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Tapani Tuovinen, referee.

To the editors of the *Journal of Archaeology and Ancient History* Referee report on:

Is there archaeological potential for sociology of landing sites? by Kristin Ilves

This paper argues, with three case studies, that the varying characteristics and functions of landing sites can be interpreted as evidence of socially constructed contact zones, where people coming from the sea met and interacted with people on land. The concept *landing site* refers to all kinds of interfaces between land and sea, from anchorage points and *båtlänningar* to complex harbour sites.

The author first remarks, with good reason, that it is not enough to merely focus on the topograp-hies of different types of landing sites. In order to understand the societies that made use of landing sites we should instead adopt a wider approach and study the "diversity of cultural processes involved in landing", as she puts it. Landing sites have traditionally been placed in the context of trade or exchange of goods, towns, military organisations, ship building, maritime subsistence strategies and so on. However, there are constituents associated to the social spaces of landing sites that have not been sufficiently discussed, such as interaction, connection, transition, safety, mobility, diversity, and codes of behaviour. The very physical nature of landing sites as thresholds between the sea and the land implies that it is adequate and reasonable to examine them as liminal places where a variety of people and groups got together and many social processes were active.

The paper proceeds to an interesting discussion about the archaeological signatures of landing sites and a presentation of three case studies, Tornimäe (Estonia), Fribrødre Å (Denmark), and Krogen (Sweden). The essence of the case studies is to clarify the problems of archaeological interpretation and to bring out challenges for future research.

The paper makes a valuable contribution to the archaeological and historical discussion concerning the Baltic Sea as a network which connected more or less local coastal communities through a flow of people, goods, and cultural knowledge. A view of social contact zones along the Baltic coast, which has some parts common with Kristin Ilves' thoughts, has been discussed by Bozena Werbart in her studies on the multicultural and pluralistic ports of trade on the Baltic rim. The new points of view of this paper include the wide definition of landing sites, which prepares way for theoretical approaches in the subject, the discussion on the liminal character of landing sites, and the concrete reinterpretations of the case sites, emphasising the importance of the analysis of coastal communities on the local level.

The problem presented by the author is interesting and relevant, and the topic is clearly explained. As far as I can see, the topic is pertinent to the statement of purpose of the *Journal of Archaeology and Ancient History*. The structure of the paper is straightforward and logical, consisting of an introduction to the subject, a criticism and a definition of the problems, guidelines for a model, an empirical part, and a conclusion. The paper is well written in terms of contents, structure, and originality. It was a pleasure to read this paper.

Åbo, 26. of August, 2011 Tapani Tuovinen Adjunct Professor (Docent)

Christer Westerdahl, referee.

Kristin Ilves:

Is there (an) archaeological potential for (the) sociology of landing sites?

I have been entrusted with the task of referee. It is, I believe, my duty as an elderly gentleman with a certain experience to aid this younger incumbent of maritime archaeology.

This is in many ways, particularly in this kind of forum, an original text. The sociology of ports is a new angle, although it might be an ambition difficult to live up to. The introduction of the concept *liminal* in this sphere is interesting and entirely relevant, and should perhaps to some advantage be deepened further. There is a wealth of aspects of the cognitive landscape to be accounted for in connection with the notion of liminality (Westerdahl 2010b). The notion of a contact zone for *altering the status of individuals* ought definitely to be more emphasized because it is new. It is easy to confirm.

Myself I would like as well to introduce the aspect of *a informal postal station* to the array of purposes of the 17th-19th century out-harbour (in this case applicable in a source-critical sense only to the case of Krogen). Above all, the out-harbour was a source of all kinds of information, in a general sense of a meeting place. I know it from my own field research of extensive interviews in the 1960's and 70's (out-harbours used by local inhabitants to send messages in either direction). These harbours were of *the kind that was used in the two possible main directions along the route*, which by no means was normal= an aspect to be at least mentioned. Many harbours were thus only used in one direction.

The other direct reaction in my mind is the reminder that harbour areas seem to have been *centres* for the dissemination of myths and stories, not only of a maritime nature. This cannot more than be indicated by a pioneering study by Staffan von Arbin (1999), but also by Frans-Arne Stylegar (2004) and Per Hultqvist (2001), on a very small loading place called Bodane in Dalsland. This mechanism was also suspected by me during my field works, but never seriously considered in a text.

This article should, according to my views, be published, but not without extensive modifications. Its structure is logical, but there are problematic points.

Now to some helpful comments:

On the terminology: harbour, port, haven, out-harbour etc. A distinction should be made in a more systematic form than on p 5f.

Out-harbours would be central places in their own right, usually on islands or what would be considered an island in the maritime sense (that of accessibility) outside of obvious land contact.

This is where to evade customs and authority control in general, perhaps at the entrance to a town. Some harbours are illegal, as is well known from documentary evidence. *Is this a way of introducing a concept of "a landscape of resistance?" Archaeology has generally been for at least 20 years completely dominated by the "landscape of power."* Maritime culture is not mentioned nor defined in this text, but it is singularly apt to illustrate this alternative view (smuggling, pirates: cf books by the American historian Marcus Rediker 1987). What else is there in the sociology of ports, except rather obvious implications of local versus external signs?

As to the *topography* of harbours or landing sites there are important references to be made to Lucy Blue (1997, Bronze Age Mediterranean), Hein Bjerck (1989/1995), Anders Fischer (1995; both Mesolithic, and predictive) and Jan Bill (1999, empirical but formulating principles on locations of medieval port towns). These analyses do not entail determinism. These considerations are necessary.

The concept of maritime cultural centres centres around landing sites, but is intended to trace a development from seasonal fishing & possibly hunting to relay points of shipping, for informal pilotage and information. Finally authorities tend to discover such sites and try to control or monitor activity at the spot (my own contributions, e.g. an elementary effort in Westerdahl 1982).

The concept of transport zones, traditional zones of transport geography, introduced another form of adaptation, that of the "type of carrier" (p. 2), above all its draught and propulsion (Westerdahl 1995). Harbours do look very different in these respects in different topographies.

P. 3 on "liminal by linking." Perhaps Tim Gambin's term "satellite" (Gambin 2003) is an interesting alternative term for the harbours/ landing sites employed by individual farms, or hamlets. This would apply nicely to the extensive survey of landing sites along Roskilde fjord in the Iron Age & Early Middle Ages by Jens Ulriksen (1998).

Bottnisk Kontakt is a project of maritime conferences started in 1982. During the 15 meetings arranged harbours have been the principal themes several times or always loomed individually in presentations discussions. The latest published in Björneborg, Finland, contains a wide range of material, among others on liminal aspects (Larsson 2010) and general ideas, e.g. on material traces (Westerdahl 2010). In the last contribution all the articles on harbour themes during the years are listed.

I am not native speaker of English but I can find several critical comments to the language. For example, the verb *emanate* seems to pervade the text. It could preferably be varied by way of other words: *derived from, based on* etc.

The English used is sometimes marred by repetition (to some extent) and irritatingly long and complicated sentences, where the meaning is almost lost:

For example in the important later part:

Immediately before Conclusions:

"The questions of the culture of abandonment while moving brought to a place and a halt are definitely hypothesisable on that basis and can be also relevant in the discussions of about the establishment of control over discharge practices, which is so typical of today.#

Conclusions

"The study on reasons for why people have died emanates from the available material and has the purpose to work towards defining the visibility of different diseases as well as other fatal causes and suggesting methods and models to apply for the further investigations (e.g. Gräslund 1973). Similarly, emanating from the archaeological material available, it has been my aim to analyze the possibility to archaeological discern the specific landing site behavioural aspects and to illustrate the potential to separate different landing sites as well as to examine the varying materiality of social relations at different kind of locations."

