Culture historical significance on areas Tasersiaq and Tarsartuup Tasersua in West Greenland & Suggestions for Salvage Archaeology and Documentation in Case of Damming Lakes

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Introduction

Archaeological studies were performed by Greenland National Museum in 2007 and 2008 on main impact areas in advance of ALCOA's proposed aluminium smelter. Initially archaeological surveys were undertaken at three areas chosen as water reservoirs for the hydroelectric plants to supply the aluminium smelter with electricity. When plans called off using the middle reservoir, Isuup Tasia (7d), it was excluded from the 2008 studies.

Awareness of the significance of the interior resources exploited by past cultures exists through traditional and historical sources. Some areas of the north reservoir, Tasersiaq (7e) had also been partly surveyed by archaeologists from the National Museum in Denmark in 2002. In spite of knowledge from these sources the amount of new finds both in the north (7e) and south reservoir (6g) areas were astounding. The importance of the caribou hunts in the interior and the use of the big lakes for that activity is now obviously cemented by the amount of mapped cultural remains as regards the Inuit. Samples collected from Saqqaq Culture settlements by Tasersiaq produced ^{14}C dates telling that the very first people of West Greenland from an early period exploited the resources of the interior. Special attention is to be regarded to the complexes of unique and largely undisturbed contiguous cultural landscapes of the interior where traditional knowledge and legends of cultural significance for the Greenlandic population are associated. The type of base camp dwellings found in most Inuit settlements in the Nuuk area (6g) was different in architecture from tent houses usually found in other areas. This type of dwelling is in this paper designated as stone huts, but in tables and diagrams the stone huts are put under the category of tent houses. The two published reports on the archaeological surveys for ALCOA constitutes the backgrounds for this summary. For the elaboration of the culture historical significance of the finds a list of references can be found at the end of the paper.

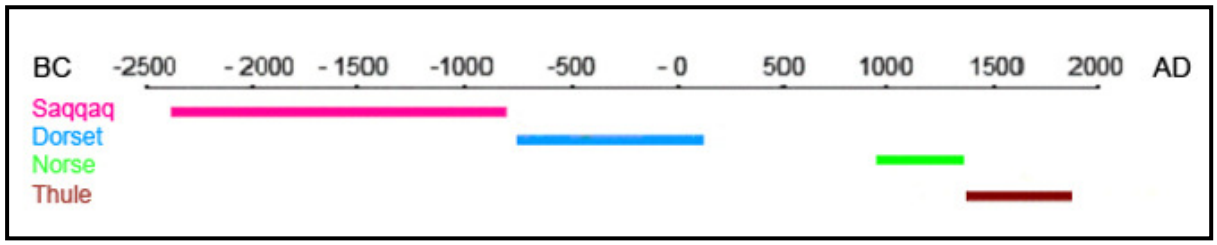
The culture-historical background

West Greenland was for the first time settled by Stone Age hunters approximately by 2400 BC. Remnants from these people are named the Saqqaq Culture. As all following arctic hunters to populate Greenland they were migrants from the arctic North America. Finds from the culture are known from all over West Greenland and way up along the East coast. Large scale excavations at two localities and finds from another place indicate the importance of caribou as resource for the Saqqaq people (Meldgaard, 2004 and Gotfredsen & Møbjerg, 2004).

Whether a cultural transition happened from Saqqaq to Early Dorset is being discussed as the gap with no archaeological finds especially in Sisimiut area is closing. Radiocarbon dates tell of the presence of Greenland Dorset (Early Dorset) in West Greenland in the period 700 BC – 200 AD. Both the Saqqaq and Dorset Cultures are included under the term: Paleo-Eskimo cultures.

The next people to populate part of West Greenland were the Norse that, according to the Sagas, migrated from Iceland around 985 AD. They settled in the Eastern Settlement in South Greenland and in The Western Settlement in the fiords behind Nuuk. The Norse disappeared from the latter area by the middle of the 14th century and totally abandoned Greenland in the middle of 15th century.

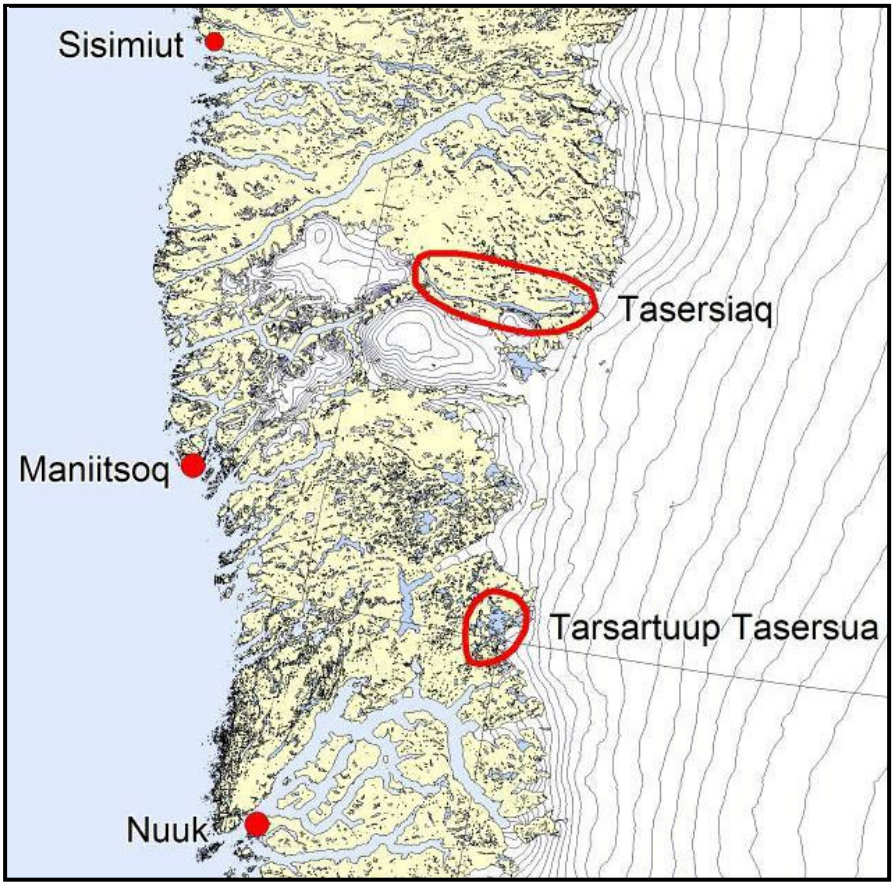
During the 13th century the Inuit – people of the Thule Culture - entered the northern most part of West Greenland and spread out along all coastal areas of the country in the following centuries. Probably the Inuit encountered the Norse, as archaeological finds from the Nuuk area indicate contemporary presence in the area. Like the Inuit from their origin in the North Western part of Alaska hunting large whales was important for their livelihood. As Inuit adapted to the local conditions, especially the cooling of climate in the 16th - 17th century affected their patterns of residence, hunting large whales became limited to few areas on the West Coast. Around 1650 long distance exchange of resources along the west coast were established and trade with European explorers and whalers are known from the 17th century. After the beginning of the gradual Danish-Norwegian colonisation in 1721 AD, approximately by 1800 AD Inuit living on the West Coast became dependent on western goods and was by and large converted to Christianity.



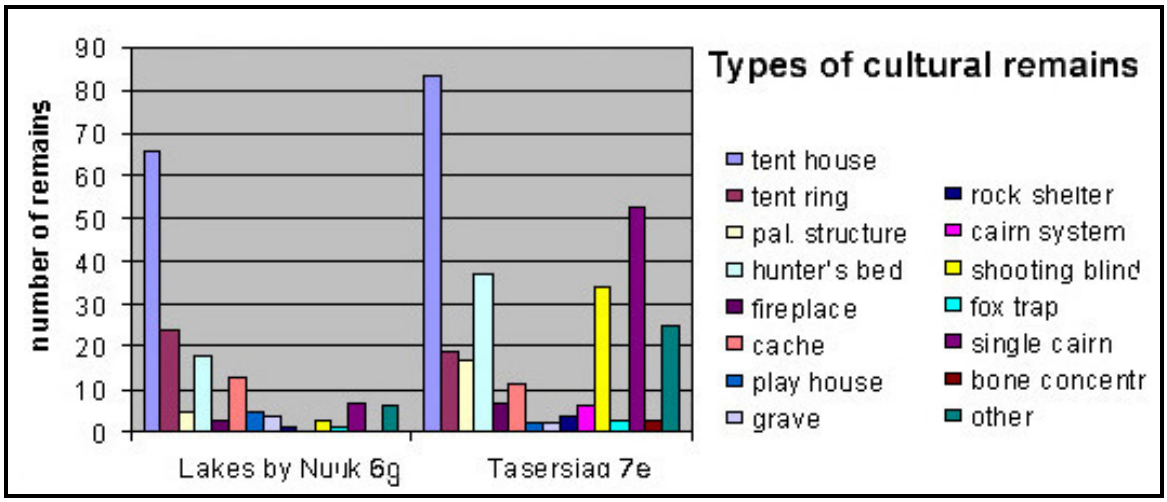
Diag. 1: Presence of past peoples in the research areas.

Results from the surveys

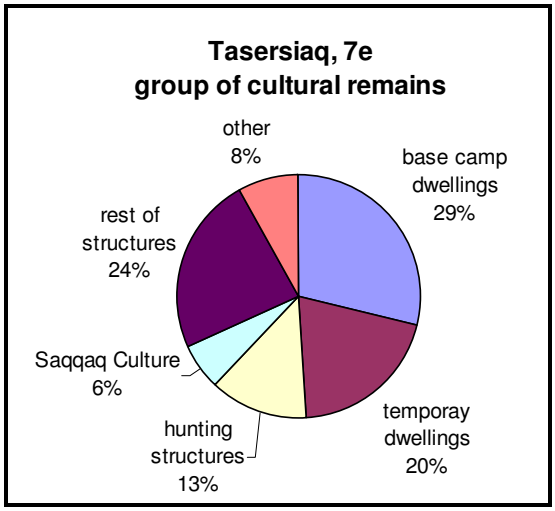
Damming lakes in the interior, close to the ice cap, will create two water reservoirs. The redirected outflows will supply hydroelectric plants to generate power for the aluminium smelter. Damming of Tasersiaq (7e) will raise the waterline by 20 meters. In the southern reservoir lakes will be merged by damming and affect elevation of water lines differently. Tarsartuup Tasersua: 10 m, Qaamasoq; 2 m, an unnamed lake: 5 m and Tussaap Tasia: 15 m.

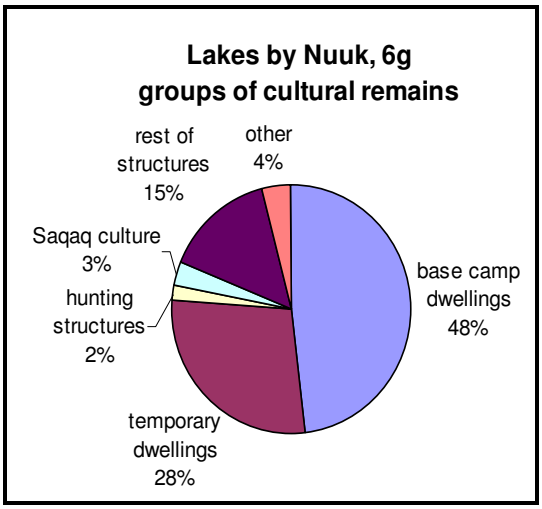


Map 1: Both reservoir areas are situated at places where Inuit according to historical sources, at least from the 18th century, was summering to hunt caribou. Both areas were renowned to attract people also from distant areas on the West Coast. After long journeys by boat and foot the families stayed in dwellings for several months in the interior. Caribou hunting by Tasersiaq ceased around 1950 and summering by Tarsartuup Tasersua already by 1920. Hunting trips in the latter area continued into the 1970'ies.



Diag. 2: The diagram shows mapped cultural remains from the two survey areas sorted by functional types. The largest structure being a tent house is a construction of stone walls to be roofed with skins for housing of the hunting family at the base camp. Play houses are miniature of dwellings. The stones forming the tent ring weigh down the skin/canvas to the ground. A frame of stones filled with twigs functioned as an open air bed for a hunting party. Rock shelters hunter's beds were used during hunting trips away from the base camp. Single cairns are markers in the landscape. Cairns systems are for driving caribous in certain directions during the hunt and shootings blinds are made for the hunter's concealment. Use of the latter two types ceased, when hunting with rifle became customary around 1800 AD. Other structures are cultural remains which could not be functionally defined into certain types.





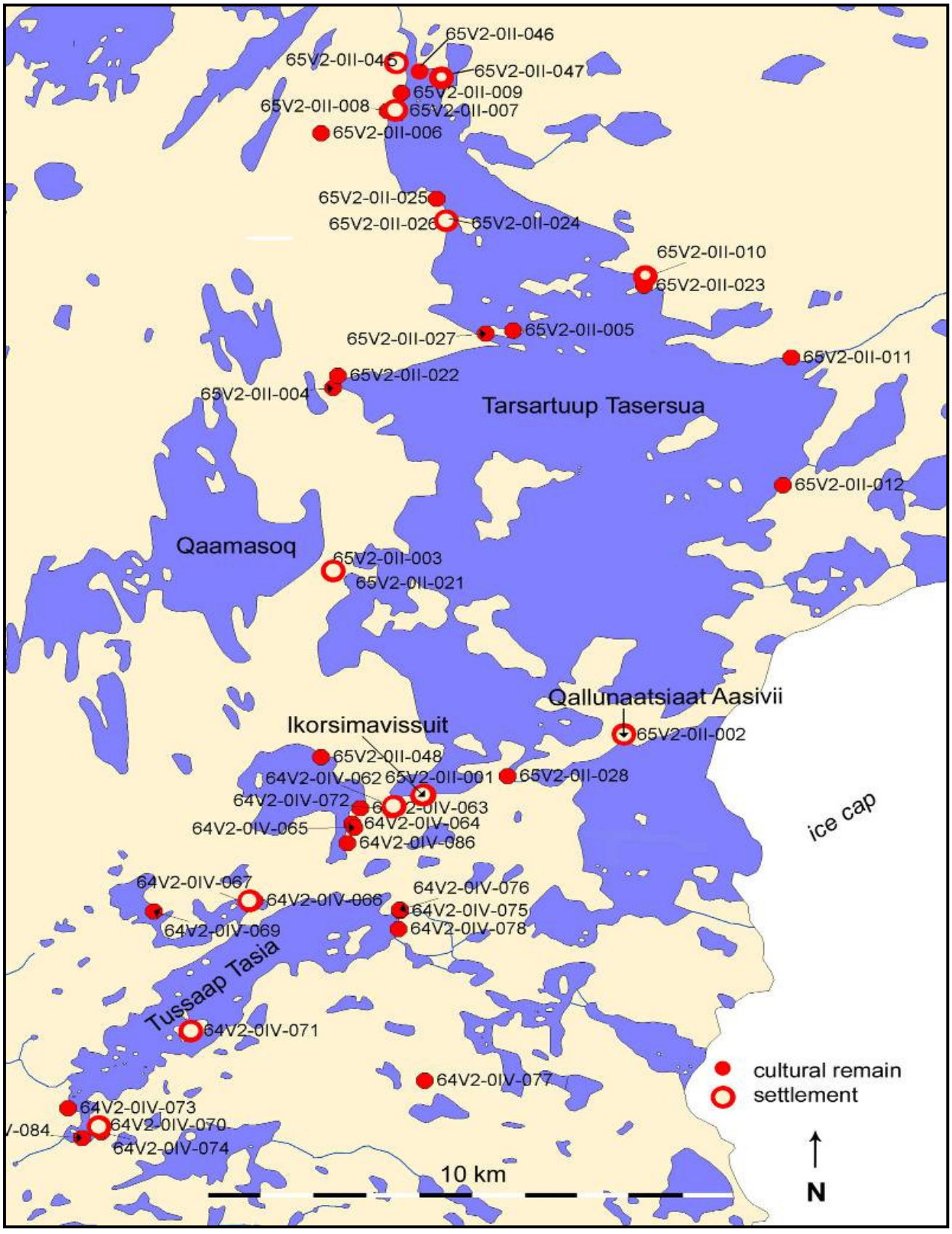
Diag. 3: One has to be cautious not to ascribe too much meaning into the pattern of the finds, as only the finds from the narrow area around the lakes to be flooded have been mapped. From the distribution of the types of grouped cultural remains it is obvious that the base camps and temporary dwelling remains in the Nuuk area comprise a significantly high share of the finds. Probably in this area the hunting grounds are situated some distance from the lakes and the amount of the temporary dwellings are consistent with the latter use of the area.

