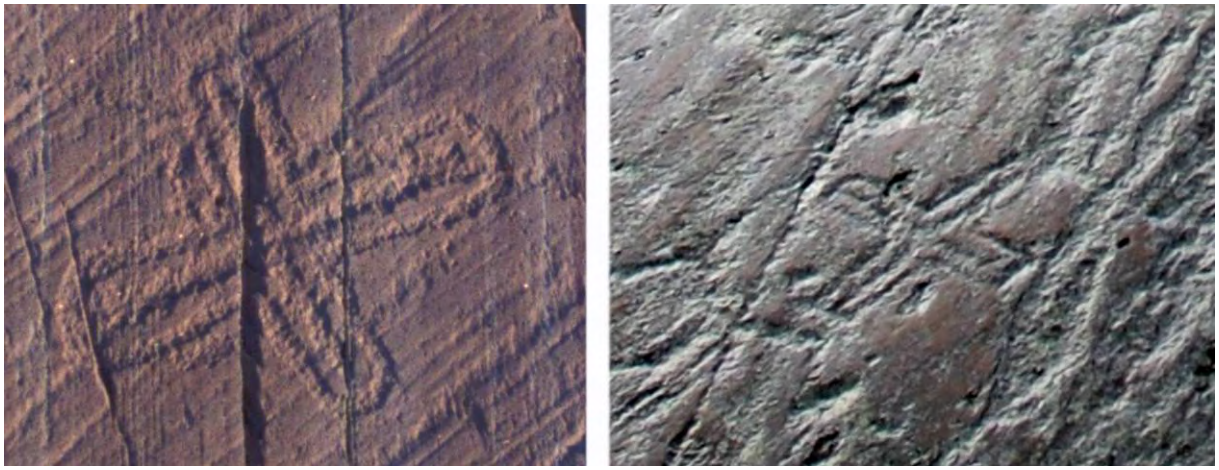

Figure 231 Cross-figures. The left is from Ytre Kåfjord in Alta and the right is from Eloviy 1 in Kanozero. The figures are similar and also are virtually the same size. The Ytre Kaafjord is about 18cm and the Eloviy 1 figure measures about 16cm. The photo to the right is taken at an angle to make the figure appear better. Photos and illustration: Jan Magne Gjerde.

Macrolandscape and microlandscapes at Kanozero

Macrolandscape

Based on the dating suggestion, when the initial carvings were made at Kanozero at about 3700BC, the sea-level in the White Sea by the Umba area would be higher. The recent geological data for the Umba area (see Figure 233) shows that at 3700BC, the sea-level was at about 22masl, and at about 2000BC, the sea level was about 14masl (Kolka et al. 2008:39f). When raising the sea-level according to the levels at the time of the initial carvings, one can see that the Umba area is an archipelago with long fjords with the longest one stretching 18km inland. Raising the shoreline at the White Sea to about 20masl (about the time the initial carvings were made), one sees that the Umba-fjord area stands out at the southern shores of the Kola Peninsula (see Figure 232). The fjords in the Umba area become a massive bay with large and smaller islands. We know that Stone Age people favoured coastal areas and the Umba archipelago would have been an ecological favourable area, especially for sea mammals and thereby sea mammal hunting. Late Stone Age settlements have been surveyed in the Umba area (Gurina 1997). The distance from the inner part of the Umba-fjord is less than 2km from the Panchozero Lake that is connected to Kanozero as part of the Umba River (see Figure 232). At the eastern side of Umba is today the prevailing Turiy Peninsula Peninsula. Most likely, the Turiy Peninsula would have been a reference in the seascape with its highest top at 172masl today. I assume this would have been a landmark / seamark to the people living in this area also in the Stone Age.

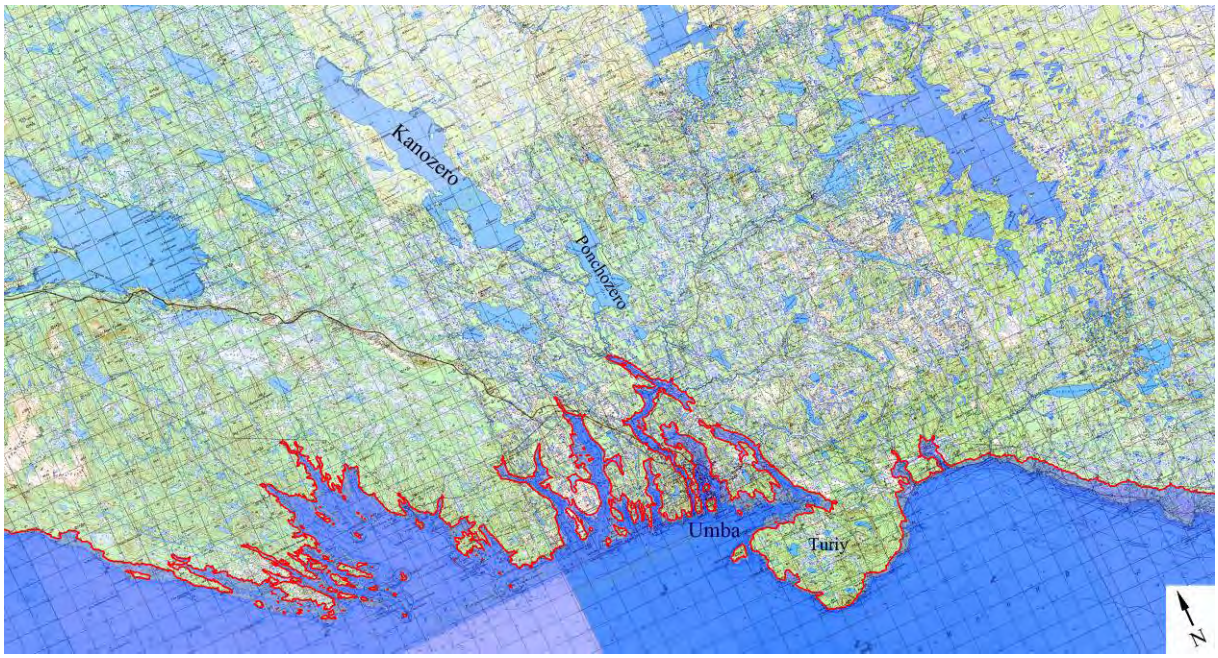

Figure 232 The coastal region between the Kanozero Lake and the White Sea with a raised sea level to about 20masl. Background map is a compilation of 9 maps from **www.poehali.org**. Scale: the squares are 2km in size. Notice that the Umba area where the river Umba disembarks into the White Sea today becomes an archipelago with long fjords penetrating inland. This archipelago would most likely be a favourable ecological area for sea mammals and sea mammal hunting. Illustration: Jan Magne Gjerde.

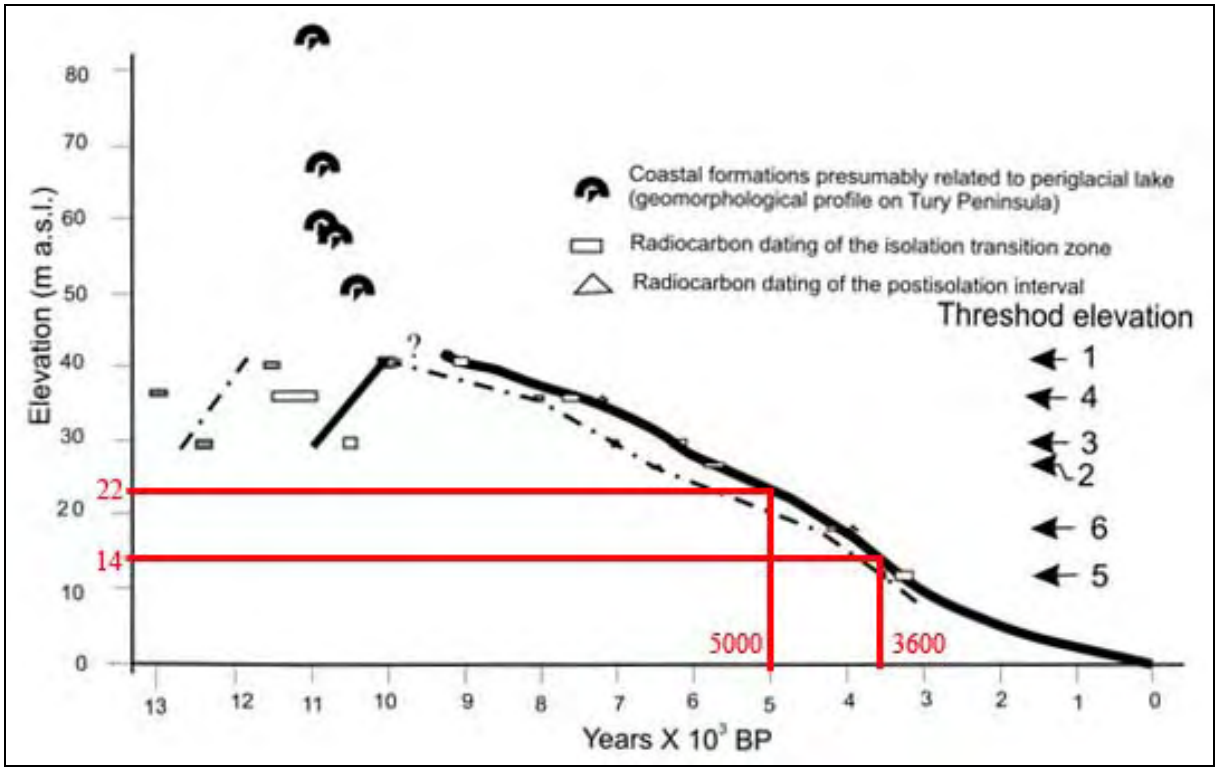

Figure 233 Relative sea level curve for the Umba region after (Kolka et al. 2008:fig.3.8.). I have marked the level at about 5000BP and 3600BP[177]. This shows that at the respective dates, the shore level was 22m and 14m higher than today. Illustration: Jan Magne Gjerde.

[177] By OxCal v3.10, 5000BP is calibrated to 3800-3710 with 2sigma and 3600BP is calibrated to 2020-1900BC with 2 sigma.

The southern end of the Kanozero Lake is situated about 28km from the White Sea. The distance between the White Sea and the Barents Sea is about 285km today. The rivers and lakes from the Umba area to the Voron'ya river forms a continuous waterway between the White Sea and the Barents Sea (See Figure 235). It would have been about 250km in the Late Stone Age due to the land uplift in the coastal regions (see Figure 232). Following the waterway north from Umba, one passes Kanozero Lake. Further, following the Umba River to Umbozero through to Lake Lovozero brings one to the Voron'ya River that has its outflow in the Barents Sea. Central along this waterway (about halfway between the Barents Sea and the White Sea) are also the two massive mountain ranges, the Khibiny Mountains (1200masl) east of the Umbozero Lake and the Lovozero Tundra between Umbozero and Lovozero (highest point at 1116masl) that stands out in the otherwise "flat" landscape. Several Late Stone Age settlements are found along the waterway sketched above and Late Stone Age settlements have been found at Umba, Umbozero, Lovozero and Voron'ya (Gurina 1997:plate 1B). There may be other Stone Age highways at Kola Peninsula, however, the Ponoj River and the Umba-Voronya route seems prevailing when studying the topography of Kola Peninsula at a macro-level.

At the centre of the U-shaped Lovozero Mountains lies the Seydozero lake. This lake is about 8km long and Late Stone Age settment sites have been surveyed by the lake. In the mountainside by the northwestern part of the lake, is a large natural formation in the rock, that is shaped like a human figure (see Figure 234). The dark rock that forms a human figure is about 75m tall and can be seen from a distance of several kilometres. This figure is called Kuyva and is eabled with myths (Hallström 1921).

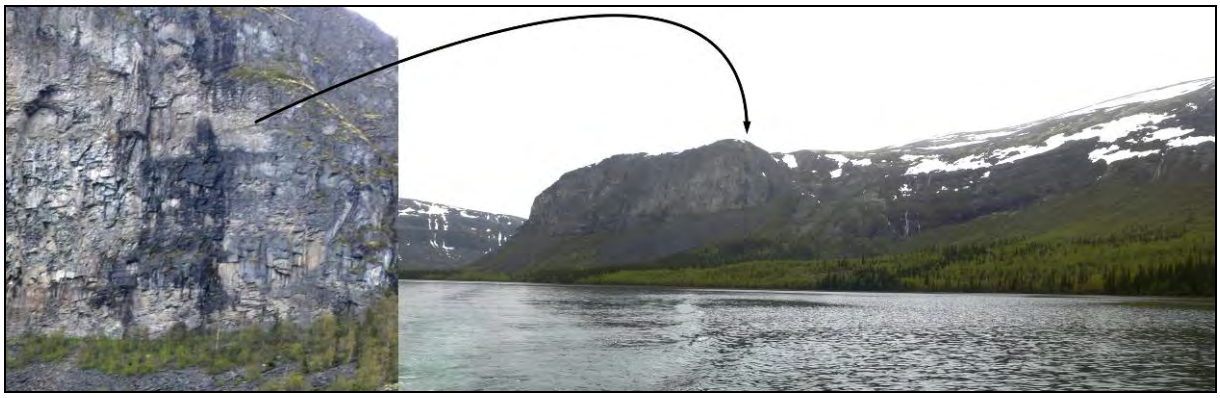

Figure 234 The large Kuyva (the old man) figure in the rocks at Seydozero. Photos and illustration: Jan Magne Gjerde.

About 50km east of the Lovozero Lake lies the Keivy Uplands, the source of the Ponoy River that runs virtually straight east towards across the Kola Peninsula. The rock carvings at Chalmn Varre are located along the River Ponoy near the village Ivanovka about 70km downstream from the village Krasnoshchel'ye (Krasnoštel'e) (Gurina & Stalsberg 2005:17). The boulders with rock carvings (Gurina & Stalsberg 2005) show similar traits, when it comes to some of the reindeer depictions, with the Kanozero carvings. Especially the deer carvings at Eloviy 1 are are made in a similar style to the Chalmn Varre deer figures. The Ponoy River is a central waterway on the Kola Peninsula.

The islands with rock art at Kanozero stand out when moving across the lake. They are always visible and may be used as geographical references. When journeying through the Umba river, the islands become natural places to stop both when travelling from and to the White Sea and travelling further inland towards the Lovozero area and also when journeying further north through the large Voron'ya hydro system ending up in the Barents Sea.

The large number of carvings as well as the focus on boat carvings suggest that Kanozero was a central place in the Stone Age landscape that was important for several thousand years. The topographic situation of the Kanozero Lake makes it a central part of the "Stone Age Highway" between the Barents Sea and the White Sea. The Kanozero site is interpreted as a meeting place where there would always be people travelling to and from. This was a place where people gathered to exchange information through the year, and there would always be people passing by and stopping at Kanozero.

The only change that has been suggested for the Kanozero Lake region is a rapid drop of the water level due to the geological situation after the Ice Age when there could have been a natural clog in the outflow area of Kanozero due to moraine remains. The geological explanation is that there was a clog in the outflow, and when this dam suddenly broke, the water-level sunk very rapidly a few metres in altitude. According to the geologists Kolka and Møller, such formations and a sudden drop in water level in lakes have been documented elsewhere both in northern Norway and in northwestern Russia[178]. That means that the water-level at Kanozero could have been about 5m higher before the break-through than at present. There is currently not good data for the geological assumptions concerning the history of the water-level at Kanozero. However, the rock art at Kanozero proved to reveal interesting results according to this scenario when related to the shore connection.

[178] Vasilij Kolka, personal communication, 2005 and Jacob Møller, personal communication, 2009.

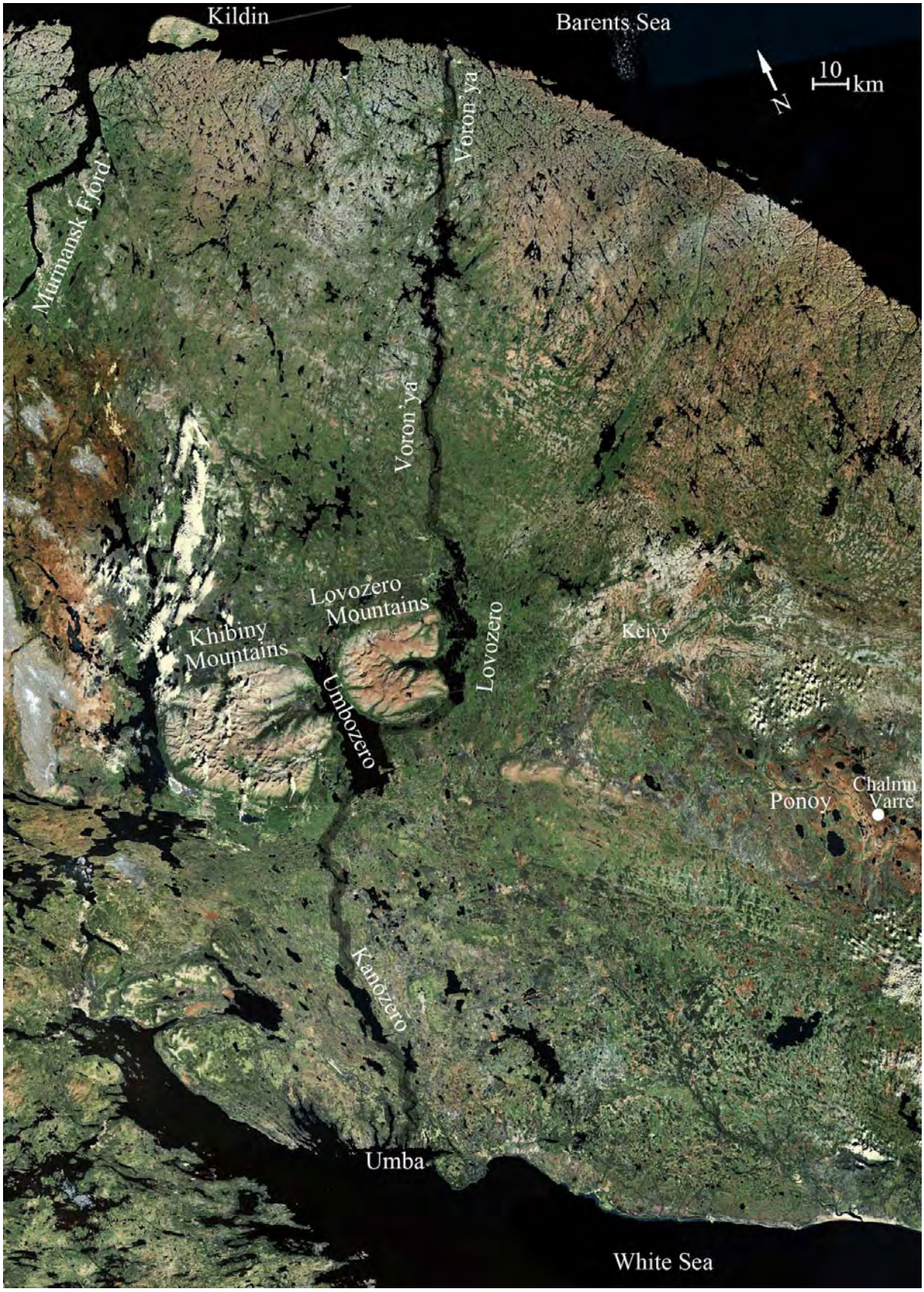

Figure 235 Central part of the Kola Peninsula with the waterway from the White Sea to the Barents Sea slightly indicated. Central at the Kola Peninsula lies the Khibiny Mountains and the Lovozero Mountains. About 50km east of the Lovozero Lake, the Ponoy River has its source at the Keivy Uplands, flowing about 426km eastwards. Along the Ponoj River is the rock art site Chalmn Varre (Ponoj, Ponoy, Chalmi Varre, Čalmn-Varrė) with 10 boulders with carvings. Sattelite images compiled from www.bingmaps.com. Illustration: Jan Magne Gjerde.

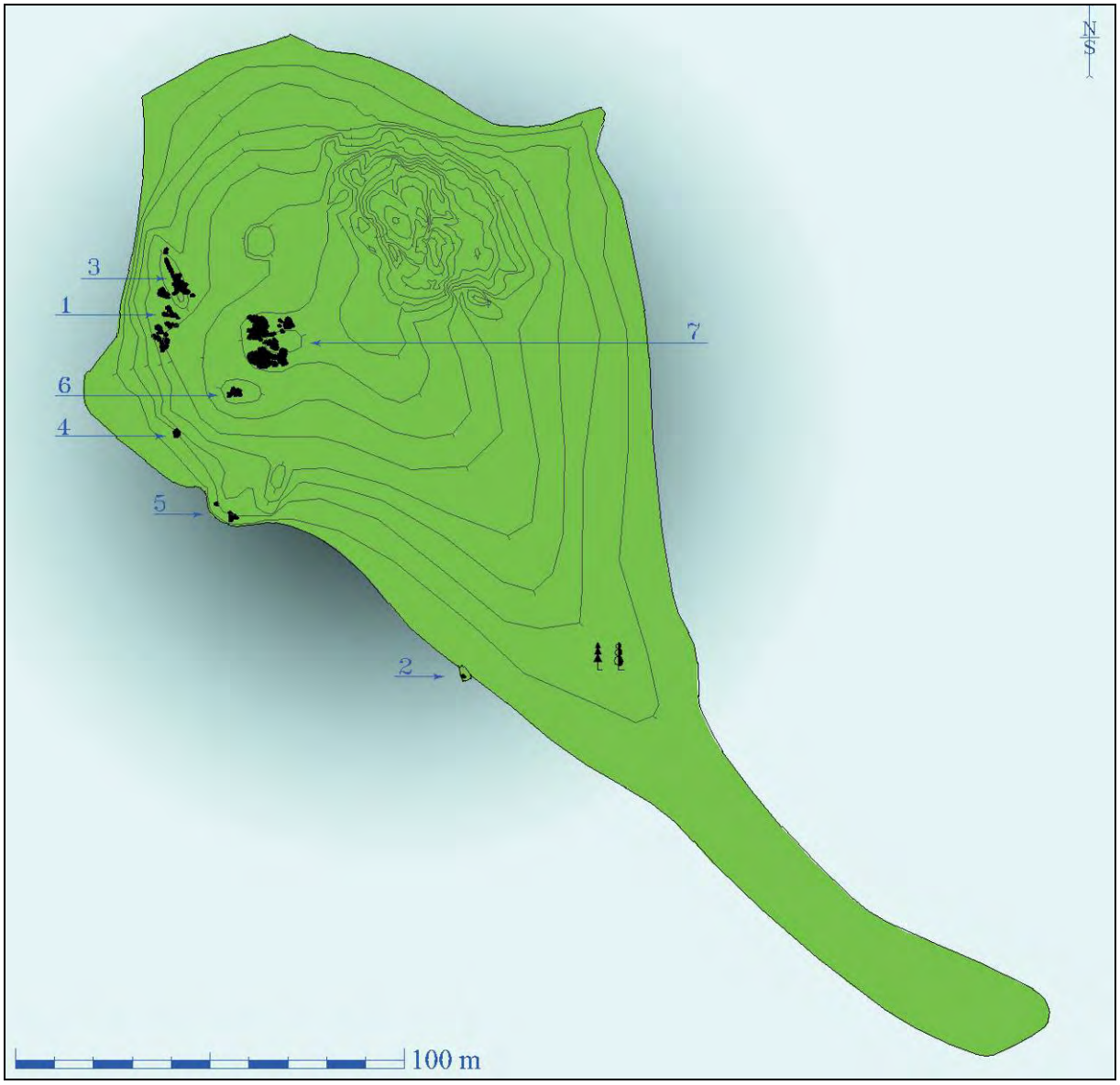

Figure 236 Map of Kamenniy Island with the 7 sites marked. The figures are traced onto the map. Contour interval 1m. Map by Kola Archaeological Expedition. E. Kolpakov.