"There were archaeological features that polarized after the examination of available material witnessing about different kind of activities carried out at these landing sites, and, among other things, suggesting differentiation as a method for organizing the data and achieving a definite archaeological understanding on diverse landing sites in general."

"But it is reasonable to hypothesise that even in cases where landing sites have been tightly spatially integrated into the settlement areas, towns and cities, these, as dynamic places, were/are still preferably kept empty of other than contacts having a transitional character."

Even if I receive a faint idea, please make it more accessible to a reader! Loud and clear! The contents are worth it.

And, besides, is it really necessary to remind us that "although the analysed archaeological material supports the model, it should still be read as an invitation into scholarly debate rather than the definite word on the subject." No one will read this as "the definite word." There is no such....

On Tornimäe the arguments on the character of the site seem convincing, but excuse me, we have to know the size of boat nails, just to be sure what we are dealing with. The annual pattern of fish is *indeed* relevant but, please, emphasize that no analysis of those fish bones recovered have been made. There is something unsaid polemical in this, tell us...

Perhaps it could be a good thing likewise to name the locations of the different harbours of Birka, apart from those "at the front" as indicated by the names Korshamn and Kugghamn. The impression is that one of these does not give anything at all, but the other provides a wealth of cultural layers.

Sunk instead of drowned for ships? Hollow road instead of sunken?

Broadbent 1988 is referred to in a note on "tomtningar," why not Broadbent 2010? I know that ethnic considerations may be irrelevant in this text, but they have to be mentioned, all the same.

With a straightening up of the text, and with a less complicated way of expressing things, we will all read something valuable on landing places!

Anförd litteratur:

Arbin, Staffan von: 1999. "Därifrån till Spårö..." En maritimarkeologisk studie av en av de platser som omnämns i en dansk sjövägsbeskrivning från omkring år 1300. C-uppsats i arkeologi, Inst. för arkeologi. Göteborgs universitet.

Bill, Jan: 1999. Port topography in medieval Denmark. I: Bill, Jan & B. Clausen, (Eds): 1999. *Maritime Topography and the Medieval Town*. PNM Studies in Arch. & History. 4: 231-261. Copenhagen.

Bjerck, Hein Bjartmann: 1989. Forskningsstyrt kulturminneforvaltning på Vega, Nordland. En studie av sinaldermenneskenes boplassmønstre og arkeologiske letemetoder. Gunneria 61. Universitetet i Trondheim. Vitenskapsmuseet. Trondheim. 2 opplag 1995.

Blue, Lucy: 1997. Cyprus and Cilicia. Typology and palaeogeography of second millennnium (BC) harbours. I: *Res Maritimae*. Cyprus-American Archaeological Research Institute, Cyprus: 31-43. ASOR. Colorado.

Broadbent, Noel: 2010. *Lapps and Labyrinths. Saami Prehistory, Colonization and Cultural Resilience*. Smithsonian Inst., Arctic Studies Center. Washington D.C.

Fischer, Anders: 1995. An entrance to the Mesolithic world below the ocean. Status of ten years' work on the Danish sea floor. I: Fischer, A. (ed): *Man and Sea in the Mesolithic. Coastal settlement above and below present sea level.* Proceedings of the International Symposium, Kalundborg, Denmark 1993: 371-384. Oxbow Monograph 53. Oxford.

Gambin, Timothy: 2003. The Harbours of Ancient Gozo. I: *Malta Archaeological Review. Issue 6 2002/2003:* 20-26.

Hultqvist, Per. 2001. Stränder och namn. Ortnamnsmiljöer och ortnamn vid Dalslands Vänerkust. Acta Regiae Scientiarum et Litterarum Gothoburgensis Humaniora 41. Kungl. Vetenskaps- och Vitterhets-Samhället. Göteborg.

Larsson, Gunilla: 2010. Hamnen som gränsområde. I: I: Savolainen, K (red.): *Bottnisk Kontakt XIV*. Maritimhistorisk konferens 1-3 febr. 2008 med huvudtemat Hamnen: 49-63. Satakunta Museum. Björneborg.

Rediker, Marcus: 1987. Between the Devil and the Deep Blue Sea. Merchant Seamen, Pirates and the Anglo-American Maritime World, 1700-1750. Cambridge University Press, Cambridge.

Stylegar, Frans-Arne: 2004. Åslaug-Kråka fra Spangereid og Ragnar Lodbrok. Om Lindesnesområdet om kulturell "melting-pot" i vikingetid og tidlig middelalder. I: *Karmøyseminaret 2002. Den nordiske histories fader Tormod Torfæus:* 128-161. Haugesund.

Ulriksen, Jens: 1998. Anløbspladser. Besejling og bebyggelse i Danmark mellem 200 og 1100 e.Kr. Roskilde. Diss.

Westerdahl, Christer: 1982a. Om maritima kulturcentra med utgångspunkt från Norrlandskusten. In: Westerdahl, C (red.): *Bottnisk Kontakt I:* 87-90. Örnsköldsvik.

Westerdahl, Christer: 1982b. Maritima kulturcentra i östra Sverige. En preliminär katalog med kartor. In: *Meddelanden från Marinarkeologiska Sällskapet 4/5:* 24-37.

Westerdahl, Christer: 1995. Traditional zones of transport geography in relation to ship types. In: Olsen, O., et al (eds): *Shipshape*: 213-230. Vikingeskibshallen, Roskilde.

Westerdahl, Christer: 2010a. Hamnar som en del av det maritima kulturlandskapet. In: Savolainen, K (red.): *Bottnisk Kontakt XIV*. Maritimhistorisk konferens 1-3 febr. 2008 med huvudtemat Hamnen: 102-117. Satakunta Museum. Björneborg.

Westerdahl, Christer: 2010b. Sea versus Land. An Arctic and Subarctic "Cosmology?" I: Westerdahl, C.(ed): *A Circumpolar Reappraisal*. British Archaeological Reports (BAR), International Series 2154: 301-327. Oxford.

Westerdahl, Christer: 2011. The maritime cultural landscape. In: Catsambis, A., B. Ford & D. Hamilton (eds): *The Oxford Handbook of Maritime Archaeology:* 733-762 (with other articles on harbours, ship yards and ship abandonment...) Oxford U.P.

In many respects, however, the references in the supplied text are entirely relevant and (to me) even surprisingly so...

Christer Westerdahl

Kristin Ilves, Author's comments

I am very grateful to both reviewers for their input and would like to emphasize that their reflections and suggestions were most valuable to me!

Reviewer 1 found the manuscript to be well written, significant and appropriate to be published as it stands. I am appreciative of the Reviewer for drawing my attention to the work of Bozena Werbart, which is now included in my manuscript. – The mentioning of the existing discussion on the multicultural and pluralistic sites on the Baltic rim is definitely relevant, particularly regarding the case study of Fribrødre Å.

Reviewer 2 was generally positive as well, but suggested modifications before publishing. However, many of the suggested changes were connected with the language and style. The editors had already decided upon a language revision which will commence during the coming weeks. The language and style in the final version of the manuscript is being professionally revised and special attention has been directed towards the parts highlighted by the Reviewer.

Considering the content-related reflections and recommendations from Reviewer 2, I am first flattered that the manuscript evoked so many interesting thoughts. The aim of my article is to suggest a simple and generally applicable model that can be used as a tool for explaining the available archaeological data, as well as provide a stepping-stone for posing new key questions in the study of landing sites. Several issues (often together with a number of stimulating references) were proposed by the Reviewer to initiate or to expand on further. These included from a more general point of view:

- * Discussion on landing sites as possible centres for the dissemination of myths and stories, not only of a maritime nature
- * Introduction of a concept of "landscape of resistance" based on the existence of so-called illegal harbours known from documentary evidence
- * Definition and discussion of maritime culture as an approach singularly apt to illustrate the sociology of ports
- * Incorporation of the analyses on the topography of various landing sites not entailing determinism

And on a more specific level:

- * Discussion on the polemical aspects in the research of Tornimäe
- * Expansion on the ethnic considerations in case of sites consisting "tomtningar"

I have carefully regarded all of the suggested issues from the perspective of the current manuscript, as well as discussed these suggestions with the editors. However, at more than c.11,000 words the manuscript is already of a considerable extent and substance. Thus, I cannot help but feeling that the inclusion of a discussion on the additional matters suggested by the Reviewer would by necessity end

up rather lengthy. Nor am I convinced that it would have a clarifying effect on a manuscript that already is of a considerable length.

