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WHERE SOURCE CRITICISM FAILS

It is unfortunate that Doctors Engelmark, Segerström and Wallin have not had the patience to study the present author's review of their work in sufficient detail. Consequently, they have not understood the essential point of its argument concerning slash-and-burn cultivation. But it is surprising that also Professor Baudou, who shows considerable interest in historical source criticism, has failed to grasp the essential parts of my review.

Both Baudou and Engelmark et al. understand the sections on slash-and-burn cultivation in my review as stating that historical sources from the 16th to the 18th century were used to prove the practice of slash-and-burn cultivation in Ostrobothnia 500–1000 years previously. The chain of argument is by no means that simple, for my review follows Engelmark's own argumentation in *Järnåldersbygd i Österbotten.*

Engelmark writes:

'As shown in the table, rye was of no significance during the Iron Age. Rye is the only cereal which could be successfully cultivated by slash-and-burn methods in the coniferous regions, and particularly a special type (Sw. *svedjeråg* [swidden rye], *rotråg*, *midsommarråg* [Midsummer rye], also known under different names), which is markedly tufty with a large root system, which during the first summer develops the store of nutrition which is used the next summer for sprouting and forming seeds. Furthermore, swidden rye has a strong tendency to tiller, which means that a single grain will provide a large number of stems and ears (normally around ten), which means that even stubbled and stony swiddens can reach a good density of stand. Barley completely lacks these properties and must pass through its whole development in a single summer, whereby there must be a very good supply of nutrients for sprouting. Therefore barley gives no yield in slash-and-burn cultivation. In the coniferous regions of Finland and Scandinavia the slash-and-burn cultivation of grain probably did not begin until the Middle Ages. Naturally, fire has been used in all times to clear areas for settlements, pasture etc.'[1]

This quotation contain the following claims:

1. Only rye was a successful slash-and-burn crop in the coniferous areas of Finland and Scandinavia, whereas barley gives no yield (*ger inget utbyte*) in these regions.
2. The slash-and-burn cultivation of grain probably did not begin in the coniferous areas of Finland and Scandinavia until the Middle Ages.

In my review, the points concerning slash-and-burn cultivation are based on a closer inspection of these two basic claims.

Claim 1. is not bound to any particular period; Engelmark appears to feel that it applies as much to the 20th century as to the period from the 9th to the 11th century. If this is so, evidence for the slash-and-burn cultivation of barley *anywhere* in the coniferous regions (coniferous zone) of Finland and *at any time* is enough to disprove this claim.

My review listed information on the slash-and-burn cultivation of barley in the 16th–18th centuries in localities that definitely belonged to the 'areas of coniferous forest', whereby this evidence alone disputed the first basic claim of Engelmark's theory of slash-and-burn cultivation. However, Engelmark's typically obscure wording and the claims put forth by him et al. are mainly based on misconceptions and require further discussion.

Engelmark uses the imprecise term *barrskogsområden* (areas of coniferous forest). Does this mean a. the coniferous zone of botanical geography, b. generally speaking broader areas dominated by coniferous forest, or c. locations growing solely coniferous forest? Engelmark's text shows that, depending on the situation, he relies on alternatives b. and c.

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It is, however, a well-known fact that mixed forest and even broad-leaved forest grow in certain locations in the coniferous zone in Finland. This is not solely the result of human activity; natural forest fires and the consistency of the soil have led to the formation of mixed and deciduous forest in the cyclical growth patterns of forests.[2]

It was possible to burn forests in long-range *erämark* utilization, as suggested by Jussi-Pekka Taavitsainen. Burn-clearing led to the growth of young forest dominated by broad-leaved trees, which was used to promote conditions for certain species of game.[3] In view of Ostrobothnia we must also point out that here human activity must have had a significant effect on forests up to the end of the Merovingian period. Consequently, we do not have to assume, as Engelmark et al. do, that the only possibilities for slash-and-burn cultivation in the coniferous zone were in full-grown stands of conifers.

In discussing how barley fares in slash-and-burn plots in the coniferous zone, Engelmark uses the expression *ger inget utbyte* (gives no yield). This expression also remains unclear. It apparently tries to state that barley does not yield a sufficient crop, but no acceptable yield level is given as a comparison.