The strict shoreline connection for the rock art is witnessed at the inland sites in northern Fennoscandia with few exceptions. This can best be observed at Onega where the carvings are placed so close that the annual fluctuations in water level often submerge carvings or rock art sites. At Kanozero, like at Onega, carvings are made on islands. This is not an uncommon phenomenon and several places the rock art sites from the Stone Age are placed on small islands (e.g. Nämforsen, Onega and Vyg). At Kanozero and Onega, the waves still wash onto the rocks and the water is sometimes interplaying with the figures. The movement of the water at Onega makes some of the swans look like they are moving when

the water slosh over the rock surface with the figures (e.g. at Mudosh Island)[179]. The rock art close to the water at Kanozero, e.g. at Eloviy 2, Goreliy and Odinnokaya show results of wave or ice erosion where the lichen is removed and the remains of the figures appear faint in the rock surface (Figure 228 and Figure 229) and frequently the waves wash over the carvings.

In 2005, at Kamenniy (see Figure 236 and Figure 239), a thorough search was done above the highest elevated known panel at Kammeny 7 since there were available rock surfaces above this panel. A survey was also done at the rock surfaces between the known sites. Even though there are available rock surfaces, the carvings at Kanozero are made between 0-2.2m above the lake level and 4.3-8m above the lake level (see Figure 237). That is, there are no carvings made between 2.2m and 4.3m. Natural dams after the glaciers or eroding river deltas have been put forward by geologists to explain fall in lake-levels. Discussing the Kanozero Lake with local geologist[180], this would mean that when the erosion from the river activity in the southern end of Kanozero broke through the dam, the water level would rapidly drop. If the geological assumption is correct, the panels at Odinnokaya, Eloviy 1-5, Goreliy 1-4 and Kamenniy 2, 4, 5 would have been under water when the first rock at was made at Kanozero. Hence, there would be fewer panels available to make the rock art. With a raised lake-level by c. 4m, the vast areas of the flat surrounding land would be submerged when the lake was 56,7masl instead of 52,7masl., hence making Kanozero a slightly larger lake than it is today. Only minor parts of the island Eloviy and Goreliy would have been above the lake-level. Thereby, during the initial phases at Kanozero, only Kamenniy 1, 3, 6, 7 and Eloviy 6 would have been above the Kanozero Lake before the water-level dropped. In the following I will focus on the carvings at Kamenniy. The Kamenniy Island is seen from the lake at its inflow and outflow. The Kamenniy Island acts like a reference point when moving along the lake since it is a visible contrast (See Figure 228 and Figure 238).

[179] At my visit to Onega in 2005, I was dazzled by the movement of the water over the small swan figures making them ”come alive”.
[180] Vasilij Kolka, personal communication 2006.

Site	m. above lake level at Kanozero	Site	m. above lake level at Kanozero
Kamenniy 1	4.5-5.3m	Eloviy 3	0-0.6m
Kamenniy 2	0.3m	Eloviy 4	0.2m
Kamenniy 3	4.3-6.5m	Eloviy 5	0.4m
Kamenniy 4	1.7-2m	Eloviy 6	4.5m
Kamenniy 5	1-2m	Goreliy 1	0.4-0.9m
Kamenniy 6	6.4-6.8m	Goreliy 2	1.2m
Kamenniy 7	6.5-8m	Goreliy 3	0.5m
Eloviy 1	1.6-2.2m	Goreliy 4	0.7m
Eloviy 2	0-1,5m	Odinnokaya	1-2m

Figure 237 Elevation above the present Kanozero Lake of the sites at Kanozero. Data after (Kolpakov et al. 2009).

Figure 238 The Kammeniy Island seen from the site Eloviy 2. Notice the flat landscape. Photo: Jan Magne Gjerde.

Figure 239 Kammeniy with the different sites marked. Kammeniy 3 is located at the rock ridge and the flat surface beneath the ridge towards Kammeniy 1. Kammeniy 6 and 7 is covered by trees, however, one may get a glimpse of the Kammeniy 7 rock looking carefully at the photo. Kammeniy 4 is slihtly covered by vegetation and Kammeniy 2 is located past Kammeniy 5 about 70m from Kammeniy 5 (see **Figure 236**) Photo and illustration: Jan Magne Gjerde.

Microlandscpes

When discussing the microlandscape at Kanozero, I will mainly focus on the sites at Kamenniy. The carvings at Kamenniy is mainly located at the rock slopes on the north-western side of the Island (See Figure 239 and Figure 241).

Kamenniy 7 is one of the clearest example of how the micro-landscape is applied in the narrative story told. The scene depicts a bear-hunt during winter (Figure 226 and Figure 240). One can follow the bear tracks up the rock four by four and the tracks, the motion, of the bear shows that the bear is walking at different paces. The tracks go upwards to the edge of the rock, and at the edge of the rock, the bear turns downwards. Following the bear is a male hunter on skies. One can see that he is walking upwards due to the positioning of the ski marks. Several times traces of a ski pole can be seen along the ski tracks. When the bear walks downhill, the skier turns, following the bear downhill. One can see that the ski marks are represented as if sliding down the hill. One can also see marks of the ski pole on the left side of the ski track. Then the hunter stops, he leaves his skies, walks four steps and puts the spear into the bear (see Figure 226). The inclination of the rock in combination with the narrative element in the figures visualizes the terrain and the skiing during this bear-hunt

during spring. This hunt could refer to a known place in the landscape where the bear was hunted (bear-den?). Under the bear and the bear hunt is a Beluga Whale hunt. The Beluga hunting-scenes are most likely referring to the Umba Bay where it is likely that the hunt occurred. However, the reference point may as at the Onega carvings be referring to the Beluga Landscapes of Vyg.

Figure 240 The bear-hunting scene at Kamenniy 7. One can see how the skier and the manner in which the ski tracks are reflecting the topography that also is present in the microlandscape of the rock surface. The skiers marks reflects the topography of the rock including the inclination in the rock art scene. The dark line at the lower half of the photo is the shadow of a tree. Photo: Jan Magne Gjerde.

The Kamenniy 3 site is characterized by the ridge the figures are placed (See Figure 239). There are figures at the top of the ridge and on either of the sides. At the top of the ridge several footsteps are depicted as if a person is walking up the ridge (see Figure 242 and Figure 243). With a higher water-level at the Kanozero lake it becomes evident that the person (footsteps) is appearing from the lake, “from the underworld”.

The inclination has been applied as part of the rock art story told at Kamenniy where the skiers movements follows the inclination in relation to tracks of the skies are depicted. At Kamenniy 3 one can also see that natural lines are applied in 3 of the reindeer representations

(see figure 24, 26 and 28 in Figure 243). At Kamenniy 7 another natural line (the most prevailing striation mark) is applied and the natural line is modified closer to the large elk where it ends (see Figure 244). Following the striation mark (see Figure 225), it starts where a person is standing with an elk head stick (Kamenniy 7, area 2). The line is incorporated in an animal-track and then a human figure is carved as if the body is formed by the natural line. In this area there are figures that appear depict various elk-hunts. Finally, the long line ends up in the back legs of the large elk (in Kamenniy 7, area 3). This could be interpreted as the natural line is marking the shamans journey, either real or cosmological.

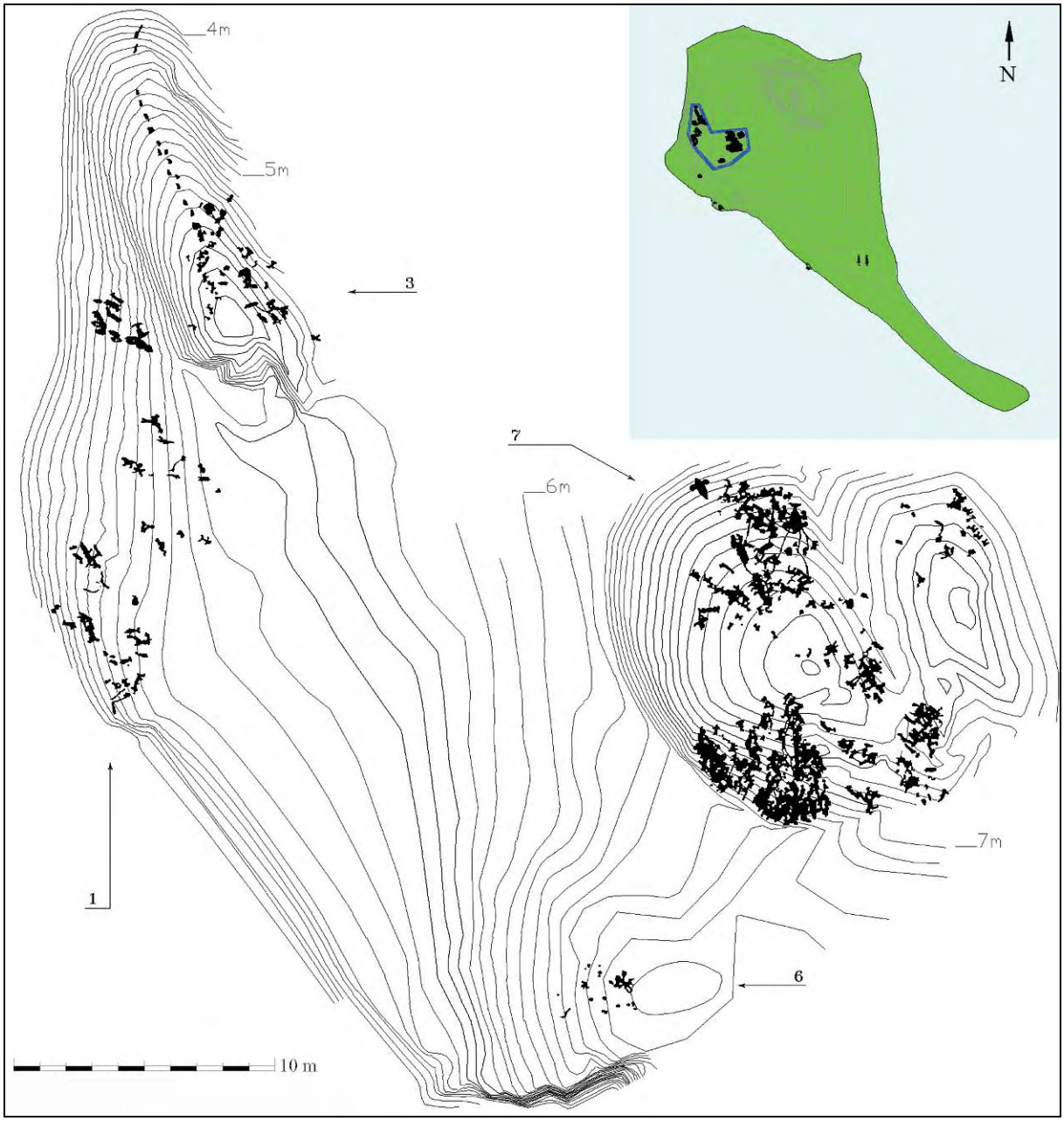

Figure 241 Soutwestern part of Kamenniy with the placing of the figures at Kamenniy 1, 3, 6 and 7. Contours at 10cm interval. Compare with **Figure 239**. Notice how the footprints that can be seen in the tracing at **Figure 243**

appear as if they are walking up the rock ridge at Kammeniy 3 (see **Figure 242**). With a higher water-level in the lake, these would come from the lake. Today, they are about 4m above the water level at Kanozero. Illustration: Kola Archaeological Expedition, Evgenev Kolpakov.

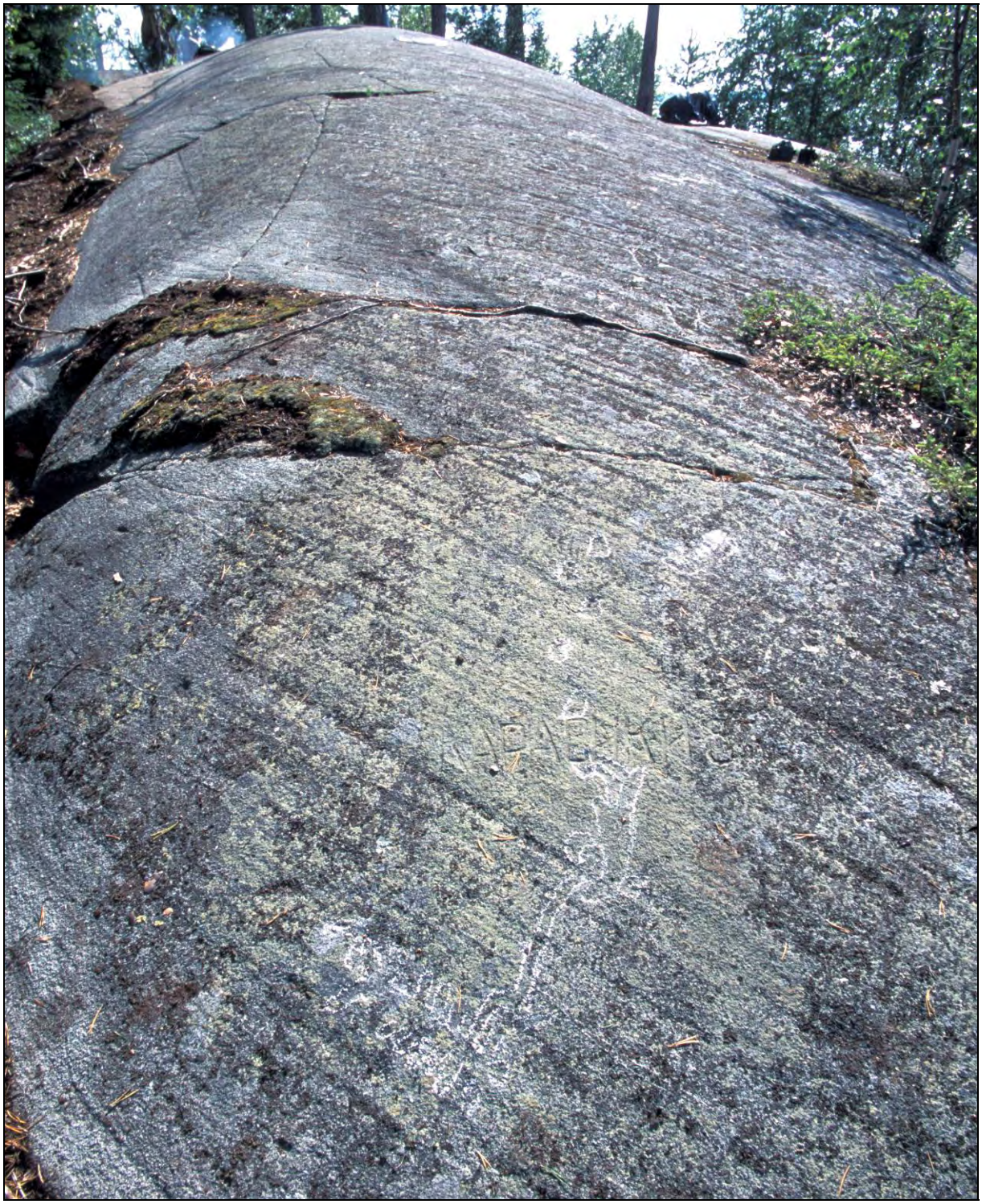

Figure 242 Kamenniy 3 seen from the lowest carvings. There are figures on both sides of the rock ridge at the flat surface in the upper right of the photo. At the lower part of the photo, a reindeer hunting scene is depicted. 15 footprints are depicted as if they are walking up the rock ridge. The footsteps start above the crack to the left of the green grass in right of the middle of the photo. For a general distribution of the figures, compare with the tracing in **Figure 243**. Photo: Jan Magne Gjerde.

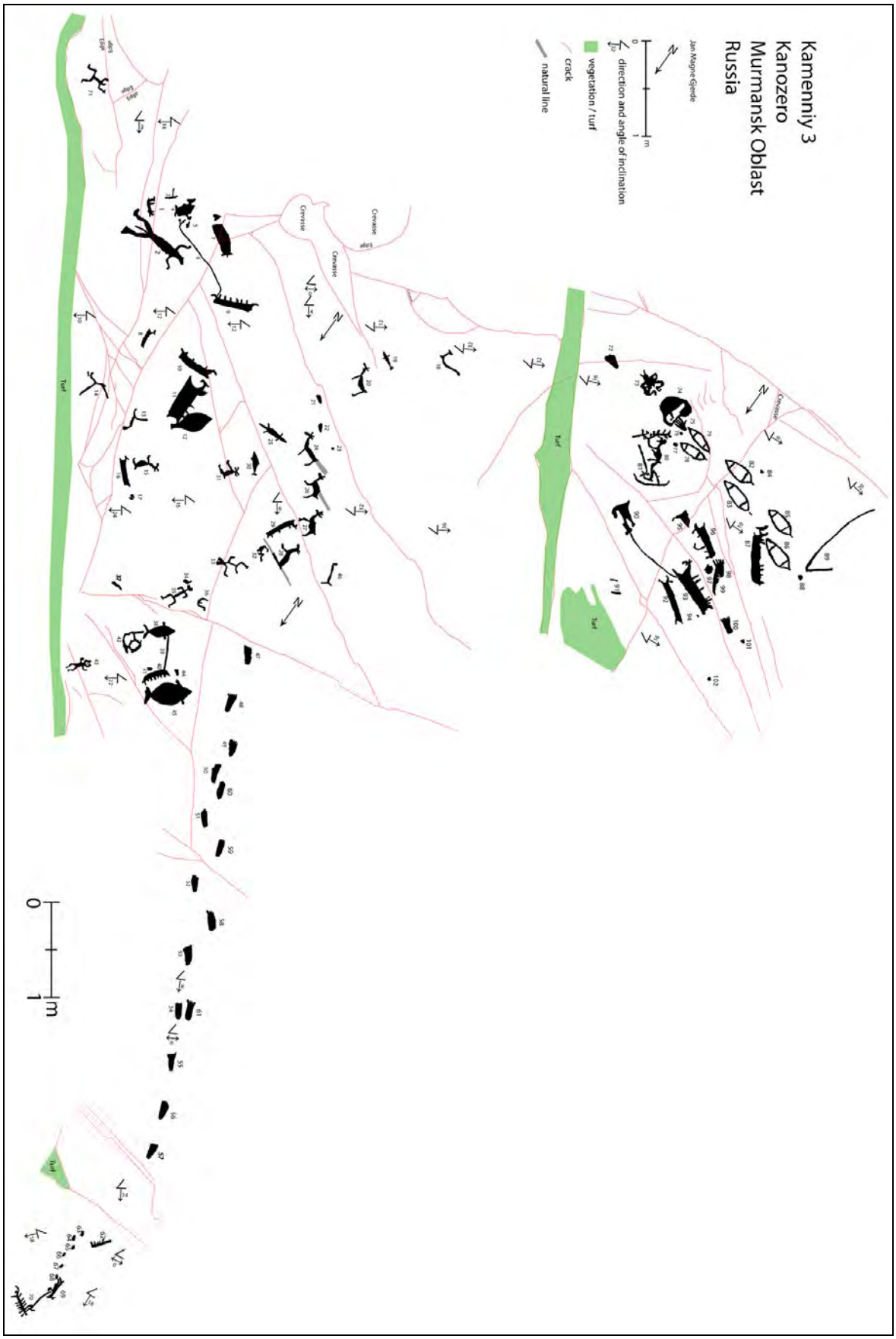

Figure 243 Tracing of the Kamenniy 3 site. The lowest figures depicting a reindeer hunt is seen in **Figure 242**. The footprints are walking up the rock as if it is appearing from the lake. For the general distribution of the figures, see **Figure 241**. Tracing and illustration, Jan Magne Gjerde.

Figure 244 The natural line connected to the large elk figure at Kamenniy 7 (area 2). Compare tracing in **Figure 225**. Photo: Jan Magne Gjerde.

Summary of the Kanozero rock art

The making of rock art at Kanozero cannot be dated by shoreline dating. By comparison to the Vyg rock art area a reasonable dating suggestion places the initial carvings at Kanozero to the Kamenniy sites dated to about 3700BC. The end-phase is hard to estimate, but could be quite recent and is placed to about 1800AD. That is, rock art was made at Kanozero for about 5500 years.

Initially around 3700BC, the Kanozero Lake was slightly larger. However even if the lake size changed slightly, Kanozero with its inflow and outflow rivers seem to have been an ideal communication ore between the White Sea, inland to the Lovozero Lake and north as far as the Barents Sea. The islands with rock art act as reference point from a boat when moving around the large Kanozero Lake.

The rock art at Kanozero is at several places deliberately placed in relation to natural features in the rocks. Some places it looks like if the natural elements of the rocks interacted with the rock art and the story told in the rocks. Some places these even have references to the wider landscape where the micro landscape or miniature landscape acts like a backdrop to tell

stories of their macro topography / macro landscape, interacting with the figures and scenes. One can also see that scenes act as reference point to places in their wider landscape like the skier on a bear hunt, at Kamenniy 7, where the figures narrative interact with the inclination of the rock outcrop.

Nämforsen

Rock art at Nämforsen

The carvings at Nämforsen were first mentioned in 1705. Several researchers paid interest in Nämforsen and published free-hand drawings with descriptions. It was however not before midsummer 1907, when Hallström visited Nämforsen for the first time (Hallström 1960:134), that the scientific investigations started[181]. For a detailed overview of the research conducted at Nämforsen before 1960, I will leave the reader in the hands of Hallström (1960:130-136). Hallström documented 1750 figures at Nämforsen, of which c. 375 in his own words are obscure and inexplicable and more than 300 are unfinished lines or remains of figures. Hallström estimated the numbers of figures to exceed 2000 (Hallström 1960:283). Later more carvings have been found. In 1997, Lindqvist documented more than 100 new figures when the carvings at Nämforsen were repainted (Lindqvist 1999:105) A re-documentation of the Nämforsen site has lately been conducted by Larsson[182], however this documentation awaits publication. Only sparse accounts have been published, but these show that more figures heve been found and that Nämforsen now has more than 2300 figures (Larsson & Engelmark 2005). I have applied Hallströms documentation to get an overview of the carving area. Hence, I will briefly introduce Hallströms sectioning of the material so that the references to figures, panels and sites will be clearer to the reader[183]. Hallström grouped the carvings of Nämforsen in three main groups that reflect his work at Nämforsen. Due to the forceful rapids (see Figure 246), he could not get to the Bradön during his first visits. Thereby the sectioning is not spatial, however, a reference to his history of documentation (Figure 245, Figure 247 and Figure 248):

[181] Hallström documented Nämforsen and his lifetime meticulous documentation (Hallström 1960) was published in full only two years before he died. Hallström had previously published parts of the Nämforsen site (Hallström 1945).
[182] Thomas B. Larsson, personal communication 2004.
[183] To make it easier to the reader to locate the examples applied from Hallströms documentation, I have chosen to refer e.g., when referring to main group I and subgroup G1 after this pattern Hallström IG1.

Group I: The carvings on the island Laxön and on the northern and southern riverbanks.