Below, I have listed some tangible suggestions from Reviewer 2, and clarified the changes I have made in the final version, as well as reasons for why I have elected not to follow certain suggestions.

- The notion of a contact zone for altering the status of individuals ought definitely to be more emphasized because it is new. *In the revised manuscript I have tried to accentuate and discuss this point more.*
- The aspect of an informal postal station to be included in the discussion of the case of Krogen. *This aspect is now included.*
- To present more systematic distinction regarding the terminology of different landing sites. The author of this manuscript has raised the issue of terminology of different landing sites on several occasions (i.e. Ilves 2009) accentuating the need for distinction in their usage to avoid confusion. For the systematic distinction applicable for archaeological studies, there is a need to define in terms of archaeology what separates different kinds of landing sites from each other. As clearly demonstrated in the manuscript, existing empirical material can serve as a valuable starting point. However, in my opinion the profound discussion of distinctions that the Reviewer wishes for is a theme for an article of its own, systematically comparing and contrasting archaeological as well as ethnological, ethnoarchaeological and/or experimental data.
- The suitability of Tim Gambin's term "satellite" for the harbours/ landing sites employed by individual farms, or hamlets. I disagree with the Reviewer concerning the suitability of the term "satellite", because landing sites employed by individual farms, minor social groups and/or units cannot be stripped of its contents in order to imply a uniform function and nature. This is not to say that many landing sites employed by individual farms are not "satellites".
- Include more research history on Baltic harbours. I disagree with the Reviewer on the need for including historiography on Baltic harbours, since the critical historiography on landing sites (including harbours) was already included in the original manuscript by referring to Ilves 2009. This article comprehensively summarises and evaluates previous research into landing sites in the Baltic Sea region.
- Name the locations of the different harbours of Birka. Different landing sites of Birka were already mentioned as well as discussed in the original manuscript (p.9).

Is there archaeological potential for sociology of landing sites?

Repeatedly, the equivalence between naturally suitable coast and landing site/harbour is drawn in terms of archaeological research on landing sites. This kind of research is emanating from archaeologically and socially ill-defined concept of landing site and has created a basis for arbitrary discussions on the nature of maritime activities of past societies. There is no comprehensive and integrated understanding of the existing variability, character and patterns in landing site behaviour and relations. This article addresses the question what characterises landing sites for watercrafts in an archaeological and social perspective and, if such characteristics can be defined, what are the possibilities of seeing any of these traits in an archaeological material. Defining landing site as a contact zone where movements and meetings on land and by watercraft are taking place and are facilitated by the very locality, a generally applicable model for the archaeological study of landing sites is suggested and checked against three different archaeological case studies from the Baltic Sea region.

Landing site – the conventional concept

Travel by water has been practiced almost throughout the history of humankind whereby the motives have ranged from economically and/or militarily derived demands to leisure, curiosity, wish to discover, etc. Also, the agencies of movements by water, i.e. watercrafts, vary almost infinitely. But irrespective of motivation or vessel, safe landing has been and is an integral and important part of water voyage and the ultimate reason why there are landing sites in the first place. Watercraft landing is thus first and foremost a navigational process where the watercraft approaches the coast/shore from the sea or lake/river to the depth that is safe for the vessel; this course of action often also comprises disembarkation. Therefore, landing sites for watercrafts can be defined as sites in between water and land people have launched and reached with different kinds of watercrafts and where they have performed activities associated with that.

A good landing site shall offer shelter against winds, waves and swell; such shelter can either be provided by natural features or enhanced by man. A set of natural physical circumstances allows for a division of landing sites into various categories according to the type of location, such as landing sites at estuaries, delta arms and rivers and island-protected and inland landing sites,

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etc. (e.g. Morgan 1964:26ff). This can inspire to geomorphological classification of coasts and shores according to their suitability for landing activity. But, suitable or even optimal settings for a landing site are far from the only requirement for a place to function as a site for landing. This fact comes to the fore when we consider that many naturally sheltered sites, potential landing sites, were never utilized, even despite their proximity to settlements. It so happens that the existence of a coastal or even insular population, a temptation for inferring an adjoining landing site, is not a decisive circumstance. There are several ethnoarchaeological examples of populations abstaining from the possibilities provided by maritime surroundings, the Guanches of the Canary Islands being a case in point. The inhabitants of La Palma ate no fish and did not know how to catch them, on Tenerife no one needed or desired to swim, and the use of boats was unknown in the whole archipelago (Cook 1900:454). Similarly, the sea remained unknown to the Riff Kabyles, although these Algerian Berbers lived on a coastal massif (de Planhol 2001:137). There are also examples of consciously giving up long-term seafaring traditions. The islanders of Pohnpei in Micronesia, according to the earliest records made by European visitors, did not possess ocean-going sailing vessels and did not venture beyond the barrier reef surrounding the island (Rainbird 2007:102-104). On the Siassi Islands, in the 1970s, after a series of fatal canoe accidents and on the order of the Australian administration on humanitarian ground, an end was put to a thousand year old tradition of inter-island voyaging (Keegan & Diamond 1987:66-67). Thus, a settlement by the water does not automatically establish a landing site in its vicinity. Needless to say, in case there are specific maritime signatures in a settlement (and/or in the adjacent waters) there is also reason to ascribe a landing site to the location or reason to search for a nearby landing site, but the interpretation must always depend on the investigated site. Suspecting the usual is not enough. Man-made settings providing shelter for watercrafts or facilitating processes associated with embarkation and disembarkation, on the other hand, are a clear indication of water-bound traffic and a definite sign of landing activity.

Man-made settings connected to landing activity range from anchoring stones and poles, simple depressions and stone-cleared areas on the shoreline, to jetties, landing stages, piers, wharves and quays, etc. Similarly, by using natural physical circumstances for the classification, landing sites can be divided into different types also departing from man-made alterations and installations – for example, categorisation can be based on different kinds of breakwater installations (e.g. Morgan 1964:49-51). The classification of landing sites characterized by man-made settings can be based on other aspects as well, e.g. available materials or construction methods are applicable as categorising features. However, as the analysis of landing sites can be based on a great variety of criteria, many other classifications have also been devised and employed, such as classification according to the type of commodity handled or according to the type of carrier (pre)dominating in the traffic (Weigend 1958:190ff). One and the same landing site may fit more than one classification.

Although the constructional properties of prehistoric watercrafts suggest that landing structures were not compellingly necessary, there is nevertheless archaeological evidence of landing facilities already from Stone Age and onwards (see Ilves submitted). And from a scholarly point of view, several kinds of techno-practical aspects are possible to investigate, e.g. emanating from shoreline alterations. Evidence can be found in water level changes (Boon 1980; Ambrosiani 1985; Stanley 1999; Morhange *et al.* 2001; Sivan *et al.* 2001) and waterfront alterations, reclamations and extensions (Brigham & Hillam 1990; Brückner 1997; Höckmann 2003). Also, different kinds of information on waterfront installations are possible to attain, including, e.g.

knowledge about the availability and origin of building materials, patterns of development of installations and civil engineering (Morel & de Weerd 1981; Blackman 1982a, 1982b, 2003; Milne 1985; Oleson *et al.* 1984, 2004; Oleson 1988; Raban 1988, 1992; Saitowitz *et al.* 1993; Hohlfelder 1997; Kalmring 2008).

