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**THE STRUCTURE OF THE PIONEER SETTLEMENT
OF SCANDINAVIA. THE ORIGIN
OF LONG LIVED SOCIAL TERRITORIES**

К. Кнутссон, Х. Кнутссон. Структура расселения первых поселенцев в Скандинавии. Происхождение устойчивых социокультурных ареалов

Доклад представляет новое исследование стоянок первых поселенцев Скандинавии после таяния ледникового покрова Валдайского оледенения в Пребореале — позднем ледниковье. Обсуждаются первые результаты скандинавского научного проекта на территории Швеции. Основное внимание будет уделено кремневым комплексам из Центральной Швеции, лишь предварительные исследования которых были представлены ранее. Сравнительный анализ показывает близость этого материала к пластинчатым комплексам среднего мезолита из Южной Норвегии и Западной Швеции, они были оставлены первыми поселенцами, проникшими на данную территорию в пребореальном и раннем бореальном периоде. Пограничная зона между южным миграционным путем с памятниками с пластинчатым инвентарем и северным, характеризующимся кварцевой отщеповой индустрией, расположена в северной части области Херьедален. Эта зона совпадает с пограничной зоной между северным и южным позднеледниковыми миграционными путями животных и растений, определенных по анализам ДНК. Таким образом, мы можем предположить, что миграции населения, происходившие в тех же условиях, что и распространение животных и растений, подчинялись единой временной/пространственной логике. Эта пограничная зона существовала на протяжении тысячелетия и могла влиять на коммуникационные сети человеческих коллективов на протяжении длительного периода времени в этом регионе. Таким образом, подобные существующие продолжительно коммуникационные сети с «пограничными зонами» могут являться частью общей теории культур, основанной на изучении уникальности археологических свидетельств.

Our presentation is based on a series of previous papers where we discuss the pioneer settlement of Scandinavia following the melting of the Weichselian ice sheet during the early Holocene using lithics as a proxy for cultural identity (Knutsson, Knutsson, 2012; Sørensen et

al., 2013; Knutsson, H. et al., 2016). The result from these investigations will be compared to the results from a recent investigation of the lithic assemblages from a stratified site in Central Sweden covering the period from the preboreal to the subboreal, thus illustrating the adaptation to a new environment as the migrants moved in to Northern and Central Sweden as the last patch of ice melted away opening this part of Sweden for settlement.

In the first paper we identified a suture zone between a southern immigration route characterized by sites with prismatic blade assemblages in local raw-materials such as porphyry and tuffites and a northern route characterized by flaked quartz assemblages is identified in northern Sweden. This zone coincides with the suture zone between a northern and a southern late glacial animal and plant migration route identified through DNA analyses. We thus hypothesised that human migrants, meeting the same obstacles and possibilities as animals and plants, established themselves according to the same space/time logic. This suture zone can be identified through millennia and seems to control some of the human networks for long periods in the region. It is thus concluded that these age-old network patterns with persistent “suture zones” hold a potential for archaeology to contribute to a general theory of culture based on the unique qualities of the archaeological record, its research into the depths of time.

In the second paper which we compiled together with a group of Scandinavian researchers it could among other things be demonstrated that the blade industry identified in Central Sweden most probably arrived to Scandinavia with ‘post-Swiderian’ hunter-gatherer groups from the Russian plain into northern Fennoscandia and the eastern Baltic during the 9th millennium BC. From there it was spread by migrating people and/or as transmitted knowledge through culture contacts into interior Norway and down along the Norwegian coast. We thus argued that the identification and spread of the conical core pressure blade concept represents the first migration of people, technology and ideas into Scandinavia from the south-eastern Baltic region and the Russian plain and that the identified Central Swedish blade industry might the traces of this process.

In a forthcoming paper it can thus be shown that the Central Swedish blade industry actually is a perfect copy of this new west