Group II: The carvings on the island Notön

Group III: The carvings on the island Bradön

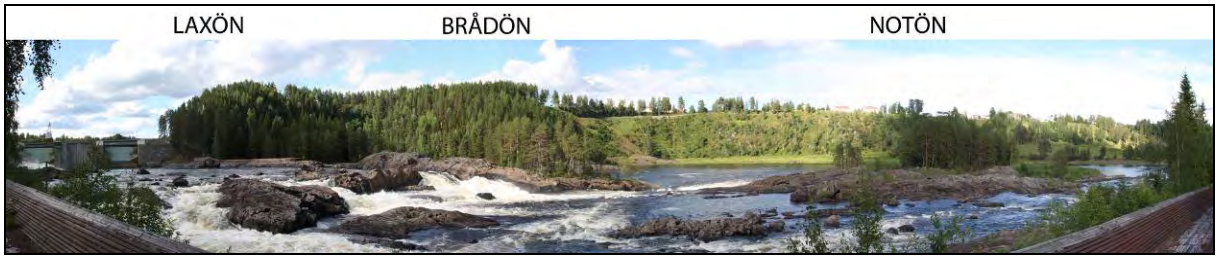

Figure 245 Panoramaphoto of Nämforsen from the area where Ställverksboplatsen once were. Compiled from 6 photos. Photos and illustration: Jan Magne Gjerde

Figure 246 The rock art area of Nämforsen and its surroundings. The rock art is situated on the islands in the rapids area and on the river bank on both sides of the river. Photo from Gustaf Hallströms Archive at the Research Archive, University of Umeå, Sweden.

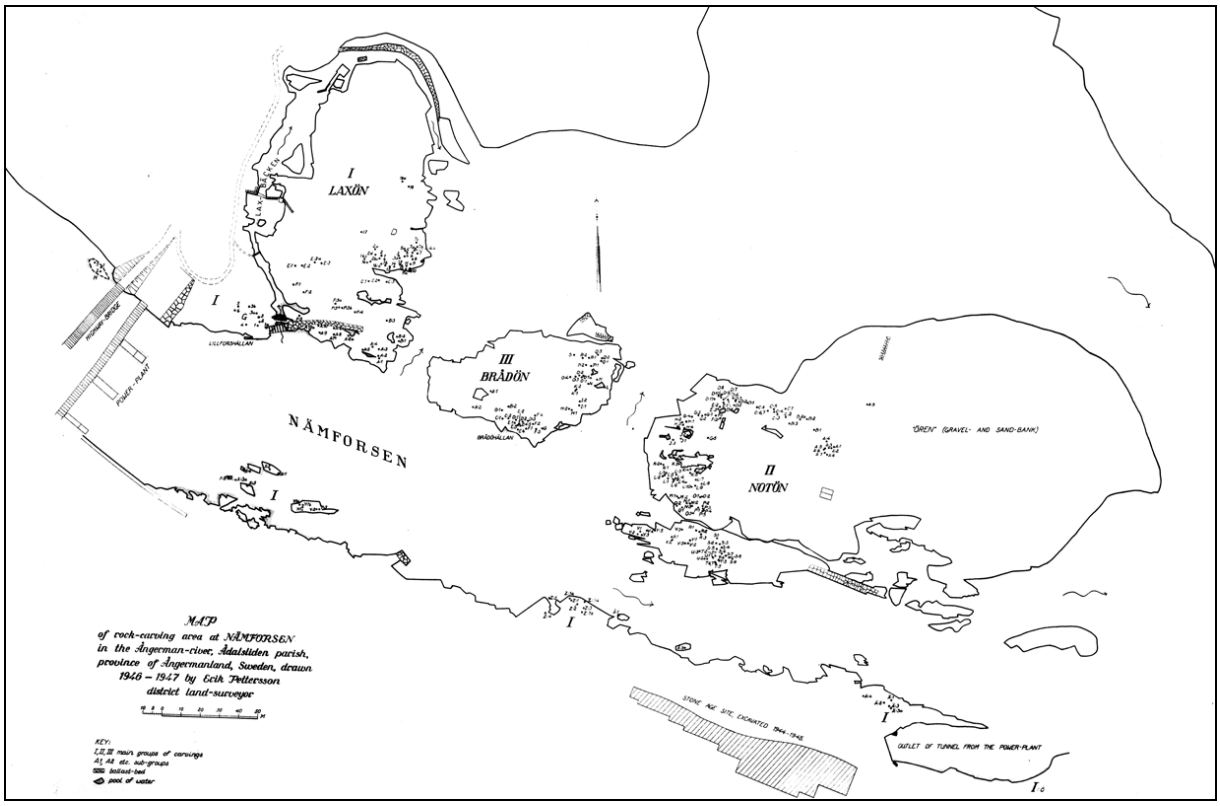

Figure 247 The rock art area of Nämforsen. to show where the carvings are located in relation to the waterfall. The shaded area in the lower part of the drawing is the excavated Ställverksboplatsen. Map from Hallström (1960:129, XXVIIa).

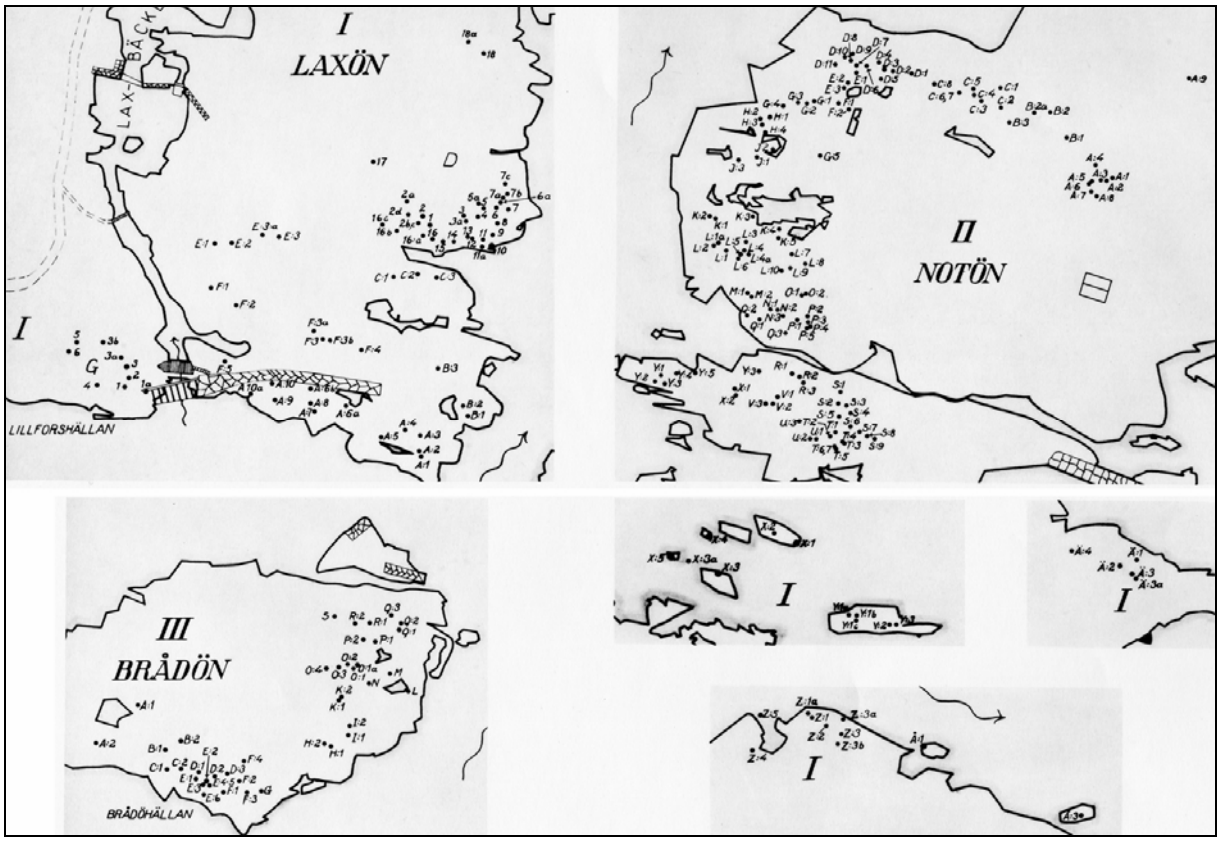

Figure 248 Map of the different groups at Nämforsen. Map from Hallström (1960:129, XXVIIb).

According to Baudou, the carvings at Nämforsen is made between 87-73masl (Baudou 1993:247). However, due to the building of the Hydro Power Station some of the carvings (Hallström group H) were destroyed. They were located at c. 90masl[184].

By far the dominant representation is that of the elk (see Figure 250). There are a few representations of other animals such as bears and salmon. Human figures are also frequently depicted, sometimes with artefacts such as the well-known elk-head sticks. There are also numerous boat depictions (see Figure 249). The elk-head boats with an elk representation are dominant, but a few examples of the "traditional" South Scandinavian boats also occur. There are also foot soles and wheel-crosses that are associated with the South Scandinavian Bronze Age carvings. An overview of the figures that could be identified at Nämforsen, presented by Lindqvist (1994:183) shows that of the 1180 identified figures, a staggering 585 are elks (c. 54%), 337 boat figures (c. 31%) and 99 human figures (9%). That is, c. 95% of all the figures at Nämforsen represents elks, boats or humans. When a motif is so dominant as the elk at Nämforsen it is important to relate the rock art to the animals morphology. The elk is depicted in many different positions at Nämforsen, single individuals and in groups.

The elk seems all-embracing since it also occurs as elk-head-sticks and on the boats with an elk-head in the stem, where the whole boat looks like an elk. At some places one can also see that the antlers of the elk is depicted like boat-representations as suggested by Tilley as ambiguous figures (Tilley 1991:68). That antlers are depicted as boat representations has also been presented for other parts of Fennoscandia (Lahelma 2007:117-119).

Figure 249 Rock art at Nämforsen. Lillforshällen (Hallström IG) at Laxön with some of the earliest figures from Nämforsen. Compilation of three photos. Photo and illustration: Jan Magne Gjerde.

[184] Hallström group H is Ådals-Liden 4:1 in http://www.fmis.raa.se/cocoon/fornsok/search.html.

Figure 250 Rock art at Laxön, Nämforsen. The elk antlers have been interpreted as boat representations. Photo: Jan Magne Gjerde.

Dating the Nämforsen rock art

Accounting for the land uplift, Sidenbladh found that the river was less accessible by ship from the coast and surmised that there was no direct shipping lane after c. 4-5000 years ago, concluding with an ancient date for the carvings (Sidenbladh 1869:206f). Sidenbladh's suggestion dated Nämforsen to the Late Stone Age, however, most dating suggestions for Nämforsen placed the carvings in the South Scandinavian Bronze Age. This was mainly rooted in the boat motif (Hallström 1907b:164, 177). In general in Hallströms early works, he dated all the rock art at Nämforsen to the Bronze Age (e.g. Hallström 1907b). Later, Hallström (1960) accepted the geological data after Liden (1913; 1938) where the shore displacement in the Ångermanland district determined that the rapids were uncovered during land elevation between 3850BC-3125BC. Hallström saw this as the maximum date for the carvings at Nämforsen, which would place the initial carvings at Nämforsen to the Late Stone Age compared to the carvings with the rock art of northern Fennoscandia (Hallström 1960:372).

The few figures belonging to the Bronze Age are focal in the dating discussions on Nämforsen (e.g. Malmer 1975; Malmer 1981). The few Bronze Age figures were dated; hence representative for the site. Malmer could not break free of the dating suggested by Hallström,

placing the rock art in the Bronze Age. Hence, Malmer (1981)[185] entered Nämforsen in what appears to be a "*South Scandinavian Bronze Age boat of type AIIIc1*". For the animal figures Malmer followed Hallströms relative chronology where the older carvings were outlined, followed by a later phase with internal patterns, and the youngest with scooped out animals dated to the Bronze Age (Forsberg 2000:60). Less than 50 figures of the more than 2300 figures can be assigned by stylistic comparison to the Bronze Age. It is therefore noteworthy and surprising that the few motifs are emphasized in the discussion on dating. A solution to the problematic dating could be to neglect it or under-communicate it, like Tilley has done in his study of Nämforsen (Tilley 1991). I do not regard this as a fruitful option since this would place rock art in what too often seems like a diachronic void that cannot relate to the rest of prehistory.

The latest dating suggestions for the Nämforsen carvings was presented virtually at the same time by Baudou (1993), Forsberg (1993), Lindqvist (1994) and Ramqvist (1992). They are all based on shore displacement data. Being more aware of the fact that figures from different times could occur on the same panels at Nämforsen, Forsberg combined land uplift data, superimposition and seriation analysis. For a thorough presentation of the superimposition at Nämforsen, see Forsberg (1993:218-223). The pattern presented by Forsberg shows that the scooped out figures are older than the line-drawn ones (see Figure 251). This concurs with Lindqvist results when he sectioned the figures at Nämforsen into three main styles (style A-C). Style A can be found between 78-88masl, style B can be found between 72-78masl (he also separated style B into B1 and B2) and style C can be found at 73-80masl. Lindqvist also observes that the few "clear" South Scandinavian designs at Nämforsen occur together with the outlined figures and not the scooped-out figures which should have been the case if they were contemporary (Lindqvist 1994:213-220). The thorough work on dating has strengthened the argument that the majority of the carvings at Nämforsen date to the Late Stone Age. The general acceptance that the boat-motif at Nämforsen could belong to the Stone Age as a result of the finds at Vyg in northwestern Russia and in Alta in northern Norway, can, in my opinion, be read between the lines in the above mentioned Swedish works.

[185] Malmers work was written in 1972, however not published before 1981. This might explain his strong stylitic focus. This also might explain why he did not look north for similarity in the boats. The carvings in Alta, northern Norway was yet to be found when he wrote his dissertation.

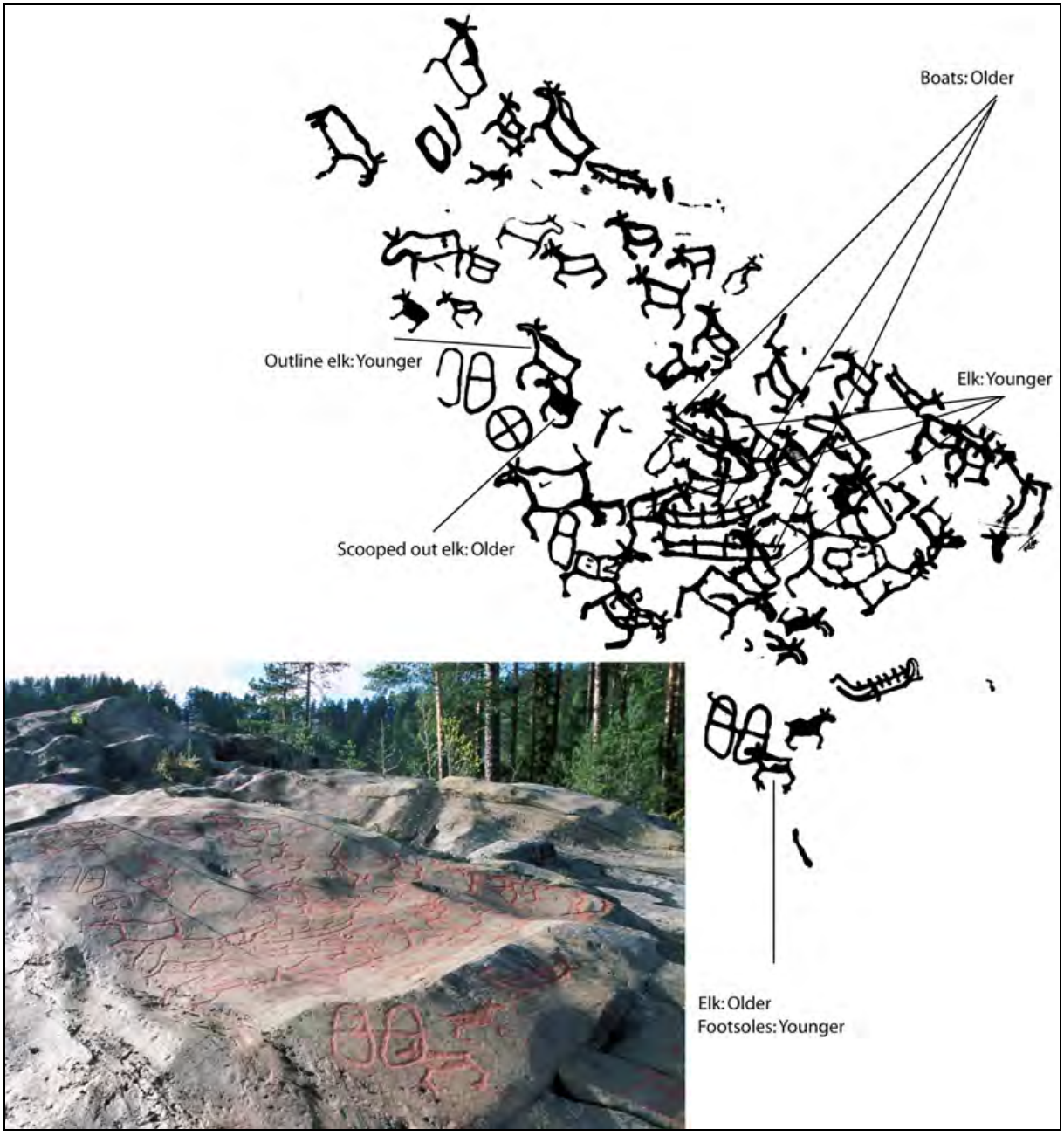

Figure 251 Carvings at Bradön in Nämforsen where the three styles (Lindqvist style A-C) of rock art is situated. The superimposition of the carvings shows that the scooped out elk is superimpositioned by an outline elk almost in the middle of the illustration. In the lower part of the illustration one can see how the outline elk is superimpositioned by the footsole motif. This panel is vital to the internal chronology between the figures at Nämforsen. Section of tracing after Hallström (1960:plate 25), superimposition documented by Forsberg (1993:222, fig 18). Photo and illustration: Jan Magne Gjerde.

A re-assessment of the material excavated in 1944 at the nearby "Ställverksboplatsen"[186] (Raä 10) site at 84-86masl indicates that the settlement was in use from 4000BC to about 0AD based on diagnostic artefacts and raw material (Käck 2001; Käck

[186] Ådals-Liden 10 after http://www.fmis.raa.se/cocoon/fornsok/search.html.

2009). Based on the find distribution and stratigraphy at the large "Ställverksboplatsen" site, Käck concludes that the highest elevated part of the site, the western part (above 85masl) was used between 4000BC to 2300BC and the eastern part between 2300-1800BC. Later the whole settlement area was utilized between 1800BC-0AD (Käck 2001; Käck 2009). This settlement is still today the richest documented settlement from the Stone Age in northern Sweden (Baudou & Selinge 1977:72; Käck 2001:26). Recent excavations at the site Ådals-Liden 158:1 on the northern riverbank of the Ångermanälven, in close vicinity of the Nämforsen rapids (see Figure 262), revealed extensive red ochre production. The site at Ådals-Liden 158:1 was situated between 75-80masl (George 2005). Excavations at this adjacent site to Nämforsen has proved that the area was utilized at least as early as 4200BC. The three distinctive layers with red ochre was dated by ^{14}C to 4200-4000BC, 3700-3500BC, 2800-2400BC (Larsson & Engelmark 2005). This would suggest that the activities related to the Nämforsen area was at c. 4200BC. However, when the first carvings were made at Nämforsen, given they were shore related, the settlement and activity areas at Ställverksboplatsen and Ådals-Liden 158:1 was under water; hence the first carvings should be older.

Nämforsen as a natural phenomena is located between 70 and 90masl. Previous geological data applied for the dating of Nämforsen, e.g. in Lindqvist (1994) was based on geological data c. 65km further east, from the Anundsjö-region by Miller and Robertsson Robertsson (1979). With the difference in land uplift, these gave a too young date for the Ångermanälven region. New geological data has recently been presented for the south-eastern part of Ångermanland (Berglund 2004). Based on the data from Berglund and extrapolation of the shore displacement curve relating the curve to Näsåker in the Nämforsen area, a more accurate shore displacement curve has been extrapolated (see Figure 252). The rock carvings at Nämforsen today is located between 87masl and 73masl. However, before the dam was built at the Power Station at Nämforsen Hallström had observed carvings at a slightly higher location at the H-group of main group I at c. 90masl[187] (Hallström 1960:180f, plate XXVII Group I H). This would indicate a maximum age for the carvings to about 7000 calendar Years BP based on an extrapolation of Berglund's shore displacement data, which is about 5000BC. That is, the earliest rock art at Nämforsen could have been made as early as 5000BC

[187] Some of these were blasted out and moved to the State Historical Museum in Stockholm in 1944. Their inventory number is 23362 (Hallström 1960:180). The carvings at Hallström group H is registred in the Riksantikvarieämbetet database as Ådals-Liden 4:1.

and that the islands with the lowest situated carvings was available at 4200BC. The Nämforsen area with its rapids and islands was formed before c. 4200BC.

The shore displacement information from the Nämforsen area makes it inevitable that all the rock art was related to the seashore. They are however clearly shore bound to the waterfall. The waterfall as landscape characteristic remained similar for a long time, strengthening the notion of this as a similar place for a long time after it was coast-related. The few Bronze Age figures present at Nämforsen can be explained through the character of the place. The rapids at Nämforsen were unchanged even for thousands of years after it lost its coastal location (see Figure 264), and forces in the waterfall must still have been evident. This was still a place people travelled to.