Finds by lakes in Nuuk area, 6g

Fig 1: The base camp dwellings in the Nuuk area are different from those at other areas on the West coast, as they are built solely from flat stones and accordingly they are designated as stone huts.
It inevitably calls to mind a possible influence from the Norse living in the fjords of Nuuk, when the first Inuit settled in the area. It should also be mentioned that the huts resemble those of the early Thule Culture winter house architecture in Northern Greenland.

Fig. 2: Aron's water coloured illustrations of stone huts from a caribou hunting camp in the Nuuk area from the 19th century**.**

***Map no. 2**:* Lakes in the southern reservoir area. Sites 64V2-0IV-071 and 65V20II-002 will remain above the water line after damming of the lakes.
In the area by Nuuk the distribution of cultural remains is not distinctive. From oral sources and archaeological surveys it is known that the areas north and east of Tarsartuup Tasersua are hunting grounds, which seems to confer with the survey results, as only four sites were found



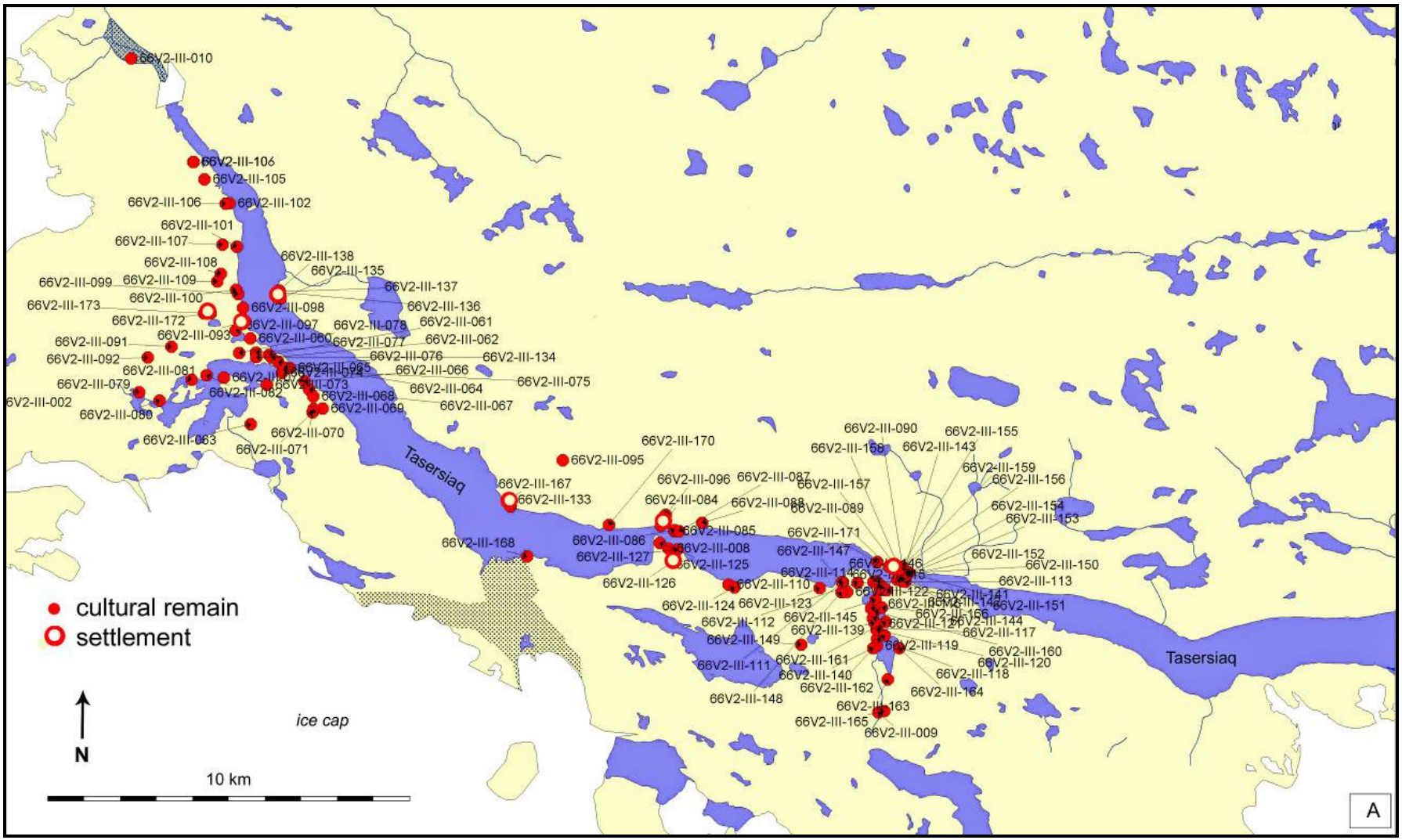
containing a total of four tent houses, two hunter's bed and three tent rings. Along the rest of the shores of the lake eight settlements are distributed, the majority situated on the southern and western shores. As regards Tussaap Tasia it seems reasonable to discern between western and eastern shores. The eastern shore was probably intended for base camps as two large settlements with a total of 22 tent houses are situated on the shore and on an island close to shore. Only one settlement with 3 tent houses is to be found on the western shore together with another site comprising 8 hunter's beds.

Fig. 3*:* A new type of structure was discovered in the Nuuk area. A circle of stones containing a big slab inside was recorded at two settlements.

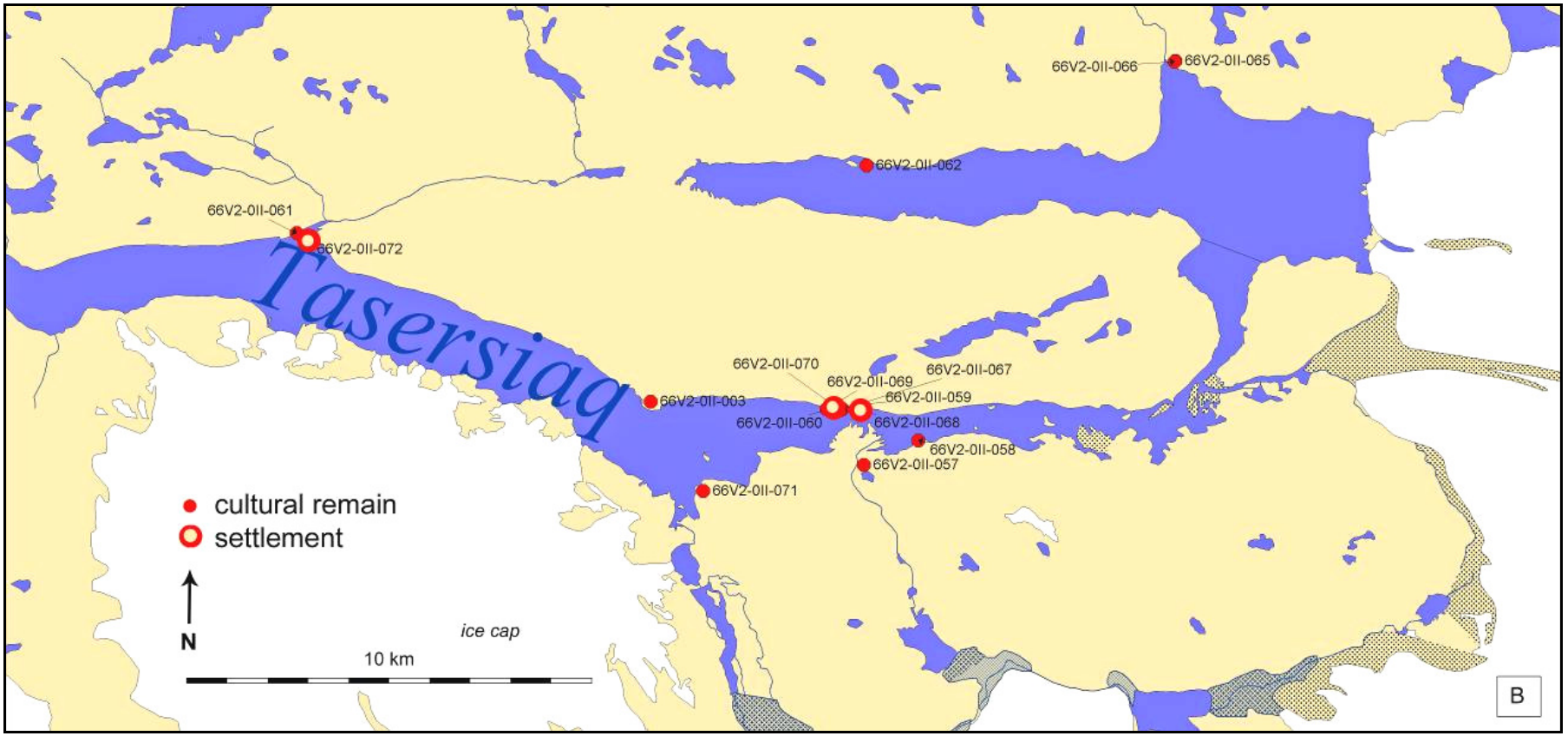
Fig. 4: A shooting blind on the shore in the narrowing before the outflow of Tarsartuup Tasersua. Caribou trails on the shores of the channel indicate a crossing place. Hunters took advantage of the vulnerable situation to kill swimming animals from kayaks. On the promontory visible just above the blind, three hunter's beds were found. Probably they were look outs for crossing animals. Surviving animals were probably taken from the shooting blind as they reached the shore.

Radiocarbon dates from site 64V2-IV-70 tell of Inuit's activity in the area at least from the 16th century. For detailed information on radiocarbon dates see appendix C.

Localities at by Tasersiaq, 7e

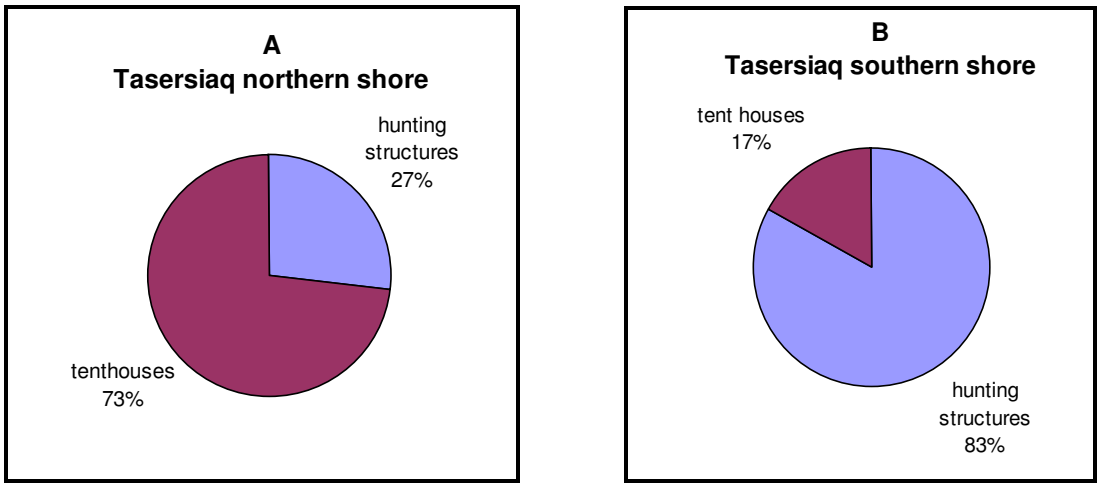


Map 3: The western part of Tasersiaq is protected from cold winds from the ice cap to the east and accordingly more lush and probably more rich in game. May be that is why most sites are to be found here. Notice the aggregation of cultural remains by the constrictions of the lake.



Map 4: On the eastern shores of Tasersiaq only few sites were found. Part of the reason for that may be the proximity to the ice cap and the steep mountains on long stretches on the southern shores.

The distribution of types of cultural remains between opposing lake shores by Tasersiaq shows how areas in the landscape are singled out for certain purposes. On the northern shore mainly dwelling structures (73 %) are to be found, whereas on the southern shore it is mainly hunting structures (83%). Probably this is why, as it can be seen from maps 3 and 4, the density of cultural remains are so profound by the constrictions of the lake, where crossing between base camp and hunting areas likely will be more convenient.



Diag. 3A & B: Distribution of types of cultural remains on opposing shores of Tasersiaq

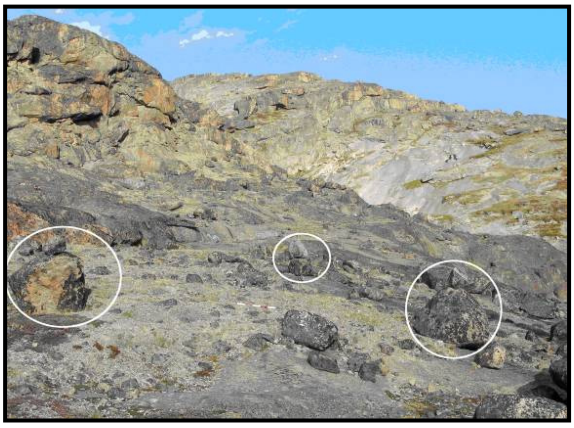
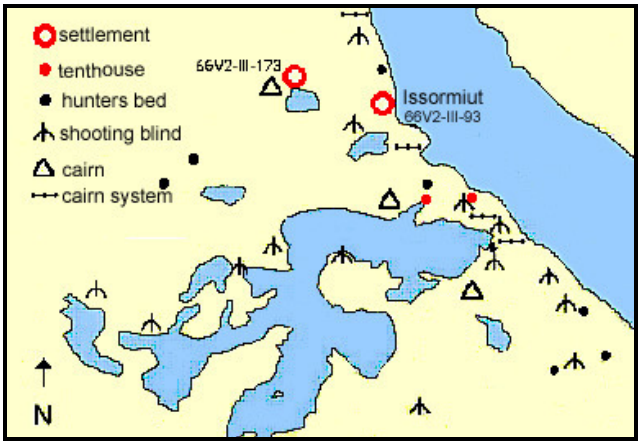


Figure 3: A small cairn system by Tasersiaq. Cairns are marked with white circles.



Map 4: Distribution of cultural remains in part of south-western shore of Tasersiaq.

