

Journal of Baltic Studies



ISSN: 0162-9778 (Print) 1751-7877 (Online) Journal homepage: https://www.tandfonline.com/loi/rbal20

Framing, valuing, and assessing the environment: August Wilhelm Hupel's perceptions of Baltic nature and settings for human activities

Esa Ruuskanen

To cite this article: Esa Ruuskanen (2018) Framing, valuing, and assessing the environment: August Wilhelm Hupel's perceptions of Baltic nature and settings for human activities, Journal of Baltic Studies, 49:2, 199-214, DOI: 10.1080/01629778.2018.1439076

To link to this article: https://doi.org/10.1080/01629778.2018.1439076







Framing, valuing, and assessing the environment: August Wilhelm Hupel's perceptions of Baltic nature and settings for human activities

Esa Ruuskanen

Department of History, University of Oulu, Oulu, Finland

ABSTRACT

This article addresses early modern Baltic environmental history and historical geography by interpreting the public writings of August Wilhelm Hupel within the theoretical framework of framing, valuing, and assessing nature and the environment. Hupel's broad series of publications, issued during the heyday of Baltic Enlightenment, not only contributed to the emergence of Baltic geographical studies but also played a pioneering role in placing the knowledge on Estonian and Livonian topography and nature to order. Although Hupel concerned physical geographical aspects in his writings to some extent, his primary interest definitely focused on human relations with and across space and place. The cameralist thoroughness and calculativeness within that geographical field of enquiry brought about an endeavor to catalogue the parts of nature by using their utility or harmfulness as the measure. However, in Hupel's opinion the then-prevailing civilisation also contained certain responsibilities for and to nature, particularly regarding forests and their sustainable use ('nachhaltende Nutzung'), which Hupel wished to promote in the Baltic provinces of Russia.

KEYWORDS August Wilhelm Hupel; Baltic Enlightenment; environmental history; environmental values; history of ideas; historical geography; Estonia; Livonia; eighteenth century

Introduction

August Wilhelm Hupel (born 1737 in Buttelstedt, Weimar, died 1819 in Paide, Estonia) epitomized the interplay between the Baltic provinces of Russia and central European German-speaking countries during the era of the Enlightenment. Eighteenth-century Baltic German nobility and literati were usually well aware of the general features of German public debate, and, furthermore, many of their sons were sent to German universities to gain a degree. Many German graduates in turn came to Livonia seeking posts in professions that required scholarship. Hupel was one of these newcomers. During his first years in Livonia, he worked as a tutor until, in 1760, he was appointed as a pastor, first in Ecks (Äksi), then 3 years later in Oberpahlen (Põltsamaa), in present-day Jõgeva County, Estonia. Hupel ascended to the peak of the Baltic Enlightenment but he was not so much an extraordinary intellectual as a prolific and well-networked publisher and organizer.

Indrek Jürjo, an Estonian author who has conducted several rigorous studies of Hupel, has stressed Hupel's influence as a proponent of the popular Enlightenment

and a member of the central European Republic of Letters (Jürjo 1990, 1991, 2004). These studies include readings of Hupel's influence in the region, regard him as a publicist who outlined the past of the Baltic provinces from the Middle Ages to the mid-eighteenth century, and an 'Estophile' who put the special characteristics of past and present Baltic culture on the map (Donnert 1984, 2008; Kasekamp 2010; Kirby 1990). Ultimately, studying Hupel from the standpoint of cultural or social history has dominated the field of research in the previous decades.

This article addresses a different research angle, the valuation of the natural environment, as well as settings for human activities in Hupel's published works, and regards Hupel not only as a scholar who put the special characteristics of Baltic culture and history on the map but also attached culture to the material world and vice versa. In general, this approach has been covered sparingly in previous studies on Hupel. Therefore, this study aims to add to the existing knowledge on Hupel and complement those made by Jürjo. It is of the utmost importance to understand the part Hupel has played in the narrative of late eighteenth-century Baltic nature writing. Although Hupel has not been previously associated with nature writing, some parts of his texts can be viewed within that framework as well, if nature writing is understood in its broadest sense as literary work that provides insights into the many physical realities that comprise an area or region. As primary sources I use Hupel's magnum opus, Topographische Nachrichten von Lief- und Ehstland I-III, as well as Nordische Miscellaneen, a publication series edited and largely written by Hupel. Hupel's texts form an interesting concoction of topographic, travel and nature writings. Topographische Nachrichten mainly follows the narrative of eighteenth-century topographic writings as the title suggests and is based on detailed and guite stereotypical categorization and description, but in some parts, it also incorporates topics that are quite common to nature writing. Nordische Miscellaneen is rather a thematic continuation of his magnum opus and thus displays topographic accounts, though the series equally comprises reviews, which can also be read as travel and nature writings. Throughout his literary work, Hupel is almost concerned as much with nature as with culture; issues of human relationships with nature are quite relevant to his thinking. Hupel's topographic narrative possesses certain views not only on the built environment but also on the natural environment. A certain voice for change, a rather characteristic tone in nature writing from the onset, is also present. The promotion of the sustainable use of forests (nachhaltende Nutzung) in the Baltic provinces of Russia played a particularly noteworthy part in Hupel's publications.