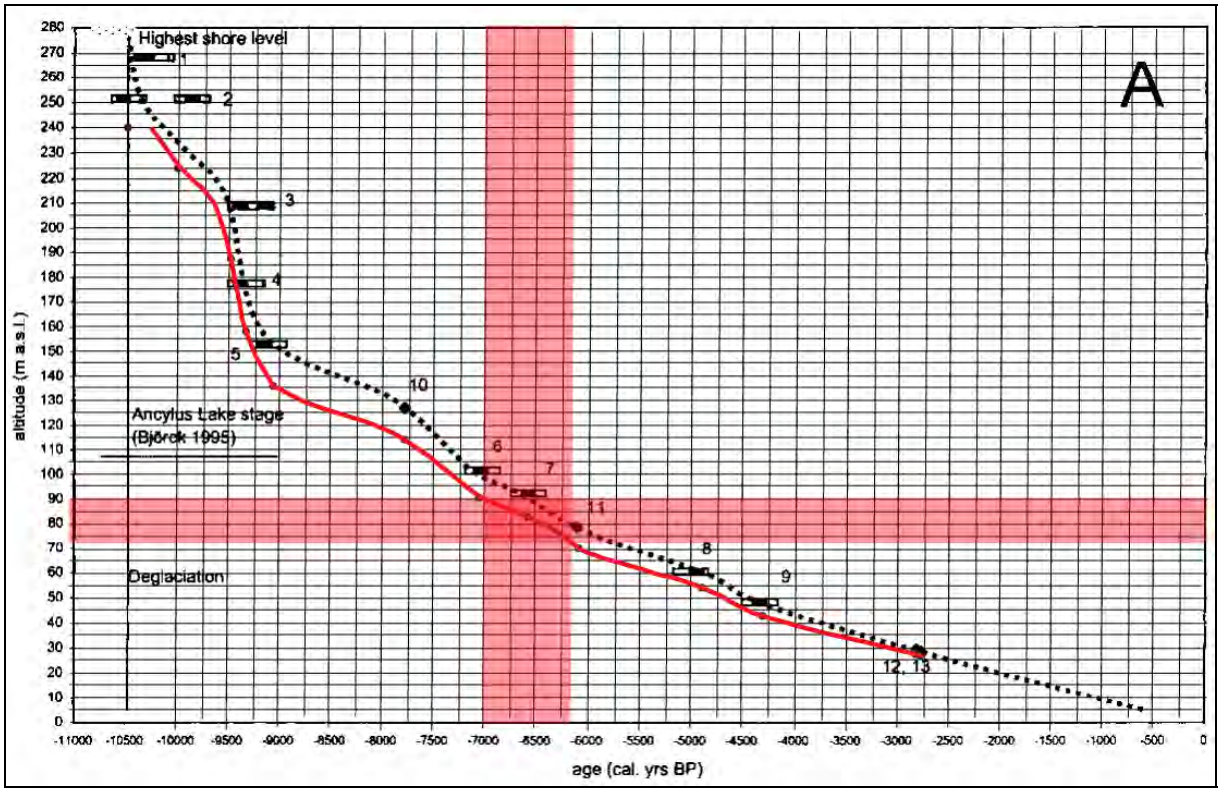

Figure 252 Shore displacement curve for the Näsåker / Nämforsen area. Based on data from Berglund (Berglund 2004:fig 5A) and Berglund (personal communication 2009). The numbers 1-13, marked with dots and dashed lines, are the dating results of the isolation event of core sediments from lakes making up the shore displacement curve. The data in Berglunds figure is given in calibrated years. Based on the data from Berglund and extrapolation of the shore displacement curve relating the curve to Näsåker in the Nämforsen area, a more accurate shore displacement curve, for the Nämforsen area, has been extrapolated marked with a red line[188]. The elevation between 90masl and 73masl is marked by giving a date to between 5000BC and 4250BC. That was the time when the rocks at Nämforsen was "coast-bound". Illustration: Jan Magne Gjerde.

[188] The highest coastline is 275masl at southeastern Ångermanland at 10500BP, this gives an average of 0.0262m/year. The highest coastline at Näsåker (Nämforsen) is 240masl. at 10200BP, this gives an average of 0.0235m/year. 0.0235 divided by 0.0262 gives a difference of 0.0897. This is the data that should be applied to extrapolate the curve (Berglund, pers.comm).

The internal dating between the panels and figures at Nämforsen is problematic. However, we can assume that the first carvings were made as early as 5000BC and the latter during the Early Bronze Age. Based on the shore displacement at Nämforsen and that the carvings initially was shore related, one may assume that the carvings at the higher elevated panels are the oldest. The boat figures e.g. at the panel Lillforshällan (Hallström, Main Group I, subgroup G1) has boat representations that are not present at lower elevations (see boat figure in Figure 249). The so-called Bronze Age boats at lower elevations are mirroring this fact, hence they are not represented at the highest elevated panels.

Studying the boat representations shows us that boats were made at Nämforsen most likely throughout the whole rock art production period from about 5000BC-1000BC. That is about 4000 years. Even if the boat typology and chronology of Nämforsen is problematic, a few major changes in the boat representation can be observed. Forsberg has presented the internal chronology between the figures at Nämforsen based on *Older / Younger* types mainly by superimposition. Both Forsberg and Lindqvist conclude that the scooped out figures at Nämforsen are older than the outlined ones (Lindqvist 1994; Forsberg 1993). While Baudou, Forsberg and Lindqvist finds it likely that the hunters carvings and the so-called agrarian Bronze Age carvings are not contemporary (Baudou 1993:261, table 2; Forsberg 1993; Lindqvist 1994:79) one can not exclude as Malmer suggested (Malmer 1975) and Käck also mentions (Käck 2009:143) that the latter hunters carvings could be contemporary with the first Bronze Age carvings. This is also supported by the figures of both traditions that are adjacent at the same panel at Bradön[189] (Figure 251).

There seems to be an acceptance for a relative chronology at Nämforsen where the scooped out figures located on the highest elevated panels are the oldest. They are older than the outline figures, and finally, after the so-called hunters carvings were made, the few Bronze Age figures were made. There are overlapping figures from the styles at the same panel (e.g. at Bradön). However, even with the few exceptions or discrepancies to this relative typology, the majority fits the pattern. Raising the sea-level to c. 78masl, shows where the figures from phase A are situated, at the higher elevated areas. It also shows that the waterfall was already a main feature and a characteristic in the landscape (Figure 253). Based on Berglunds data, 78masl represents about 4600BC. Based on Hallströms photos and the elevation data presented by Hallström, it shows that the rapids would have been forceful and the waterfall would have been a characteristic feature even earlier, at a higher elevation (see Figure 17).

[189] At the lowest panels in Alta (Apana Gård), one can also see hunters carvings and agrarian carvings at the same panel.

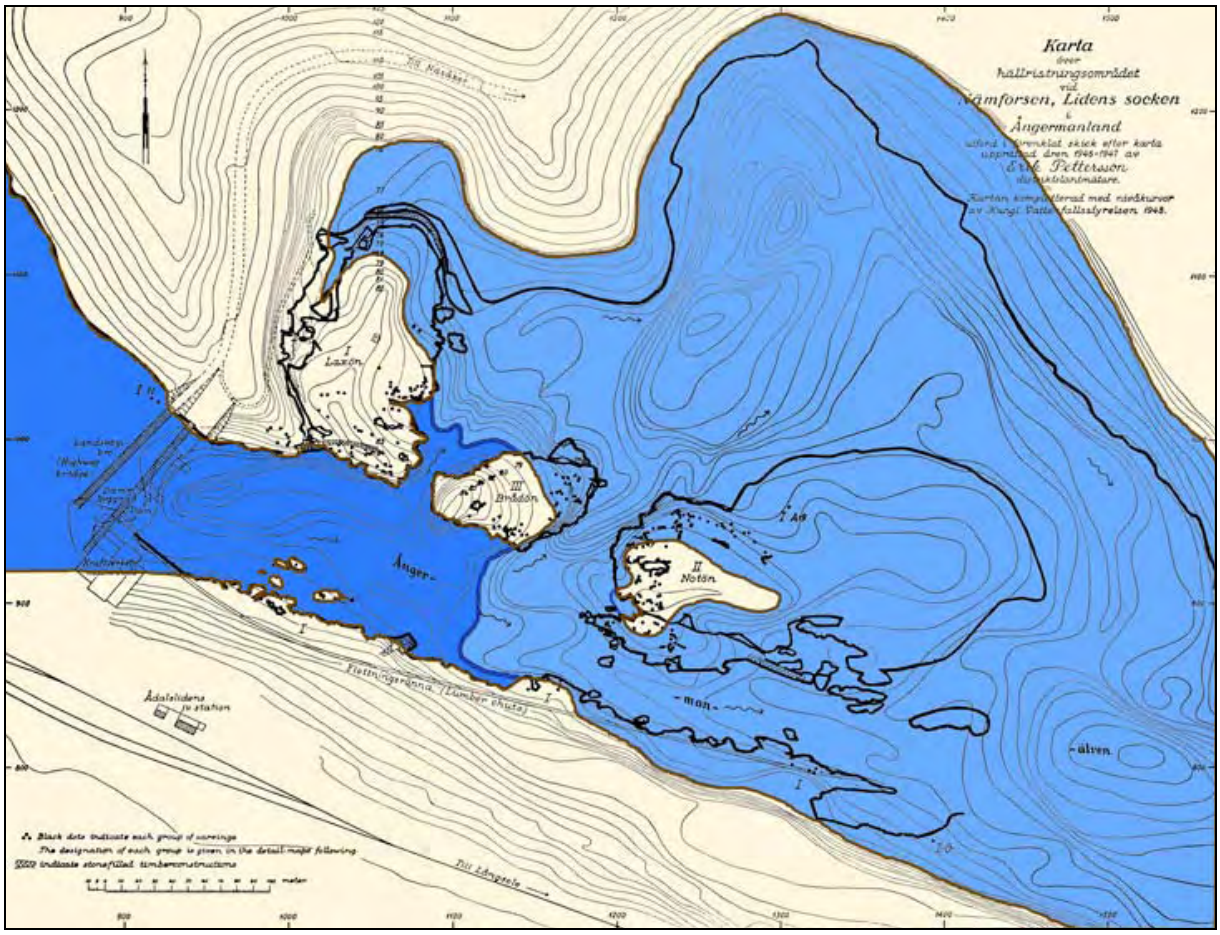

Figure 253 Sea-level reconstructed at 78masl at Nämforsen. At 78masl, the dark blue is the river and the light blue is the sea in this illustration. Base map after Hallström (1960:129). The scooped out figures are located above 78masl (with few exceptions) suggesting they are the oldest and made between c. 5000 and 4600BC. It also shows that the area adjacent to the Bradön and Notön islands would have been less dramatic than later. It also shows that the Notön island was in the sea, not in the river. Illustration: Jan Magne Gjerde.

I find the typology presented by Forsberg and Lindqvist to be as close as we today can approach a relative dating of the Nämforsen material based on the current data (Figure 254). New shore displacement data has given the opportunity to re-date the initial phase of Nämforsen. Most likely people started making carvings at Nämforsen about 5000BC. This sets the starting phase of the Nämforsen carvings back about 800-1000 years. This means that people made carvings at the Nämforsen site for nearly 4000 years. After the initial rock carvings were made between 5000-4200BC, the sea had retreated from the Nämforsen water-falls. The people living by and revisiting Nämforsen continued making rock art in close connection to the rapids of Nämforsen. Based on stylistically similarity with south Scandinavian Bronze Age boats, the latter figures at Nämforsen were made c. 1000BC. The majority of the carvings at Nämforsen must have been made between 5000BC and 2000BC within a hunter-gatherer Stone Age ideology.

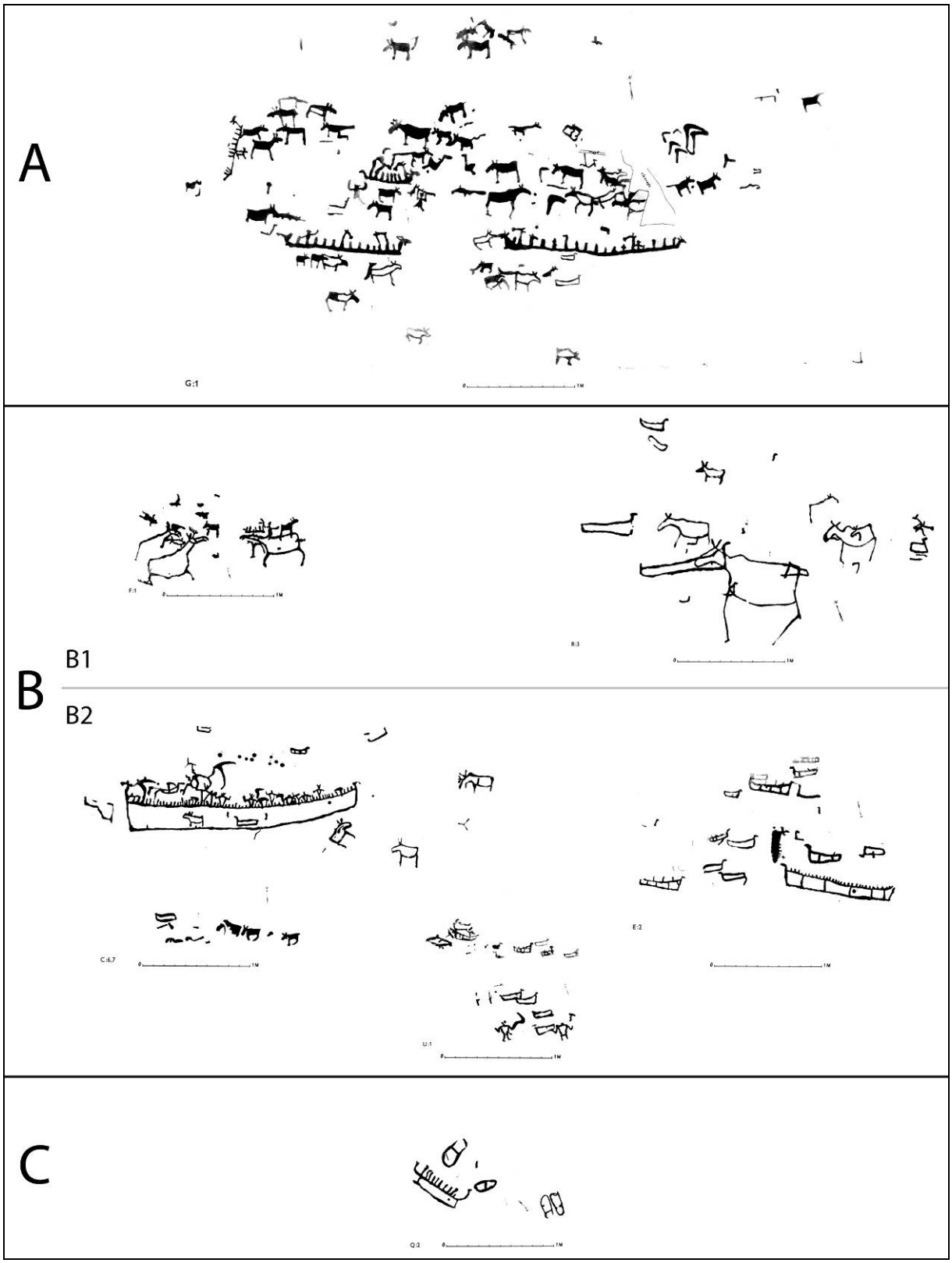

Figure 254 Relative chronology of the figures at Nämforsen. The typology is based mainly on Lindqvist (Lindqvist 1994:213-220). Tracings reworked after Hallström (1960:plate XIII, XIV, XXI, XVII, XXII, XVIII, XXVI). The figures belonging to phase A are the oldest. Figures of phase A and B type belong to the Stone Age while the figures belonging to phase C are the youngest with a Bronze Age origin. The first carvings at Nämforsen could have been made as early as 5000BC, while the latter was made in the Early Bronze Age. The internal chronology between the different styles can not be separated further than with the older / younger line of argument. Illustartion: Jan Magne Gjerde.

Macrolandscape and microlandscapes of Nämforsen

Macrolandscape

Sidenbladh (1869) had already noted the land uplift regarding the dating of Nämforsen. He also assumed that the boats depicted was proof of seagoing vessels that came into Nämforsen with a higher raised sea level. Hallström paid notion to the changing landscape when he accounted for the land elevation that had taken place at Nämforsen and that it was located at the head of the fjord when the sea penetrated as far as the foot of Nämforsen (Hallström 1960:128). The shore displacement data for the Nämforsen area shows that the land uplift was a relative rapid event. The rocks appeared and the waterfall was formed between c. 5000-4200BC. Due to the flat landscape, the land uplift both during and after the "making" of the waterfall, made the present Ångermanälven a narrow fjord. This long fjord would have been ideal for the communication between coast and inland groups. After a while, the narrow Ångerman-fjord became a river and saltwater would no longer penetrate to the rapids of Nämforsen. At about 2000BC, the sea would have been c. 40masl based on Berglunds data (see Figure 252). The fjord would have retracted due to the land uplift and now reached just north of present Sollefteå, about where Ångermanälven and Faxälven meet (Figure 255). Even with this change in land uplift, due to the calmly running river below Nämforsen, one could still go by boat c. 140km inland from the coast. By reconstructing the landscape at c. 70-75masl, the communication ore of the Ångermanälven-fjord stands out (Figure 255). The situation for the Ångermanälven-fjord between 90 and 73masl would not change much due to the waterfall with a 16m drop. The situation further south where the Faxälven and Ångermanälven meets would not have changed much either due to similar elevation difference. Thereby this communication line from the coastal region to the inland would have been very stable. The main difference would be how far the sea penetrated up the long Ångerman-valley. Even if the land uplift changed the landscape, it seems that the Ångermanälven (Ångermanälven-fjord) was "constant", although it must have been deeper than the present river. The flat landscape and the clear communication line due to the ridges on the side of the rivers made these communication lines more stable. The importance of the fjord / river as a communication system would still be important and could be the reason why the boat motif is depicted from the earliest carving phase until the latest.

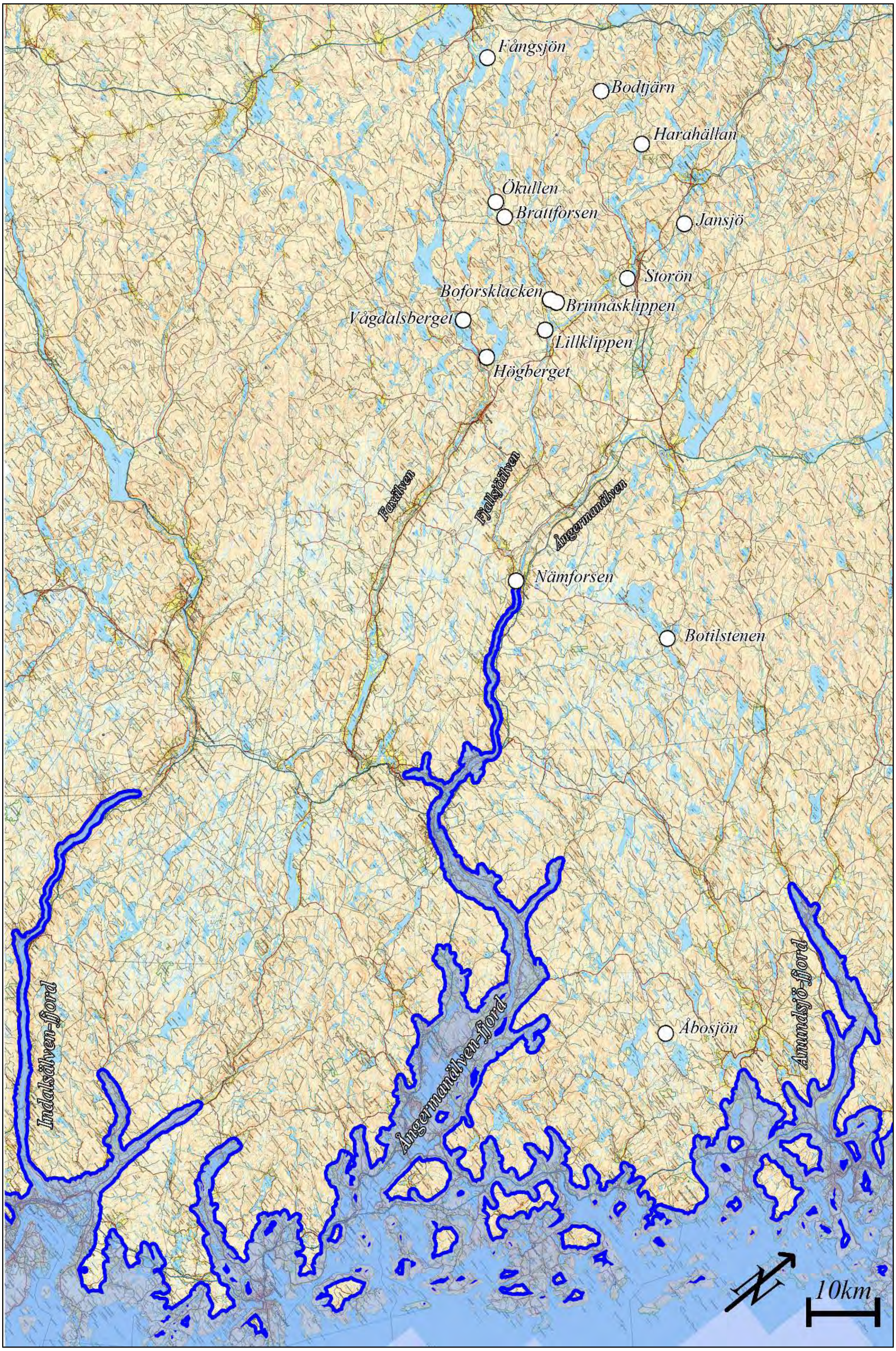
Fångsjön
Bodtjärn
Harahällan
Ökullen
Brattforsen
Jansjö
Storön
Boforsklacken
Brinnåsklippen
Vågdalsberget
Lillklippen
Högberget
Faxälven
Fjällsjöälven
Ångermanälven
Nämforsen
Botilstenen
Indalsälven-fjord
Ångermanälven-fjord
Åbosjön
Ammdsjö-fjord
N
10km

Figure 255 Previous page. Rough schematic map based on 70-75masl from the Gulf of Bothnia to inland of Nämforsen with rock art sites[190]. Map based on data from http://www.fmis.raa.se/cocoon/fornsok/search.html. The map follows the 70-75masl elevation for the entire area. The gradual difference in land uplift at the coast has not been accounted for. However, this shows a tentative map of the shoreline situation from the coast to Nämforsen when the carvings were made. The present day map in the background shows how minor the changes in the macro topography would be between the present situation and the situation with a raised shoreline. The Nämforsen site is the only site with carvings, while the others are paintings. Illustration: Jan Magne Gjerde.

Due to the difference in land uplift, the outer regions of Ångermanälven would have been at c. 77masl when the Nämforsen area would have been at c. 70masl. The difference in the landscape at this level, when it comes to the fjords and the coastline, is minor when studying the topography from maps. This means that at the given time, when the Ångermanälven area was about 70masl, the elevation of the Indalsälven-fjord area would have been slightly less and the elevation of the area north of the Ångermanälven area at the Anundsjö-fjord would be slightly more due to the difference in the land uplift. A reconstruction shows how the long fjord ends up at Nämforsen (Figure 255).

The many Stone Age settlements along the Ångermanälven and connected water systems shows that this area was attractive during the Stone Age. In total more than 1000 Stone Age settlements had been surveyed according to Baudou, although not all the tributaries have been surveyed (Baudou & Selinge 1977:68f). The large settlements at "Ställverksboplatsen" (e.g. Baudou & Selinge 1977), and the recent excavations with massive concentrations of red ochre, defined as a red ochre factory at Ådals-Liden 158:1 (Larsson et al. 2003) shows that activity was intensive at Nämforsen not only by the vast numbers of carvings in the area. Adding to this the large settlement site at Råinget (c. 3km upstream from Nämforsen) and clusters of settlement at places where the rivers meet, at waterfalls and at places where the river narrows or changes character shows an intensive use of this area during the Late Stone Age Figure 262). The related settlements shows intensive elk hunting where bone material are conserved (e.g. Råinget and Bastuloken). The large amount of hunting pits and hunting pit systems along the Ångermanälven and connected Fjällsjöälven shows that these areas were favourable ecological places (Figure 258). These areas must have been ideal for people living by a hunter-fisher-gatherer strategy.

[190] Id-nr from Riksantikvarieëmbetets Fornsök http://www.fmis.raa.se/cocoon/fornsok/search.html: Åbosjön (Sidensjö 1:1), Botilsstenen (Anundsjö 696:1), Nämforsen (Ådals-Liden 4:1, Ådals-Liden 169:1, Ådals-Liden 193:1), Högberget (Ramsele 160:1, Ramsele 161:1, Ramsele 180, Ramsele 181), Lillklippen (Ramsele 182), Vågdalsberget (Ramsele 179), Brinnåsklippen (Fjällsjö 218:1), Boforsklacken (Fjällsjö 196:1), Jansjö (Fjällsjö 219), Brattforsen (Fjällsjö 191:1), Fångsjön (Ström 332:1, Ström 332:2, Ström 332:3). Information of the sites at Bodtjärn, Harahällan, Storön and Ökullen from reports by Viklund (2004b, 2004c, 2006) that is not yet present in the Riksantikvarieämbetet Fornsök (Archaeological site register).