An example on the use of the landscape by Tasersiaq is illustrated in map 4. Site number 66V2-III-093 (Issormiut) is a base camp comprising five tent houses. The settlement 66V2-III-173 does not have as substantial dwellings, probably because it was used mainly as a temporary camp in a shorter period of time. As can be seen, most of the shooting blinds and all cairn systems are situated by lakes. The complex of settlements and hunting structures are situated in a broad valley were the lake south west of Tasersiaq are in the centre.

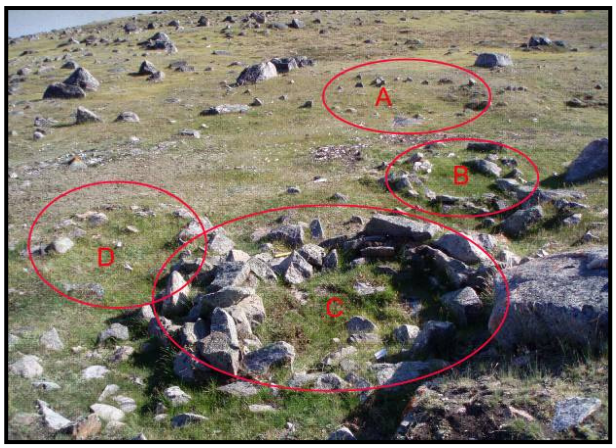


Fig. 4: Cultural remains from the settlement, Qoornoq Killeq by Tasersiaq. A is tent ring and B - D are tent house ruins.

Fig. 4*: W*ater coloured painting from mid 18th century by Aron of Kangeq of the stone the old couple, who buried their daughter-in-law alive, when their son died by Tasersiaq.

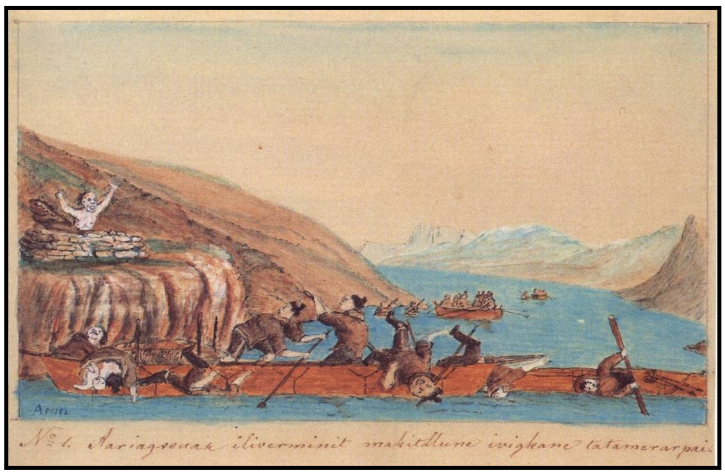


Fig. 5: Another painting by Aron of Kangeq. Aariassuaq frightens his competitors from his grave on the shore of Tasersiaq

Radiocarbon dates of two caribou bones collected on the surface by Tasersiaq associated with cultural remains dated them to between resp. 1301 – 1398 AD and between 1526 – 1663 AD. Five charcoal samples found in association with five Saqqaq Cultures sites in Tasersiaq had dates between 2139 – 1779 BC.
For detailed information on radiocarbon dates see appendix C.

Culture Historical Significance of the Finds

Fig. 6: View toward west from the easternmost settlement (66V2-0II-067) at Tasersiaq.

Fig. 7: Archaeologists looking for diagnostic tools in a tentring from the Saqqaq Culture at Tasersiaq.

Situated at heights over 600 meters next to the icecap the landscapes in both areas are peculiarly beautiful and hunting activity in the areas way up into the 20th century apparently has not affected the landscape or the cultural remains. The interplay between hunting structures and landscape features are clearly obvious. More detailed studies are needed to get profound knowledge of how prehistoric hunters took advantage of the landscape for their benefit. The coherent complexes of settlements and hunting areas by Tasersiaq make up unparalleled opportunities for the study of prehistoric Inuit's activities in the cultural landscapes as traditionnal knowledge from historical use of the landscapes are available. In many aspects the conditions at Tasersiaq are comparable to the landscapes of last Ice Age in the northern hemisphere where caribou hunting was of great importance. For these reasons the contiguous landscapes are of great value for the study of prehistoric hunting activity and the interplay between human and nature in general.

It is not until this century that larger areas of the interior of Central West Greenland were surveyed by archaeologists. The finds now challenge the widely held view of the relative low value attributed to the Greenlandic Inuit's use of the interior and its resources. The new knowledge of at least periodically intensive use of the interior indicate more complexity to the Inuit life style where fluctuations in the animal populations probably was an important structuring force for the dynamic of the historical progress.

In general for the study of the history of Inuit in West Greenland the interplay between coastal and interior resources and fluctuations in animal population are fundamental aspects to study and understand. In that respect interior settlement and hunting areas can help to clarify the conditions.

Inuit's combination of coastal and interior resources was rather specialized and complex compared to hunter – gatherers in general, however the affect on their cosmology is poorly studied. Some archaeological studies on Inuit's cultural remains in the Canadian arctic have touched upon the subject and illuminated that the study of cultural remains combined with ethnographic and traditional knowledge can give a more profound understanding of the

esoteric aspects of Inuit life ways. In that respect the cultural landscapes are important sources for the study of the Inuit cosmology.

Archaeological studies and excavations at Aasivissuit - a large caribou hunting camp situated 100 kilometers north of Tasersiaq with associated cairn systems for driving caribou, a fence and shooting blinds - is hitherto the main study of Inuit's hunting in the interior of West Greenland (Grønnow et. al, 1983.) The stratigraphy from the midden reveals horizons with layers of caribou bones of differential thickness. Radiocarbon dating of caribou bones from the midden correlates the thick layers of bone with historical known periods of large caribou populations. This supports the traditional indigenous knowledge about fluctuating caribou herds through times. The amount of cultural remains found on the surveys does indicate an intensive use of the land, which possibly can be related to the highs of caribou populations.

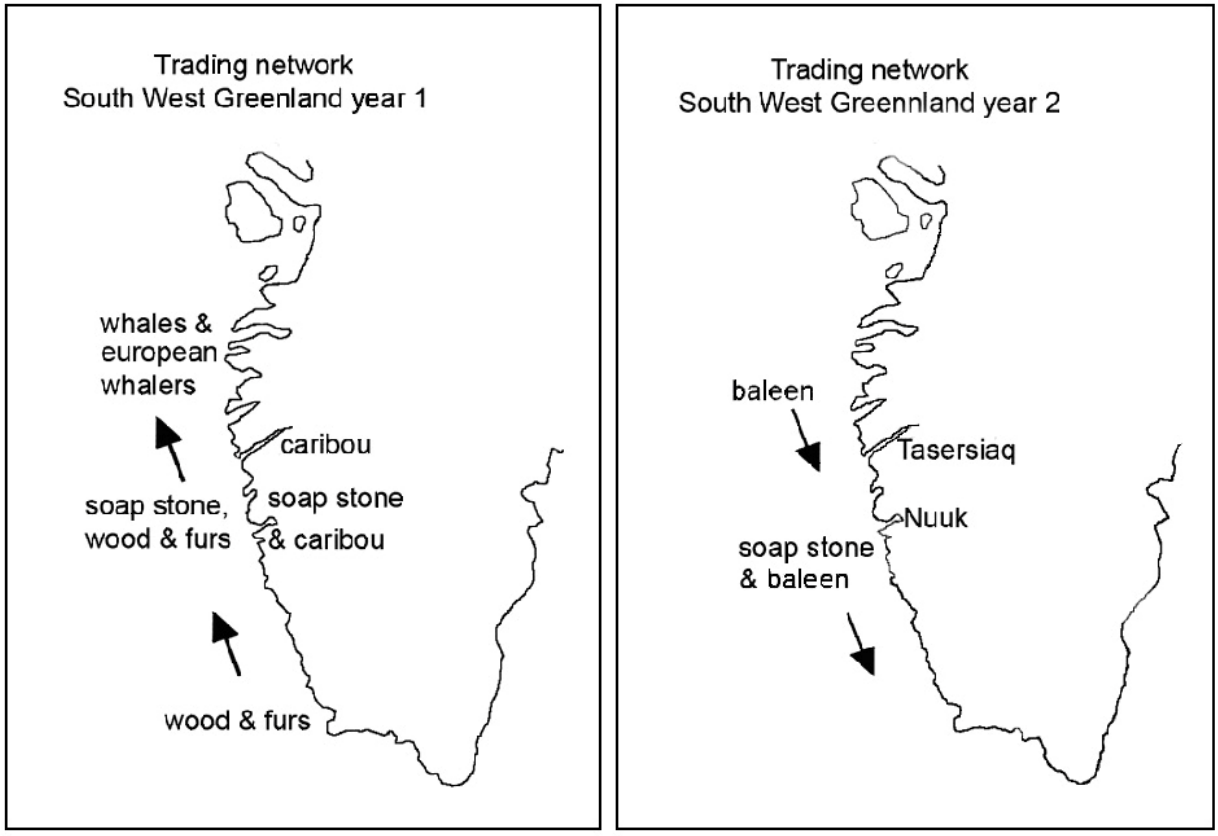


Fig.8: Illustration of the trading network of the Inuit in West Greenland between 1650 – 1750AD. According to historical sources people from South and South East Greenland travelled north to trade for soap stone, baleen and presumably also to trade European goods with the whalers before the establishment of the Danish – Norwegian colonies.

As previously mentioned a trading network along the south western region of Greenland was maintained during the 17th and 18th centuries. The conditions for sustaining the network were due to a combination of circumstances. Soapstone from deep inside the fjords of Nuuk was an important commodity in the network. Baleen from the large whales available by the coast north of Tasersiaq was likewise. The whales were also exploited by European whalers with whom Inuit traded European goods.

The Inuit travellers from south, reported by the first colonists, were considerable in numbers, as they were counted in hundreds, and had to stay for the winter before returning home. The pressure on resources in an already populated area can possibly be met by periods with sufficient resources e.g. whales and caribous, but it is known that Inuit from historic periods regulated access to resources mainly through territoriality. The Southerners' access to whales and caribou was probably solved by suspension of the territories as is widely known to happen among a wide range of traditional societies when resources are plenty and predictable.

This very rich period from the mid 17th to mid 18th century where people from large stretches of the coast intermingled and shared ideas in the central area of West Greenland created a unique situation in the history of Greenland. For the understanding and study of the historic conditions of this important period that had a great cultural impact on Inuit/Greenlanders the Lakes by Nuuk and Tasersiaq constitute an important aspect.

Fig. 9: Hunter's bed and cairn by Tasersiaq.

Suggestion for Preservation of Tasersiaq

Based on the above it must be concluded that the cultural landscapes by the intended water reservoirs are of high cultural value for the Greenlandic people, research in the Greenland past and Inuit anthropology. Especially the complex contiguous landscapes where settlement areas and hunting ground interchange at Tasersiaq is an invaluable testimony to prehistoric and historic lifestyle of Inuit in West Greenland.

As a consequence of the conclusion it is recommended that the cultural landscapes including the cultural remains by Tasersiaq are to be preserved due to following reasons:

Tasersiaq was a considerable hunting area for a sizeable part of the Inuit population of West Greenland. Several folktales are associated with specific localities at Tasersiaq, appearing in sources from i.e. Aron from Kangeq and Jens Kreutzmann and in oral tradition in general.

The large concentration of features indicates that the lakes were very important for hunting, and that interior regions of West Greenland were more important to the livelihood of Inuit than has hitherto been assumed. The archaeological remains relating to Inuit activities by the shores of Tasersiaq include among other 8 base camps, several temporary camps, meat caches, graves, and several undisturbed hunting drive systems consisting of cairns and shooting blinds. The settlement of Qoornoq Kangilleq situated on the northern shore and encompassing more than 40 structures, is particularly important as it is probably the largest caribou hunting camp in Greenland which also was in use 4000 years ago. The settlement is surrounded by hunting territories in all directions, including the areas across the lake to the South. The undisturbed drive hunting systems situated in differing landscapes along the more than 80 kilometre long lake are also clearly important, yet they have still not been examined thoroughly.

Four camp sites relating to the Saqqaq Culture provide new information about the culture, as it is the first time that their remains have been found this far inland.

Because the exploration and interpretation of the prehistory of Greenland has hitherto been conducted solely by Western scientists, it is important to leave these significant archaeological structures and cultural landscapes on the shores of Tasersiaq for study and interpretation by Greenlandic archaeologists in the future.

The ability to combine the exploitation of resources from both coastal and interior regions is one of the central characteristics of Inuit cultures dispersed from the eastern part of Siberia to East Greenland. In that context, Greenland is special because of its narrow strip of unglaciated land between the ice cap and the ocean. Early in prehistory, the dichotomy between coast and interior became reflected in the cosmology of Inuit culture and has been a central part of the culture up to the historic period. The coast-interior duality which marked prehistoric cultures is still not sufficiently explored by archaeologists. As the cultural remains by Tasersiaq are among the most substantial remains relating to interior hunting in the eastern Inuit area, they have a major importance for the understanding of this special aspect of common Inuit prehistory.

Hunting structures situated in the undisturbed landscapes of the southern shores of Tasersiaq yield outstanding possibilities for the study of the hunting methods used by prehistoric hunters of the European Ice Age because traditional knowledge on the historic use of the area that are available. The hunting conditions in the area are analogous to those during that important period in human prehistory. During the Ice Age, caribou hunting had a special importance.

Fluctuations in animal populations had profound effects on prehistoric hunting societies e.g. on organisation of the hunting. The cultural remains by Tasersiaq in combination with remains from the coastal areas can contribute to the study of the affects of fluctuating animal populations in prehistory in general.

Suggestions for Salvage Archaeology and Documentation in Case of Damming of Lakes Tasersiaq, Tarsartuup Tasersua and Tussaap Tasia

For the last 2 years the Greenland National Museum and Archives have undertaken archaeological surveys, interviews and archival research around Lake Tasersiaq, Lake 7e, in order to elucidate the antiquarian interests in the area. Some surveys have been done earlier and now an even more interesting and complex picture has arisen of the cultural-history of the area.

Ca. ten years ago Greenland asked UNESCO that 3 areas in Greenland should be considered World Heritage Sites. UNESCO later approved the Jakobshavn Isfjord as a World Heritage Site and maintained the other two on the Tentative List.
The Aussivissuit – Arnangarnup Qoorua (Sarfartoq) area is one of these areas on the Tentative List. The southern border of the suggested area is just north of Tasersiaq, Lake 7e. The main argument for nominating the area is the impressive representation of Inuit cultures as seen in the landscape from the Inland to the Davis Strait.
Based on a request from the Greenland Home Rule, Dept. of Culture, Research, Education and Church in the fall 2008 the Greenland National Museum recommended that the nomination should be upheld and informed the Department that "based on the information we (i.e. the Museum) have today after two years of survey and mapping, we would have included an area to the south in order to include the area around the largest lake in Greenland: Tasersiaq. The landscape from just north of Kangerlussuaq till south of Lake Tasersiaq holds a fantastic cultural landscape - in a Greenland context - which yields information on social, cultural and natural resources and adaptive strategies, which are unusual among Inuit – at least in the Eastern Arctic." (letter and e-mail dated November 26, 2008)

If the planned damming of lakes 6g and 7e takes place two important and unique West Greenland inland areas will disappear for ever. The investigations which must be undertaken will reflect that. The list of sites and features to excavate represents what the Greenland National Museum considers essential and a minimum to do.