Where Engelmark et al. state that barley is not a successful slash-and-burn crop in the coniferous zone, their claim is based on their own experiments in cultivation. The fact that cultivation experiments carried out with barley in the coniferous zone of *Sweden* have not been successful, does not disprove the evidence of reliable written sources on the successful slash-and-burn cultivation of barley elsewhere in the coniferous zone. The experimenters may have had insufficient knowledge of growing this cereal in slash-and-burn plots, and they may have used the wrong varieties; the old varieties of barley suitable to slash-and-burn cultivation do not necessarily exist any more. An incorrect understanding of the subject is pointed to by the description of methods other than the *huuhta*, for which the Finnish literature on the subject was used. With reference to the works of Arvo M. Soininen and Kauko Pirinen they suggest as the only alternative the *rieskamaa* (fresh land) which they seem to identify with the *pykälikkömaa* (ring-barked land), but there is no mention of the so-called common slash-and-burn plot or swidden (Fi. *tavallinen kaski*).

The common swidden is described as follows by Arvo M. Soininen:

'The common swidden (Fi. *kaski*), which has given its name to the whole form of cultivation, is the most common method of slash-and-burn cultivation which is used almost everywhere in Finland. It was cleared in deciduous forest or mixed forest dominated by broad-leaved trees, which for the most part was relatively young. The best type of forest for slash-and-burn cultivation was a mainly even-aged broad-leaved forest of birch and alder, 15–30 years old. If a good stand of broad-leaved forest was lacking, the swidden could be cleared in what was known as *petäikkö*, which appears to have meant mixed forest with a large proportion of pine. A swidden could not be made into coniferous forest alone, for it was by nature a form of cultivation for broad-leaved forest.... After burning over the common swidden was usually sown with winter rye, and to a lesser degree with barley.'[4]

This description does not correspond well to the account and views of Engelmark et al. concerning Finnish slash-and-burn techniques. These authors question the information of historical sources on the cultivation of barley in swiddens in the coniferous zone, claiming that barley was cultivated in burned-over plots cleared in peatland (Fi. *kytö*), among other methods. This peat-bog cultivation practice differed to such a degree from slash-and-burn methods that contemporaries did not confuse the terms, even though it has been claimed that this method developed from the slash-and-burn cultivation of bog.[5] Accordingly, cultivation of burned-over peatland also has its own terms in Swedish: *kyttning*, *kyttlandsbruk*. The distinction between these cultivation methods clearly emerges in the late-seventeenth-century tithe records of the Parish of Lapua, where separate columns are used for slash-and-burn cultivated grain (*Swedie*) and grain from burned-over peat-bog plots (*Kytö*).[6] Contrary to the claims of Engelmark et al., my review makes no mention of cultivation in burned-over bog plots. – The investigation carried out at Nastola in 1746 concerned illicit slash-and-burn clearing and cultivation (*olofligit svediande*), and here, too, we are referring unequivocally to slash-and-burn cultivation.

We may also refer to a description by the agronomist Kaarle Loune concerning slash-and-burn cultivation in the 1920s at Suojärvi and Korpiselkä, north-west of Lake Ladoga. Here, barley cultivation in swiddens is clearly prominent; the plots were cleared in forests with rich topsoil and stands of alder.[7]

With respect to Engelmark's first basic claim the results of Swedish cultivation experiments run counter to the evidence of a wide variety of sources concerning slash-and-burn cultivation in the coniferous zone of Finland. All the available knowledge points to the fact that barley thrived

Fig. 1. Slash-and-burn cultivated barley on stooks. Maaninka, Savo, 17 September 1928. Photography by Ahti Rytkönen, National Board of Antiquities.

sufficiently well in so-called common swiddens in the coniferous zone of Finland to make its cultivation tenable (Fig. 1). In their reply, even Engelmark et al. appear to admit that barley cultivation was also feasible in the coniferous zone of Finland.

The second basic claim put forth by Engelmark et al. is that slash-and-burn cultivation probably began only as late as the Middle Ages in the coniferous zone of Finland. What is the basis of this claim? It appears to be the fact that barley was the main grain species grown in prehistoric times, and, as claimed by their theory, only rye could thrive in swiddens. Therefore slash-and-burn cultivation was not practised in prehistoric times.

In accusing the present author of using 16th to 18th-century sources to argue for prehistoric slash-and-burn cultivation, Baudou and Engelmark et al. fail to note that all their own conclusions on slash-and-burn cultivation are based on cultivation experiments of the late 20th century. Such a chain of reasoning proceeding from present conditions to the past clearly belongs to their methodological arsenal, as can be seen in their reply. Since 19th- and early 20th-century data shows that slash-and-burn cultivation was non-existent at the time in Ostrobothnia, they draw the conclusion that the situation was the same in the Iron Age.