Figure 256 The relations between the nearest sites "related" to Nämforsen with waterways viewed from inland towards the Gulf of Bothnia. The waterways are slightly highlighted The landscape is tilted in Google Earth. Thereby distance relations are distorted (Compare with **Figure 255**). With a raised sea-level, the fjord would have come all the way to Nämforsen where the present Ångermanälven runs. These waterways most likely were the Stone Age highways of northern Sweden. Illustration: Jan Magne Gjerde.

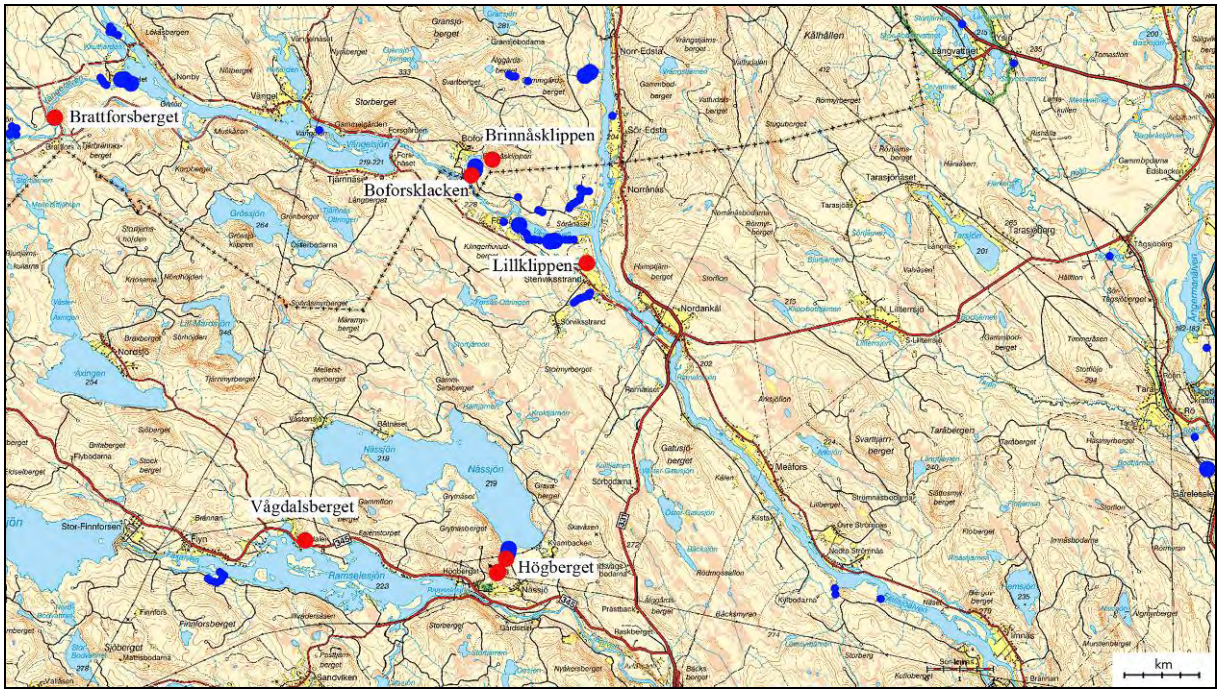

Figure 257 The relation between the Bastuloken area with the sites Brinnåsklippen, Boforsklacken and Lillklippen and the Högberget area with the sites Högberget 1-4. The distance between the Bastuloken area and the Högberget area is c. 10km. The distance from Nämforsen to Högberget is c. 30km. The red dots are rock paintings while the blue dots are hunting pits and hunting pit systems. Data from http://www.fmis.raa.se/cocoon/fornsok/search.html. Illustration: Jan Magne Gjerde.

Inland, not far from Nämforsen, a concentration of rock painting sites have been discovered through intensive surveying (Viklund 1999; Viklund 2002; Viklund 2003; Viklund 2004b; Viklund 2004c; Viklund 2004e; Viklund & Tjärnström 2006). Common for all these sites is that they all depict elk and encompass only a few figures. Viklund has defined this area as the space of red ochre or *Alces Ocra* (Viklund 2004d). When Hallström studied the Monumental Art in Northern Sweden, only one of these sites were known, the Fångsjön site that was discovered in 1950. Brattforsberget was found in 1980 while the remaining has been discovered between 1996 and 2006. The number of sites makes this area a favourable study area. Eleven sites including 18 panels with paintings are discovered inland within 75km distance of Nämforsen (Figure 255). The short distance between the sites, the similar style of the elk figures, a similar dating suggestion (Late Stone Age) and the relation to the connected waterways justifies to discuss these sites in relation to the large Nämforsen site (see Figure 256). When relating the waterways to the reconstructed landscape in Figure 255 with a raised sea-level to about 70-75masl it becomes evident how the "Ångermanälven fjord" was a major route of communication. The waterways in northern Sweden must have acted as Stone Age highways for the people living in these areas. The connection to the other sites makes me briefly move inland from Nämforsen entering a couple of these areas in order to relate them to Nämforsen. It seems that there is a close relation between settlements, elk-hunting and rock art in this area. The two areas that will be discussed further are the Bastuloken area and the Högberget area (Figure 257).

The Bastuloken area

The Bastuloken area is located c. 35km northwest of Nämforsen along the Fjällsjöälven River. The Bastuloken area consists of four sites with paintings; Brinnåsklippen 1-2, Boforsklacken 1-3 and Lillklippen (see Figure 258). The figures at Lillklippen are two elk representations and some paint fragments (Viklund 2004e). The figures at Boforsklacken includes three panels that are made up by a total of 7 elk depictions, a human representation and fragments of paint (Lindgren 2004; Viklund 1997). Brinnåsklippen 1 is made up of an elk figure, a zigzag-pattern and a human representation. Brinnåsklippen 2 includes an elk and fragments of paint (Viklund 2004c). Lillklippen, Brinnåsklippen 1 and most of the figures at Boforsklacken are located on vertical cliff surfaces. Brinnåsklippen 2 and the figures to the

left of the Boforsklacken is located at small glacier boulder cave[191] ("bouldercaves"). The sites are dominated by the elk motif painted in red colour (most likely ochre).

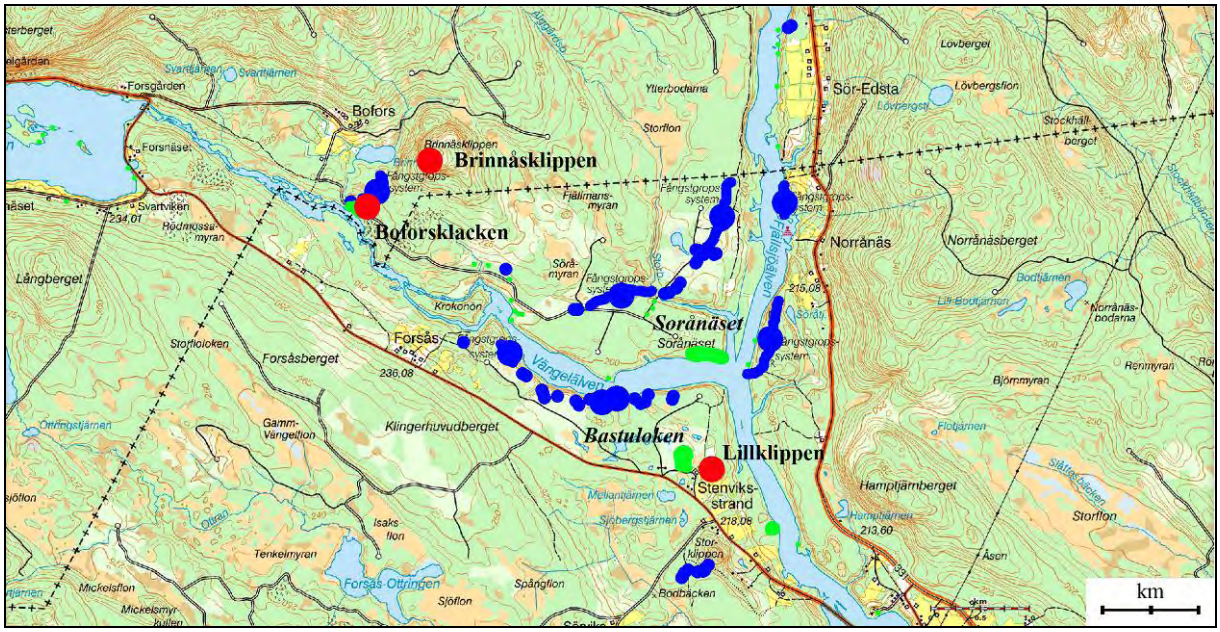

Figure 258 Map of the area with the three rock painting sites Lillklippen, Boforsklacken and Brinnåsklippen marked in red. The hunting pits and hunting pit systems marked with blue. The two large settlements Sörånäset and Bastuloken marked with green. Other minor settlements are marked with small green dots. Data from http://www.fmis.raa.se/cocoon/fornsok/search.html. Illustration: Jan Magne Gjerde.

Bone material from settlements in northern Sweden suggests that the elk was regularly hunted in large numbers (Ekman & Iregren 1984:11). The recently excavated settlement site at Bastuloken evidence a remarkable hunting intensity connected to a large hunting pit system. The excavated test-pit was one by one m. It was 80cm deep and dug in 10cm layers (layer 1-8). Two ^{14}C dates were analyzed; from layer 2 (2175±75BP) and layer 5 (4125±40BP). Vast numbers of elk bones appeared during the excavations at Bastuloken and the bone material consists of 98% elk bones. Adding to this a large number of fire-cracked stones and artefacts (mainly of slate) were found (Engelmark & Harju 2005:10-13). The ^{14}C dates are calibrated by OxCal ver. 3.51 this means that layer 2 is between 360-170BC[192] and layer 5 is between 2860-2620BC[193]. The cultural layer is up to 30cm deeper than layer 5 indicating that the initial settlements phase is older. In layer 6 to 8, one also found small traces of red ochre. The red ochre could be connected to the nearby painting practice. The stone tools indicate a Late Stone Age date for the diagnostic material (Sjölander 2007:5). The

[191] The large boulders forms small caves between the boulders.
[192] Calibrated with 68.2%probability. With 95.4%probability the result is 370-110BC.
[193] Calibrated with 68.2%probability. With 95.4%probability the result is 2880-2570BC.

Lillklippen rock painting site is located only c. 400m southeast of the Bastuloken settlement area (Viklund 2004a:4). Within a radius of 2.5km are 4 panels with rock paintings, two large Stone Age settlements and 7 large pitfall systems with a total of 164 pitfalls surveyed in the area. To my knowledge, none of the pitfalls are dated, hence only a geographic connection is suggested. Although a connection between the settlements, the hunting pits and the paintings can be advocated. There are several traces of settlements. However, the extent of the two large settlements (Bastuloken and Sörnäset) adjacent to the intersection between the rivers Vängelven and Fjällsjöälven are extremely large[194] (Figure 258).

The Bastuloken area shows how settlements, hunting areas and rock paintings are located in relation to each other (Figure 258). The rock paintings are dominated by the elk motif and I see no reason why they could not be related to the intensive elk hunting and related activities in the Bastuloken area. The rock paintings with elks are connected to the elk hunting grounds. This must have been a favourable ecological place in regards to the hunter-gatherer strategy. It is also located where two rivers meet, at a favourable location as a focal place in peoples interaction with the environment.

The Högberget area

Moving c. 10km south of Bastuloken, four panels with rock paintings, Högberget 1-4, are located at the southern end of the Nässjö Lake, about 30km northwest of Nämforsen. Högberget 1 includes two elk representations and fragments with paint (Viklund 1997). Högberget 2 consist of three small surfaces with 3 elks (Viklund 1999). The Högberget 3 site includes an elk representation and a human figure and fragments of paint (Viklund 2004d). At Högberget 4 it is not easy to detect the figure, however at good light conditions it has been noted that an elk figure can be seen (Lindgren 2004). Högberget 1 and Högberget 2 are situated on vertical cliffs, while Högberget 3 is located on the outside of the glacier boulder cave with settlement remains[195]. Högberget 4 is located on a glacier boulder.

[194] The size of the Bastuloken area (RAÄ Ramsele 183) is 360x20-160m and the Sörånäset (RAÄ Ramsele 14:1) is stretching about 100m along the Fjällsjöälven River and about 400m along the Vängälven River (www.raa.se).
[195] http://www.fmis.raa.se/cocoon/fornsok/search.html. Ramsele 185.

Figure 259 The hunting pit system and rock paintings at Högberget. The Högberget hilltop is located between the two lakes Nässjön and Ramselesjön slightly left of the middle of the map. The hunting pit system is marked blue. The sites with paintings are marked white. The settlement (Ramsele 185) that was excavated in 2003 is connected to the Högberget 3 site. A Stone Age settlement (Ramsele 20:1) is located at the other end of the southern part of Nässjön. Map and data from http://www.fmis.raa.se/cocoon/fornsok/search.html. Illustration: Jan Magne Gjerde.

The association between settlement, hunting pits and rock art is also clear at the rock painting site where the motifs at the panel is of elks and while the hunting pit system ends in front of the vertical cliff with rock paintings (see figure Figure 259 and Figure 260). The hunting pit system consists of 36 hunting pits covering a distance of about 355m in length (Ramsele 16:1). The one closest to the rock paintings are located less than 10m from the panel. One of the adjacent hunting pits in front of the rock painting site Högberget 1 was

excavated and the date was slightly younger than the paintings (Eriksson 2005)[196]. During the excavations at Högberget 1, a slab with red paint was found, that had fallen from the above cliff with rock paintings. Charcoal directly under this slab was dated to 3790-3490BC calibrated. Lindgren relates the Högberget 1 site to be this ^{14}C date and dates the rock art to be older than 3490BC by ^{14}C [197] (Lindgren 2004:31). The excavations at the site Ramsele 185 settlement, next to the paintings at Högberget 3 site, was dated to 4340-4210BC. At the site was also found red ochre (Holmblad 2005) that could be connected to the paintings (Ramsele 185). There is no evidence that concludes that the settlements, hunting pits and rock art is contemporary. However, the hunting pits indicate that this was a favourable place for elk hunting regardless of the internal connection between the archaeological remains.

The paintings at Högberget depict elks. The elks are depicted facing the major crack at the middle of the panel from both sides. The elks to the left can be seen clearly, while the elk figure to the right is less detainable due to lichen and moss (Figure 261). There are two or three elks depicted on the left side of the crack and one elk to the right of the crack. The elks on the left of the crack are depicted as if they appear from the crack in the rock. This could represent that they are positioned as if they are coming out of a valley. The elk to the right of the crack is depicted as if it is running down the ledge that can be seen in Figure 261 and this ledge might represent a valley. Thereby the elks are coming from the valleys entering the river valley that is represented by the large crack in the middle of the panel.

The crack resembles the natural line of movement round the Högberget hilltop as if representing the macrolandscape (Figure 261). Only a small part of the panel have been applied; hence the location of figures have been carefully positioned in relation to the microlandscape of the rock. The panel with the rock paintings at Högberget 1 is c. 6m high. The macrolandscape at Högberget would have forced the elks to move along the Högberget mountain, passing Högberget 1 where the hunting pit system started. The placing of the figures here seems to represent the areas macrotopography where the elks walk along the long rock wall that stretches along the lower parts of this section of the Högberget hilltop. The strategic location regarding hunting is striking. The placement of the elk figures indicates that they are placed in relation to natural features that could be references to places related to their geographical knowledge.

[196] The reuse of elkpits and the general lack of datable material makes the dating problematic. The hunting pit was dated and calibrated to c. 3100BC (3095±35BC) (www.raa.se).
[197] A slab with rock painting was found upside-down during the excavation. Direcly under the slab a ^{14}C sample was dated to 3790-3490BC calibrated. A date from above the slab was dated to 2200BC-1000AD calibrated. A date 0.4m NE of the slab from an activity area was dated to 3650-3330BC calibrated (Lindgren 2004:31).

Figure 260 Photo of the Högberget 1 site with the Högberget hilltop in the background. The panel with paintings are situated just right of the middle of the photo marked with black arrow. The hunting pits are located in front of the panel with rock paintings. The nearest hunting pit is less than 10m from the vertical cliff with rock art under the black arrow in the photo. Photo and illustration: Jan Magne Gjerde.

Figure 261 Photo of the Högberget 1 site with the hunting pits in front of the rock art site. The large crack in the middle of the photo is interpreted as a river. To the left of the crack one can see the red paint that is depicting the elks. The elk figures are depicted just above another crack that forms a small ledge as if they appear from a valley. The paintings to the right of the crack is somewhat dubious due to lichen and moss covering the surface. They are placed as if they are standing on the small ledge. Photo: Jan Magne Gjerde.

Returning to Nämforsen

Returning to Nämforsen and the surrounding area shows a large number of settlements dated to the Late Stone Age. Several hunting pit systems are to be found in the surrounding area of Nämforsen. About 650m and c. 1.5km northwest of Nämforsen on the terrace above the

Ångermanälven River two large elk hunting pit system are found. The nearest consist of 12 hunting pits and stretches for about 360m, while the other is made up of 14 pits stretching for more than 390m in length[198]. The amount of elk hunting pits connected in large hunting system inland of Nämforsen is innumerable, and since the landscape is densely forested, many are probably yet to be found (Figure 262). The large Råinget settlement, the Ställverksboplatsen and the recently excavated Ådals-Liden 158:1 site where the so called "red ochre factory" (Larsson et al. 2003) was found shows that this area was intensively used for settlement during the Late Stone Age (Figure 262).

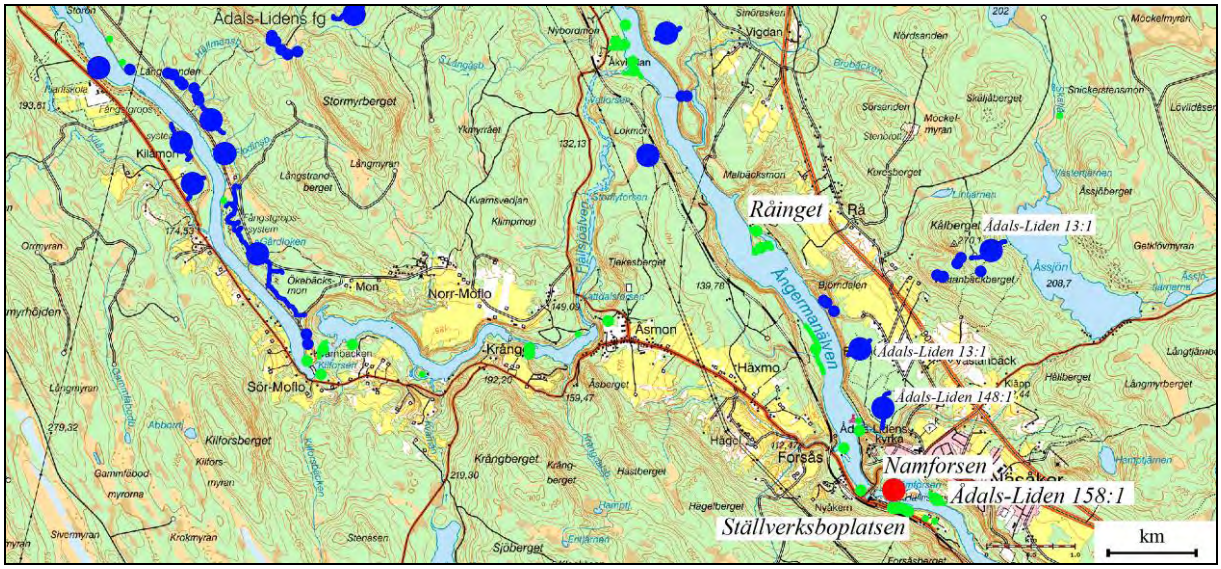

Figure 262 Map of the Nämforsen area with connected sites. Settlements marked with green dots. The Nämforsen site is marked with red colour, and the hunting pits and hunting pit systems marked with blue colour. Råinget (Ådals-Liden 123:1, 123:2). Ställverksboplatsen (Ådals-Liden 10:1). Map and data from from http://www.fmis.raa.se/cocoon/fornsok/search.html. Illustration: Jan Magne Gjerde.

The "making" of the Nämforsen waterfalls between c. 5000BC and 4200BC, made it a distinct character emerging from the sea where the rocks appeared from the calmly running river Ångermanälven. The emerging rocks from the sea and the enactment with the powers of Nämforsen could be one of the main forces why Nämforsen was such a special place that was revisited for generations. The powerful rapids at Nämforsen then came from the sea, hence, land had to be defined and negotiated to pacify the spirits. The Nämforsen waterfall with a drop of 16-17m appeared during the 800 years between 5000BC and 4200BC. The tidal effect at Nämforsen would have been next to none[199]. However, the seasonal fluctuations in the water level from the river would have made the water-level at the rocks differ according to the

[198] Raä Ådals-Liden 13:1.
[199] Today the difference between high tide and low tide is c. 30cm at the outflow of the Ångermanälven.

seasons. When the islands "came from the sea" and gradually appeared in the rapids area, they would at times have been inapproachable due to the powerful rapids, and at times even under water[200] (Figure 264). The seasonal fluctuations in the water level has been observed to be c. 6m at its highest[201]. When Hallström visited Nämforsen in 1907, the Bradön island was inapproachable due to its location in the midst of the powerful rapids (Figure 264) causing Hallström to delay the documentation of the Bradön until his next visit to Nämforsen, in December 1916 (Hallström 1920). Powerful rapids have in ethnography from Siberia been described as Shamanskiy [Shaman] Rapids[202]. Two large boulders in these rapids include the carvings of large elks (Okladnikov 1970:90). For the Evenki the importance of dangerous rivers with rapids link the three worlds in their universe. Rapids and whirlpools are doors or thresholds between their worlds, where the rivers are linked to their cosmology. The three worlds described in Evenki cosmology are connected in the shamans or the clan river (Animosov 1963; Vasilevich 1963; Tilley 1991:130-135). The carvings and the location of the engravings at small islands in the middle of the rapids have been interpreted as evidence of shamans visiting an isolated dangerous place (Forsberg 1993:244). In my opinion, such dangerous places important in their cosmology also became important in their geographical knowledge linking cosmology and geography.

The rocky outcrops and islands in the waterfall at Nämforsen initially came to be a landscape characteristic that stood out from the rest of the land, hence it became a node in the landscape for more than 4000 years. The watercourses were waterways that connected people together by the central means of communication, the boat. Along the waterways, land uplift changed the land making new rivers, new lakes and thereby new waterways. However, the Ångermanälven was to remain a "stable", and important communication line. Moving between the coast and the inland by boat would force them to stop at the rapids of Nämforsen. This was the first stop coming in the long *Ångermanälvenfjord*, and this was a place they would have to carry their boats past in order to go further inland. This would be a transition place, a place where the waterfall would act as a threshold to the inland. As other researchers

[200] Carved surfaces with carvings dated to the Stone Age are generally situated at the waters edge. Due to seasonal fluctuations in the water level at rivers and lakes, the carvings are situated under water at times. Thereby they become unapproachable. I have observed this at the Landverk site in northern Sweden and at Onega north-western Russia. At the Chalmn Varre site the boulders with carvings are under water during part of the year (Shumkin 1990).