Hupel authored the aforementioned publications during the heyday of the Baltic Enlightenment, when an economic and cultural boom followed the turbulent times of the beginning of the eighteenth century. Innovative initiatives, structural administrative reforms, and a nascent liberal intellectual climate brought about by the reign of Catherine II realized the expectations of the region's literati. According to Jürjo, Hupel considered proficiency in the exponentially burgeoning literary production of the era the duty of every Enlightenment-minded intellectual. Hupel's activity as a representative of Baltic Enlightenment was wide-ranging. Topographische Nachrichten inspired, for instance, other learned, Enlightenment-minded persons in the region to take part in the debates on social evils, as well as on ethnicity, cultural roots, and the past. The reading society (Lesegesellschaft) he founded in Oberpahlen in 1771 significantly increased the further development of reading societies in the region and helped him outline his own writing process. Although Hupel's own articles make up a large



amount of the volume of the Nordische Miscellaneen, the names of around 30 of his colleagues can be identified. Moreover, Hupel stayed in close contact with the German-speaking Gelehrtenrepublik throughout the Baltic Sea region by writing for such journals as Historisches Portefeuille, Allgemeine Deutsche Bibliothek and Russische Bibliothek. According to Jürjo, Hupel always considered himself as a mediator between the knowledge gathered in the Baltic provinces on Russia and a wider Germanspeaking audience, including those in St Petersburg. (Jürjo 2004, 126-33, 203-10, 242-58, 484-89)

To emphasize Hupel's relevance to knowledge of early modern Baltic German environmental thinking in particular, his written legacy creates the first comprehensive geographical treatise of nature and the built environment of the region. Although Baltic nature and landscape was sketched in the compilation Zustand Des Russischen Reichs (1769), and by such German scholars as Friedrich Gladov (1716) and Anton Friedrich Büsching (1754), Hupel pioneered the description of the natural environment of the region in a thorough and comprehensive manner. Hupel was so convinced of the value of his work that he even criticized both Gladov and the authors of the compilation of 1769 for their imprecision. He wanted to correct some points on Baltic nature offered by Büsching, although he thought highly of that great figure of mideighteenth-century German geography (Hupel 1774, 13-20).

It is obvious that Hupel could not have produced such a large volume of work solely by himself. He depended on those who provided him with information about the region or other kinds of support, utilizing strong networks. These networks included, for example, the reading society (Lesegesellschaft) of his parish in Oberpahlen, his fellow pastors in the province, and the publisher Johann Friedrich Hartknoch in Riga. The support and networks provided by Hartknoch and his press gave more coverage to Hupel's works than any other printing house in the region (Jürjo 2004, 199, 2006, 97-117, 142-47). Hupel's writing process progressed through contact with his informants, members of the Library Society and kindred spirits among the Baltic Enlightenment, as well as the wider Gelehrtenrepublik in the Baltic Sea region. Hupel was a remote though not detached character among the vital and evolving crop of eighteenth-century, German-speaking topographic writers. It is thus of utmost importance to contemplate how both Topographische Nachrichten and Nordische Miscellaneen embody not only Hupels's but also his era's ideas, especially cameralism, utilism, the drive for exploration, and evolving perspectives of the relationship between humans and nature.