It should be kept in mind that in all Greenland (with the exception of Peary Land), only a few sites along Kangerluarsunnguup Tasersua, the hydropower lake south of Nuuk, and one prehistoric site in the inland, Aussivissuit, c. 100 km. north of Tasersiaq, have ever been excavated,
That was in the early 1980'ies and 1990'ies and the research questions asked and the array of archaeological tools for retrieving information has been incredibly improved since then. This means that the museum has very little present empirical experience to base our experience upon.
The list of sites and structures in this Report which must be excavated or documented in other ways is based on present knowledge, which however may change when we obtain more empirical information from more field-research.

Some of the methods to be used for documenting the cultural use of the areas are listed below:

The salvage plan will strive towards documenting all sites including their relation to the landscape and to each other as thoroughly as possible, and to retrieve data which can contribute with information on the cultural use of and impact on the areas through times.

The different methods for documenting the cultural use of the areas are listed below:

- All sites must be mapped in detail including their relation to the landscape, and the landscapes surrounding lakes must be documented by satellite photos.

- Excavation of all settlements and selected structures outside the settlement areas are recommended. Settlements must be totally excavated including areas in between the structures. It is likely that some of the cultural remain are sunken into the lakes and the lakes may have been used e.g. as middens. As far as possible lake areas bordering settlements has to be examined in spite of the murky waters. As mentioned in the 2008 survey report some cultural features are sunken into the lake that at times had a lower waterline. In that respect the lake has also been part of the activity area.

- Structures selected for excavation should be representative of all types of structures in their diverse designs through times (a list of types of structures appears from the appendix A). Some features can not be excavated because they are built of stones on rock e.g. fox traps, cairns, some shooting hides, cairn systems, etc.

- Regarding structures from the Paleo-Eskimos all finds will be excavated, as remnants from that period from the interior of West Greenland in general is very sparse and as the number of finds from the surveys are limited.

- Excavation of the sites must be combined with diachronic natural science studies which can help retrieve data on the human impact on the areas and changes in the natural environment.

Proposal for research questions

Of course all data to be collected from the excavation are to be regarded as significant. But from the existing knowledge about prehistory and cultural history in Greenland some questions/ theories to guide the collection of data are already at hand:

- Paleo-Eskimos
  It is known from archaeological studies from both areas, that in some periods plenty of caribous could be hunted near the coast. This put forward the question, if the same fluctuations known from historic time can be applied to the Saqqaq – period. Do the ^{14}C dates from the interior differ from the periods with plenty of caribou in the inner fjords and the coastal areas?

- The Norse
  Signs of Norse activity especially in the south area must be one of the objectives for the archaeological documentation. Especially as part of an area neighbouring upon Tarsartuup Tasersua to the South is named Qallunaatsiaat Nunaat (Land of The Norse) and the river outflow to the north of the lake is named Qallunaatsiaat Kuuat (Norse River) by Inuit or their descendants.

- The Inuit (Thule Culture)
  Is it possible to correlate the different architecture to certain periods and/or to hunters from different areas of the country?
  Attention must be paid to any signs that can validate the historically known claims that people from other parts of the West coast and probably also the East coast took part in caribou hunting in the areas.

Summary of cultural features/remains to be excavated.

Table 1: If plans on damming the lakes are realized, a large salvage archaeology programme will be necessary.In that case at least 15 settlements by the lakes in the Nuuk area and 26 at Tasersiaq must be excavated.

Type of structure	**Lakes by Nuuk, 6g**	**Tasersiaq, Lake 7e**	**Total**
tent house	58	74	132
tent ring	8	10	18
hunter's bed	16	13	29
fireplace	2	2	4
cache	5	3	8
play house	4	2	6
grave	3	1	4
rock shelter		2	2
cairn system		1	1
shooting blind	3	9	12
fox trap	1	2	3
single cairn	1	4	5
bone concentration		3	3
other	5	26	31
Saqqaq Culture features	5	16	21
Sum	111	168	279

All sites containing ≥ tent houses are considered as settlements. The table shows the amount of features appointed for excavation within settlements and at other sites.

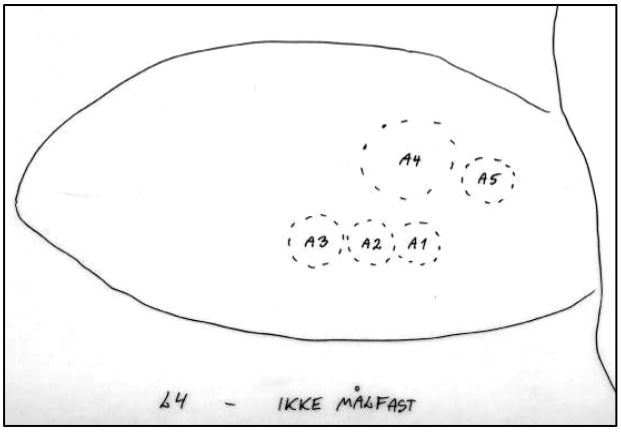
Descriptions of sites to be excavated are given as summaries from previous survey reports.

The number after the slash mark by the locality number is the last digits in the official ID-number in the archive on protected Greenland monuments.

Tarsartuup Tasersua and adjacent areas (6g)

Saqqaq Culture sites

L4/065 - N64°59,565', W50°06,608' – 1-2 m above unnamed lake.
Paleo-Eskimo culture – at least 5 small tent rings on a small gravel/sand bank only 1 m above the lake. At least 5 tent rings, at least one with a mid-passage. They seem all to be very small, only around 2,5 m. Due to the loose sand mapping the single rings was given up.



This is the only known site from the Saqqaq Culture in the interior of Nuuk region. Information from an excexcavation of the site will at best yield important supplement t the knowledge about the culture.

Sites from the Inuit Culture

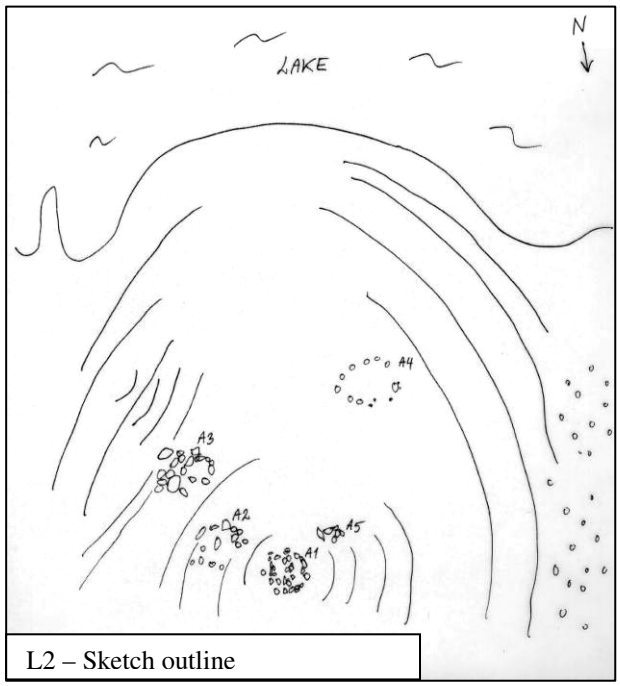
Settlements

L1 /062 – Settlement. N64°59,884', W50°05,642'

Situated at 7 m above lake, 6g next to a huge dark rock the settlement is visible from a far distance. A1 is an unusually big 4,40 x 5,40 m house of oval shape with up to 1 m wide and high walls of large rocks, mostly horizontal slabs. To the North the house is narrowing and in this end of the house a 1,25 m long rock, placed vertically, is incorporated in the wall.

L2/063 – Settlement – N64°59,805', W50°06,556' 4 m above unnamed lake. Small, very old looking settlement on a small foreland.

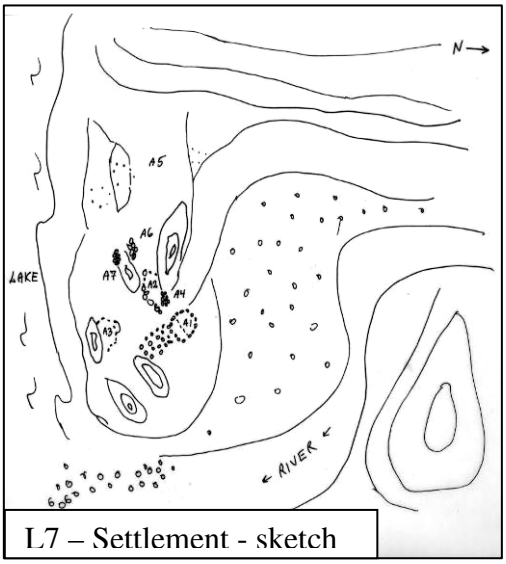
A1: Tent house/tent ring. Through the middle of the structure is either a "midpassage" or maybe rather a demarcation of the sleeping area.
A2: Similar to A1 but not as well preserved.
A3: Small tent
A4: Tent ring
A5: Small cache.



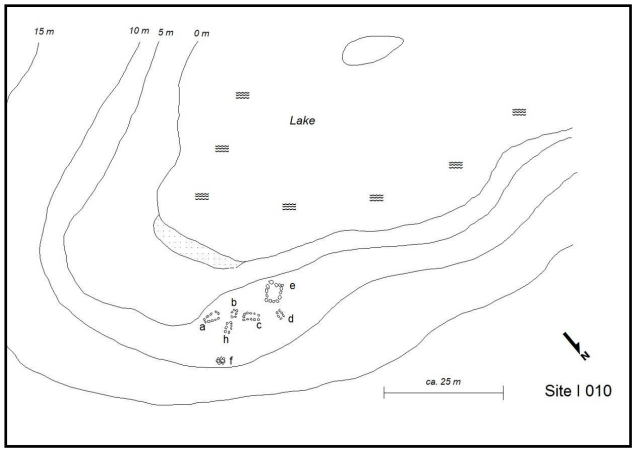
L2 – Sketch outline

L3 – Settlement – N64°59,608', W50°06,674' – 2 m above unnamed lake. Possible very old tent house and cache.

L7/066 – Settlement N64°58,520', W50°08,766' – 7 m above Tussaap Tasia.
Thule culture – at least three houses and one or two graves or meat caches. From its appearance the settlement is one of the oldest in the area. The houses are small, and their outline is different from other tent houses in the area.
A1: Horse shoe shaped tent house
A2: Tent house c. 3 x 2 m with front
A3: Very overgrown tent house
A4: Cache
A5: Drying area with rings of rocks
A6: Grave or cache
A7: Possible grave or cache



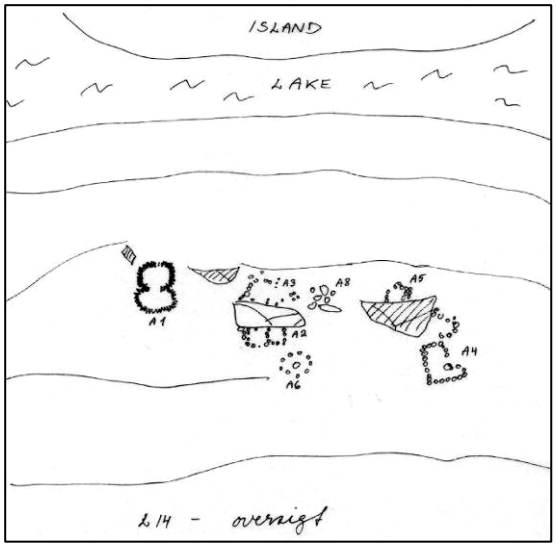
L7 – Settlement - sketch



L10/010 - N65,10699 - W50,02557
Probably four tent houses and 2 hunter's beds. This is the only settlement on the eastern shore of Tarsartuup Tasersua

L14/024 – Settlement N65°06,839', W50°06,927'- 5-6 m above lake, 6g
At least three tent houses and a very big house structure (with thick walls as the structure at L1) at a location where it is very close (c. 10 m) to a small island in the lake.

A1: Large house construction with walls of up to seven layers of big slabs. Length on the
A2: Tent house built against large rock. Walls of rocks and turf but somewhat unclear.
A3: Tent house with sleeping platform Cooking niche between large rocks.
A4: Rectangular tent house with a cache
A5: Possible tent house with a slab inside.
A7: Fox trap located c. 100 m behind the settlement.
A8: Cache or grave

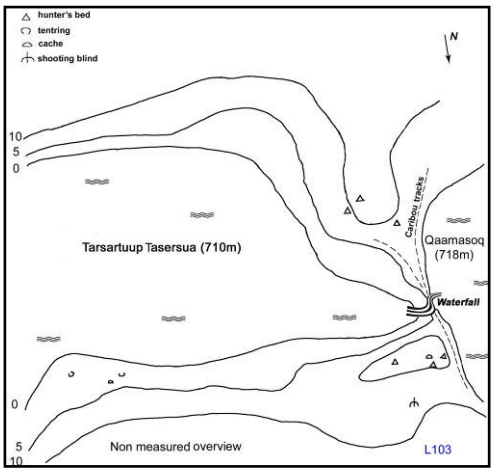


L103/03 + 021 – Settlement N65°02,41', W50°08,07' – 9-29 m above lake 6g.Thule culture.
Tent house and hunters' beds on both sides of a waterfall where a lake runs into the big lake.

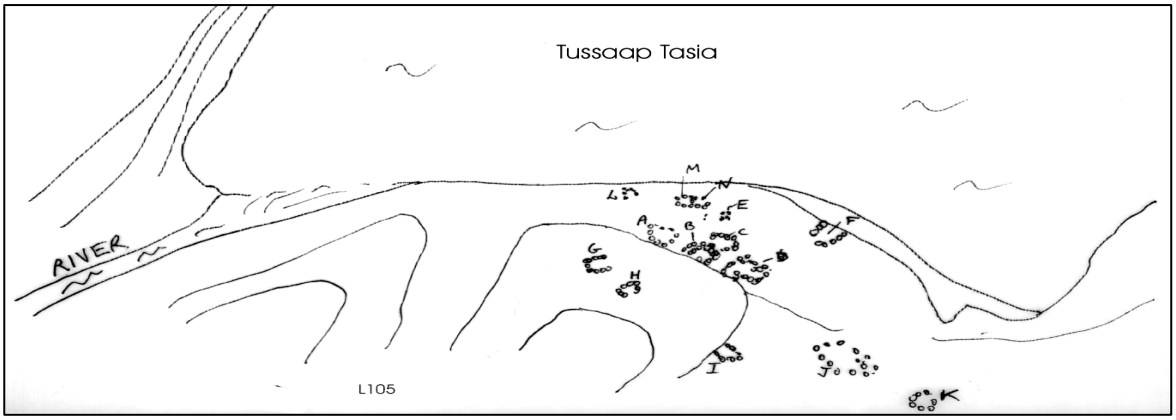
A: Tent house or hunter's bed c. 3 x 2 m
B: Tent house or hunter's bed c. 1,5 x 1,5 m
C: Double hunter's bed c. 4 x 1,5 m
D: Tent house or hunter's bed c. 3 x 1,5 m

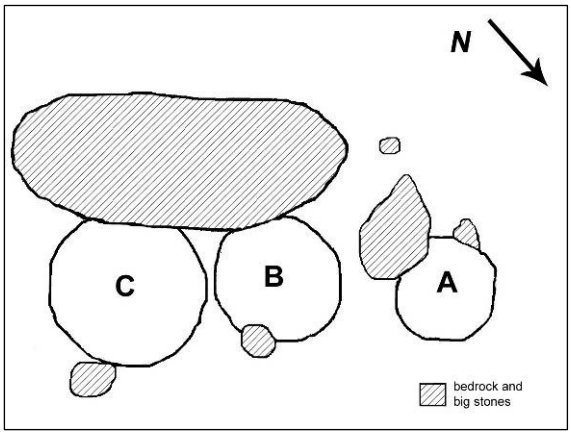
New recorded features at Qaamasoq (2008):
L103, 2 hunter's beds, 2 caches + 2 tent rings.