[201] The water level varied between 76.29masl and 70.36masl depending on the flow of water (Hallström 1960:128).

[202] The Markha River is a tributary of the Vilyuy River in the drainage basin of the Lena River in the Republic of Sakha (Yakutia), Siberia, Russia.

have pointed out (e.g. Forsberg 1993; Tilley 1991), Nämforsen would be a liminal place at many levels.

Revisiting the Nämforsen site with a landscape focus is somewhat bizarre since the main character of the landscape, the massive rapids (Figure 263 and Figure 264), are regulated by the power station. Some of the carvings at Nämforsen are today easy to approach, mainly due to the fact of the Hydro Power Station that shuts down the water-fall. The physical changes at Nämforsen are many. I have already accounted for the natural setting with the land uplift, consequently leaving Nämforsen 140km from the present coastline. In 1918, a bridge was built over the Ångermanälven River at Nämforsen. If the initial plans for the Hydro Power Station would have been executed, the majority of the carvings would have been lost. The Central Office of National Antiquities (now Riksantikvarieämbetet), prevented this and the construction plans were slightly altered[203]. The construction of the power plant took place between 1944-1947. The massive changes at Nämforsen has made it vital to study Hallströms photos of the area before modern constructions domesticated the waterfall[204]. The massive changes in the landscape has made Nämforsen a different place from how it would have been when the carvings were made. It is therefore vital to explore these changes and reconstruct the landscape of Nämforsen. The force of the water-fall at Nämforsen has been discussed by Goldhahn, where the audio-visual aspect of the carvings at Nämforsen have been stressed (Goldhahn 2002a; Goldhahn 2002b). By no doubt, the sound and the rapids at Nämforsen made this place as "special" to people in the past as today. As Hallström puts it: "On the rock laid bare by the river on the shores of Nämforsen and on the islets in the middle of the rapids, the multitudinous rock-carvings have been applied; it is these which together with the beauty of the rapids have made the locality so famous" (Hallström 1960:130). Baudou has reconstructed the Nämforsen landscape by raising the shore-level to 90masl, 85masl, 80masl and 75masl (Baudou 1993:Figur 2a, 2b, 3a, 3b). The rapids at Nämforsen were already present at 90masl, then Bradön came from the sea when the sea-level was at 86masl while the Notön island started to appear when the sea-level was at 79-80masl. The lower part of the rapids and the waterfall was revealed at c. 73masl. Then the sea slowly retracted due to the land uplift. Hence, the Nämforsen waterfall and the area with the rapids were stable for more than 6000 years before the Hydro Power Station was built.

[203] Compare maps in Hallström 1960:129 and 137.
[204] The photos of Hallströms documentation is today stored in the Gustaf Hallströms Archive at the Research Archive, university of Umeå, Sweden.

The landscape at Nämforsen changes immensely by the seasons. During summer, the waterfall is powerful and it is hazardous to approach the islands with carvings and it must have been connected to danger. During winter however, the water runs calmly (see Figure 263).

Figure 263 The landscape view at Nämforsen where changes are observed. The top left photo shows Nämforsen in 1916 during spring. The top right photo shows Nämforsen in 1924 during winter. Now the bridge has been built. The bottom left shows Nämforsen in 2004. The rapids are shut down by the power Station. In 2008, I got the chance to experience a glimpse of the massive rapids of Nämforsen again. The changes in the landscape can be quite comprehensive. Top photos by Gustaf Hallström by courtesy of the Gustaf Hallströms Archive at the Research Archive, University of Umeå, Sweden. The bottom two photos: Jan Magne Gjerde.

Figure 264 The massive rapids at Nämforsen with the island Bradön midsummer 1907 from the Notön island. Photo by Gustaf Hallström by courtesy of the Gustaf Hallströms Archive at the Research Archive, University of Umeå, Sweden.

Microlandscape

At the main concentration of rock art at Brådön Island (Hallström IIIB-G), there are small rivers running through the areas where the rock art is situated. With no water, the area where the water is running gets a dark greyish patina due to the discolouring of the rock (Figure 265). Some of the elks are placed as if they are running along this miniature river (Figure 266). There are no figures where the water would be running at this place. The figures are located as if they are representing a miniature landscape that would resemble the surroundings at Nämforsen (Figure 265 and Figure 266). The miniature river could then act as a link between the surroundings and the stories told in the rock art.

Figure 265 The surroundings at Nämforsen and the miniature landscape with the river. The Ångermanälven River can be seen to the left in the compiled photo. The dark lichen where the water runs are representing the river in this miniature landscape. Photo and illustration: Jan Magne Gjerde.

Figure 266 The miniature river at Bradön is situated slightly left of the middle of the photo. It stands out by the discolouring in the rock. When it is raining water runs in these "rivers". One can here see how the elks are places along the river as if they are moving along the shore of the river. Photo: Jan Magne Gjerde.

On the south-western side of Notön, facing the southern riverbank, one of the large boat representations at Nämforsen in northern Sweden is located at the Island Bradön within the rapids of Nämforsen. The boat was immaculately documented by Hallström (Hallström 1960:pl XXIII). The elk boat representation at Bradön is common in northern Fennoscandia. This boat representation with 25 lines most likely representing people suggests that this was a large boat (Figure 267). The boat is located where the water runs when it is raining and where water from the rapids would run[205] (confer Figure 264). The dark blackish lichen represents where the water runs. Here one observe that the boat figure is placed where the water would be running in a miniature river on an island in the waterfall. Looking carefully at the micro topography in the rocks it resembles the macro topography at Nämforsen. I doubt the placing of the figures is a coincidence. Here one can see that by documenting or observing the rock art anew, one might get a good impression of the landscapes character and tell us why they made the rock art exactly where they did. One can here see how the figures are related to a micro-landscape that most likely acts as a miniature or a representation of the macro-landscape at Nämforsen.

[205] Today this rarely occurs due to the Hydro Power that regulates the quantity of water.

Figure 267 Documentation of a boat figure at Bradön, northern Sweden where the boat is situated in a miniature landscape. Tracing top left after Hallström (1938: plate XXIII). Photos and illustration Jan Magne Gjerde.

One of the largest compositions and the one with most human figures includes about 42 elk figures, 30 human representations, two boat representations and a at least 3 elk-head sticks (poles). At this large panel (Hallström IIQ1) with rock art, on the south-western side of Notön the composition is made up of at least two scenes that shows how the figures are located in relation to a miniature landscape. The outcrop is defined as belonging to Notön, however, it would be a small island with water running at both sides of the outcrop with the waterfall present. The lowest elevated figures are boats that, by their position at times would be under water. At the right part of the panel is a human and an elk walking on the largest quartz line on the panel. This quartz line most likely represents the water line. Interestingly,

both the boats on the panel is depicted below this line where the water runs. They are thereby depicted in their “right” element. This is in my opinion one of the best examples of a “direct” link between a rock art composition where the interplay between the figures and the natural features represent the environment and its surroundings. The panel represent activities from the coast to the inland. From the panel one can also see the shore on the other side of the small bay below Nämforsen. This shore can best be seen in the background to the left of the panel (Figure 268). The inland activities with the communal elk hunting occurrs inland, on the “flat landscape” on top of the terrace. The eroding sandbank between the terrace and the shore is most likely also represented by there not being any figures on the panel between the elk and man walking on the shore and the large communal elk hunting scene.

The two large scenes on this panel are interpreted as depicting a communal elk hunt. Looking closer at the scene, some of the humans taking part in the hunt also are equipped with elk-head sticks. None of the elks in the panel has antlers. The antlers fall of the elks during winter. The beard of the male elk is a diagnostic feature among the elk, and even if the female elk also have a small beard, it looks like this is one of the distinctions between the sexes of elks depicted in rock art. The elks depicted looks like both male and female adding to the smaller elks most likely representing calfs. Looking at the elk-head boats, they generally never have beards, thereby representing female elks. The time all the elks are gathered in flocks is during winter. If one then looks at the whole panel, the elk-hunt occurred inland as is also depicted while an elk and a human is standing by the “ocean” or waterline and the boats are at the river / coast. The rock art composition where the figures interact with the natural features representing a section of the land with inland and coastal activities. Such a representation where the figures in themselves relates to activity areas where the coastal / river figures represented by the boats and the elks representing the inland possibly as geographical references can also be seen at Notön (HII:C3). The boats are placed at the right of the panel while the elks are placed to the left of the boats (Hallström 1960:plate XVI).

Figure 268 The miniature landscape at the the Notön panel (Hallström IIQ1). The boats are depicted where the water occasionally is, at the lower part of the panel. A human figure and an elk is placed on a quartz line as if they are walking along this line that might represent the shore. Compare with **Figure 269** and **Figure 270**. Photo: Jan Magne Gjerde.

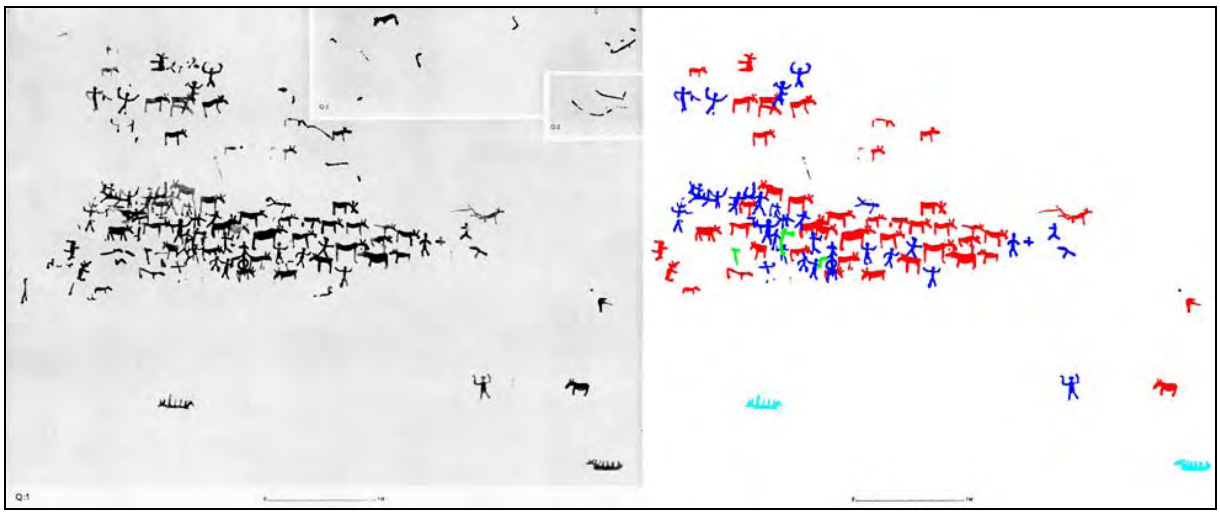

Figure 269 The elk hunt at Nämforsen (Hallström IIQ1) after Hallström (1960:plate 20). Tracing to the right reworked colouring in the different types of figures to more clearly visualize the elk-hunt scenes. Illustration: Jan Magne Gjerde.

Figure 270 The figures are traced onto the photo to show how they are related to the rock surface at the panel (Hallström IIQ1). The figures are given different colour to better visualize the elk-hunt. Compare with **Figure 268** and **Figure 269**. Photo and illustration: Jan Magne Gjerde.

At Laxön (Hallström ID6) water collects in a large pool where the carvings are placed on the small ridges around the pool edges. One can see how the whole area represents a miniature landscape where the pool acts like a lake with connected river systems. This area was named "Nedre Hällkaret" by Lindqvist when he also noted that the water represents lakes, tarns, river, tributaries, watercourses in a rocky Stone Age landscape in miniature, inhabited by elks, salmon and humans with their elkhead-stem boats (Lindqvist 1999:107-108, planch I, Figur 1A). One can see how the elks are walking along the rivers. The dark lichen shows where the water runs and collects in pools (Figure 271 and Figure 272). The inland of Nämforsen includes numerous rivers and lakes. The carvings are placed in relation to this miniature landscape and the composition might include geographical references connected to the natural features.

How the figures are related to such miniature rivers and valleys can also be seen at the panel HID:9 (compare Figure 273 and Figure 274). The traditional tracing only shows the figures, and does not reveal its locational attributes. Here one sees how the figures are placed, interacting with the micro-landscape. The discolouring in the rock shows two parallel rivers where water runs and here the elks are placed in relation to the rivers. One of the elks is on its way along the river up the valley, while the others are moving to the right beneath the hilltop that can be seen above the elks. These natural features could be related to valleys and rivers in

the hunter-gatherer landscape in the vicinity of Nämforsen and might act as geographical references.

Figure 271 The pool with connected rivers and lakes at Laxön by Hallström (ID6). This might represent the macrolandcape where the figures are placed in a microlandscape within a miniature Hydrosystem. Photo: Jan Magne Gjerde.

Figure 272 The pool with connected rivers and lakes at Laxön by Hallström (ID6). This might represent the macrolandcape where the figures are placed in a microlandscape within a miniature Hydrosystem. Photo: Jan Magne Gjerde.

Figure 273 Tracing of the panel at HID:9. Tracing after Hallström (1960:plate XI) .

Figure 274 The elks placed in relation to the micro-landscape at HID:9. The rivers and valleys can be seen both to the right and to the left of the elks. The elk at the upper left is deliberately placed as if it is moving round a hilltop along a valley. Photo: Jan Magne Gjerde.

Summary of the Nämforsen rock art

The making of rock art at Nämforsen based on shoreline dating and the relation to the elevation of the settlement finds indicates that the first rock art was made at Nämforsen at about 5000BC. According to the motifs wit a South Scandinavian Bronze Age character, the last rock art was made at Nämforsen about 1000BC. That is, rock art was made at Nämforsen for 4000 years.

Initially around 5000BC, the upper parts of the rapids were where the first carvings were made at about 90masl. The rapid land uplift changed the character of the Nämforsen area from hefty rapids to a vibrant waterfall with a 500m rapids area and a drop of about 16-17m was formed due to the land uplift leaving the rock shores and the islands in the waterfall area. This formation of the Nämforsen waterfall took about 800 years, between 5000BC and 4200BC. The main characteristics at Nämforsen, the waterfall was still vibrant until the building of the hydro power construction. Even when the land uplift made the sea retract from the Nämforsen waterfall and the Ångermanälven fjord became the Ångermanälven River, this worked as a major communication line from the Gulf of Bothnia stretching about 140km inland to Nämforsen.

The Nämforsen area is a place that stands out by its forceful waterfall, and the landscape character would most likely have been important and acted as a reference point for people inhabiting the Ångermanälven region and beyong during the Stone Age as it has astonished visitors even until today when the waterfall is present.

The rock art at Nämforsen is many places placed deliberately in relation to natural features in the rocks. Some places it looks like if the natural elements of the rocks interacted with the rock art and the story told in the rocks. Some places these even have references to the wider landscape where the miniature landscape acts like a backdrop to tell stories of their macro topography interacting with the figures and scenes. At one occasion one can also see that they relate the story in the rock to a reference to what their landscape is as observed from the rock surface where the rock surface and its figures depicts their local topography. One can also see that scenes act as reference point to places in their wider landscape like the elk-hunt at e.g. Bastuloken, Högberget where settlements, hunting pits and rock art are placed in clear relation to each other.

Chapter 6 Discussing the case studies – including the rest of northern Fennoscandia

From East to West - Crossing the borders

Before I enter the discussion of the case studies, I will draw attention to what I name *crossing the borders*. Important when setting out on this rock art journey, was breaking down the border between east and west. I will approach what I regard the fallacy of distance and the east-west paradox in rock art with Nämforsen as the vantage point. The Nämforsen site has an advantage since it has been well published and discussed during the last century. Malmer suggested Nämforsen was a site for trade and exchange mainly on the basis of elk hides in return for Bronze objects from Southern Europe. Malmer claimed that in prehistoric Northern Europe new impulses normally spread north-wards from the south; hence he suggested that the ship motif supported such a spread of innovations from south to north (Malmer 1981:21-22).

Tilley, in his study of Nämforsen, criticizes Hallström for his Russian comparison (Onega) based on Hallströms stylistic studies: "So a connection between rock carvings more than 800km distant (as the empiricist walks – or in this case must also swim across the Gulf of Bothnia) is possible while one involving distances of 5 to 10 cm is ruled out of court" (Tilley 1991:13). Tilley advocates a maritime exchange between Nämforsen and southern Scandinavia (Tilley 1991:158-159) based on Malmers studies and dating of the Nämforsen site (Malmer 1975:44-45; Malmer 1981:107). If all contact in the Bronze Age is south-north, why are Russian Bronzes and Bronze moulds found in northern Sweden (Bakka 1976:17-25, plate 16). It is for most researchers still easier to consider south-north relations than relations between east and west. The distance between Nämforsen and the northern tip of Jutland in Denmark as the crow flies is c. 750km. When Tilley belittle Hallströms eastern affinities, he also question Stone Age seagoing ability by not being able to cross the Gulf of Bothnia. I find the assumptions of Tilley based on Malmers studies for the Nämforsen rock art questionable when it comes to dating, distance, communication and the interpretation of Nämforsen as a trading station during the Bronze Age. First, the distance between Onega and Nämforsen is about 800km, virtually the same as the distance as between Nämforsen and Jylland (northern Denmark). Hallström had dated the earliest carvings at Nämforsen to the Late Stone Age (Hallström 1960:372). A Stone Age origin for the boat motif in northern Norway was already advocated for in the early 1930's (Gjessing 1931:285). The earliest boats depicted in rock art

in northern Europe dates at least to 5000BC as can be seen in the Case study of Alta, Nämforsen and Vyg. Clearly, a motif that occurs more than 3000 years earlier in rock art in northern Scandinavia than in southern Scandinavia cannot have a south-Scandinavian origin. Dating suggests that less than 50 figures of about 2300 figures at Nämforsen belong to the Bronze Age. Hence, I find the Bronze Age trade as suggested by Malmer and backed up by Tilley, as a sole explanation for the Nämforsen site to be highly questionable. If that was the case it would have been the worst outcome strategy ever performed by hunter-fisher-gatherers of the north.

Hallström had undertaken several journeys to northwestern Russia and participated in several Stone Age excavations (Hallström 1960:358). Thereby he could identify Russian flint when found in northern Sweden (Hallström 1925:90f, 107). New finds backs the finds of Hallström, and flint with both south Scandinavian and Russian origin has been found dating to the Late Stone Age in northern Sweden. The Russian flints most likely originates from a source at the eastern part of the White Sea or the southern end of Lake Onega (Huggert 1984:59-60, fig 8), close to the area with rock art from Onega and Vyg. At about 5200BC the first rock paintings occur in Finland (Lahelma 2008:40). This concurs with the dating suggestion for the starting phase at Nämforsen. The paintings in Finland show similar traits with the north Swedish rock art, e.g. the boat figures. The Finnish paintings could link Onega to Nämforsen. Based on the factors presented above, I am therefore not unfamiliar with the idea that these nodes in the landscape, or Stone Age meeting places, could have been visited by people not just at a regional scale but also at an inter-regional scale. The similarity in the material between Onega and Nämforsen, that is thoroughly discussed by Hallström (Hallström 1960), strengthens this idea. Not only ideas travel, artefacts and people travel. Based on the similarity in the rock art over large distances, I regard it as realistic that people in the Stone Age visited both Alta, Nämforsen, Onega and Vyg, including journeying vast distances.

By this preamble to the discussion of the rock art in this thesis, I hope it has routed the reader to important threads of the lost relations in rock art. Knowledge of the material record, not only within present administrative boundaries, but across boundaries is advocated. A focus on dating helps relate rock art to the cultural context; for Stone Age rock art in northern Fennoscandia this is a northern hunter-fisher-gatherer context. Being aware of the natural background or the landscape as it was, is important when distancing time and space. Today it is much easier for me to travel to Sweden or Finland than to Russia, but surely, there were no

such “borders” in the Stone Age. Finally visiting the sites with the landscape clearly in mind is of utmost importance when discussing rock art and landscape.

This discussion will originate from the results from the case studies where they will be discussed in relation to three main points; time, macrolandscapes and microlandscapes. I will first discuss time since it has implications for the interpretation of the macrolandscape by the land uplift that has changed the context of the rock art sites from the time of the making until today. I will throughout this discussion include some of the material from the rest of northern Fennoscandia where I find it imperative. The discussion will then relate to the main topics discussed in chapter 4 in relation to the rock art of northern Fennoscandia where the Case studies will be emphasized. The theme of lost relations will run as a thread through these discussions. This is reflected in the interpretations of dating, the macrolandscape, the microlandscape, and the ethnographic parallels where the inclusion of lost relations might help us get a better understanding of rock art and landscape and how they interacted in the past.

Time

The initial rock art

In this thesis, shoreline dating has been of crucial importance in order to get a grip on the age of the sites at the different Case studies. A summary of the dating suggestion, based on the results from the Case studies, is presented in Figure 275 to get a better overview of the dating relevant for this thesis. The initial rock art can be ascribed to the pioneer phase of the settling of Fennoscandia after the last Ice Age. The oldest sites in the Ofoten Case study is dated to about 9200BC. The common factor for all of the early dated sites is that they only depict large game and that they, in general, are large in size. The largest whale figure at Leiknes 1 (see Figure 96) is 7,63m long. There has been a longstanding idea that the 7 sites with polished rock art in northern Norway, was by far the oldest belonging to the Early Stone Age and discontinued before the carving tradition started. The study of the polished carvings and the carvings in the Nordland / Troms region in Northern Norway was conclusive stating that the polished carvings were made, several thousand years after the polished rock art, at about 4000BC, the carving tradition started (Hesjedal 1990; Hesjedal 1994). As the study of the Ofoten sites showed, for the few sites in question, the polished rock art sites is by far the oldest.

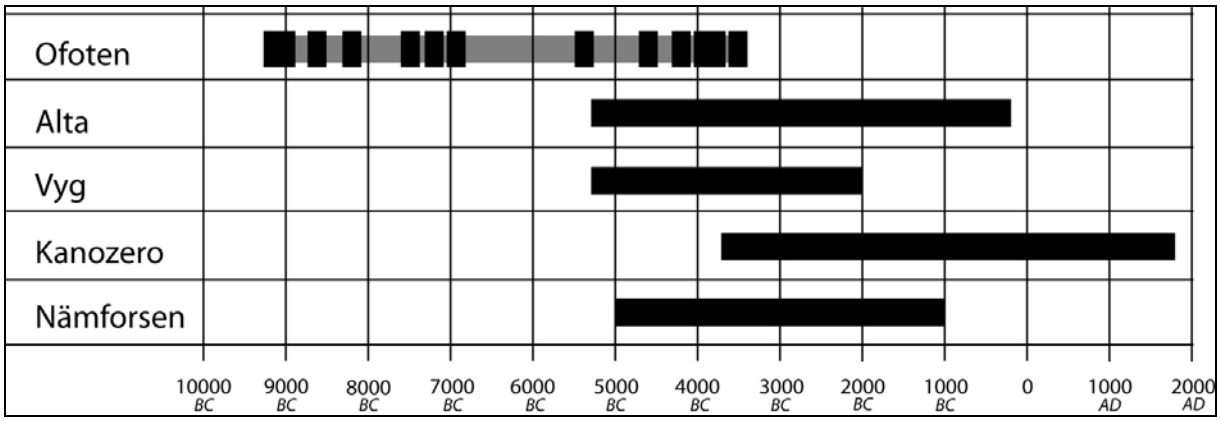

Figure 275 Overview of the dating suggestion for the rock art from the Case studies in this thesis. The Ofoten Case is marked in bright grey for the total rock art production. The different sites maximum dates are marked as 200 year intervals. Based on the dating of the sites, I do not consider there to have been a "long" discontinuity period of rock art production in the Ofoten area even if there are no sites with a maximum date between 6830BC and 5485BC. Illustration: Jan Magne Gjerde.