The starting point of this study, however, is not the tracing of the previously described contributor networks and the potential exchange of letters between the members of these networks but the interpretation of Hupel's public texts. This article develops its argument from three cognate bases: framing, valuing, and assessing nature. I will start from the premise that the processes of framing, valuing, and assessing the natural environment are culturally and socially constructed. While nobody doubts that deer, fir trees, swamps or rivers existed in nature before we named, framed, and assessed them, they take on significance through these actions. Furthermore, freely following on from Kenneth Burke's theories of identification, framing, valuing, and assessing an object of the natural environment with certain terms and not others also entails by implication negating alternative understandings. This hypothesis more or less applies to values as well. Yet, the aforementioned processes unavoidably began to produce, limit, and shape discourses on the natural environment. (Tschida 2012, 121)¹

I begin with the premise that Hupel focused on the integration of humans and nature, and aimed to develop a cultural response to nature. The concept of nature, in turn, is ambiguous and reflects all the sentiments humans encounter in relation to the natural environment. (Passmore 1980, 207-18) As for valuation, my focus is mainly on the anthropocentric values, whose basis rests on physical (e.g. health), mental (e.g. feeling), or societal (e.g. well-being) attributes. More specifically, I trace the kinds of valuation – aesthetical, ecological, economic, existential, and utilistic – that can be found in Hupel's texts. Moreover, how did framing, valuing, and assessing the environment relate to general objectives of integrating humans and nature? Finally, how did Hupel's cultural response to nature become involved in a much larger cultural and socioeconomic project (i.e. the mobilization of the natural environment)? In other words, I seek to locate Hupel's environmental values within the wider European culture.

This discussion that follows is organized into three sections. In the first, I engage with the concepts of space and place and contemplate how they relate to the framing of natural and built environments in Hupel's works. In the next section, I focus on the different types of valuations of the natural and built environments, which can be found in Hupel's public texts and, furthermore, consider how values can be interlocked with the questions of framing and assessing nature. In the final section, I continue to deal with framing and valuing nature and the ways in which they, in this case, mediated a process of assessing Baltic environments and, in addition, the emergence of particular environmental concern focusing on future visions of the use of Baltic forests.

Framing Baltic environment(s)

Timothy Morton (2009, 11) has expressed that 'in order to have an idea of an environment, you need ideas of space'. This is an apt remark when it comes to both premises and readings of Hupel's texts. By following in the steps of the eighteenthcentury geographers and topographic writers, he delineated the ways in which facts about nature can be correctly ordered and acquired. Additionally, by stressing the importance of utility, he may have set frames to his aesthetic observation of nature.

The tradition of early modern German topographic writings formed one of the frames through which Hupel tried to integrate nature and culture. He mentioned Büsching's Topographie der Mark Brandenburg (1775) as one of these writings while explaining his own goals in the field of topography and geography (Hupel 1777, 4). Although Hupel was not exactly a geographer in the twentieth or even nineteenth-century sense, he contributed to the emergence of that new discipline in the Baltic provinces. In the era of the Enlightenment, geography remained almost entirely in the hands of textbook writers that produced compilations of regional descriptions and showed little concern with the theory of the subject or its relation to significant issues in the scientific thought of the time (Bowen 1981, 124–25). In many ways, Hupel numbered among this group of geographers. For Hupel, like so many eighteenth-century European textbook writers, the idea of geography and topography was encyclopedic, part of an attempt to place the world and knowledge of the world in order (Withers 1996, 275-76). Where there is order there are also frameworks. Furthermore, what was excluded from these frameworks was equally as important as what was included in them.

Although Hupel covered such physical geographical aspects as, for example, climate and landforms in his writings, to some extent, his primary interest was definitely in human relations with and across space and place. 'I don't use the word "topography" in its strictest meaning', Hupel wrote in the preface of the first volume of Topographische Nachrichten, 'My own intuition told me not to provide the reader with all the characteristics'. He specified and referred to the differing knowledge interests of 'naturalists', 'historians', 'ecclesiastics', and 'traders' (Hupel 1774, 3-4). This interest was closely tied together with a regional desire for knowledge as well as identity and selfperception-building processes. Self-perception was in a way a geographical perception based on the distinctiveness of the relatively newly acquired western Russian provinces, and that distinctiveness was constructed through a process of situated practical enquiry including traveling, representation, and assigning of place (Withers and Livingstone 1999, 1-14). No wonder that this ambition resembles utilism, an attitude which philosopher Juhani Pietarinen defines as a 'way of thinking that nature exists only for the welfare of humankind' (Pietarinen 1992, 290). Echoes of that attitude can easily be found in Hupel's texts, as well as in early modern German topographic writings in general (Knoll 2009, 2013). Nature provided civilization with resources and natural routes, particularly waterways, which benefited the ceaseless movement of material flows to urban cores.