Landing sites are optional and regardless of the amount of questions and answers concerning alterations, building phases, progressions and constructional functions, looking at landing sites *merely* from the waterfront point of view would characterise sites only in their capability to assist safe landing. Even if structures to facilitate landing are important and often physically characteristic to landing sites, they do not tell so much about the importance of landing sites in the wider social context (see also Rickman 1985:105-106, 1988:257). Why then are landing sites important for societies? Why are they located where they are, and what decides whether a landing site is a success or not? What can we find out about societies by the study of such sites?

Liminal by linking

Generally, the role of different landing sites in connection to trade and its organisation has been emphasized as one of the most essential aspects for understanding the establishment of landing sites, their situation, their innovations and their importance for societies (e.g. Eneborg 1929; Weigend 1955; Tiik 1957; Morgan 1964; Hoyle 1968; Layton 1981; Milne 1985; Rickman 1988; Turgeon 1998; Bergman 1999; Jackson 2001; Pasquinucci &Weski 2004; Haggi 2006). On par with this, landing sites are sometimes also accentuated because of their political and military significance and their role in urban development (Deasy 1942; Hohenberg & Lees 1995; Lee 1998). But in spite of these frequent ways of contextualizing landing sites in coastal areas, many were never linked to trade or spheres of political and military organisation. Instead, they linked in with fishing or grazing or maritime hunting without being reduced to places facilitating nothing but landing. There are, moreover, landing sites with explicit tasks providing a possibility for interaction and exchange of information. Landing sites are also established solely for technological development or leisure or as strategic hide-aways, etc. Yet, these aspects are seldom incorporated into scholarly analyses as considered unreachable in terms of source material, which, in turn, emanates, at least partly, from the purely functionalistic and technological reasoning in the studies of landing sites generalising, for example, interdependency of shipbuilding and sites for landing.

The pronounced emphasis on trade has created a simplistic and almost deterministic understanding of landing sites. This tendency is especially apparent in the archaeological studies (Ilves 2009). To account for inferences to be made on the basis of landing sites, we must deconstruct this rigid discussion and stop thinking about landing sites as mainly related to trade as well as stop emanating from the hypothesis of invisibility of landing activity. Instead we should clarify and come to terms with a much more complex landing site category.

From a general social point of view, embracing men of war as well as children rafting bark boats, one should point out the importance of landing sites in their widest social sense, namely, as contact zones in both a cultural and a topographical sense. Landing sites, created for people using watercrafts, constitute sites for interplay between people who meet at a certain kind of border defined as a coast or shore. Only on coasts and shores is interaction made possible on land as well as on watercrafts and I therefore suggest that we look upon landing sites as water bound contact

zones – sites where movements and meetings of various kinds, both on land and by watercraft, are facilitated by situation and place, i.e. by locality (see also Horden & Purcell 2000; Falck 2003). Understanding landing sites in this way their importance for society would not be trapped in rigorous and deterministic constructions, on the contrary, a wide variety of factors could be included the subject of the inquiry.

Adapting this perspective it becomes possible to hypothetically generalize about a diversity of cultural processes involved in landing. Since landing sites enable mobility and displacement both on land and by watercraft they also constitute places for different kinds of connections, interactions, actions and counteractions as well as separation – landing sites are liminal places of communication. Allowing for coastal societies to be more or less dynamic a constant flow of people of diverse backgrounds meet, probably to a much greater extent at landing sites than at many other places of contact. Because of this quality, the well-known metaphor by which deserts are regarded as seas and oases as islands allows us to a certain extent to discuss landing sites as oases (also Reger 2010) – as the only places to access in the hazardous and unpredictable surroundings and therefore to be reached by many. A range of analogous experiences and institutions could be hypothesised in this kind of meeting place; notably, a tendency for both landing sites and oases to bring together people of widely different backgrounds temporarily and/or seasonally. Inevitably, these meetings have a strongly confronting and affronting as well as selective and changing nature within the mixed frames of such communities. For example, contacts between people alike could be welcomed to a greater extent than in more detached surroundings, but also abhorred, when contacts with different taken more cautiously. However, communication depends on the dominating nature of social relations, and this also affects the actual places of communication.

Safety from the hazards of nature offered by landing sites is obviously relevant in seafaring societies – it is one of the reasons for establishing many landing sites exactly where they are and one of the main values for their users in general. But socially, landing sites are not safe in the same meaning of the word. Despite extensive regulations and laws directed among other things towards ensuring the peace at landing sites, landing sites and harbours are socially dynamic and thereby constitute sites suitable for provoking tension around social rules; counteractions could result in severe violence, and ports, for example, are often associated with frequent crimes and deviant social behaviour (e.g. articles at PortCities London website;

http://www.portcities.org.uk/london/server/show/nav.001001006). But inasmuch as social and administrative boundaries are often less fixed in port areas, greater acceptance towards social deviance is also ensured; tolerant attitudes allow for a diversity of lifestyles as well as, e.g., religious expressions. This means that landing sites may have been important for some agents as the only places where they were socially accepted (also Falck 2003).

On the basis of the above, a far from complete and hardly exclusive number of features associated with landing sites become apparent. Mobility, displacement and connectivity are definite constituents of landing sites. But diversity, selectivity and tolerance are to be presumed, too. There are also several categories usually kept apart and opposed which polarize and comingle in the case of landing sites, such as safety and insecurity, accessibility and regulations. Thus, there is definitely a potential for a broader understanding of landing sites as social phenomena. However, while a historical narrative sociology of landing sites and harbours is an acknowledged and employed methodological approach (e.g. Knight & Liss 1991; Lane 1997; Brown 2005; de la Fuente 2008; Harris 2010), there is as yet no such thing as a sociology of

landing sites that would reach across time and space. Nevertheless, the discussion above has already moved us from seeing landing sites as just thresholds between two distinct spaces for people coming and going, to spaces with their own effects and significance. And, although not identical to every landing site, in important ways, there is tentatively the same set of features applicable to each and every site and forming the foundation for suggesting a theoretical framework model for the archaeological study and understanding of landing sites for watercrafts (Fig. 1).

A MODEL OF LANDING SITES AS CONTACT ZONES

Landing sites for watercrafts are on the border between water and land. Apart from constructions, alterations or other obvious topographical and/or technological requirements to facilitate processes associated with safe embarkation and disembarkation, landing sites are essentially empty zones; however, they should not be reduced to the scope of watercraft operations only. Landing sites are not simply passive settings for landing, but socially constructed contact zones for both land-based individuals and groups and social units onboard watercrafts. The social function of landing sites is to facilitate movements and various kinds of meetings, both on land and by watercraft. However, social communication at these places has generally transitory aspect; thus, landing sites are no "societies", they are meeting places. Furthermore, landing sites often operate instrumentally to alter the status of individuals – for example, a housewife becomes a fisher, a seaman becomes a drunkard, a farmer becomes a pirate, etc. – there is a liminal aspect of social situations at landing sites in addition to the more straight forward physical liminality of sites' placement.

Obviously, in positing such a model of broad application, many operation details cannot be specified and there have to be adaptations developed for specific situations. However, in order to move beyond the realm of trade and exchange in the studies of landing sites and to capacitate the possibility for a comprehensive and integrated picture and understanding of the existing variability, character and pattern at landing site behaviour and relations, it is justified to test the proposed perspective. In the next part of the article I will evaluate the potential to archaeologically study landing sites as contact zones by means of three different cases from the Baltic Sea region.