The site is a historical known temporary camp for caribou hunters. It is obviously a crossing place for animals.



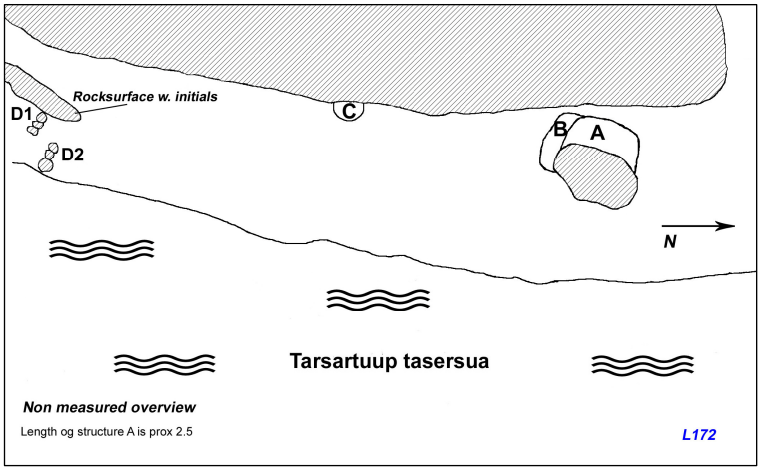
L105/070 – Settlement - N64°55,587', W50°11,590' – 2-8 m above Tussaap Tasia.
11 tent houses, some are of the unusual big type. These houses, however, differ widely in type, size and probably also in age. A, B, C, D, E, F, L, M, N: 2 m above lake. G, H, I, J: 7 m above lake. From survey in 2008 1 tent house, 2 playhouses (P + Q)and a grave in tent house J were discovered in addition to previous finds.



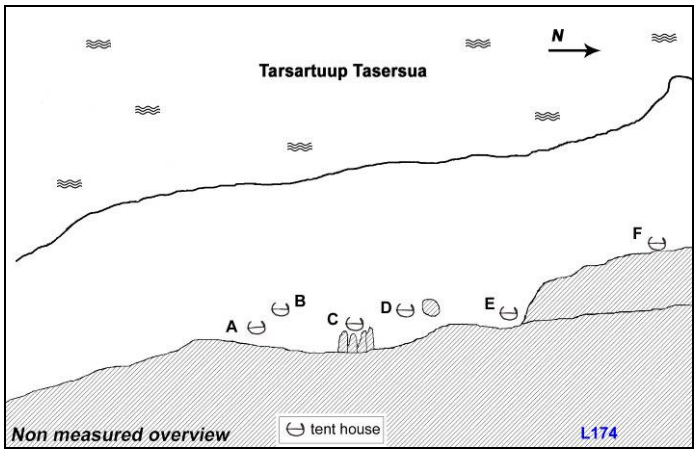


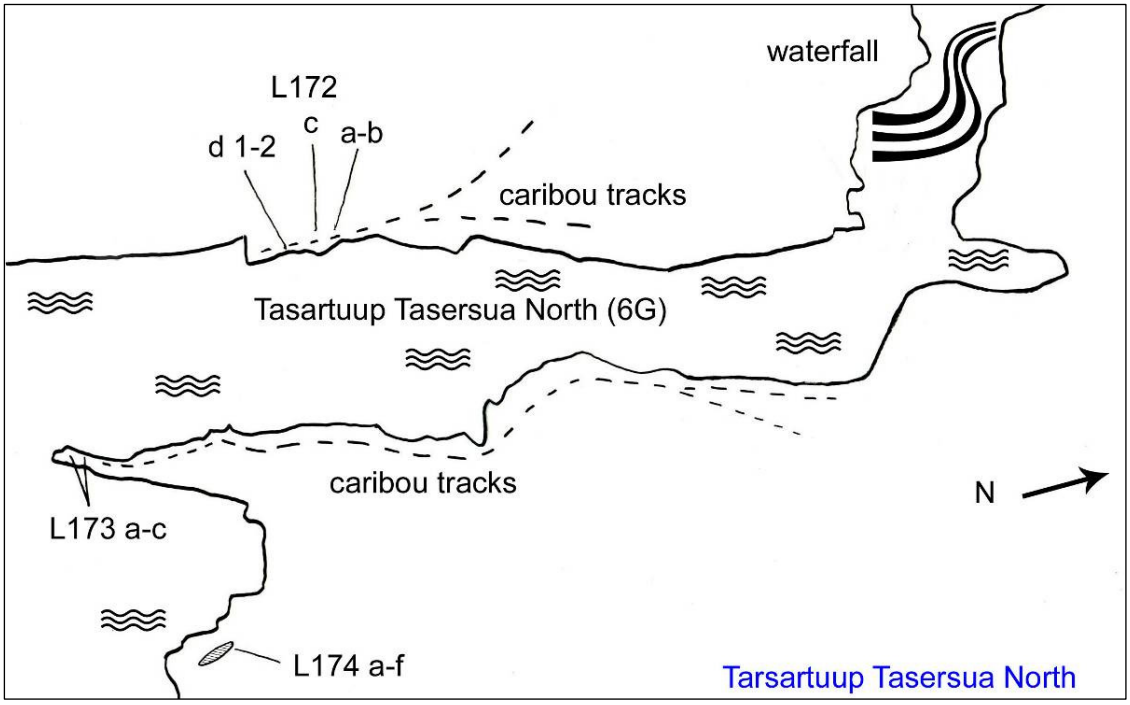
L171/044 - Hunter's beds/tent houses - Situated on a small island near to the western shore of the lake. Three features resembling tent houses

Site L172/045 consists of one or two tent houses built against a big rock situated approximately 30 metres to the north of two shooting blinds by the lake shore. Later visitors had inscribed their names and some years on the rocks just behind the blinds.



In settlement L174 at least five stone huts and two other not as substantial features were on a promontory south east of L173.





Sites L 172 – 174 presumably are to be regarded as connected to each other. They are situated in the northernmost, narrow part were Lake Tarsartooq turns into a river. On both shores of the narrow part a lot of animal paths are visible. This is probably a place were caribous cross the lake. Hunters from settlement L174 presumably used the hunter's beds on the promontory at site L173 when looking out for swimming animals. Here the kayaks could easily be put into the lake to get the prey. Hunters at site L171 could take the surviving animals.

Ca2/075 – A settlement -W 50°05.039´ - N 64°58.677. 5m above of Tussaap Tasia (680m).
The site is a historically known camp for caribou hunters in the 20th century.
A: meat cache
B: rectangular, approx. 3m long structure.
C: possible meat cache
D: structure out of eight stones (hearth?)
E: triangular structure
F: oval-shaped structure
G: to the west a tent-ring;
to the east is a second tent-ring.

Cb8/01 - **A settlement -** W 50°04.187´ - N 65°00.002´ approx. 10-20m above Tarsartuup Tasersua Ikkorsimavissuit (the Ataneq –huts)

A: recent, u-shaped hearth
B: large complex, overall 8m long,
C: large tent house
D: mound-like structure
E: tent ring.
F: high, round wall
G: tent house with cooking niche and entrance passage
H: unknown feature built out of stones
I: recent, u-shaped fireplace
J: round low wall with cooking-niche;
K: round, low wall with cooking-niche
L: 8-shaped
M: rectangular wall with sleeping-platform and entrance.
N: tent house
O: tent house with main room, cooking-niche and entrance.
P: circle out of single boulders
Q: unidentified structure
R: horseshoe-shaped wall.
S: tent ring
T: tent house with cooking-niche

Hunters beds

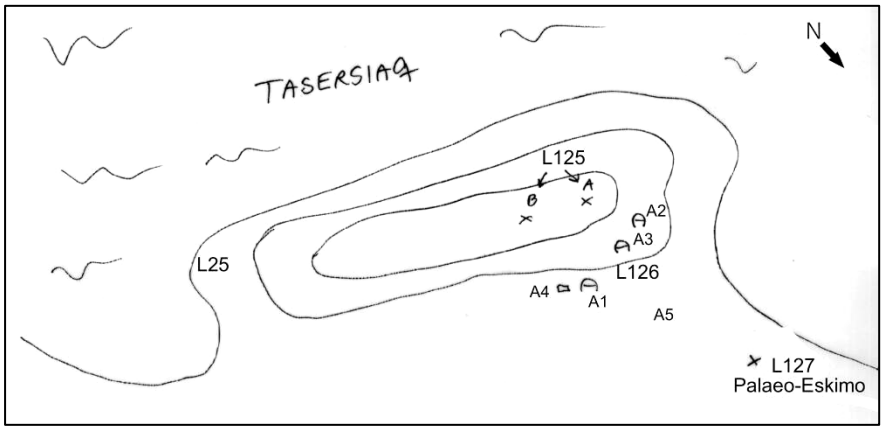
L173/046 - Three observation posts/hunter's beds - The site comprises three hunter's beds situated on a narrow promontory SE of L172 on the eastern shore of the lake.

Ca1/073 – eight hunter's beds - W 50°12.430´ - N 64°55.732 - 5m above Tussaap Tasia
The site can be recognized the best by a single stone cairn on rock surface
A: rectangular hunters´ bed
B: hunters´ bed
C: badly preserved hunters´
D: rectangular, rounded hunters´ bed
E: u-shaped, low stone-wall
F: badly preserved hunters´ bed
G: slightly visible hunters´ bed
H: slightly visible hunters´ bed
I: head cairn

The only rock shelter found in the 6g area are situated in a boulder field were excavation is not possible

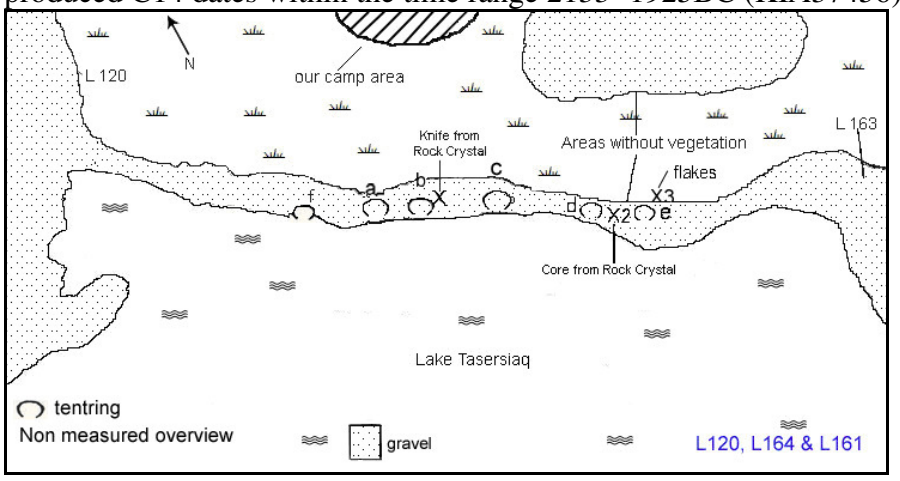
Tasersiaq (7e)
Saqqaq Culture sites

L127/138 – Paleo-Eskimo settlement - N 66°15,261', V 51°12,504' – 10 m above 7e on the Northern bank. Structure, possibly dwelling, situated on an eroding sand slope. A "pavement" of probably fire-cracked rocks has been exposed under a c. 10 cm thick layer of sand. Right next to the pavement a couple of stone tools.



L161/067 - A box hearth from the Saqqaq Culture was discovered east of L164. The feature was built against a boulder by the beach. The feature was mapped in scale 1:10 (see plan sketch on p. 26) and sampled for charcoal for radiocarbon dating. The charcoal was dated to BC 2133 – 1925.

L163/069 – fireplace - Approximately 4 metres above the beach 100 metres southwest of L120, a rock crystal core was found. Test pitting revealed cultural layers containing flakes and charcoal. Samples were collected for C14 dating produced C14 dates within the time range 2133 -1925BC (KIA37456).



L164/070 – settlement - 6 tent rings with axial features (L164) on the beach. A knife and a core from rock crystal were found between the structures. The charcoal sampled from feature E produced C14 dates in the time range of 1942 – 1779BC (KIA37457) relating the structures to the Saqqaq Culture.

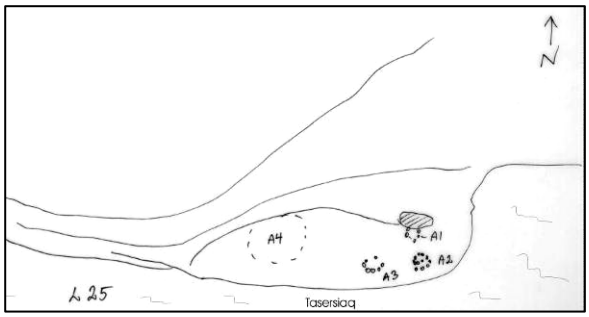
L166/072 – Settlement - Opposite to site L 123 on a promontory two Saqqaq culture tent rings with axial features, L 166, were found on the gravel surface. Except from a small flake the features produced no finds.

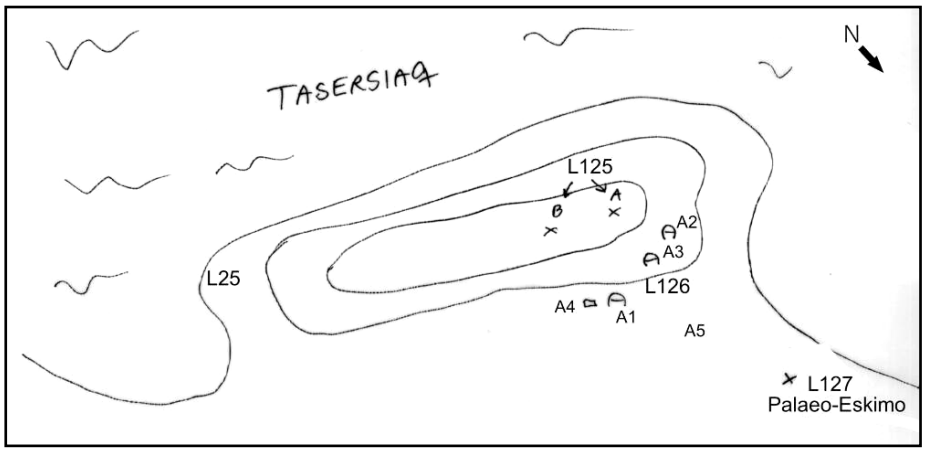
Inuit Culture Sites

Settlements

L24/134- N 66°14,135', V 51°12,885' – 10 m above 7e – Southern bank. Small settlement with at least two old tent houses at the Northern end of Quantum Lake

L25/135 – Settlement – N 66°15,138', V 51°12,381' – 1 m above 7e - Northern bank. According to Jens Kreutzmann's map this area is Qarsormiut (the people who live at the rock). It is a small and old settlement with at least two old tent houses. Probably more structures can be found on the site.
A1: Tent house
A2: Tent house with sleeping platform.
A3: Possible structure m.