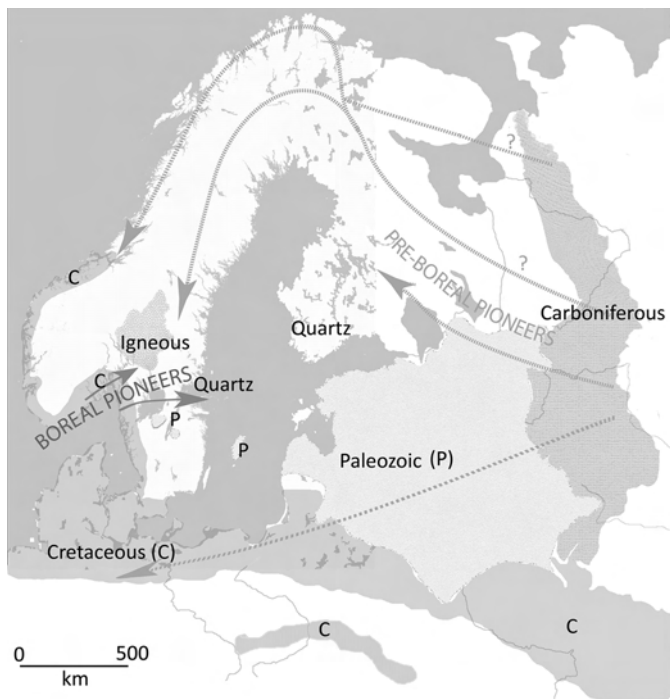


Fig. 1. Raw material used for tools available in different parts of the North European continent. Carboniferous flint: from Upper Palaeozoic layers; Cambrian/Ordovician/Silurian flint 1(P): from Lower Palaeozoic layers; Cretaceous/Maastrichtian flint (C): from Mesozoic layers; Quartz: from Fennoscandian Shield (Precambrian); Igneous rocks: from the Scandinavian igneous Belt (Precambrian Volcanic). The distribution is shown on a map showing the approximate coastline of Scandinavia at 9000 BP prepared by Geological Survey of Sweden (Johan Daniels). Arrows indicate the preboreal (yellow) and boreal (green) human migration routes into areas dominated by quartz

Рис. 1. Сырье для изготовления каменных орудий, доступное в разных частях севера Европейского континента. Каменноугольный кремнь: из слоев верхнего палеозоя; кембрийский/ордовикский/силурский кремнь 1(P): из слоев нижнего палеозоя; меловой/маастрихтский кремнь (C): из мезозойских слоев; кварц из скандинавского щита (докембрийский); вулканические породы: из скандинавского вулканического пояса (докембрийский вулканизм). Распределение показано на карте предположительных очертаний береговой линии Скандинавии 9000 л. н., подготовленной Шведской геологической службой (Йоган Даниелс). Стрелками показаны пути миграций человеческих коллективов в районы с преимущественно кварцевым сырьем в пребореальный (штрихованные) и boreальный (сплошные) периоды

Scandinavian blade industry but transformed using local igneous raw materials with flint-like knapping qualities (Damlien et al, in press).

In the third paper we discussed in more detail the two migration routes into northern and Central Sweden focussing on the transition from formal blade industries to informal quartz industries typical for Northern Sweden and parts Eastern Central Sweden. As a point of departure we acknowledged that formal technologies and intensified reduction are often seen as responses to increased mobility and low abundance of lithic raw material of good flakeability and controllability. In the paper, we discussed an alternative explanation to this hypothesis using the change in tool raw material experienced by flint- using pioneers, as they had to go from a formal blade technology to a simple flake technology as they settled in the northern and part of Central Scandinavia. This region is dominated by quartz, and we used use-wear data as a means to evaluate the role of this type of raw material compared to the use profile of flint assemblages in the home territories of the pioneers. Although we could show that the technology changed through simplification and loss of formal production rules, due to the low workability of quartz, we concluded that changes in the foraging range into areas of different quality tool raw materials did not need formalization of the technology. The quartz in our sampled area was produced with a simple platform/bipolar technology and used for a wide variety of activities in every aspect comparable to the range of uses identified in the contemporaneous blade assemblages based on flint. Instead of formalization of the lithic technology to cope with different quality raw materials, it was diversified and simplified. The organisational dimensions and design criteria of the bone technology, whereby simple flakes were used as insets in slotted tools, did not have to change in this process.

We could thus conclude that the pioneers adapted to the new raw material situation in two totally different ways, an adaption that was steered by different access to good tool raw materials. In the areas with igneous rock the blade industry was continued following the details of the *chaine opératoire* practiced in the homelands in western Scandinavia. In areas with quartz as the dominant raw material, the strategy was to simplify but without losing any of the functional needs. We also hypothesized that the simple quartz industry was not

new to these migrating groups, it was one technology among others that was part of a repertoire that changed according to the situation. The subsequent analysis of the Motala site with a stratigraphy covering a period from the preboreal to the subboreal and containing a well preserved flint and quartz industry, gave us the opportunity to test that hypothesis. This will be the focus of the discussion in our presentation.

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