Archaeological signatures of different landing sites

Trade and exchange as an important and/or decisive phenomenon in many societies can easily be studied and evaluated with the help of archaeology (e.g. Callmer 1991; Sindbæk 2005), because commodities of trade are found frequently, their source of origin can be determined and distribution patterns thereby observed, etc. – there is a well-defined source material to start with. The same achievability applies to the study of other issues which have a defined source material. For example, disposal practices can be examined through the study of landing sites' waterfront (Lindenlauf 2003; Delgado 2009) and concepts of reuse and recycling in societies can be examined by using landing sites as a source material (Lemée 2006; Leino submitted). But, in a strictly archaeological context there is usually much less information to work with if we want to understand mobility and communication beyond trade and exchange. The situation is even more

complicated since landing sites, especially if not connected to trade and exchange, are generally considered to be highly elusive in the archaeological record.

Landing sites for launching and reaching with different kinds of watercrafts must have been situated right by the shore. The dominating but deficient definition of landing site, based on the logics of location and drawing the equivalence between naturally suitable coast/shore and landing site, has also its' roots in this trivial peace of knowledge. Former coasts/shores, however, are not necessarily the same as today – for example, the Baltic Sea region is still influenced by the shore displacement caused by the Ice Age, it has resulted in huge landscape transformations; but natural as well as artificial changes of shorelines are worldwide phenomena. Archaeological methods have been proposed, discussed and tested for establishing the exact spatial relation between a site and the site-contemporary shoreline in areas with shorelines in a modern day terrestrial context (e.g. Ilves & Darmark 2010). However, knowledge of a site's exact spatial relationship to the site-contemporary shoreline is not enough for discussions on the character and nature of activities conducted at water-bound sites and to ascribe the functions of landing to a site (see above).

Furthermore, in earlier research, there has been an unclear definition of what kind of activities were carried out at different landing sites; therefore, in terms of archaeology, it has been unclear what kind of archaeological markers one should look for in order to find out which coastal sites were used as landing sites. It is, however, reasonable to suggest, that there have been and are varying types of landing sites ranging from simple anchorage points, roadsteads, moorage, boat-launching sites, shipyards, dockyards, harbours for shelter or fishing to marina, seaports, ports of trade, naval ports, industrial harbours, etc. In general, for example, while anchorage points are used for overnight stay and/or for waiting for suitable sailing conditions, the harbours for shelter are mainly connected to escaping hard weather; while shipyards are sites of shipbuilding, the boat-launching sites are places for setting watercrafts afloat, etc. It is also reasonable to suggest that different landing sites are also characterised by a generally different nature of social relations, and both foreseen and unforeseen behavioural aspects at the locations. However, comparatively few landing sites perform only one certain task and carry only one certain meaning. Thus, anchorage points can also function as harbours for shelter and harbours for shelter include anchorage points; boat-launching sites can also have functions of shipyards as shipyards can accommodate boat-launching sites, etc. Various, but often simultaneous functions at landing sites are, however, usually discernible (cf. Lundström 1981:42ff; Herrmann 1997:38ff, 62ff). The issue of separating different functions at a site is much more problematic in case the tasks of a site are being totally replaced by another and the nature of social relations has been shifting. Thus, for example, the role of shipyard can not only merge but also change into the function of dockyard. Landing sites for fishing have often expanded into trading places even if fish was never traded; trading places on their hand could expand into administrative centres without having a direct economic function (Hasslöf 1985:478) – or the other way round (e.g. Pawson & Buisseret 2000).

By the archaeological study of sites, we infer about conducted activities, which should lead us to examine the motives behind and making inferences about past societies. Although ancient landing has been generally considered to be invisible in terms of archaeology (see, however, Norman 1995), there is an increase in archaeological documentation of landing sites. In the following, I will examine the archaeological material and its social implications from three different, but not exceptional landing sites in the Baltic Sea region – the local, seasonal/temporal fishing village from the Viking Age at Tornimäe, in Estonia, the late 11th century dockyard at

Fribrødre Å, in Denmark, and the post-medieval meeting place at the natural harbour site of Krogen, in Sweden (Fig. 2). To some extent, the data from these places will be also compared with a number of other coastal sites. The purpose is to discuss the possibility to discern archaeologically specific landing site behavioural aspects and check the general correlation with the suggested model of landing sites as contact zones.

TORNIMÄE

Tornimäe (Tower Hill) is situated on the Estonian island of Saaremaa, in Pöide parish, which has been called the granary of Saaremaa, as the most fertile agricultural soils of the island are located there. This fact together with the concentration of conspicuous ancient monuments has created an interpretation of this territory as being the most outstanding and richest in Viking and Early Medieval times – one of the earliest churches on Saaremaa was also built in Pöide parish. And the contemporary gateway, i.e. landing site for the region has been considered to be found in Tornimäe. Indications that this site was a place for landing in the Viking Age and Early Middle Ages are strong. It is located on top of a formerly seaside hill, back in time overviewing the waters and sea lanes. At some distance, Viking Age graves have been registered, with swords and spearheads among the finds. Only 1 km west of Tornimäe there was a medieval manor, which because of its vicinity to stone graves is considered to derive from prehistoric times and to be the unit that possibly had direct control over landing site at Tornimäe in the Viking Age². During Middle Ages, the manor became responsible for collecting taxes in the area, and emanating from the written sources, Tornimäe is considered to have continued as the main landing site of the region for transporting taxes - construction remains interpreted as a stone jetty, about 500 m north of the Viking Age site (Fig. 3), are considered to belong to the medieval activities. There is also an oral tradition among the local people about ancient landing practices at Tornimäe and even about the find of a ship and maybe of a jetty (Mägi 2005).

Minor rescue excavations were carried out twice in the 1960s at Tornimäe, at the spot pointed out for Viking and Early Medieval activities, and in 2004 the first extensive research excavations were undertaken. During these fieldworks a cultural layer (black, greasy and sooty soil) at least 40 cm thick was studied; modest house foundations with traces of rebuilding and seasonal use were suggested. Finds of local pottery, mostly sherds of simple cooking vessels, and a lot of fish bones dominated the find material. Bones of domesticated animals as well as a considerable number of seal bones were also represented, and boat-rivets were collected. However, there were no trenches directly by the former waterfront, these were placed about 30 and 50 m from the approximate shoreline; thereby, the question of the actual landing area was left open. The site is dated by means of the pottery to the 8th/9th-10th centuries (Mägi 2005). Despite the fact that the investigations gave no support for the hypothesis about this site as the "gateway" landing site, it has entered the academic writings in both Estonia and other countries as the central harbour of Pöide district (e.g. Mägi 2004; Creutz 2003). The archaeological find material discovered only supports the statement that there was a seasonally used local fishing village at Tornimäe.

² The stone graves on Saaremaa seem to belong only to elite families and the absolute majority of prehistoric graves have been recorded around manors known from medieval written sources. The graves thus mark the best arable lands, which have been owned by the elite ever since farming became the dominating subsistence. The connection between historical manors, prehistoric stone graves possible harbour sites has been discussed by Estonian archaeologist Marika Mägi to be obvious (see 2004:143-145).

There are many local fishing sites of seasonal character known both archaeologically and historically from the Baltic Sea region. As for archaeology, the type of site which has been subject of the most profound investigations is to be found in the whole Baltic archipelago, namely, fishing camps consisting of a group of primitive buildings/huts, so-called "tomtningar"3. Characteristically, these huts have seldom any remains of a stove or chimney. They are situated close to the water but sheltered from winds. Frequently, these dwelling remains are also connected with visible traces of landing in front of them - narrow stone-cleared areas surrounded by stone walls crossing the (former) shoreline – as well as remains of constructions for storage and for drying nets. Archaeological investigations have discovered sparse, but typical settlement finds at these sites, such as food refuse, flints for fire making and fishing equipment. High phosphate values at the shoreline contemporary with the camp indicate slaughter and/or gutting activities at the contemporary water's edge. These types of fishing camps have been used for long time periods from the Iron Age up to the beginning of the 20th century. They were not permanent living places, but on the basis of their constructional nature and geographical location interpreted as seasonal camps used by local inhabitants. In their Late Iron Age phase, they were connected to developments in the Early Medieval societies in which the consumption of fish was an important part of life (Varenius 1978; Norman 1991, 1993, 1995; Landin & Rönnby 2002).