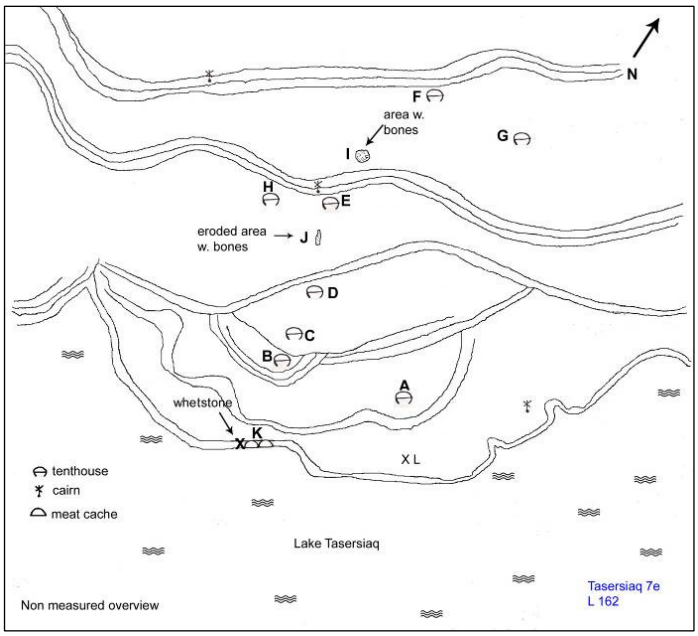


A1: Tent house
A2: Tent house
A3: Tent house
A4: Cache or grave
A5: A couple of tent rings

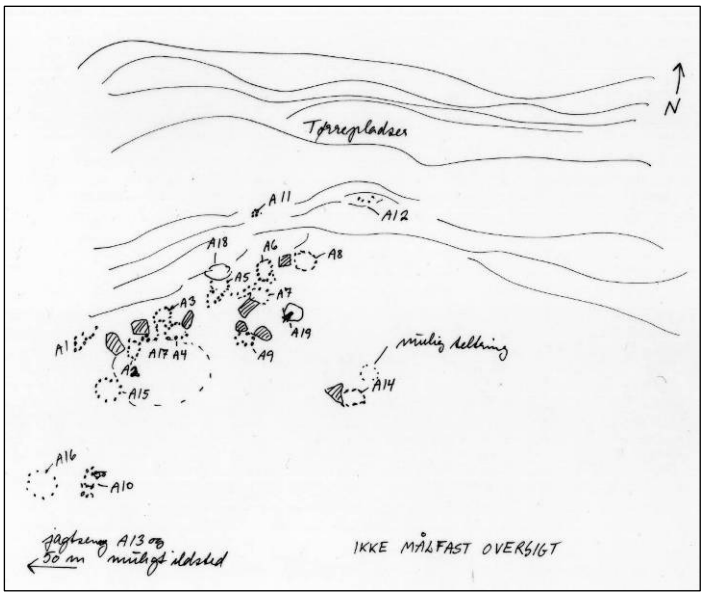
L126/137 – Settlement – N 66°15,244', V 51°12,526' – 10 m above 7e – Northern bank (Qaarsormiut).Old settlement with three old tent houses – all of the same type with two "compartments".

L151 Settlement with grave - N 66°12,659', V 51°01,989' – 15 m above Tasersiaq.
Settlement with two old tent houses and a grave. This could be the grave Aron refers to when he tells that he has been at the grave of Aariassuaq.
A: Grave with visible bones (hip, ribs etc.)
B: Antechamber with 1 bow and 3 arrow points.
C: Tent house c. 2 x 1,5 m.
D: Tent house c. 1 x 1,5 m.

L162 / 068 – Settlement.A settlement situated at south side of Qeqertaasaq at some distance east of L163 on the headland. On the site are mapped 8 ruins of tent houses, 3 cairns, 2 caches and an uncertain feature.

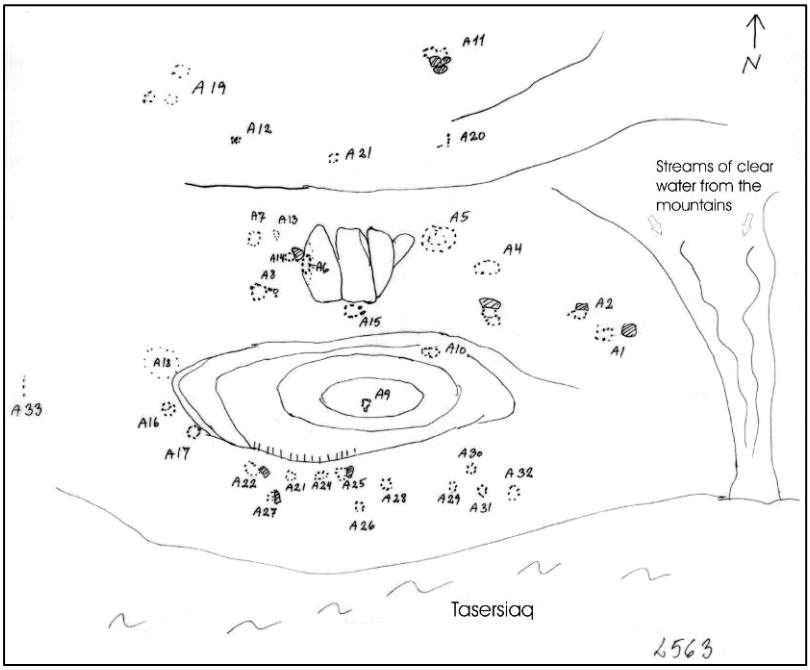


L168 – A temporary settlement – The settlement consisted of presumably two tenthouses and three hunter's beds build against a bedrock wall. As the presumed tent houses did not look as substantial as usual the settlement is regarded as a temporary settlement



L558/084 - Settlement – N 6°12,725', W 50°55,754'
10 - 20 m above Tasersiaq
Qoornua Killeq is a large base camp on the northern bank of the lake, around 150 m from the lake at the foot of the hills. At the site are many bones – also sticking out of turf layers. Wooden pieces of probably a kayak and bone plates for a paddle support the stories that people brought kayaks over the high plain.

A1: tent house
A2: tent house
A3: tent house
A4: tent
A5: tent
A6: tent house
A7: complex tent house
A8: tent ring or tent house.
A9: small tent house.
A10: tent house or hunter's
A11: fox trap.
A12: cache or grave.
A13: hunter's bed and hearth
A14: hunter's bed / tent house
A15: tent ring
A16: tent ring.
A17: cooking pot fireplace.
A18: possible rock shelter
A19: cairn or drying place
A20: rings of rocks



L563/089 – Settlement – N 66°12,747', W 50°46,522' – 20 m above Tasersiaq at the large "split boulder". At the settlement Qoornua Kangilleq are found at least 20 dwellings and a number of other structures from the Paleo-Eskimo culture, but most from the Thule culture.

A1: tent house
A2: tent house
A3: complex tent house and adjacent a grave or a meat cache
A4: tent house
A5: complex tent house

A6: tent house/shelter
A7: tent house
A8: tent ring/tent house
A10: tent house
A9: tent house/out look
A11: tent house/meat cache
A12: fox trap
A13: play house
A14: tent house/hunter's
A15: tent ring
A16: Palaeo-Eskimo ring tent
A17: Palaeo-Eskimo tent ring
A18: diffuse traces of dwellings
A19: Rings of rocks
A20: diffuse structure
A21: play house
A22: tent house
A23: unclear structure
A24: tent house
A25: tent house
A26: tent with kitchen
A27: tent house
A28: tent house
A29: tent house
A30: tent house
A31: tent house
A32: tent house

L567/093 – settlement, Issormiut – situated on the slope with boulders approx. 20 meters from Tasersiaq. Sheltered from winds from the West. Lower area is wet.

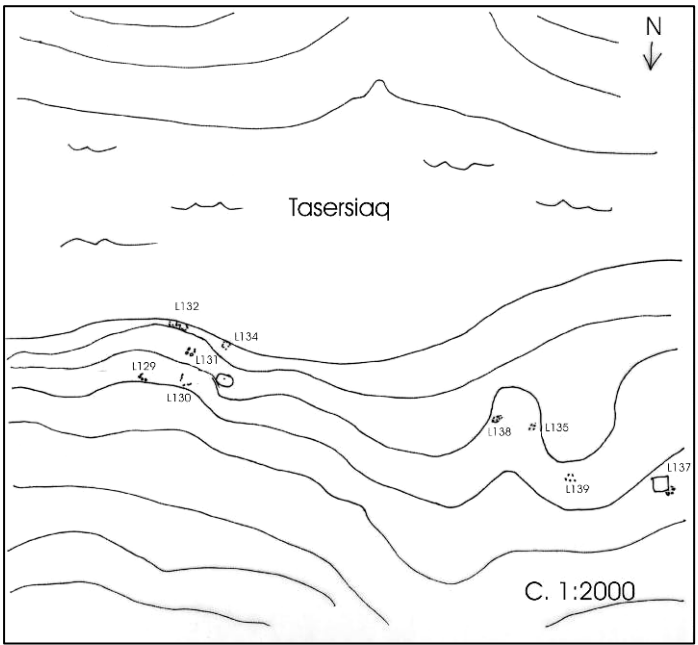
A: tent house complex with a midden area.
B: tent
C.: Tent house. 4 m.
D: tent house
E: cache/hunter's bed
F: cache? Build from big slabs.
G: tent house of Thule type.
H: playhouse
I: crevice between boulders with bones
J: small circular ring
K: area with possible tent houses

.**Tent houses**

L123 – Tent house and Palaeo-Eskimo tent ring - N 66°13,744', V 50°25,085' – 6 m above lake.

L123 – Tent house.

L132/153 – Tent house N 66°12,691', V 50°45,758' 1-3 m above Tasersiaq one or two tent houses.



L135/155 – Tent house N 66°12,735', V 50°46,079'22 m above Tasersiaq. Tent house.

L138/158 – Tent house N 66°12,727', V 50°46,029'22 m above Tasersiaq. Tent house.

L139/159 – Tent house

L152/168 – Tent house - N 66°11,824', V 51°00,755' – 8 m above Tasersiaq

L153/169 - N 66°12,585', V 50°57,875' – 20 m above Tasersiaq. Tent house and tent ring

L479/62: A little tent house E of Issormiut. Entrance towards Tasersiaq (approx.. 200 m away). Entrance built between bedrocks. Sleeping platform possibly marked. A lot of moss is to found just in front of the house (midden?). A possible tent ring just 2 meters away from house – maybe a paleo-structure?

L483/066: Tent house cache, hunting system and rings of rocks on bedrock.
Al: tent house
A2: cache
A3: shooting blind
A4: shooting blind?
A5: shooting blind
A6: row of cairns approx 100 m to WNW 10 – 12 small stone circles on bedrock.

L730/126: Settlement, Qoornuata Killiup Uninngavii, situated on the "ferry-headland" far backward against the rock. On the site and in the boulder field "fragments" of old structures are visible. Fragments of antler and bone are visible on the surface of the site which is overgrown with moss and blueberries.

A: 2 joint hunter's beds.
B: tent ring/tent house
C: hunter's bed
D: tent ring.
E: tent house/hunter's bed
F: tent ring.
G: tent ring/hunter's bed
H: tent ring
I: circle of stones
J: tent ring.
K: tent ring

Tent house/hunter's bed

L 26/139 – Hunter's bed/tent house – N 66°11,837', W 50°46,667'
On western side of lake system south of Tasersiaq c. 22 m above this. Hunter's bed, c. 2,9 x 2,4 m, built against rock and boulder.

L29/142 – Tent house N 66°12,583', W 50°46,100' – 9 m above Tasersiaq.
Possible tent house around 50 m from the southern bank of Tasersiaq. 30 m south of the house is a head cairn.

L121/060 – Hunter's bed - N 66°12,635', V 50°04,828' – 13 m above lake

L122/061 – Tent house - N 66°12,635', V 50°04,829' – 1 m above lake

Rock shelters

L620/096 – Rock shelter, hunter's beds and a cache.

Hunters beds

L143/164 – Three hunters' beds - N 66°11,508', V 50°45,514' – 17 - 21 m above Tasersiaq
A1: hunter's bed
A2: hunter's bed
A3: hunter's bed

Shooting blinds

L35/148 – Shooting blind – N 66°12,219', W 50°48,183' – 10 m above Tasersiaq
Shooting blind of six rocks (one is large) built against big boulder next to a passage between the gravel ridge and the mountainside on the western side of the foreland.

L141/161 – Shooting blind - N 66°11,886', V 50°46,241' – 14 m above Tasersiaq
Five rocks on a bigger rock next to caribou path.

L701/097 - N 66°14,492', W 51°13,887'
Cairn and shooting blind.

L710/106: Cairn system staring by L706 (cache and cairn) situated on a slope in an angle approximately 45° the lake. The system consists of 16 cairns.
A shooting blind are included in the system. The blind is build up to a boulder on both sides high up in the slope. Length all in all is approximately 5 m. (bone fragment sampled).

List on References

Aron of Kangeq
1999 *Således skriver jeg, Aron. Samlede fortællinger og illustrationer af Aron fra Kangeq (1822-1869*). Editor Kirsten Thisted. Atuakkiorfik. Nuuk.

Brink, Jack W.
2005 Inukshuk: Caribou Drive Lanes on Southern Victoria Island, Nunavut, Canada *Arctic Anthropology*, Vol. 42, No. 1, pp. 1-28.

Gabriel, Mille, Grønnow, Bjarne, Odgaard, Ulla & Clemens og Kerstin Pasda
2002 Bosættelsesmønstre i det centrale Vestgrønland. Rapport om undersøgelserne i Angujârtorfiup Nunâ, Manitsoq kommune, sommeren 2001. *SILA – Nationalmuseets Center for Grønlandsforskning, Feltrapport 4.*

Gotfredsen, Anne Birgitte and Tinna Møbjerg
2004 Nipisat – a Saqqaq Culture Site in Sisimiut, Central West Greenland. *Meddelelser om Grønland, Man & Society, vol. 31*. Copenhagen.

Grønnow, Bjarne, M. Meldgaard og J. Berglund Nielsen
1983 Aasivissuit – The Great Summer Camp. Archaeological, ethnographical and zoo-archaeological studies of a caribou-hunting site in West Greenland. *Meddelelser om Grønland, Man & Society* 5. København.
1986 Recent Archaeological Investigations of West Greenland Caribou Hunting. *Arctic Anthropology,* vol. 23, 1-2. s. 57 – 80. Chicago.

Gulløv, Hans Christian
1997 From Middle Ages to Colonial Times. Archaeological and ethnohistorical studies of the Thule culture in South West Greenland 1300-1800 AD. *Meddelelser om Grønland, Man a & Society 23.*
1985 Whales, Whalers, and Eskimos: The Impact of European Whaling on the Demography and Economy of Eskimo Society in West Greenland. In: *Cultures in Contact.* W.W. Fitzhugh, red

Knudsen, Pauline
2009 *An Archaeological Survey in the West Greenland Inland, summer 2008, in Advance of Proposed Development of Hydroelectric Power. Report prepared for ALCOA.* Greenland National Museum & Archives

Knuth, Eigil
1944 Bidrag til Vesterbygdens topografi. In: *Det Grønlandske Selskabsårsskrift.* S 81-124.