The view, presented in the review, that slash-and-burn cultivation dates back to prehistoric times is not based on sources of the 16th–18th centuries but on pollen analyses by several researchers, some of which are listed in note 6 of the review. Baudou and Engelmark et al. missed this point completely. Engelmark seems to represent the view that pollen analysis cannot discern whether slash-and-burn or arable cultivation was practised. In his words: '... pollen analysis is a much too blunt instrument to distinguish between different forms of cultivation. The important weed indicators are to a great pollinated by insects and are represented only in exceptional cases in the pollen sequences'.[8] Baudou expresses the same point in his article. However, in their reply Engelmark et al. rely solely on pollen analysis to prove that there were no prehistoric swiddens in Ostrobothnia.

Finnish paleoecologists claim that pollen and charcoal particle analyses provide a considerable degree of certainty in distinguishing the past use of slash-and-burn methods from arable cultivation.

Accordingly, they have issued several studies observing the practice of slash-and-burn cultivation in the coniferous zone of Finland in prehistoric times. The crops concerned were rye and barley, and also wheat.[9]

This means that – unlike Engelmark et al. – we cannot say outright that pollen analysis proves that slash-and-burn cultivation was not practised until the Middle Ages. It would have been more correct to observe that their school is of this opinion, although Finnish paleoecologists have a different view. – Engelmark et al. criticize the interpretations of Finnish palynologists concerning Ostrobothnia, but in other respects completely bypass the considerable body of Finnish paleoecological research on prehistoric grain cultivations and its methods.

Pollen and charcoal analyses namely show that slash-and-burn cultivation in Finland's coniferous zone is not of medieval but prehistoric date, and that both rye and barley were grown in these early swiddens. This means that we may also counter the second basic claim of Engelmark's theory on slash-and-burn cultivation.

Both basic claims in Engelmark's slash-and-burn theory can thus be shown to lack basis. Accordingly, the small proportion of rye in Iron Age pollen samples from Ostrobothnia does not prove that slash-and-burn cultivation was not known in this region in prehistoric times. This observation naturally does not imply that on these grounds alone we could conclude that slash-and-burn cultivation was practised in Ostrobothnia in prehistoric times. The probability of this form of cultivation must be solved with reference to other factors.

Baudou's reply focuses on the evidence provided by the excavations at Kalaschabrännan for the thesis, put forth in *Järnåldersbygd i Österbotten*, of regional continuity of settlement in Ostrobothnia in the Viking and Crusade periods. If it were possible to prove continued settlement at Kalaschabrännan until the Viking period, this would of course be evidence for the continuity theory. But there is no such continuity of settlement; *Järnåldersbygd i Österbotten* explicitly points out that settlement ended in the 8th century. It is by no means clear that random pollen grains dated to the Viking and Crusade periods in samples from near the site can be linked to a relocation of the Kalaschabrännan settlement. This interpretation is based on a model deduced from the theory maintained by the project's researchers. The proposed combination can just as well be regarded as arbitrary.

All the pollen diagrams compiled so far from Ostrobothnia which display cultivation activity in the Middle Iron Age, show a change in the intensity of cultivation in the transition from the Merovingian period to the Viking period, regardless of the sampling site. For this reason, the pollen diagrams from near the Kalaschabrännan site cannot be used as evidence for continued settlement. Had a Viking period settlement been found in the vicinity, the situation would be different.

Baudou et al. are of the opinion that the find of a Merovingian period fossil field with its ploughing marks proves that slash-and-burn cultivation was not practised in Ostrobothnia in the Viking and Crusade periods. This reveals a dichotomous view of prehistoric cultivation, implying that grain could have been grown either in normal fields or in swiddens, but the co-occurrence of these forms of cultivation was not possible. Finnish paleoecological studies have in some cases demonstrated the adoption of arable cultivation with the continuation of slash-and-burn practices alongside it.[10]

Baudou is of the opinion that Viking period remains are not found, because prehistoric sites and features at shorelines of this period were subject to a much greater degree of damage and destruction than corresponding antiquities at higher elevation. This is claimed to have been caused by a situation where, once cultivation in burned-over peat-bog plots had been adopted, there was no longer any need to follow the shifting shoreline to new sites, since peat-bog cultivation had made it possible to utilize all available peatlands, unlike at higher elevations.