Tornimäe, however, is not situated on the marginal areas away from arable lands as the type of fishing camps mentioned above. Seasonality/temporality at Tornimäe is mostly argued for because of the absence of oven remains (Mägi 2005:70). But the lack of, for example, objects associated with cattle breeding or cultivation and activities associated with that, such as grinding, also indicates seasonal/temporal use. Overlapping house constructions, suggested at Tornimäe, could be a sign of houses being used episodically and raise the questions about the level of attachment to the area. The task of tracing evidence of seasonality/temporality at landing sites would be interesting to discuss further. Is it possible to distinguish general criteria of seasonality – what in the archaeological material is the same for all seasons every year, and what is different for each season but with the same annual pattern? Since seasonal migrations are a common factor in the behaviour of many sorts of fish, the different ages and sizes of fish will be found in different places during different parts of an annual cycle (Colley 1987:17), a study of both fish bones and fishing gear would therefore be useful for achieving better knowledge about the seasonality of fishing villages. Also, other osteological remains may contribute (e.g. Olson et al. 2008:4). Furthermore, from a social standpoint, certain fishing methods have social implications and may inform about sex roles or the cooperation of large groups of people (Colley 1987:16). The same applies to seal hunting. Thus, a study of the seasonal/temporal usage of Tornimäe fishing village over at least two centuries on the basis of material related to fishing and sealing could be valuable as a source of information about issues of how social identities and relationships were connected to (long-term) seasonality/temporality.

The Tornimäe site was according to the documented archaeological evidence used by locals of the island of Saarmaa – the cultural layer and pottery used by the people at Tornimäe have both a counterpart at the contemporary Pöide hill-fort situated in the vicinity (Mägi 2005:70, 72-73). There is no find-material at Tornimäe reflecting overseas connections. As indicated by its

³ It is important to note that there are also special seal hunting camps consisting of "tomtningar" studied archaeologically. In such cases, besides somewhat different archaeological findings and geographical location, there are fewer huts; these are situated higher up in the terrain and not in connection to the shoreline (e.g. Broadbent 1988).

rather long use, the site's specialised activity of fishing and seal hunting helped to create and sustain its own social and economic place within the broader social community of the island. But, although located immediately by the most fertile arable lands of the whole island and used over two centuries, its lastingly seasonal/temporal character attests that this site was established and maintained as a place of transitory nature, constructed by and for local social units based further in-land. It is clear that the seasonal fishing village at Tornimäe was not living outside the forces of historical, social and cultural change and should thus be considered in that context. It is too simple to argue that the abandonment of the Tornimäe site around the year 1000 was due to the changing environmental conditions, which might have made it too difficult to approach the site by ship (cf. Mägi 2005:73); especially, as this hypothesis was never tested during the excavations and there were historically documented landing activities taking place in the basically same area during the Middle Ages. For alternative perspective, one should also, for example, hypothesize about a possible social conflict that triggered a break in the tradition, or about a competition among different resource users in the same area; or, maybe, returning every year to the village for the fishing/sealing season started to be perceived as a waste of time because of decreasing catches, etc.

The excavated landing site at Tornimäe should clearly be understood as a seasonally/temporally used fishing village of local importance and not as a "central district harbour". However, the gateway landing site of the district may still be situated in the vicinity and visible in the archaeological material. Various but often simultaneous functions as well as the spatial detachment of activity areas are well-known features at landing sites. The site with the remains of a stone jetty, so far interpreted on the basis of its height in relation to the approximate shoreline as belonging to the historically known medieval activity, may have been in use earlier. It may have been the underwater foundation of a Viking Age and Early Medieval landing facility similar to those recently discovered and investigated, for example, at Birka, on the small island of Björkö, Sweden. The stone constructions there are situated right at the today's waterfront and partly incorporated into current landing activities, therefore, long considered to be modern as these were also rather far away from the Viking Age settlement area; the archaeological excavations of 2010, however, have dated these constructions to the Viking age (Sw: Pressmeddelande från Södertörns Högskola 2010-10-04;

http://www.forskning.se/pressmeddelanden/pressmeddelanden/marinarkeologiskafyndibirka.5 .2ac1d9f612b59a0254b8000386.html). If the stone constructions at Birka or Tornimäe belong to landing facilities also used during the Viking Age as hypothesized, this would surely open an additional perspective on how to search for and study prehistoric landing sites — alterations belonging to landing activities would be possible to find tens of meters from the activities-contemporary shoreline.

Different but contemporaneous landing sites in the same area, situated side by side, can be observed in the Baltic Sea region first and foremost at the archaeologically well-studied Viking Age and Early Medieval trading centres, such as the afore-mentioned Birka. There are different kinds of shoreline alterations and construction remains visible at Birka by the Viking Age shoreline (Heamägi 2006). These landing sites had surely different functions as did their nearby activity areas. In addition to the extensive and varying constructions for landing activities in front of the main settlement area and also in the more marginal areas (Hansson 2004), the hypothesis of different use can be suggested on the basis of the archaeologically studied location used by Birka's garrison, where the associated, stone-constructed landing stage has been documented

(Lindström 2003). Landing sites of different function on Björkö are also possible to consider on the basis of the calculations of the transport needs connected to, for example, requirements for wood or for waste management (Wiklund 2009). Thus, in the case of Tornimäe, rather than "making" the site of a local Viking Age fishing village of seasonal character into the central district harbour (cf. Mägi 2008:101) one should test and investigate the hypothesis of the existence of different landing sites in the same area and their relation to each other – differentiation is a way to coincide.

Above all, however, the study of the Tornimäe Viking Age fishing village should be pursued further in its regional context. It would be unfortunate to disregard landing sites of such 'unimportant' character in the interpretations of the past societies. The Viking Age people at Tornimäe did not constitute a haphazard community just sometimes fishing or hunting seals. The same site was used throughout centuries and, thus, by several generations, although temporal and spatial pattern seems to remain the same until the abandonment. The persistence of cultural practices at this Viking Age seasonal fishing village, maybe parallel to activities at other landing site(s) in the same area, offers an opportunity to investigate the causes and dynamics of the region's social character.

Fribrødre Å

In the beginning of the 1980s a late 11th century dockyard for breaking up and repairing watercrafts was discovered and investigated on the Danish island of Falster a couple of kilometres from the sea along the western shore of the Fribrødre River (Fig. 4). Loose parts from a number of vessels were scattered along the river in no particular order but constituting in places layer up to 1 m thick and 7 m wide, stretching several hundreds of meters along the shore which had partly – at the so-called entry to the yard-site – been stabilised by means of a wattle construction. Almost all discovered parts of ships were worn and damaged, showing signs of coming from ships that had been partly broken up. Vast amounts of chippings as well as waste timber were spread in among the ships' parts. Many fully finished but unused wooden nails were discovered. The site also yielded various tools, such as knives, whetstones, wooden wedges, bailers, pins and stilettos, potsherds of so-called Baltic ware were scattered throughout the entire find-layer. The whole activity area was under the low water level during the site's use. There were vast numbers of posts hammered into the riverbed at the excavated portion of the site constituting among other things remains of narrow foot-bridges. No adjacent contemporary settlement has been located, but there were traces of a sunken road leading down to the yard area. Notably, the highest phosphate values of the areas around the Fribrødre River were documented at the dockyard activities (Skamby Madsen 1984a, 1984b, 1991; Skamby Madsen & Klassen 2010).