Moving out of Ofoten, where the chronological relation between the polished carvings and the carvings seems to be straight-forward is important. Relating the earliest rock art to the rest of Fennoscandia is important since there are very few sites that can be ascribed to the Early Stone Age in Fennoscandia. This is a problem when it comes to representativeness of the material record. In the rest of northern Norway there are the polished site at Fykanvatn (see Figure 20), the Vågan site and the Klubba site (see Figure 95). These sites are all dated to the early part of the Early Stone Age by shoreline dating. All of the polished sites in Nordland, northern Norway, are situated above the tapes transgression. By shoreline dating, the Vågan site is dated to 7520BC-7480BC[206], the Klubba site is dated to about 7740BC-7610BC[207], and the Fykanvatn site to between 9050BC and 8740BC[208].

Near Tromsø, new figures have been found at the large rock art site with carvings at Skavberg (Skavberget). It was previously dated by Simonsen and Hesjedal[209] who found that the carvings belonged to the Late Stone Age, connecting them to the adjacent Stone Age site[210]. Hesjedal dated the Skavberg 1 site to 5800BP, the Skavberg 2 site to 5500BP and the Skavberg 3 site to 4300BP (Hesjedal 1994:table 2). Based on recent excavations in the

[206] Vågan is located at 52masl. With isobase 30 from the SeaLev programme, the site is dated to 8400BP calibrated to 7520BC-7480BC with 2sigma.
[207] The figures at Klubba is located between 52masl and 65masl. At Klubba with isobase 27 the date for the site at 52masl is 8700BP 7740BC-7610BC. At 65masl at isobase 27, the carvings are dated to 9300BP. Calibrated this is 8620BC-8480BC calibrated with 2sigma.
[208] At Fykanvatn, the gological dating has been questioned for the highest elevated figures. At this level, the geological data is very uncertain. The figures at Fykanvatn is situated between 96masl and 138masl. At isobase 33, the dating for the sites is 12000BP at 138masl and at 96masl the date is 9500BP is calibrated to 9050BC to 8740BC calibrated with 2sigma.
[209] Hesjedal extracted 2m from the elevation of the lowest carvings when applying shoreline dating for the site.
[210] The Stone Age site is located at about 11masl while the rock art panels are located at 18.54masl,17.17masl and 11.87masl.

Tromsø area it seems like isobase 15 is more correct than isobase 17 for the Skavberg area[211]. The shoreline dating of Skavberg 1 based on isobase 15 is 8500BP, at Skavberget 2, 8400BP and at Skavberget 3 4900BP. Studying the isobase curve for the Skavberg area however shows that the land uplift is virtually standstill (including the deviation in the data) between about 8500BP to about 5400BP. This makes it problematic to apply shoreline dating for the Skavberg site. The direct reading of the shoreline data is not sufficient, one needs to look at the shoreline curve (isobase) to interpret the data (see Figure 276). The rock art at Skavberg 1 and Skavberg 2 seem to reflect figures from both the Early and the Late Stone Age. The newly found elk figure of about 2.9m in length at Skavberg 2 (see Figure 276 to Figure 278), and the large bear figure at Skavberg 1 would stylistically back such an old date. The shoreline data suggest that the carvings at Skavberg could have been made over a long period of time. This would explain why figures at Skavberg 1 and Skavberg 2 include both large naturalistic figures, human representations and geometric figures otherwise only found in relation to the Late Stone Age in northern Fennoscandia. The Skavberg site, backed up by some of the sites from middle Norway and northern Sweden, suggest that there is no clear cut discontinuity between the polished rock art and the carvings.

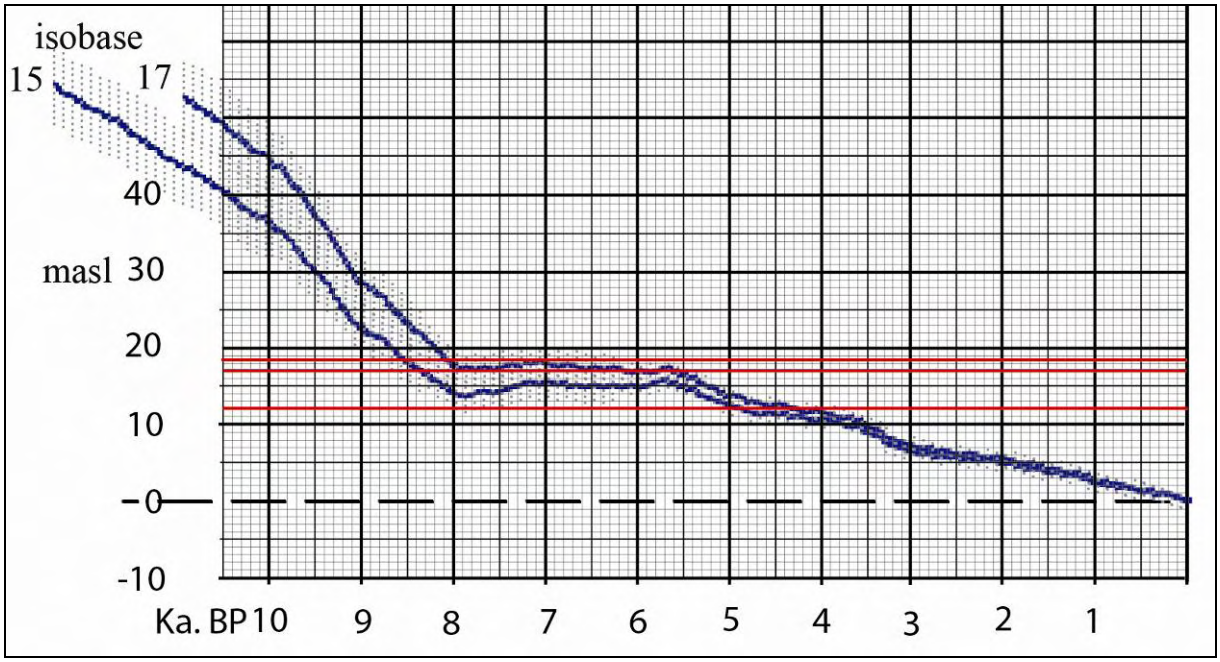

Figure 276 Shoreline dating at the Skavberg site. The isobase 15 and 17 curve in blue. The elevation of the Skavberg 1 site at 18,5masl, the elevation of the Skavberg 2 site at 17masl and the elevation of the Skavberg 3 sitye at 12masl in red. This shows that the shoreline at the Skavberg area is virtually standstill between about 8500BP and 5400BP. Thereby the carvings at Skavberg 1 and Skavberg 2 could have been made between 8500 to 5400 assuming they were shorebound. Data after SeaLev (Møller & Holmeslet 1998). Illustration: Jan Magne Gjerde.

[211] Jacob Møller, personal communication 2009.

Figure 277 The Skavberg 2 site before removing the lichen (top photo from 2003) and after removing the lichen (bottom photo from 2007). The previous documentation is painted red on the rock surface and visually dominates the rock surface making it difficult to see the vague lines that appeared clearer after the removal of the lichen (compare night photo in **Figure 278**). Photos and illustration: Jan Magne Gjerde.

Figure 278 The large elk figure at Skavberg 2 when first found in august 2008. One can see that some of the lines were already painted in red (compare **Figure 277**). Looking carefully one may see the elk figure in **Figure 277** by comparing it with the night photo. The bear figure under the elk becomes clear on this photo. One can see vague lines on the rock surface, however it is hard to discern motifs due to the erosion on the rock surface. The night-photo is taken after the figure was marked. The elk figure is about 2.9m long. Photo: Jan Magne Gjerde.

Including the rest of northern Fennoscandia, there are figures in northern Sweden that have been connected to the large naturalistic polished rock art in Northern Norway. The Gärde site was early connected to the Early Mesolithic by its size and naturalistic form (Hallström 1960:52). In northern Sweden, Forsberg, by stylistic arguments, have backed Hallström and dated the Landverk and Gärde site to the Early Stone Age based on style (Forsberg 2000:68f). At the Gärde site there are large figures carved into the rock surface on an island in an area with rapids (see Figure 279 and Figure 280). They can only be dated by stylistic comparison and the argument of size. They appear to be similar in style and size to the earliest rock art in Ofoten in northern Norway (compare Figure 279 with Figure 100).

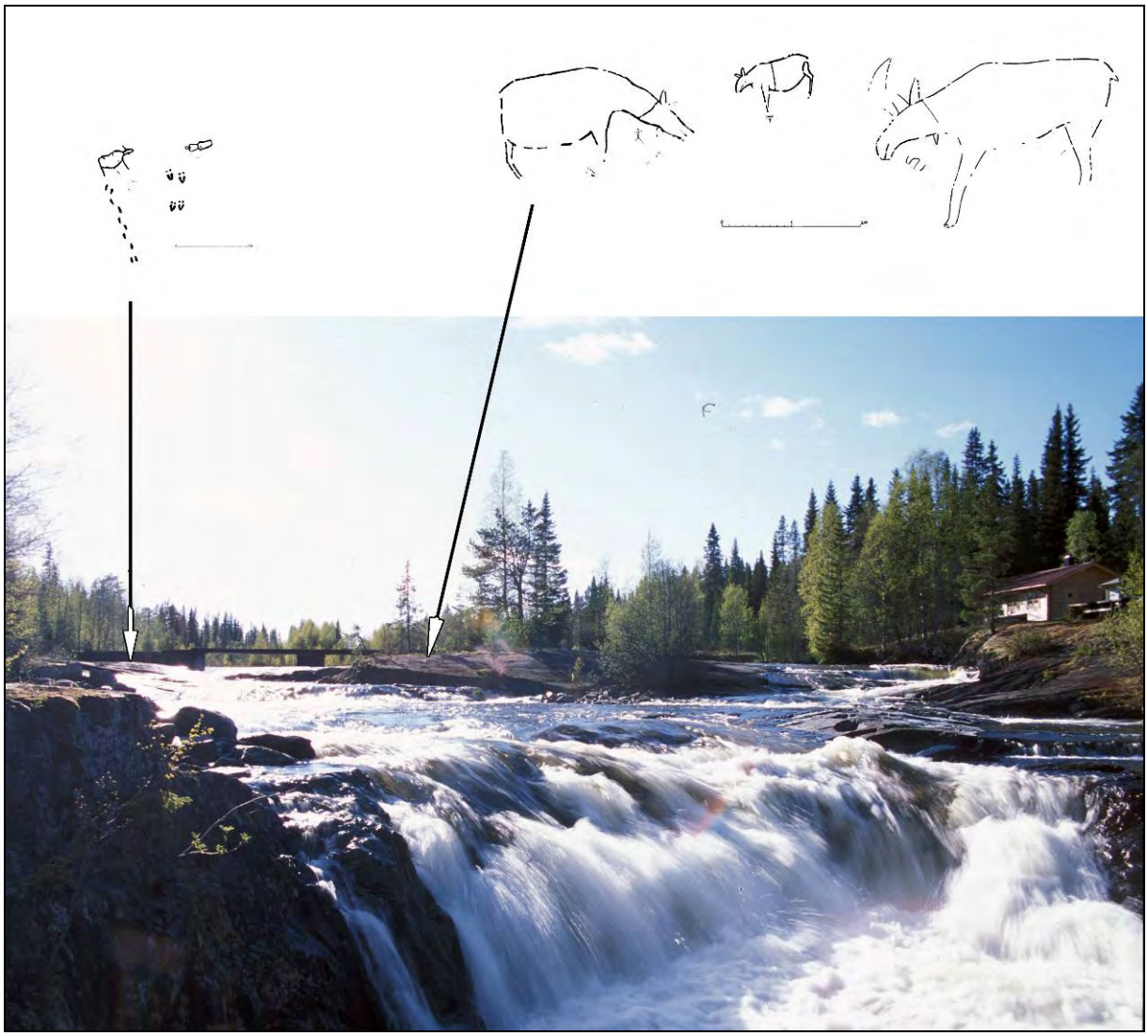

Figure 279 The Gärde site in northern Sweden. The carvings appear in three groups. The group with the large elk figures is located at the island. The large elk figure to the left could be a bear. The carvings with the elk and elk tracks are located at the riverbank to the left in the photo. The third group is made up of lines that cannot be identified as a motif. Tracings after Hallström (1960:plate 3 and 4). The figures are made into same scale. The scale to the right under the large elk figures measure 2m. The largest elk to the right measures 3.65m. Photo and illustration: Jan Magne Gjerde.

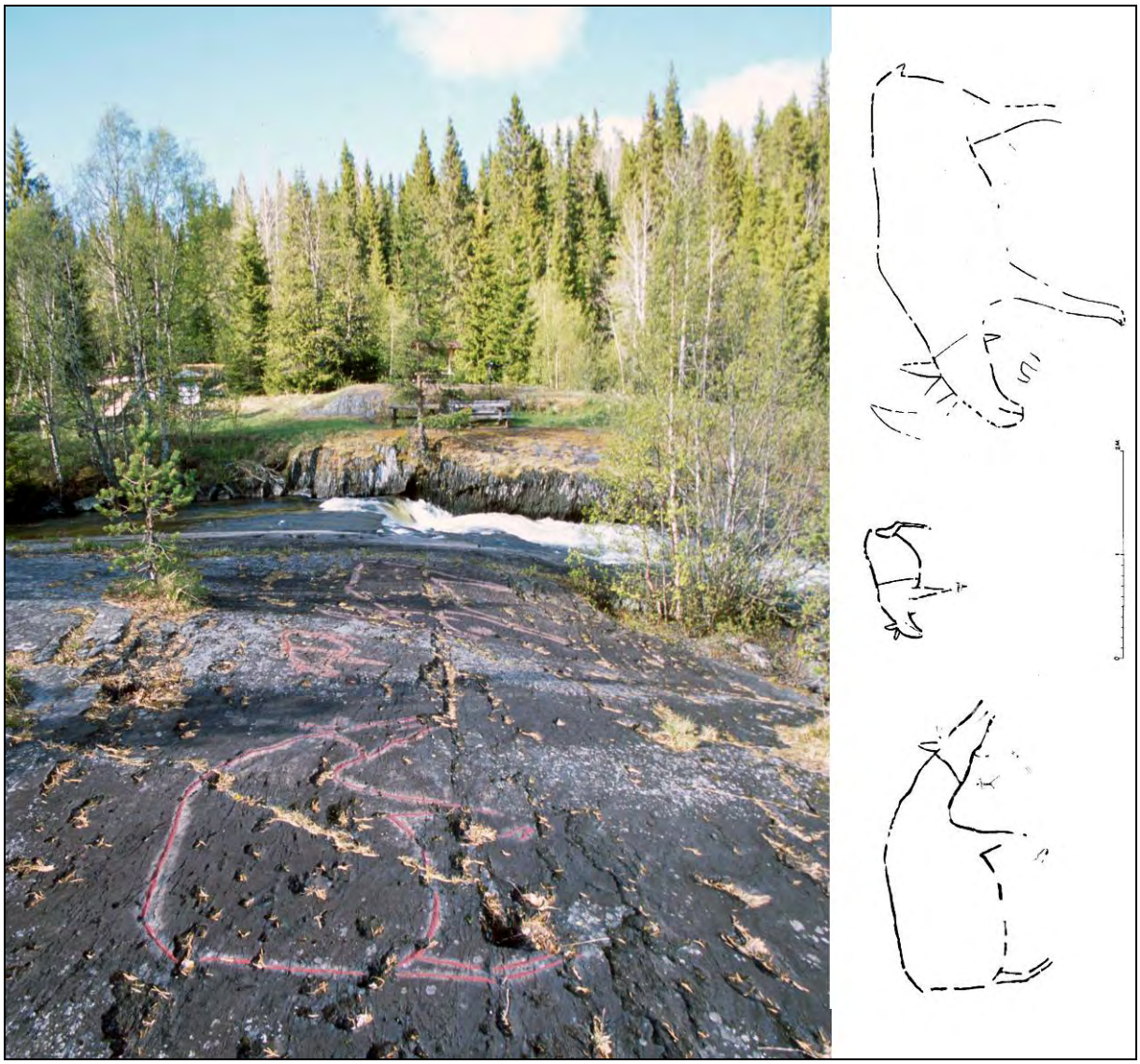

Figure 280 The large elk figures at Gärde. Tracing to the right after Hallström (1960:plate 4). The scale to the right of the tracing measures 2m. The largest elk figure is total 3.65m long. Photo and illustration: Jan Magne Gjerde.

Moving west from Gärde one finds the sites in middle Norway. The first carvings dated by shoreline dating (Sognnes 2003a) seems to appear at about 5000BC at Stykket (5800BP), Lånke 1 (6300BP), Bardal 1 (6300BP) and Bardal 3 (7600BP). The paintings could date from the Early Stone Age with Mølnargården (8800BP), Gjølga (8200BP) and Varghiet (8200BP) if they were shore bound. This early date for the paintings is questioned by Sognnes who dates these paintings to the Late Stone Age (Sognnes 2003a). A more thorough study of the relation between carvings and paintings in middle Norway is advocated. The carvings at Bardal 1 are some of the largest rock art figures in Fennoscandia, with the large elk figure measuring 3.35m and the large whale figure 7.05m. The earliest rock art at Bardal 1 is dated to 6300BP, which is calibrated to 5315BC-5220BC by OxCal. The Bardal site is unique in

Fennoscandia since rock art seems to have been made at the same panel that covers the longest rock art tradition at one single panel in Fennoscandia. The figures seem to be made at least 4 time periods. There are figures from the Early Stone Age, the Late Stone Age, the Bronze Age and the Early Iron Age. People visited the Bardal site making rock art for about 5000 years.

It has been argued that some of the sites in Eastern Norway belong to the latter phase of the Early Stone Age (Mikkelsen 1977; Paasche 1999), in Western Norway (Bakka 1966; Bakka 1973; Gjerde 2002; Lødøen 2009; Lødøen 2003), in middle Norway (Sognnes 2003a) and in Northern Norway (Hesjedal 1993b; Hesjedal 1994). It has not been established that there is rock art belonging to the Early Stone Age in Northern Finland, however the earliest paintings in southern Finland has lately been suggested dated to the latter phase of the Early Stone Age (Kivikäs 2005:20; Seitsonen 2005b:407). The brief summary of the earliest rock art in Fennoscandia show that there are rock art sites dated to the Early Stone Age at many places. The dating of rock art in northern Fenoscandia presented in this thesis shows that there is a continous production of rock art and not separate phases of production representing a long discontinuity of rock art production as previously suggested by Hesjedal (1994) for northern Norway.

Period of use

Many of the sites in the Case studies advocate a long utilisation period. Leiknes in the Ofoten Case study includes two sites, and according to shoreline dating people made rock art at Leiknes for about 1500 years, between 8300BC and 6830BC. Then at Sletjord in the Ofoten Case, the three sites indicate that people made rock art in this area for about 2000 years, between 5485BC and 3530BC. The shoreline dating and the dating in general of rock art constitute a problem since we are dating the maximum date of the rock art site. This is "verified" by the shore connection that is evident in all the Case studies with the strongest examples from Alta, Ofoten and Vyg. It is important to look at the location of the rock art sites. At Nämforsen the first rapids appeared at about 5000BC and the landscape characteristics did not change much between about 4200BC when the waterfall appeared in full until about 2000BC. The location at Nämforsen and at Besovy Sledki at Vyg indicates that the shoreline connection was justified by its location by the rapids. This seems to be backed by rock art at the inland lakes like Kanozero and Onega in northwestern Russia, Landverk in northern Sweden (see Figure 15), Sporanes in eastern Norway and from rivers or

waterfalls like Gärde and Nämforsen in northern Sweden and at Katsundholmen, Møllerstufossen from eastern Norway.

The location of Forselv where the coastal rock slope was connected to the sea by its shape and steep drop at the highest part of the rock surface may explain why people made rock art maybe for a couple of thousand years at Forselv. The variation of motifs backs up this interpretation. This can also be seen at the Storsteinen boulder in Alta in northern Norway (see Figure 163), where the drop is about 4m, hence connecting the large boulder to the shoreline for about 2200 years. From the Case studies, we know that people returned to the large rock art areas to make rock art for many thousand years (in Alta most likely for about 5000 years from about 5200BC until about 200BC). At Skavberg this can be seen at the three sites at different elevations like at Sletjord in the Ofoten Case Study. The conclusive dating of motif and theme observed in the Ofoten area and the earliest rock art that can be dated by shoreline dating is important for the dating suggestion for inland sites like Gärde in northern Sweden. Style will always include information and I do not think we can enter the post-stylistic era in rock art research. The sites where one can observe change in the motifs depicted at the same place is important when it comes to the period between the initial rock art by the pioneers (about 10000BC) and about 5500-5000BC when the large rock art areas is initiated e.g. at Alta, Nämforsen and Vyg. The rock art sites where rock art is made at the "same places" at different elevation is important when studying change in rock art motif, theme, relations between rock art and cultural contact. However, dating rock art is crucial before such lost relations can be studied.

At some places rock art was made for thousands of years. The results are conclusive when it comes to the debate whether sites were made during one visit or whether they were revisited. Another question is whether all the figures in a panel was made in one go. Looking at panels like Bradön at Nämforsen, Kamenniy 7 at Kanozero, Bergbukten 4 in Hjemmeluft, Alta, Forselv in Ofoten, of course rock art was made at the same panel for some time and not during one visit. However there are sites where figures could have been made at one visit, such as at Jo Sarsaklubben, Sletjord 2 or Valle in Ofoten. While at some places it looks like people made rock art for a short time or the rock art could be the result of one visit (even if I assume they returned to the site after the initial making), most of the sites evidence revisiting.

Chronological variation: The rock art explosion

Before about 5500-5000BC only large game in virtually naturalistic size and "morphologically correct" had been depicted in the rock art of northern Fennoscandia. Even if the large naturalistic figures were still being depicted at places like in the Case study of Ofoten (e.g. at the sites Brennholtet and Forselv) after about 5000BC, one now can observe a change in the material record. Since it is only in the Ofoten Case Study in my thesis that the sites are dated to before about 5000BC, this is where the change can be observed. A similar change can be observed in the material from middle Norway when comparing the Stykket site with the Evenhus site and in Northern Sweden when comparing the Gärde site with the Glösa site.

This change included the first human depictions and human activities, an explosion in the number of motifs, an increase in the number of sites and the large concentrations of rock art at places like Alta, Nämforsen and Vyg was initiated. Quite a few sites can be dated to this period and by looking at the dates of the sites compared to the material record, one finds a transmission phase where large figures are still made, but the variation of motifs increases and eventually the life-size naturalistic figures are no longer being made. The best examples of this from the cases studies is from Forselv (see Figure 127) and at Ole Pedersen in Alta (see Figure 71) in northern Norway. Moving to the rest of Fennoscandia, good examples of such "transmission" sites are Gärde in northern Sweden, Bardal and Hammer 5A (see Figure 281) in middle Norway and Ekeberg 2 (Figure 307) and Skogerveien (see Figure 308) in Eastern Norway. At Bardal and Hammer 5A the time difference becomes evident since the large figures are more eroded than the smaller ones; hence they are interpreted to be of a younger date.