Kreutzmann, Jens
1997 *Fortællinger og akvareller*, udgivet ved Kirsten Thisted. Atuakkiorfik

Meldgaard, Morten
1986 The Greenland caribou – zoogeography, taxonomy, and population dynamics. *Bioscience, 20. Meddelelser om Grønland.*

Meldgaard, Morten
2004 Ancient Harp Seal Hunters of Disco Bay in *Meddelelser om Grønland. Man & Society vol. 30.* Copenhagen.

Møbjerg, Tinna
1998 The Saqqaq culture in the Sisimiut municipality elucidated be the two sites Nipisat and Asummiut. In: *Man, Culture and Environment in Ancient Greenland.* Dansk Polar Center. Copenhagen.

Odgaard, Ulla, Grønnow, B., Gabriel, M., Pasda, C., Pasda, K. and Damm, C.
2003 *Bosættelsesmønstre i det Centrale Vestgrønland – Rapport om undersøgelserne i Angujaartorfiup Nunaa, Maniitsoq Kommune, sommeren 2002.* SILA-Feltrapport 12, Nationalmuseet København, 109 p.

Odgaard, Ulla, Knudsen, P., Petersen, H. C. & Lembo, A. 2005
2005. Bosættelsesmønstre i det centrale Vestgrønland. Rapport om Undersøgelserne i Angujaartorfiup Nunaa, Maniitsoq Kommune, sommeren 2003. *SILA Feltrapport nr. 20*

Odgaard Ulla, Fuuja Larsen, Mikkel Myrup, Marie Leander Petersen, Anne Tømmervåg, Aoife Daly, Charlotte Damm and Kerstin Pasda
2008 *An Archaeological Survey in the West Greenland Inland, summer 2007, in Advance of Proposed Development of Hydroelectric Power.* By Ulla Odgaard (ed.) *Report prepared for ALCOA.* Greenland National Museum & Archives.

Pasda, Clemens
2004 Hotel Grønland. Human use of caves and rock shelters in West Greenland. *BAR International Series 1309.*

Petersen, H.C.
1992 *Ataraaq.* Aaqqissuisut: Nunat Aqqinik Aalajangiisartut. Grønlands Stednavnenævn. Nuuk

Steward, Andrew, M. Darren Keith and Joan Scottie
2004 Caribou Crossings and Cultural Meanings: Placing Traditional Knowledge and Archaeology in Context in an Inuit Landscape. In: *Journal of Archaeological Method and Theory.* Vol. 11, No. 2.

Appendix A: Functional definitions of types of cultural remains.

Site
A site in this text is a locality with cultural remains, whether it comprises a single, several or many structures. Every locality has it own number. In the survey reports a preliminary find number was attributed to each locality usually beginning with the letter L. A few of the localities begin with the letter C followed by the letter a or c. When entered to the register of cultural remains at the Greenland National Museum each site/locality is given a unique FM-number which looks like: 66V2-III-014.

Structure
A single archaeological feature e.g. grave, fox trap, tent ring etc. are regarded as a structure.
The cultural remains described in this text are made from materials available in the immediate surroundings, which usually mean stones and peat. Some structures can be difficult or impossible to categorize into a certain type. Either because they are overgrown by plants, disturbed or in such a state of decay that identification into a certain type is difficult.

Tent house
This is a dwelling and one of the most substantial structures to be found in the survey areas. Walls built from stones sometimes in combination with peat can consist of several courses. The house has a round to square main room. In addition to the main room can be an entrance and/or a niche and rarely a cache. Two and rarely more tent houses built end to end sharing one of their walls are to be found. In some cases natural occurring rocks or boulders are included to the construction. Mostly the size of the house does not exceed 4 meters in any direction, though buildings up to 8 meters have been found. The oldest looking dwellings usually are the smallest, some times not more than 1.5 x 1.5 m.

The smallest houses are usually built in one course from rather big stones (more than head sized stones) and have an outline like the number 8. Other houses are built from stones in combination with peat in two or more courses. Houses in the southern areas (6g) are mostly built from flat stones alone and in many courses. These are classified as *stone huts*.

Some houses are dug into the ground, accordingly the floor is lower than ground surface. The main room may have a platform build up to the wall opposite to the entrance occupying most of the space in the room. In some cases the platform is absent and the room can be divided by a line of stones. Part of the floor may be paved with flags.

Tent ring
The structure consists of stones placed in an outline of a circle or a square. The placement of stones is in spaced intervals, but dense lines also occur. The stones usually are not much bigger than head sized, and their size does usually not exceed 4 meter in diameter or c. 16 square meters. In some cases the ring of stones is double.

The outer ring is for fastening the guy lines. The ring is at times divided by a line of stones which marks the sleeping area and part of the floor can be paved with flags.

Rock shelter
Caves or places naturally protected against rain and wind (e.g. boulder overhangs or crevices) can function as temporary shelters. Part of the floor can be paved with stones and a low wall to protect against winds occurs. Usually the shelters are not high enough for a standing adult. Caves or shelters which are not modified can be identified by scatters of bones in the immediate surroundings.

Hunter's bed
Stones placed tightly in an oval or an oblong square functioned as sleeping places. Stones in the construction usually are not much bigger than head sized. Beds build end to end occur. The length of a single bed rarely exceeds 2 meters. Often the structure is built against a rock or a boulder. Beds constructed from larger stones can be difficult to discern from small tenthouses.

Cairn
Head sized stones placed on prominent places e.g. on boulders or rock protrusions are regarded as cairns for marking routes, river crossing, caches camps etc. The majority of the cairns consist of only one stone, but some are built from three or four stones. Rarely cairns consist of a big slab stabilised by smaller stones in a nearly erected position. Cairns built of many stones are regarded as modern.

Cairn system
A cairn system is constructed of several cairns and is meant to drive caribou to places where it is difficult to escape the hunters. The systems lead animals to lake shores, river banks, or boulder fields. Most systems consist of three to five cairns, but in rare cases they can extend for more than 1 km.

Shooting blind
Most shooting blinds are build of several more than head sized stones put side by side into a crescent shaped structure, but some are built on rocks or big boulders. Blinds on boulders often consist of two stones placed with a gap in between. The structures are often positioned on localities in the landscape where caribous will pass very close by e.g. on top of ridges, narrow sections in valleys, by caribou track or by cairn systems.

Meat cache
These structures will often look like a heap of head sized stones, often placed on shaded places or in boulder fields. Their size seldom exceeds 2 diameters. Some times the caches are found open.

Grave
Burials are usually built as a small, rectangular chamber inside a heap of stones closed at the top after placing the dead in the chamber. Bones can be visible inside the grave. The size normally does not exceed two meters in length or diameter.

Fox traps
Built from head sized or bigger stones the oblong chamber inside the construction has an approximate size of 20 x 60 cm. The outside of the chamber is reinforced by stones and the structure is always built on bedrock. The traps can be found near to settlements or meat caches.

Play house
The playhouses are miniature plans of houses and tent made buy stones that usually not exceed a fist in size. Playhouses are to be found near to camps.

Pot hearth or fireplace
Most fireplaces are pot hearths built against a boulder or rock. The structure is a parallel arrangement of stones to serve as a rack for a pot with space enough beneath to have little fire of twigs. Some times the hearth is free-standing as a u-shaped arrangement of stones to hold a pot with burning twigs underneath.

Structures from the Saqqaq Culture
All structures described above are attributed to the archaeologically described Thule Culture and the historic known Inuit. Some of the structures may have been made by earlier cultures especially as regards the shooting blinds, cairns and cairn systems and maybe also hunter's beds and fox traps.
Structures regarded as remains from the Saqqaq Culture are tentrings with an axial features or a box hearth at times containing boiling stones. Free-standing hearths are also to be found. Tentrings with axial features are diagnostic structures for the Stone Age cultures of Greenland (e.g. the Saqqaq and Dorset Culture.

Midden
Areas in association with some settlements are clearly to be defined as middens. Typically the midden will be situated in a lower area front of a settlement. The layer of humus will be thicker than in other areas and more bones will be visible in the surface.

Areas singled out for certain activities
During our surveys we have still not found areas used for certain activities like sewing as it is know from Canadian Inuit staying in the interior.

Appendix B

Summary of cultural features for excavation at Tarsartuup Tasersua + 3 adjacent lakes (6g):

Structure type																	Total
	001/ 062	002/ 063	003/ 064	004/ 065	007/ 066	010/ 10	014/ 024	103/ 3 + 21	105/ 070	171/ 044	172/ 045	173/ 046	174/ 047	Ca1/ 073	Ca2/ 075	Cb8/ 001	
tent house	5	3	1		3	4	5	2	14	3	2		6			10	58
tent ring		1						2	1						2	2	8
Saqqaq Culture				5													5
hunter's bed						2		3				3		8			16
fireplace																2	2
cache	2	1	1		1												5
play house								2	2								4
grave					1		1		1								3
rock shelter																	
cairn system																	
shooting blind									1		2						3
fox trap							1										1
single cairn					1												1
bone concentr.																	
other					1		1								2	1	5
Total	7	5	2	5	7	6	8	9	19	3	4	3		8	4	15	111

Summary of Cultural Remains by the shores of Tasersiaq (7e) to be excavated:

Structure type	Locality (serial number) / FM no. in map no. 66V2-0II + 66V2-III																			Sum
	24/ 134	25/ 135	26/ 139	29/ 142	35/ 148	120/ 059	121/ 060	122 060	123/ 061	124/ 133	126/ 137	127/ 138	131/ 152	132/ 153	135/ 155	138/ 158	139/ 159	141/ 161	143/ 164	
tent house	2	2		1			1	1	1	2	3		1	2	1	1	1			19
tent ring																				
Saqqaq Culture						2			1			1								4
hunter's bed			1																3	4
fireplace																				
cache																				
play house																				
grave																				
rock shelter																				
cairn system																				
shooting blind					1													1		2
fox trap																				
single cairn																				
bone concentration																				
Other	1										1									2
Sum	3	2	1	1	1	1	1	1	2	2	4	1	1	2	1	1	1	1	3	31

Type of Structure	Locality (serial number) / FM no. in map no. 66V2-0II + 66V2-III																		Total
	151/ 167	152/ 168	153/ 169	161/ 067	162/ 068	163/ 069	164/ 070	166/ 072	168/ 172	479/ 062	483/ 066	558/ 084	563/ 089	567/ 093	620/ 096	701/ 097	710/ 106	730/ 126	
tent house	2	1	1		8				2	1	1	9	23	5				2	74
tent ring			1									2	1					6	10
Saqqaq Culture				1		1	6	2					2						16
hunter's bed									3			1			2			3	13
Fireplace												2							2
Cache					2						1								3
play house													1	1					2
Grave	1																		1
rock shelter													1		1				2
cairn system																	1		1
shooting blind											3		1			1	2		9
fox trap												1	1						2
single cairn					3											1			4
bone concentration					1							1	1						3
Other					1					1	10	4	4	3	1				26
Sum	3	1	2	1	15	1	6	2	5	2	15	20	35	9	4	2	3	11	168

Appendix C

Radiocarbon dates by Claus Andreasen

AMS- and C14 datings always present some problems when interpreting them. During our project we have only dated caribou-bones from the features as terrestrial material yield the most the most reliable dates.
In two cases we have dated human bones. Such bones are consistently too old as the people have been eating a mixture of a marine and a terrestrial diet. The bones have been corrected by the difference between of the date of the human bones and the caribou bones associated with them. It seems to be a fair procedure in these cases. In one case the dates indicate a marine diet reservoir age of 508+/- 34 years and in the other 506+/-32 years.

All dates marked "p" are problematical as the lab writes: *"Unfortunately the C13 concentrations of those samples fall within the C14 plateau caused in part by fossil fuel burning (Suess effect), in part by an increase in solar activity after the Maunder sunspot minimum, and it is not possible to precisely determine the time of death of the animal or the persons within the wide calendar range AD 1640- AD 1954."*

Fig. 1. Paleo-Eskimo datings
Paleo-Eskimo dates exhibit no problems. They show a Saqqaq culture presence in the inland south of Kangerlussuaq / Søndre Strømfjord from c. 2.100 BC to ca. 1300 BC.
From Aussivissuit we have the only date on Dorset-culture.
Dates with an L-number derive from the ALCOA-project.

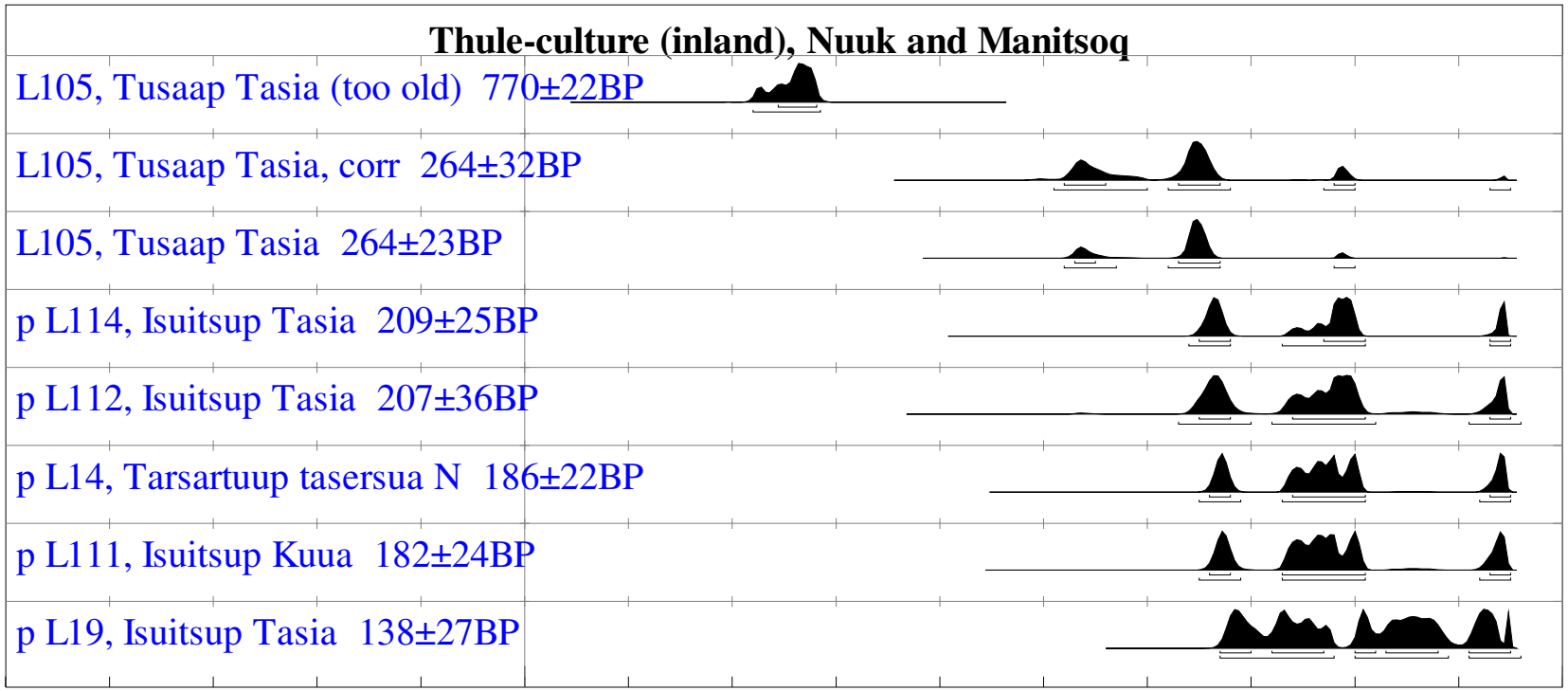
Fig. 2. Thule-culture (inland) Tasersiaq – Aussivissuit
The L 151, Napasorsuaq, is from a human bone and too old. The relevant date is the corrected date.