Throughout the age of wooden ships, it was a necessary practice to break up worn-out vessels in the dockyards and to work all the material that was still serviceable into new hulls in areas with a frequent shortage of (seasoned) timber; it also saved trouble and labour of making new parts. The archaeological material from Fribrødre Å clearly witnesses breaking activity, but not of entire vessels, only partial breaking of watercrafts was executed. Although the find layer is densely packed with wooden chips as well as pieces of wood and branches in various stages of processing and many unused loose tree-nails were discovered, this is rather evidence of repairs than proof of the site's role also for shipbuilding. Furthermore, no tools special to shipbuilders were found at the site. Dockyard functions, the intensity of which is suggested by the extensive find-layer, seem however to have been planned and not of a spontaneous nature (as suggested by Skamby Madsen

& Klassen 2010:299). This is possible to infer, for example, from the site's inland location which made it not so easy to access, as well as from the wattle construction which had been carefully repaired and maintained.

The dockyard activities at Fribrødre Å are often compared to the activities at Viking Age Paviken on the island of Gotland (e.g. Skamby Madsen 1984a:9, 1984b:273). At Paviken a major site has been studied, plentiful industrial activities have been suggested, including glass-bead production, metalworking and also shipbuilding. Activities connected to yard are spatially clearly restricted to the beach, where also two parallel slipways, 20 m long, 2 m wide and 0.5 m deep, have been documented. The associated find material consists mainly of thousands of boat rivets and nails, often, deliberately broken, but unused iron nails and rivets were also discovered. Of tools, pointed chisels, nail punches and one special nail puller tool have been found (Lundström 1981:68-72). The shipbuilding suggested by the investigators is actually not provable in the archaeological find material and thereby only speculatively considered. But, at Paviken, there is clear evidence of boat-repairs, similar to the evidence at Fribrødre Å, though the technological practise exercised was probably of a different nature.

The watercrafts broken up and repaired at Fribrødre Å were of Viking Age Northern-European tradition. Since the parts of the vessels documented show that the strakes of ships were not fastened together with iron rivets common in Scandinavian shipbuilding, but with wooden nails, and there are also finds of caulking material consisting of a mixture of lamb' wool and moss, the activity in this Scandinavian area is assigned to Slav people. The occurrence of Slavic shipbuilding features at the site does not in itself mean that the users of the boats or the breakers/repairers were Slavs because the same features were also used by Scandinavians; nor does the discovered pottery of the Baltic type that was originally a Slav type, because it was also copied and produced locally at number of sites in Scandinavia. However, there are several other finds from the site, such as the mounts from knife sheaths, an ear-ring and at least one knife with finely engraved decoration on its shaft, which associate with West Slavic origin. Also, a number of place-names in the area constitute West Slavic element (Skamby Madsen 1991:197ff).

The difference between the Slavic and Scandinavian areas in the western and southern Baltic in the late Iron Age and Early Medieval times is linguistically clear – as has also been pointed out repeatedly in Medieval written sources; furthermore, an overwhelming proportion of the material culture respects this linguistic border (see Sindbæk 2008). At Fribrødre Å, however, several features intermingle and imply Western Slavic presence during the time of the dockyard activities. A Slavic presence in Danish areas during late 11th century is however not surprising since there were multi-faceted contacts between the regions in the Viking period and Early Middle Ages (Jensen *et al.* 2000; Urbańczyk 2010). However, since the material at Fribrødre Å is rather mixed, it seems speculative to state that the actors were exclusively Slavs. Despite that fact, the site is often treated as Slavic, recently by Naum, who even states that inhabitants of Fribrødre Å "have chosen to actively sustain traditions and separate identities" (cf. 2010:116).

Based on the archaeological material available, Fribrødre Å was a site with narrow footbridges in the water and a partial shoreline reinforcement, but otherwise empty. It was a locality where special technological knowledge and mastery was used together with other resources needed for dockyard activities, such as available timber. It may have been a yard connected with one or a few specific military campaigns stretching over a few decades (cf. Skamby Madsen & Klassen 2010:305, 359) or an open neutral dockyard, in any case, the Fribrødre Å dockyard was a site in a specific location planned for facilitating meetings connected to the demands of

repairment technology, not ethnicity. Furthermore, being a site of its own significance established on the waterfront for the meetings in-between people coming with watercrafts and those living further in-land, the Fribrødre Å dockyard definitely correlates with the contact zone model.

KROGEN

On the 26th of March 1860 about forty rigs and full-rigged vessels from many different places in Northern Europe were anchored on the eastern side of the small island of Krogen, in the archipelago of Stockholm in eastern middle Sweden waiting for the break-up of the ice (Öberg 1987). Today, only 150 years later, it is at first sight even impossible to imagine a maritime encounter of that scale at this modest spot. The island of Krogen ("the Tavern") – approximately 600 x 300 m in size, quite a rocky place with insignificant extent of land to cultivate – is situated in a cluster of similar skerries and islets in the southern part of the Stockholm archipelago. Emanating from written, cartographical and ethnographical sources, the island of Krogen is mainly associated with its suitable geographical position on the crossroads of the inner and outer sailing routes in the Stockholm archipelago and with the tavern that existed on the island from the end of the 17th century and during the 18th century was run co-operatively with the customs station on the neighbouring island of Läskär. During the 19th century both the customs station on Läskär and the tavern on Krogen were abandoned. The customs services were moved to the southernmost island in the Stockholm archipelago, Landsort, where a co-operation between the customs officers and the pilots was established (Roque 1998:52).

There are only few and sometimes barely visible remains left on dry land from the former activities on the islands of Krogen (and Läskär). There are several house foundations on the island, among which the remains of the 17th and 18th century taverns have been identified. The garbage mound of the tavern(s), consisting of household utensils such as forks and broken pottery, has been found. Also, a detached cellar or storage room has been located in the proximity of the tavern remains as well as remains of what is possibly a well. In addition to the building foundations and other traces of settlement, there are archaeological features clearly signifying the maritime role of the island, such as shoreline alterations and remains of jetties. Also, from the centre of the island, departing from house foundations, there are pathways leading to and from the coast in three directions. But the understanding of the extent of the former maritime importance of this island is considerably enlarged if the underwater scene is considered. There are thick and rich underwater cultural layers at several places around the island. Thousands of clay pipe fragments representing a time-span from the 17th to the 19th century, as well as potsherds and bones, far beyond the amount that would have been produced by the activity of the simple tavern, have been collected at different occasions from the seabed by local people, scholars and sport divers. Stone foundations and burned pieces of wood, loose timbers - some of them carved, are recorded under water as well as a number of anchors. And up to date, there are 12 shipwrecks known from the area, intentionally drowned or abandoned as well as accidentally sunken (Fig. 5) (Roque 1998).

Krogen is one of many similar sites of the period in the Stockholm archipelago connecting good anchoring grounds of a natural harbour site with the activities of taverns, customs and often also piloting stations run by local people (Westerdahl 1989; Kutuonen 1993). Thick habitational debris around the island carry evidence of intensive use, and not only for escaping bad weather, or for over-night stops at the tavern, or for picking up a pilot, but also for longer stays, such as passing the winter or for gathering into seasonal convoys for travel. Furthermore, the very

existence of the tavern indicates that the maritime activity around the island was not seen as temporary or accidental; it is a reasonable hypothesis that the tavern and customs station were established by the state as a reaction to the already routinized use of the natural harbour site by people sailing to and from Stockholm. Thereafter, the public forum for both locals and visitors was naturally embodied in the tavern and, in consequence, more public forms of socialization were exercised. Meetings were facilitated in the socially acceptable context of the tavern. In addition to their recreational value, these encounters could shape the attitudes and manners of all parties; function as instructions for encounters to come. Obviously, there is a need for profound archaeological studies for specific discussions of the nature of meetings at this locality and of other social aspects. But, as an example of the potential, already the analysis of the thousands of clay pipe finds can shed light on issues of possibly changing consumerism, spending habits and social trends of 17th to 19th centuries' interacting inhabitants and transients of Krogen (as in Fox 2002).