This claim again shows that the researchers from Umeå lack sufficient information on the settlement history of Ostrobothnia. They appear to hold the opinion that in historically documented times settlement and cultivation at elevations utilized by prehistoric settlers until the Merovingian period was in some essential way less intensive than on the Viking period shoreline. An agrogeological map of Ostrobothnia from 1928, however, shows that there are no marked differences between cultivated areas among the various parts of the region that were inhabited in the Iron Age. Cultivated areas are limited almost solely to clayey soils and peatlands, extending into locations of moraine only in exceptional cases. In fact, the Finnish-speaking parishes, at higher elevations than the Swedish-speaking ones, form the grain-growing areas of Ostrobothnia, where field clearance and the burning-over of bog were especially intensive practices in historically documented times. This is shown in the following table containing information on different parishes in the region in the 1920s:[11]

Parish	Inhabitants/ sq.km	Percentage of forest and idle land
Petolahti	18.8	83.4
Maalahti	20.1	79.5
Sulva	21.2	72.1
Mustasaari	31.-	75.6
Koivulahti	21.3	81.1
Maksamaa	24.4	75.7
Vöyri	18.6	78.1
Vähäkyrö	27.8	54.8
Laihia	10.4	84.1
Isokyrö	23.3	68.5
Ylistaro	25.8	68.9

The Umeå researchers themselves point out that Iron Age settlements were in a moraine landscape, and not in clayey soils or other low-lying locations. Accordingly, their claim that field clearance in historically documented times, which explicitly focused on clayey soils and peatlands, would have been especially detrimental to remains of the Viking period is strange. The situation would, in fact, appear to be the opposite.

No less surprising is Baudou's claim that the resources of areas that rose from the sea through land upheaval were no longer conducive to cultivation practices in historically documented times. He does not seem to be familiar with Michael Jones' fundamental work on land upheaval and the cultural milieu of the Parish of Maksamaa.[12] This study would have shown that resources provided by land rising from the sea were the subject of considerable interest, and that fields were also cleared at elevations below the Viking Period shoreline whenever this was possible. This is clearly seen in the above-mentioned agrogeological map from 1928.

In fact, Baudou has no concrete evidence for his claim that exceptionally large numbers of Viking period remains and antiquities were destroyed. This is only a hypothesis, which in turn is used to support the whole project's main hypothesis.

Concerning the rune stones, Baudou makes the following observation: "The rune inscriptions, however, have no decisive importance for the problem of settlement continuity or discontinuity in Ostrobothnia. Therefore they are not discussed in the project." This reaction to the reference to the Ostrobothnian rune inscriptions is quite surprising, for in other connections Baudou takes up even the most insignificant stray finds indicating the Viking and Crusade periods, interpreting them as provenancing from fixed remains. This reaction gives further reason to review Baudou's selection of prehistoric finds, and his treatment of earlier results and interpretations. We can observe interesting principles underlying the criteria of selection, which are of importance for Baudou's source criticism of the archaeological material.

The archaeological record of Ostrobothnia contains accumulations of artifacts, which the supporters of the settlement continuity theory regard as burial finds dating back to the *Viking and Crusade periods*. Following Baudou's own wording, these should be of *decisive importance for the problem of settlement continuity or discontinuity in Ostrobothnia.*

A number of objects were discovered in 1984 at Båtholmen in the village of Rejpelt in Vöyri at a distance of c. 12 metres from one of the claimed rune stones. In an article following an archaeological method, Ralf Norrman, a professor of English, dates the material to the Viking period or the Crusade period ("...the grave can be dated to the Viking or Crusade period, i.e. to between A.D. 800 and 1150."). Norrman points out, however, that the *surface layer* of the grave had been disturbed prior to excavation.[13] According to the official excavation report of the National Board of Antiquities, the whole area of the grave was disturbed and mixed down to the bottom, and fresh lingonberry leaves and even a berry were found at a deep layer.[14]

One would have expected an especially source-critical archaeologist to have considered a grave find that has given rise to such conflicting views. Should it prove to be genuine, it would lend support to the continuity theory, which – efforts to the contrary – has not yet found conclusive archaeological evidence.

The nature of the Båtholmen find should also have relevance for the authenticity of other prehistoric finds in Ostrobothnia. An opinion one way or the other concerning the authenticity of this grave should have an important bearing on how we should view other finds by the discoverer and the group which he represents. If this grave could be proven to be genuine in a project led by an archaeologist specialized in source criticism, this finding would give support to the repeated indictments levelled against the Finnish antiquarian authorities concerning the falsification of evidence in the interpretation of Ostrobothnian material. If, on the other hand, a high-level study by outside researchers shows the grave to be a falsification, also this finding would clarify many issues in the

conflicting field of prehistoric research in Ostrobothnia.