Hupel outlined surrounding environment(s) through borderlines he placed between nature and culture, and at the intersection of nature and culture. That was a characteristic starting point for seventeenth- and early eighteenth-century German topographic writings (Knoll 2009, 153-57). First, there were centuries-old places for mercantile activities and encounters across borders. Riga, as a place where a bishopric, cathedral, Landtag, and the core of bourgeoisie life were situated, created an apex of Baltic achievements (Hupel 1774, 197-216), being followed in rank order by other historical cities such as Reval (Tallinn), Dorpat (Tartu), Narva, and Pernau (Pärnu). The narrative related to these old commercial towns highlighted them as well organized, picturesque, and tidy urban cores of many advantageous human activities. Such less pleasing urban phenomena in the early modern period as particulate emissions caused by the use of wood as a fuel or dung and rubbish heaps did not fit in that narrative, which visualized towns as purely functional and harmonious systems. Cities and towns were followed by a group of provincial congregational centers, like Hupel's Oberpahlen, as well as individual manor houses, which formed the heart of local country life (Hupel 1774, 85-8, 197-405).

Then there were spaces and places with completely different characters. Hupel placed certain abstract yet strongly cultural borderlines between 'coastal areas' and 'the interior' on the one hand, and 'populated places' and 'wilderness' (Wüste, Wildnis) on the other. Compared to the more cultivated and urban areas in Saxe-Weimar, where the landscape was mainly artificial and where Hupel grew up, the signs of man's hand appeared more sparsely in Livonia and Estonia. In the third volume of Nordische Miscellaneen, in 1782, Hupel described how 'forests and marshy areas compose almost all of the ground, in which towns, country houses, villages and populated areas emerge only as specks', and 'Livonia consists of wilderness and woods more than those countries which are cultivated' (Hupel 1781, 186).² Hupel wished to emphasize how profoundly the Livonian and Estonian countryside differed from the German countryside. In the Baltic province of Russia, 'some manor houses have plenty of fertile land; others have to use a lot of time and money to convert the rotten and watery soil into arable soil by digging canals or cutting down the woods, and in some cases it is not even worth it' (Hupel 1777, 226).3 Converting spaces into specific and civilized places made a difference, and in this process, exploration and knowledge was the key, whether it applied to language, ethnicity, or the natural environment. Even the title of Hupel's magnum opus wishes to call the reader's attention to places because topography is about the description of a place as much as geography is about the description of earth or land.

Urban cores and civilized nature were surrounded by unequal spaces. Watercourses and forests embodied most evidently the spaces at the intersection of nature and culture. Rivers, which Hupel greatly valued, could be, and in many cases had already been, converted into useful spaces, which helped humans to transcend such physical boundaries as distance. The River Düna (Daugava) could even be seen as 'the mother of the wealth of Riga'. Hupel (1774, 126) judged how 'the grandeur of the city and its mercantile life, for all its barriers, owes to that river in question'.⁴ In addition, Hupel found the view from the floating bridge of the city, when one can see 'a multitude of ships' from many nations, 'most picturesque' (128). It was as though civilization was gliding over the river and a feeling of 'borderlessness' could almost be sensed. That feeling of 'borderlessness' became tested when one continued into the interior, or the winter came and the major waterways froze. Little could be done about the climate but by dredging rivers and streams, and by making tributaries navigable, the distance between coastal areas and the interior could be shortened. Hupel particularly admired how humans had even created 'man-made waterways by converting shallow rivers or streams into canals' and thus 'linked the interior to coastal commercial cities'. In Hupel's visions of the future, canals could play a considerable role in promoting trade in Livonia and Estonia if the lords of the manor realized the advantages of canal transport (91-92, 129).

Alternatively, certain sandy and muddy areas represented the antitheses of the partly civilized nature mentioned earlier. These spaces set physical boundaries to human progress and could even give off unhealthy vapors, as was hypothesized in the case of some bare and waterlogged soils, the drainage of which had made 'the air healthier and also probably a bit warmer' (Hupel 1774, 93). Overgrown swampy lakes' in particular represented the antithesis of fertile soil (97). Large and characteristic sand dune areas here and there on the Livonian coast and the shores of the River Düna (Daugava) were, in turn, 'unpleasant', since they posed 'obstacles to agriculture and shipping' (196, 217). Unlike most twentieth and twenty-first-century tourists, Hupel did not even find these spaces aesthetically pleasing.

