

# Doctoral thesis: The land use of West Estonian lowlands in Late Stone Age turned out to be seasonal

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Kristjan Sander in fieldwork. Picture by Teele Tamme. Credit: Teele Tamme

At the end of the Middle Stone Age and during the Late Stone Age, settlements in the West Estonian lowlands were more seasonal than in the neighboring areas of the island of Saaremaa and the Pärnu Bay catchment area, indicates the study conducted by Kristjan Sander who

defended his doctoral thesis at Tallinn University's School of Humanities. The doctoral thesis examines the period of approximately 5300-2600 BC.

The time frame of the thesis begins with the end of the maximum water level of one of the development stages of the Baltic Sea following the Last Glacial Period—the Littorina Sea—since which the sea level in Estonia has been continuously falling. To this day, post-glacial rebound is particularly fast in West and North-West Estonia, and the ancient coastlines are now located as far as up to 30 km inland in certain locations. In many places, millennia-old beach formations are still visible in nature today.

In the two geographical areas examined, Kristjan Sander searched for settlements of Stone Age people on the land freed from under the sea as a result of post-glacial rebound and on inland riverbanks up to 10 km from the coastline of the Littorina Sea at its maximum water level.

One of the areas studied is situated in North-West Estonia, embracing the peninsulas bordering the sea bay that lay there in the place of the present-day Suursoo, and, further northwest, the Elbiku mountain that was once an island located up to 15 km from the coast.

Fieldwork took place in the villages of Kõmmaste, Risti, Vilivalla, Vihterpalu, Variku, and Nõmmemaa. The second examined area is situated on the beach of Ancient Matsalu Bay on the Üdruma—Teenuse—Vana-Vigala—Avaste route and on the southern edge of Matsalu National Park where the current highlands (Kirbla, Lautna, Kloostri, Hälvati, Lihula, Massu, and Salevere) formed an archipelago resembling today's Väinameri Sea.

New settlements were searched for by collecting finds on open land, i.e. plowed fields, allotments, road verges, firebreaks, forest roads, and

clearings.

Kristjan Sander's [doctoral thesis](#) fills a big gap in studying Stone Age in Estonia as prior to Sander's exploration only four settlements and one burial site were known in Western Estonian lowlands. During fieldwork, 102 settlements (at least 3 finds) and 39 incidental discovery sites were mapped.

Surprisingly, no settlements were identified that could, based on the material found and dimensions established, be considered more permanent in nature as are known settlements in the neighboring Pärnu Bay catchment area and the island of Saaremaa. Regarding the studied period, solely seasonal land use in large areas like the ones in question is a new discovery on the entire eastern shore of the Baltic Sea, although individual seasonal settlements have also been described earlier.

Stone Age settlements in Western Estonia expanded on different terrains at different times. The oldest settlements of the Middle Stone Age are located at river estuaries and ancient coastal lagoons as well as at the tips of peninsulas. At the end of the Middle Stone Age at the latest, starting from the Narva stage (5200-3900 BC), small islands were also made use of. At the beginning of the New Stone Age, in the Comb Ware stage (approx. 3900–1800 BC), additional settlements were built on the riverbanks near the coast.

Based on ethnographic analogies, Sander hypothesizes that the observed settlement dynamics are caused by the intensification of fishing in response to the slow cooling of the climate. It can be assumed then that the seasonal settlement situated in the southern area examined originated from Saaremaa island as inhabitants of the Pärnu Bay catchment area already had an abundance of large rivers rich in fish.

Assembling such a broader picture of settlements provides an insight

into the ways of life and society of the distant past that cannot be replaced by excavation of individual settlements. However, [archaeological excavations](#) are indeed required to investigate the activities that took place in the newly identified [settlements](#).

**More information:** Thesis: [A tradition of mobility: land use dynamics of Stone Age hunter-gatherers in West Estonian Lowland \(app. 5300–2600 BC\)](#)

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