The interaction of the natural harbour site with the activities of the tavern and the piloting and customs station were also increasingly reflected in the power relations – places where so many people and activities assemble on a regular basis almost immediately create also an opportunity to monitor or negotiate norms. The transfer of the functions of Krogen in the 19th century to Landsort is a direct reflection of the transformative effects of the routinized meetings to become further regulated by the state when feared of developing into meetings of the nature not benefiting the state. Emanating from the contact zone model, the transfer of functions is also to be understood as means of keeping Krogen just as a meeting place between people sailing to and from Stockholm and not allowing it to naturally develop into the place of further economic significance and more, thereby possibly threatening the position of Stockholm.

Comparable developments of similar principle could probably be investigated at several places that have combined good anchoring grounds of a natural harbour with interacting activities of other kind. The potential is already scholarly acknowledged, for example, in the case of the historically well-documented medieval/post-medieval naval base of Djurhamn, also situated on an island in the Stockholm archipelago - in 2008, a special foundation was established to promote scientific studies of this site (Sw: Stiftelsen Vasakungarnas Djurhamn; http://www.vasakungarna.se/wcm/content/index). According to the written sources, the activity at Djurhamn began in the middle of the 15th century when the natural harbour site on the southern side of the island of Djurö was taken into use as a meeting station/base for grand military fleets of both Swedish and other origin. The village of Djurö was established later whereby the existence of a naval station was one of the factors that contributed to the location and formation of the village (Rundkvist 2009:142, 146); in 1680, however, the base for military fleet was moved away from Djurö (Glete 2009). In terms of the archaeological material, even in the case of Djurhamn, the former maritime importance of the location is not so much visible on land as under water. Some burial places are known immediately on the medieval/post-medieval shoreline and few finds are documented, including a battle-damaged early 16th-century sword (Rundkvist 2008), but there is an extensive cultural layer with thousands of finds under water. Up to date, also, three wrecks have been discovered (Sw: Bulletin Djurhamn, No. 1, 2010; http://www.vasakungarna.se/wcm/WeceemFiles/ ROOT/Bulletin%20Djurhamn%20nr%201 %202010.pdf).

It is not self-explanatory that natural harbour sites at sailing routes and/or naval stations have many ships ending up as wrecks in the area. It surely seems not to be the case, for example, with

the archaeologically investigated medieval naval base at the crossroads of both ancient and modern sailing routes by the tiny island of Högholmen in the outer archipelago of south-western Finland where extensive constructions both on land and under water have been documented (Edgren 1979, 2005; Ericsson 1989). But accidents do occur even in the sheltered surroundings of landing sites (e.g. Casson 1965:32-33) and that has been the case with some ships discovered around Krogen – these shipwrecks carry among other things signs of collision with an islet or a rock. But at Krogen, there are also several shipwrecks that were deliberately abandoned and intentionally drowned as suggested by their location in very shallow water in the innermost parts of the natural harbour and their state of preservation. These vessels were obviously estimated to have no further value and were therefore carefully "lost" in an out-of-the-way place. The questions of the culture of abandonment while moving brought to a place and a halt are definitely hypothesisable on that basis and can be also relevant in the discussions of about the establishment of control over discharge practices, which is so typical of today.

Although only roughly sketched above, there is no doubt that the small island of Krogen was an important place for navigation – a meeting place in maritime surroundings for both local people and visiting sailors, leaving imprints on both sides – the archaeological study of which can be useful in understanding such locations, with potentially accumulating economic activities so large that they would otherwise have been regulated as closed down, as social phenomena.

Conclusions

In the Baltic Sea region, the sea and other bodies of water are features of central importance and, repeatedly, had an essential role during history. Thus, landing sites for watercrafts have created inevitable spots for societies, the study of which has a potentially high source value in understanding the maritime aspects of past societies. In the archaeological investigations of landing sites, however, hypothesis testing has often been replaced by colourful "might-havebeens" based on data carefully selected for the occasion whereby the divide between observation and assumption is erased. Instead of empirical material, scholars' pre-understanding on the invisibility of landing activity has turned into well-known, accepted and self-evident part of archaeological knowledge. But, there have been many different kinds of landing sites which have left archaeological evidence of varying kind, as also demonstrated by the sites examined in this article. Obviously, there are also landing sites that will remain elusive in the archaeological material. However, no-one is building up an argument, for example, based on (as yet) archaeologically invisible heart attacks as the main cause for death in prehistoric times, despite that death occurred and, among other things, surely also due to heart attacks. The study on reasons for why people have died emanates from the available material and has the purpose to work towards defining the visibility of different diseases as well as other fatal causes and suggesting methods and models to apply for the further investigations (e.g. Gräslund 1973). Similarly, emanating from the archaeological material available, it has been my aim to analyze the possibility to archaeological discern the specific landing site behavioural aspects and to illustrate the potential to separate different landing sites as well as to examine the varying materiality of social relations at different kind of locations. A theoretical framework model of landing sites as contact zones was suggested in order to capacitate a comprehensive and integrated understanding of the existing variability, character and patterns in landing site behaviour and relations.

The three sites illustrated, chosen as being different in many respects – from the range of archaeological inputs of study to discovered traces and interpretations on the sites' character, all correlate with the suggested model according to which landing sites are explainable as contact zones of its own significance. Archaeologically, variety of traces connected to launching and reaching with different kinds of watercrafts and activities associated with that have been discovered at former waterfronts (and/or clearly indicated at former waterfronts) as well as under water. There were archaeological features that polarized after the examination of available material witnessing about different kind of activities carried out at these landing sites, and, among other things, suggesting differentiation as a method for organizing the data and achieving a definite archaeological understanding on diverse landing sites in general. However, finds of other nature than connected to various landing activities were of accidental quality at landing areas, explainable with the statement that these were the places of movements and meetings, established and maintained as such. In relation to landing sites examined, human life "happened" either on board watercrafts (also Bjerck 2009) and/or on land, varying in distance from the landing areas. But it is reasonable to hypothesise that even in cases where landing sites have been tightly spatially integrated into the settlement areas, towns and cities, these, as dynamic places, were/are still preferably kept empty of other than contacts having a transitional character.

Model presented by this article and tested through the analyses of the archaeological material and its social implications from three different landing sites was the first attempt to make sense of the landing site notion in a wider social context. It was suggested as a tool for explaining the available archaeological data as well as posing new key questions in the studies of landing sites. Most of all, it was as a step towards a general model and theory for the sociology of landing sites that would reach across time and space. However, although the analysed archaeological material supports the model, it should still be read as an invitation into scholarly debate rather than the definite word on the subject.

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Figures

- Fig. 1. A model of landing sites as contact zones
- Fig. 2. The location of the sites in the Baltic Sea region discussed in the article
- Fig. 3. Tornimäe excavation plots in relation to the approximate site-contemporary shoreline drawn with an enhanced dashed line (after Mägi 2005:68). A star up centre on the satellite image marks the location of a stone jetty (© *Maa-amet*, accessed 26-07-2011)
- Fig. 4. Fribrødre Å excavation plots in relation to the current river-bed (Skamby Madsen 1991:188). Main dockyard activities indicated with a cross on the satellite image (© *Google Earth*. 54°52′11.64″ N and 12°03′00.91″ E, image 1-1-2006, accessed 26-07-2011)
- Fig. 5. A sketch map of Krogen. House remains and possible house remains as well as pathways marked on land; most of the discovered wrecks and find concentration areas marked underwater (after Roque 1998:30-31; © *Google Earth*. 58°47′38.71′′N and 17°50′40.00′′E, image 8-7-2010, accessed 26-07-2011).