Surprisingly enough, Baudou, writing in *Järnåldersbygd i Österbotten*, makes no mention of this assumed Viking or Crusade period grave and the adjacent rune stone. The same applies to all other rune inscriptions in Ostrobothnia. Perhaps his source criticism is to such a degree focused on historical sources that there was no time to consider this aspect of the archaeological material.

Stray finds also present considerable problems of authenticity in certain parts of Ostrobothnia. In many cases similar anomalies as the above emerge in the conditions and circumstances of the finds. A site with no traces of fire has revealed a genuine object with fire patina, or an accumulation of objects claimed to be a grave contains most obviously late material. An example is a find of "fire-steel-shaped" amulets found at Rösslon, Härtull in Vöyri. According to the State Historical Museum in Stockholm, these objects differ in both material and form from prehistoric prototypes,[15] which can be interpreted as implying that they are imitations of later date.

On the strength of these observations we can undertake a closer survey of how Baudou takes into account the results of researchers of different schools concerning the Iron Age in Ostrobothnia. Of special interest is the way the results and conclusions of persons active in the *Österbottniska Fornsforskningssällskapet* archaeological society are treated. It can be clearly seen that both Baudou and the other researchers of the project do not present any critical or reserved views concerning the results and conclusions of the members of this group. Where agreement cannot be found silence prevails.[16] On the other hand, whenever Baudou et al. feel they can concur with the views of the members of this group, they generally make reference to them.[17] This shows that the project led by Baudou is to such a degree bound to the group that commissioned it and arranged its financing that it has refrained from expressing views, which are of undeniable importance for the source-critical appraisal of excavation finds, stray finds, and prehistoric sites and remains.

In view of the above, it appears that the project of the Umeå researchers has close ties with the core group of the *Österbottniska Fornforskningssällskapet* society – a counterpart on the eastern side of the Gulf of Bothnia to the Swedish 'Västgöta school' of Herostratic fame. These links are so strong that they cannot have avoided influencing the conclusions presented by the project.

Man merkt die Absicht und wird verstimmt.

NOTES

[1] To avoid unnecessary accusations of misquotation, it may be necessary to present certain sections of text *in extenso*.- 'Som framgår av tabellen har inte rågen haft någon betydelse under järnåldern. Rågen är det enda sädesslaget som framgångsrikt kunnat odlas i svedjebruk i barrskogsområden och då särskilt en speciell typ (svedjeråg, rotråg, midsommarråg m.fl. namn) som är kraftigt tuvad med stort rotsystem som under första sommaren bygger upp det näringsförråd som andra sommaren används för stråskjutning och fruktsättning. Svedjerågen har vidare kraftig bestockning vilket innebär att från en sädeskärna får man ett stort antal strån och ax (normalt kring tio) varför även stubbiga och steniga svedjor kan få en god slutenhet. Korn saknar dessa egenskaper helt och ska klara hela utvecklingen på en sommar varför det måste finnas mycket god tillgång på lättlösliga näringsämnen vid stråskjutningen. Därför ger korn inget utbyte vid svedjeodling. Finlands och Skandinaviens barrskogsområden började sannolikt inte svedjas för sädesproduktion förrän under medeltid. Naturligtvis har elden brukats i alla tider för att röja för bosättningar, betesmark m.m.' *Järnåldersbygd i Österbotten*, p. 90.

[2] E.g. Mirjami Tolonen, 'Vegetational history in coastal SW Finland studied on a lake and a peat bog by pollen and charcoal analyses', *Annales Botanici Fennici* 24 (1987), p. 362; Pertti Huttunen & Mirjami Tolonen, 'Human influence in the history of Lake Lovojärvi, S. Finland'. *Finskt Museum* 1975 (1977), pp. 80–82, 98–100; Mirjami Tolonen, 'Pollen-analytical Evidence of Ancient Human Action in the Hillfort Area of Kuhmoinen'. Appendix 5 in J.-P. Taavitsainen, *Ancient Hillforts of Finland*. Suomen Muinaismuistoyhdistyksen Aikakauskirja 94, Helsinki 1990, pp. 257–261.

[3] J.-P. Taavitsainen, 'Wide-Range Hunting and Swidden Cultivation as Prerequisites of Iron Age Colonization in Finland'. *Suomen Antropologi* 4/1987, p. 224.