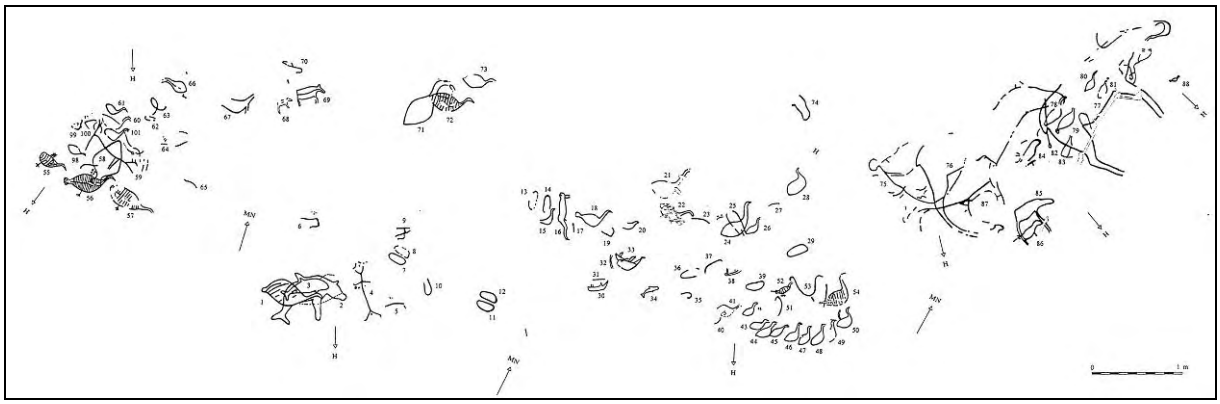

Figure 281 The Hammer 5A panel at Hammer, middle Norway. Scale at the lower right in the tracing is 1m. Tracing after (Bakka 1988:plate iv). The large life size figures to the right in the tracing.

One may argue that this change is the most exciting change in the rock art of northern Fennoscandia. It is so groundbreaking that I have named it a "rock art explosion". In northern Fennoscandia, the first rock art where the motif and theme expands from that of solely large game, to include a wide variety of motifs. Human representations were now depicted and large scenes included many figures that clearly were related. This is best observed at the Forselv site in the Ofoten Case study where there is clear evidence of a site where figures were made for a long time. Of the large rock art areas in my case study, the three largest originate at virtually the same time. People started making rock art in the Altafjord area, Nämforsen and Vyg between about 5500BC and 5000BC. At Vyg, the earliest carvings could be as old as 5500BC. Including the Slettnes site that is dated to about 5500BC and the first carvings in the Ofoten area at Sletjord 1 dated to about 5500BC. The Sletjord 1 site is the first panel with other motifs than large game (see Figure 119). The motif is interpreted as elk-tracks.

This all inclusive change coincides with the first paintings in Finland, dated to about 5200BC, and connected to the latter phase of the Early Stone Age by adjacent excavated archaeological sites and shore displacement (Kivikäs 2005:20; Lahelma 2008:35; Miettinen 2000:79f; Poutiainen & Lahelma 2003; Seitsonen 2005a; Seitsonen 2005b:407). The other large area with rock art in northern Fennoscandia is the Onega carvings on the rock slopes at the eastern side of the Onega Lake. These carvings have been dated to the Neolithic by adjacent settlement sites (Lobanova 1995a; Lobanova 1995b). Lobanova grounds her dating on the artefacts (mainly pottery), ^{14}C-dating, palynological and geomorphological observations. Her dates are based on the contemporary chronology of the adjacent Pit-Comb Ceramic finds, and the Pit-Comb Culture, dating to c. 4200-2700BC [212] (Lobanova 1995a:103). By calibrating the data given by Lobanova with OxCal, the initial carvings at Onega would have been made between about 5220BC and 5070BC. This means that the first carvings at the large rock art area at Onega can be assigned to the period between around 5000BC and the latter to the final stage of the Stone Age at about 2000BC. In western Norway, at the Vingen rock art area, recent excavations have dated the house structures to the latter part of the Late Mesolithic with ^{14}C-dates indicating that the site was in use from about 5000BC to 4200BC (Lødøen 2009; Lødøen 2003). Previous dating of the Vingen site (Bakka 1973:176; Bakka 1979:118f), argues for a date of the rock carvings in Vingen to start in the Late Mesolithic and Early and Middle Neolithic, is backed by Walderhaug (1998:288ff)

[212] This is based on uncalibrated data (BP) which gives us an uncalibrated date to 6200BP-4700BP for the entire rock art production at Onega according to Lobanova (personal communication 2005).

where she states that: “As the evidence stands today, Bakkas’s dating of the Vingen site to the latter part of the Late Mesolithic, Early and Middle Neolithic is as good as we can get” (Walderhaug 1998:290). The starting phase in Vingen, according to Bakka (1973; 1979) and Walderhaug (1998), would fit the data presented by Lødøen, while according to Walderhaug (1998), rock carvings were made in Vingen until about 2400BC. The ^{14}C-dates from the house structures, presented by Lødøen (Lødøen 2009; Lødøen 2003), indicates that the site was in use for only 800 years. However, I find it more likely that Vingen, with more than 2100 carvings, have a long tradition like the other large rock art areas in Fennoscandia, and that rock art was made in Vingen between about 5000BC and 2400BC.

Viewing northern Fennoscandia in relation to the rest of Fennoscandia, this change in motif, extent and the introduction of large rock art areas occurs over a large area virtually at the same time. The rock art areas show a clear similarity in the selection of motifs where large game animals are the main focus. However, they also show a dissimilarity in the selection of motifs. The clearest example of this is the Nämforsen site, where the majority of the figures are of elks and in Vingen in western Norway where they clearly focused on depicting red deer. While the different rock art areas all focus on large game, one can also see that they focused on different animals.

An important motif that occur in northern Fennoscandia for the first time about 5500BC-5000BC, is the boat motif. The boat has until recent decades been associated with the South Scandinavian Bronze Age. The boats at Nämforsen was ascribed to the Bronze Age by Hallström (1907b) even if he later suggested a Late Stone Age date (Hallström 1960). The bold dating suggestion put forward by Gjessing (1931) for the Forselv boats where he dated them to the Late Stone Age, was passed by in silence by contemporary scholars. The boats discovered at Vyg was dated to the Late Stone Age by Savvateev (1970). However, this had little impact on the Scandinavian research, as evidenced in Malmers study of North European Rock Art where Malmer dated all the boats to the Bronze Age (Malmer 1981). The conclusive dating put forward by the Russians for the Vyg material (Savvateev 1970), and the dates put forward by Helskog (e.g. 1985b) for the Alta material showed that the boat as a motif dates to the Late Stone Age. Growth of the material both in northern Norway and in northwestern Russia includes boats that rarely have been discussed in a wider context with the exception of Helskog for the Alta material (Helskog 1983; Helskog 1985b), Malmers chorological study (Malmer 1981) and Lindqvist (1983; 1984; 1994). The general assumption that the boat motif has a South Scandinavian origin is rejected by the material record. Reviewing the rock art in

northern Fennoscandia strongly suggest that the first boat was depicted in rock art more than 3000 years before the Bronze Age (Gjerde 2008).

Awareness of the cultural context of rock art is important. The boat motif, central in the Late Stone Age rock art of northern Fennoscandia, has often been placed in a Bronze Age context due to the South Scandinavian Bronze Age rock art boats and comparative studies such as by Malmer (1981). An example that shows how important dating is for rock art is the study of Nämforsen by Tilley (1991) where he applied Malmers suggested dates and rejected the Stone Age dates for this site as put forward by Hallström (1960:372). Tilley suggested that the boat motif came from the south as a package-deal that introduced a new symbol set, including boats, shoe soles and scythe-like tools (Tilley 1991:163f). Unfortunately for Tilleys art of ambiguity, works on the dating of Nämforsen stating a starting phase to about 4000BC (Baudou 1993; Forsberg 1993; Helskog 1989a; Lindqvist 1994) was published just after his study of the Nämforsen rock art. Malmers and Tilleys interpretation of the Nämforsen site becomes a flawed *ex oriente lux* of rock art that is not backed up by the current scientifically accepted date of the Nämforsen site. Boats were being depicted at Nämforsen as much as 3000 years before the Bronze Age started.

The elkhead boat is the dominant boat-type in northern Fennoscandia (see Figure 282). The practice of connecting animals to boats can be found in the ethnographic record from large areas of the Arctic. Animal parts, amulets or figurines were also put in the boats as a token or an offering, connecting the boat to the animal world (Brandstrup 1985:148-149, 156, 158). Amulets or figurines of the whale, elk and bear made in flint is found in Late Stone Age sites by the White Sea, northwestern Russia (Zamyatnin 1948:106). The animals represented on the stem or in the boat as charms or amulets varied. Stuffed seals have been put onto the stems (Thornton 1931:165), and wolf sculls, dried ravens, vertebras of seals, tip of red fox's tails or eagle feathers have also been put into the boat during whale hunts (Murdoch 1892:275, 437). Prehistoric sculptures shaped as elk-heads or bear-heads are found in vast parts of northern Fennoscandia (e.g. Carpelan 1975) and could be connected to journeys both on land and at sea since they are mobile artefacts.

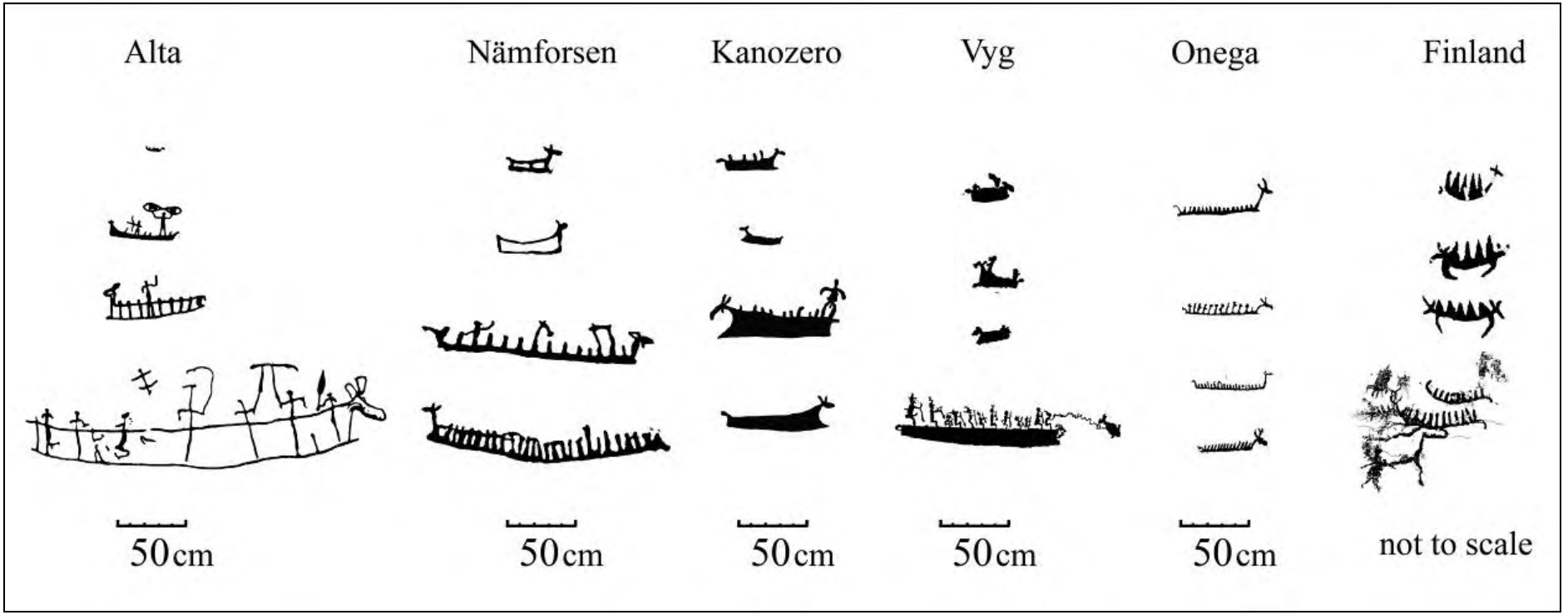

Figure 282 Examples of elk-head boats from the north dated to the Late Stone Age. Boats from Alta, northern Norway after Helskog (1989b:fig. 4). Boats from Nämforsen, northern Sweden after Hallström (1960). Boats from Kanozero, NW-Russia after authors' tracings. Boats from Onega, NW-Russia after Hallström (1960:plate XXVIII) and Ravdonikas (1936b:plate 1 and 13). Boats from Finland are from top to bottom from the sites: Patalahti, Saraakallio, Saraakallio, Pyhänpää after Lahelma (2005b:fig 1). The Pyhänpää boat figure is depicted as the antlers of an elk and is included in this overview to show the link between the elk and the boat. Illustration: Jan Magne Gjerde.

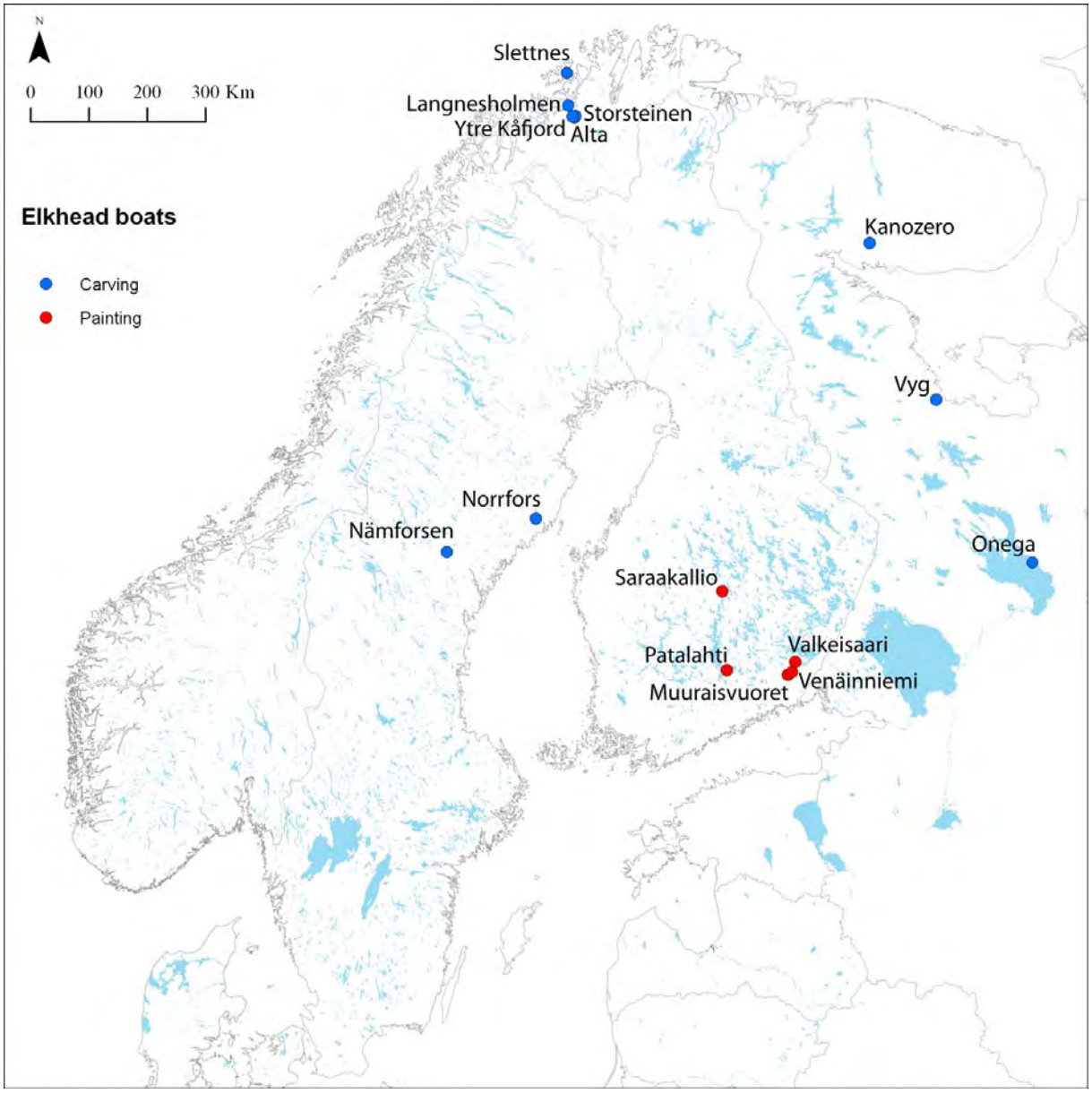

Figure 283 Distribution map of sites with elkhead boats in Fennoscandia. This show that the elkhead boat is clearly an eastern phenomena. Compare with distribution map of all Stone Age rock art sites (see **Figure 90**) to see the clear eastern distribution of elkhead boats in relation to the distribution of Stone Age rock art. Alta in this map also includes the sites in the Hjemmeluft area. Illustration: Jan Magne Gjerde.

The elkhead boats are found only in the northeastern parts of Fennoscandia including northern Norway, northern Sweden, Finland and northwestern Russia (see Figure 283). No such boat depictions have been found in the Trøndelag-region in middle Norway or in southern Scandinavia. Dating is crucial when looking at innovation, origin and spread of material culture. It has been suggested that the earliest boats in southern-Scandinavia (Sognnes E-type and Mandt A1-type) dates to the latter part of the Late Stone Age, even though most researchers end up with an Early Bronze Age date (Fett & Fett 1941:137; Fett & Fett 1979; Mandt 1991:334; Marstrander 1963:137; Sognnes 1987a:76; Sognnes 2001).

Graves where similar boat-types are found are dated to the Early Bronze Age (Linge 2004; Linge 2006; Linge 2007; Mandt 1983; Marstrander 1978). The similarity between Stone Age boats and the oldest Bronze Age boats have previously been forwarded (Sognnes 1990:64f; Vogt 2006:224). Even though Sognnes accepts that similar boat types are found in northern Fennoscandia, he regards the boats from middle Norway and western Norway as a seperate group of West-Scandinavian boat figures (Sognnes 1990:65). I question this notion by Sognnes, and claim that the boat types we see depicted along the Norwegian coast has a northern origin, that dates back to the latter phase of the Early Stone Age. The earliest depicted boats in middle Norway and western Norway date to the latter phase of the Late Stone Age or the earliest phase of the Scandinavian Bronze Age.

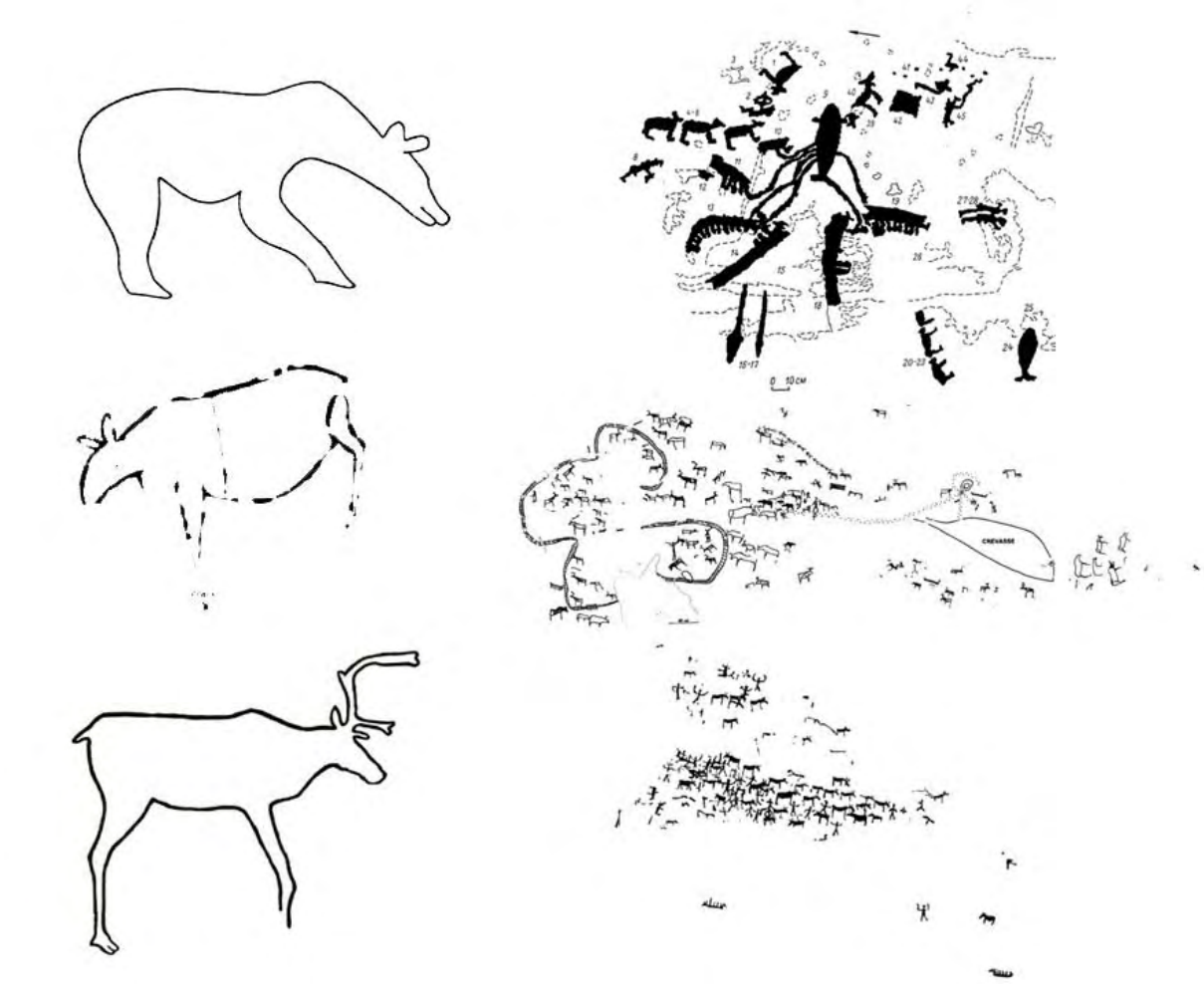

Figure 284 The clear difference between the "Early Stone Age" and the "Late Stone Age" rock art. Images are not presented in the same scale. However, the Early Stone Age animal depictions are with a few exceptions much larger. Thereby this illustration shows a relative difference in scale. Top left: Polished bear from Valle (Finnhågen), northern Norway, after Gjessing (1932:plate XXVIII). Middle left: pecked elk from Gärde, northern Sweden, after Hallström (1960:plate IV). Bottom left: Pecked reindeer from Bøla, middle Norway, after Gjessing (1936a:plate LIII). Top right: pecked whale-hunting scene from New Zalavruga 8, Vyg, northwestern Russia, after Savvateev (1970:plate 48). Middle right: Pecked reindeer corral and bear hunting scene, Bergbukten 1, Alta, Northern Norway, after Helskog (1999:figure 5). Bottom right: pecked elk-hunting scene from Nämforsen, northern Sweden, after Hallström (1960:plate XX). Illustration: Jan Magne Gjerde.