The dates show a constant use of the inland from c. 1200/1300 AD to the present. The earliest date is north of the fjord, the rest south of the fjord.

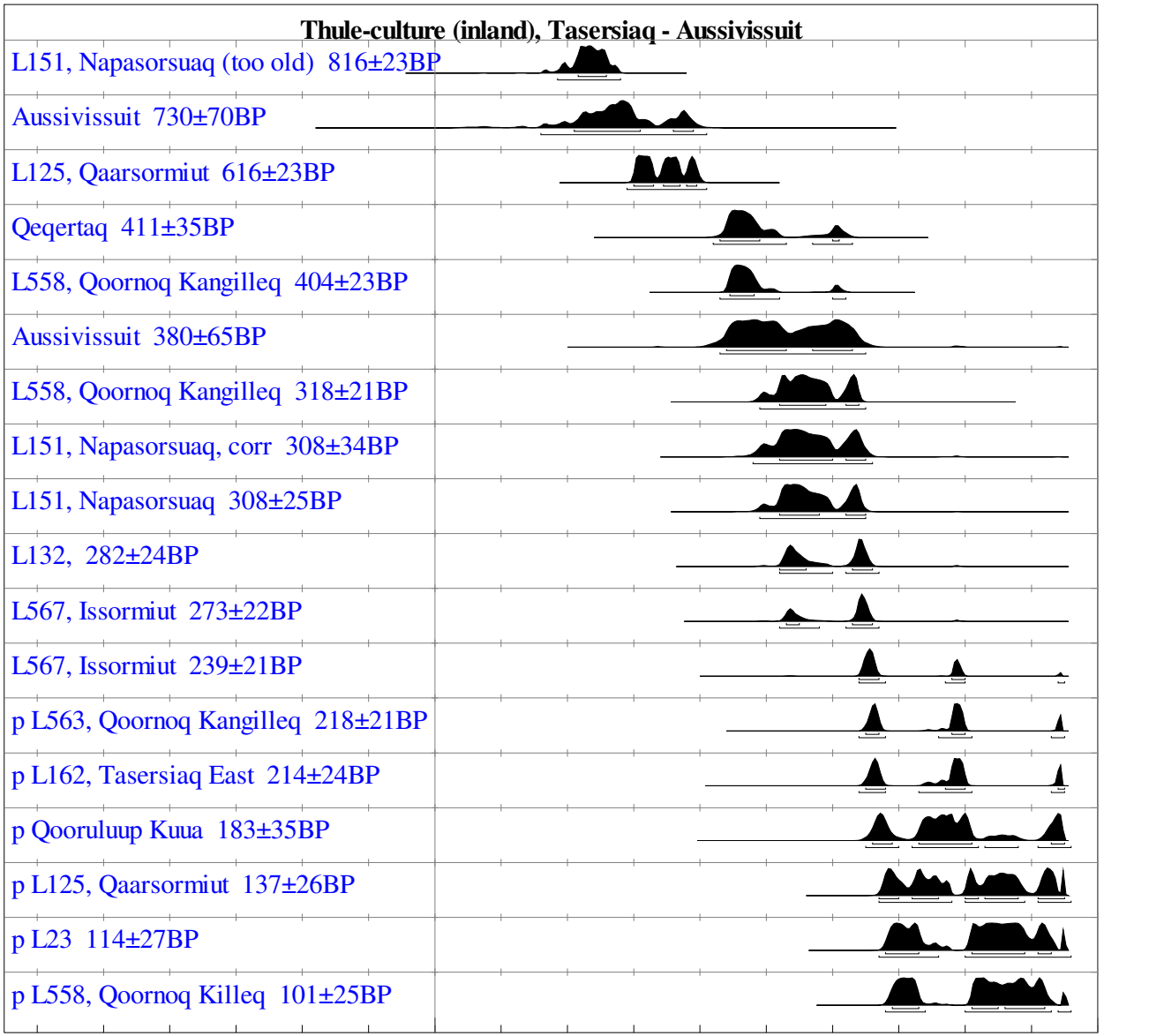
Fig. 3. Thule-culture (inland), Nuuk and Manitsoq
The L 105, Tusaap Tasia, is from a human bone and too old. The relevant date is the corrected date.

Only two dates – and even from the same site - are reliable and both show an occurrence in the inland in the 16^{th} or 17^{th} C. AD.
So far no dates fall within the Norse period.

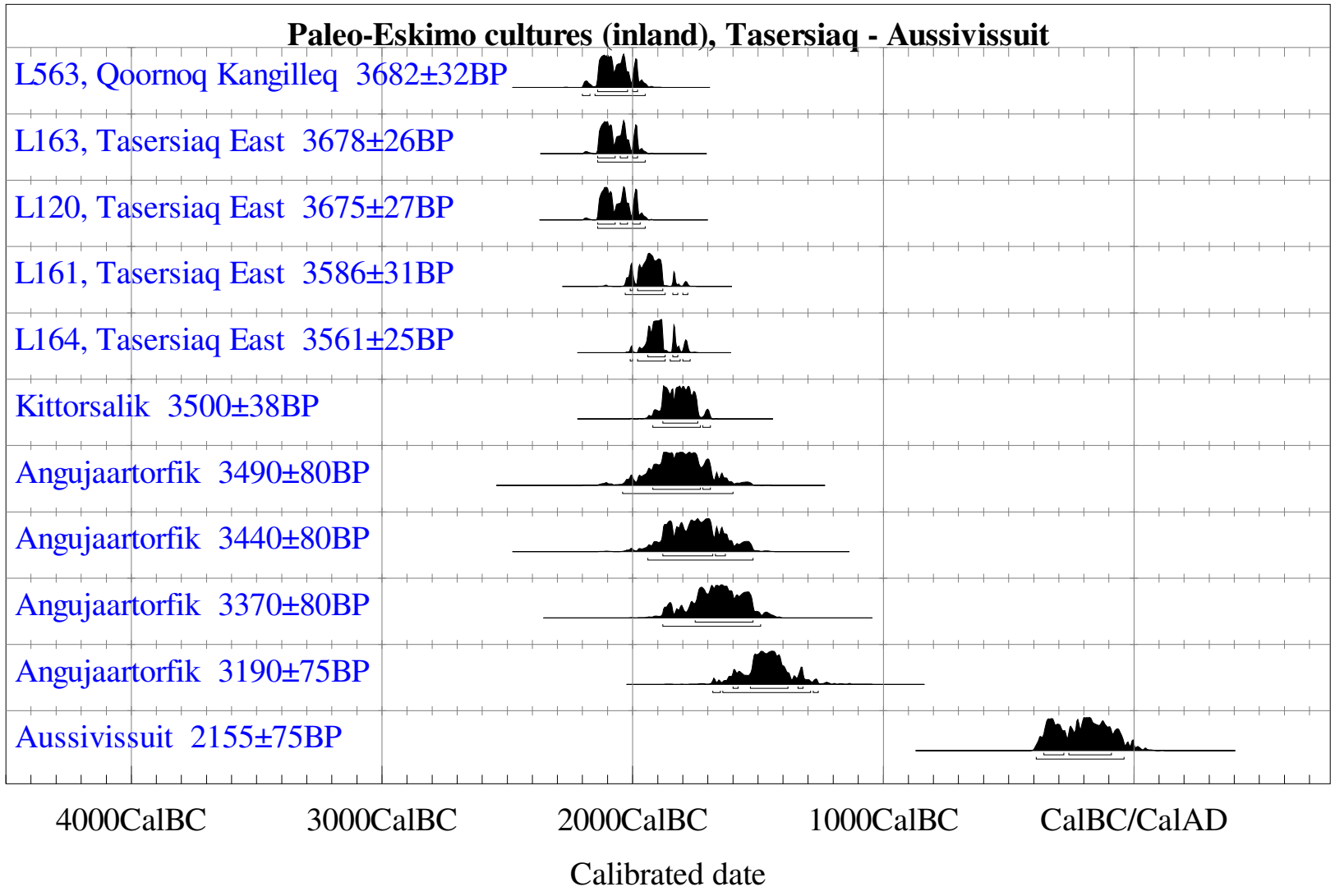
Atmospheric data fromStuiver et al. (1998); OxCal v3.5 Bronk Ramsey (2000); cub r:4 sd:12 prob usp[chron]



Atmospheric data from Stuiver et al. (1998); OxCal v3.5 Bronk Ramsey (2000); cub r:4 sd:12 prob usp[chron]



Atmospheric data from Stuiver et al. (1998); OxCal v3.5 Bronk Ramsey (2000); cub r:4 sd:12 prob usp[chron]



ALCOA area dates, Nuuk area (6g)

C14 Lab nr	Sample type	Regime (T, M, F, H, U)	Collection Site	14C age BP	Error	Cal age +/- 1 stdv	Culture (dating)	Area (latitude)	FM-nr
KIA 37450	Human bone	H	§ L105, Tusaap Tasia (too old)	770	22	AD 1228-1274	Thule	64 W	64V2-0IV-070
KIA 37450 Corr	Human bone	H	* L105, Tusaap Tasia, hum corr	264	32	AD 1520-1800	Thule	64 W	64V2-0IV-070
KIA 37449	Rangifer tarandus	T	* L105, Tusaap Tasia	264	23	AD 1530-1663	Thule	64 W	64V2-0IV-070
KIA 35096	Rangifer tarandus	T	*L114, Isuitsup Tasia*	209	25	AD 1654-1954	Thule; Recent	65 W	65V2-00I-008
KIA 35095	Rangifer tarandus	T	*L112, Isuitsup Tasia*	207	36	AD 1651-1954	Thule; Recent	65 W	65V2-00I-006
KIA 37448	Rangifer tarandus	T	*L14, Tarsartuup tasersua N*	186	22	AD 1666-1954	Thule; Recent	65 W	65V2-0II-024
KIA 35094	Rangifer tarandus	T	*L111, Isuitsup Kuua*	182	24	AD 1667-1954	Thule; Recent	65 W	65V2-00I-005
KIA 35093	Rangifer tarandus	T	*L19, Isuitsup Tasia*	138	27	AD 1680-1954	Thule; Recent	65 W	65V2-00I-003

ALCOA area dates, Tasersiaq (7e)

C14 Lab nr	Sample type	Regime (T, M, F, H, U)	Collection Site	14C age BP	Error	Cal age +/- 1 stdv	Culture (dating)	Area (latitude)	FM-nr
KIA 37452	Human bone	H	§ L151, Napasorsuaq (too old)	816	23	AD 1216-1255	Thule	66 W	66V2-III-167
K-3153	Rangifer tarandus	T	Aussivissuit, Lag 4A	730	70	AD 1210-1390	Thule	67 W	67V2-III-006
KIA 35097	Rangifer tarandus	T	L125, Qaarsormiut	616	23	AD 1301-1393	Thule	66 W	66V2-III-136
KIA 37458	Rangifer tarandus	T	L558, Qoornoq Kangilleq	404	23	AD 1445-1480	Thule	66 W	66V2-III-084
K-3154	Rangifer tarandus	T	Aussivissuit, Lag 4B	380	65	AD 1440-1630	Thule	67 W	67V2-III-006
KIA 37459	Rangifer tarandus	T	L558, Qoornoq Kangilleq	318	21	AD 1521-1637	Thule	66 W	66V2-III-084
KIA 37452 Corr	Human bone	H	¤ L151, Napasorsuaq, hum corr	308	34	AD 1520-1650	Thule	66 W	66V2-III-167
KIA 37453	Rangifer tarandus	T	¤ L151, Napasorsuaq	308	25	AD 1522-1643	Thule	66 W	66V2-III-167
KIA 35100	Rangifer tarandus	T	L132,	282	24	AD 1526-1652	Thule	66 W	66V2-III-153
KIA 37463	Rangifer tarandus	T	L567, issormiut	273	22	AD 1529-1544	Thule	66 W	66V2-III-093
KIA 37462	Rangifer tarandus	T	L567, Issormiut	239	21	AD 1648-1792	Thule	66 W	66V2-III-093
KIA 37460	Rangifer tarandus	T	*p L563, Qoornoq Kangilleq*	218	21	AD 1654-1954	Thule; Recent	66 W	66V2-III-089
KIA 37455	Rangifer tarandus	T	*p L162, Tasersiaq East*	214	24	AD 1652-1954	Thule; Recent	66 W	66V2-0II-68
AAR-7474	Rangifer tarandus	T	*p Qooruluup Kuua*	183	35	AD 1663-1947	Thule; Recent	66 W	66V2-III-024
KIA 35098	Rangifer tarandus	T	*p L125, Qaarsormiut*	137	26	AD 1681-1954	Thule; Recent	66 W	66V2-0II-136
KIA 35099	Rangifer tarandus	T	*p L23*	114	27	AD 1691-1922	Thule; Recent	66 W	66V2-0II-058
KIA 35101	Rangifer tarandus	T	*p L558, Qoornoq Killeq*	101	25	AD 1695-1918	Thule; Recent	66 W	66V2-III-084
AAR 7377	Rangifer tarandus	T	*Qeqertaq*	411	35	AD 1430-1610	Thule	66 W	66V2-0II-031

Paleo-Eskimo dates, Tasersiaq (7e) and Aasivissuit

C14 Lab nr	Sample type	Regime (T, M, F, H, U)	Collection Site	14C age BP	Error	Cal age +/- 1 stdv	Culture (dating)	Area (latitude)	FM-nr
KIA 37461	charcoal	F	L563, Qoornoq Kangilleq	3682	32	BC 2134-2027	Saqqaq	66 W	66V2-III-089
KIA 37456	charcoal	F	L163, Tasersiaq East	3678	26	BC 2133-2025	Saqqaq	66 W	66V2-0II-069
KIA 37451	charcoal	F	L120, Tasersiaq East	3675	27	BC 2132-2083	Saqqaq	66 W	66V2-0II-059
KIA 37454	charcoal	F	L161, Tasersiaq East	3586	31	BC 1973-1894	Saqqaq	66 W	66V2-0II-067
KIA 37457	charcoal	F	L164, Tasersiaq East	3561	25	BC 1942-1885	Saqqaq	66 W	66V2-0II-070
AAR 7376	Rangifer tarandus	T	Kittorsalik	3500	38	BC 1890-1690	Saqqaq	66 W	66V2-0II-038
K-5192	Rangifer tarandus	T	Angujaartorfik	3490	80	BC 1925-1705	Saqqaq	66 W	66V2-0IV-090
K-5194	Rangifer tarandus	T	Angujaartorfik	3440	80	BC 1880-1680	Saqqaq	66 W	66V2-0IV-090
K-5191	Rangifer tarandus	T	Angujaartorfik	3370	80	BC 1750-1530	Saqqaq	66 W	66V2-0IV-090
K-5193	Rangifer tarandus	T	Angujaartorfik	3190	75	BC 1525-1415	Saqqaq	66 W	66V2-0IV-090
K-3152	Rangifer tarandus	T	Aussivissuit	2155	75	BC 360-90	Dorset	67 W	67V2-III-006