[4] 'Tavallinen kaski, joka on antanut yleisnimen koko viljelymuodolle, on yleisin ja miltei kaikkialla maassamme käytetty kaskeamismenetelmä. Se tehtiin lehtimetsään tai lehtipuuvaltaiseen sekametsään, joka lisäksi ainakin suurimmalta osaltaan oli verraten nuorta. Paras kaskimetsä oli pääosaltaan verraten tasaikäinen 15–30 vuoden vanha koivua ja leppää kasvava lehtimetsä. Hyvän lehtimetsän puutteessa saatettiin kaski tehdä "petäikköön", millä näyttää tarkoitetun runsaanlaisesti mäntyä kasvavaa sekametsää. Pelkkään havumetsään kaskea ei voitu tehdä, sillä se oli luonteeltaan lehtimetsän viljelytapa... Tavalliseen kaskeen kylvettiin polton jälkeen tavallisesti syysruista, vähemmässä määrin myös ohraa.' Arvo M. Soininen, *Vanha maataloutemme*, Historiallisia tutkimuksia 96, Helsinki 1974, p. 59.

[5] On the development of burned-over cultivation of peatland from the slash-and-burn cultivation of bog, see Kauko Pirinen, 'Rajamaakunta asutusliikkeen aikakautena 1534–1617'. *Savon historia* II:1. Pieksämäki 1982, p. 366.

[6] E.g. tithe records for 1675 and 1680. VA (National Archives of Finland) 9174: 221–224; 9179: 275–277 v.

[7] Kaarle Loune, 'Vanhoista rajaseudun kaski- ja peltoviljelytavoista Suojärvellä ja Korpiselän Ägläjärvellä 1920-luvun alkupuolella'. *Acta Agralia Fennica* 93.5 (1958), p. 15. – K. Loune had graduated as MSc. and

agronomist, majoring in agricultural theory. *Suomen agronomit – Finlands agronomer*, Porvoo – Helsinki 1942, pp. 333–334.

[8] 'För övrigt är pollenanalysen ett alldeles för trubbigt instrument för att urskilja olika odlingsformer. De viktiga ogräsindikatorerna är i stor utsträckning insektpollinerade och endast undantagsvis representerade i pollensekvenserna.' *Järnåldersbygd i Österbotten*, p. 90.

[9] E.g. Pertti Huttunen, *Early land use, especially the slash-and-burn cultivation in the commune of Lammi, southern Finland, interpreted mainly using pollen and charcoal analyses*. Acta Botanica Fennica 113, Helsinki 1980; Mirjami Tolonen, 'Palaeoecology of annually laminated sediments in Lake Ahvenainen, S. Finland I. Pollen and charcoal analyses and their relation to human impact'. *Annales Botanici Fennici* 15 (1978), pp. 194–196, 198–202; idem, 'Vegetational history in coastal SW Finland studied on a lake and a peat bog by pollen and charcoal analyses', pp. 362–369.

[10] Tolonen, 'Palaeoecology of annually laminated sediments in Lake Ahvenainen, S. Finland I', pp. 195–196, 200.

[11] *Suomenmaa. Maantieteellis-taloudellinen ja historiallinen tietokirja*, VII, Vaasan lääni, Porvoo 1925, pp. 113, 116–117, 125, 130, 145, 151, 158, 162–163, 151, 183, 187.

[12] Michael Jones, *Landhöjning, jordägoförhållanden och kulturlandskap i Maxmo*, Bidrag till kännedom om Finlands natur och folk 135, Helsingfors 1987.

[13] Ralf Norrman, 'Båtholmengraven', *Studia Archaeologica Ostrobotniensia* 1985, pp. 55, 62.

[14] Mirja Miettinen, *Muistio ilmoitetun muinaisjäännöksen tarkastuksesta* 129/28.11.1984 (site inspection report), Archives of the Department of Archaeology, National Board of Antiquities, Helsinki.

[15] Letter from Lena Thålin-Bergman of the State Historical Museum in Stockholm to Bertel Holm (7 October 1983, no. 4845/83). Copy in the archives of the Section for Archaeology, National Board of Antiquities.

[16] Examples of this are the avoidance of expressing opinions regarding the rune stones of Ostrobothnia, which the leadership of the association regard as authentic, and also silence regarding the Båtholmen grave. Ralf Norrman, Båtholmengraven', p. 54; idem, 'Järnmejsel från Båtholmen', *Studia Archaeologica Ostrobotniensia* 1985, p. 67.

[17] *Järnåldersbygd i Österbotten*, pp. 72, 180–181, 183.