Teleological themes such as function and design appear frequently in Hupel's texts. As an eighteenth-century Lutheran guided by the teleological explanation of the world and the rationalism of the Enlightenment, Hupel considered that everything in nature has a purpose, and that nature, like society, was a dynamic whole. 'Nature is very efficacious', Hupel (1783, 204) stated, in an issue of Nordische Miscellaneen in 1783, and expressed a view of nature as a creative force itself. Hupel exemplified how in Livonia and Estonia 'nowhere exists a scarcity of rivers and streams', 'all lakes, rivers and streams are rich in fish', 'forests are swarming with all kind of animals and birds' (Hupel 1774, 92-3), and 'nature provides us with an abundance of various berries' (Hupel 1777, 486). In addition, Hupel (1774, 91) saw Livonia and Estonia as 'blessed with various bountiful and splendid products', which leads him to the conclusion that the natural world provided evidence of conscious design by the Creator. This belief in a natural purposiveness and order can be seen as a way to legitimate social relations and norms. Here, the conservative Hupel emerges, who, as Jürjo puts it, was dedicated to the policy of Catherine



II (Jürjo 2004, 485). There was, however, also the Enlightenment-minded Hupel who believed in reforms if they did not revolutionize the social order. Hupel thought that nature could also be an arena for limited reforms. Though nature was a creative force in itself, its splendor also presumed paternal solicitude or reforms, at least in environmental thinking. After witnessing excessive logging in Livonia in the 1760s and 1770s, Hupel invited locals to nurture the creative force of nature and was sold on the idea that 'by way of little appropriate contribution, the aim can be achieved with giant steps'. That aim was 'tackling the loss of valuable forests' (Hupel 1783, 204). Hupel considered that humans have limited responsibilities for nature. This view was based on Christian principles on the human responsibility for nature on the one hand and eighteenth-century German models on the sustainable use of forests (nachhaltende Nutzung) on the other.

Hupel's concern over forests exemplifies how his writings vary from very stereotypical topographic writing, which preferred idyllic and disciplined description, to nature writing, in which the arena is fundamentally open to personal experiences. The narrative is no longer about the description of manicured and well-tended landscapes and idyllic nature; instead, overtones that are more ambiguous arise. Thus, the process of framing becomes touched by environmental concern and the world of experiences and sensations, which is quite uncharacteristic of conventional topographic writing. The borderlines between nature and culture shade into something less inflexible, and material flows to urban cores, in this case the flows of timber, could also refer to overconsumption and a burden on nature. This particular angle makes Hupel an exceptionally modern thinker among eighteenth-century topographic writers.

Valuing Baltic environment(s)

It is necessary to examine the wider cultural context in which Hupel lived before discussing questions about values and valuation in his works. Upon closer inspection, the idea of progress opened up novel perspectives on interpreting the nature of the natural environment in eighteenth-century Europe. Gottfried Leibniz (1646-1716) and Georges Leclerc de Buffon (1707–1788), among others, observed these perspectives. They found progress in the cultivation of the earth accompanying progress in human affairs. To the religious in particular it must have seemed that the Creator's purpose was for human beings and their institutions to improve over time. The progress of humans was clear in the many beneficial changes already made on the earth's surface, in humanity's control of nature, in its adaptation of the entire planet to its needs and desires, and in its thirst for knowledge. (Glacken 1967, 636, 664; Wolloch 2011, 73, 76) Therefore, it was possible to set and explicate a value for the physical world and, consequently, appraise nature as an object of mobilization resting on human will, needs, and preferences (Watling 2009, 15-16). This way of thinking almost solely calls forth economic and utilistic values with regard to nature. In Hupel's texts, these can be found in relation to value for livelihood, travel, and progress, often interwoven and stretching from the past to the near future.

Hupel's general view of the Baltic environment(s) was idyllic; underscoring that God had bestowed good conditions on the region's inhabitants. He wrote that, 'Livonia is flat and water-rich for the most part, formed by forests and still more by marshy areas, but at the same time a land blessed with sufficiently big yields and some excellent goods' (Hupel 1992, 91). Hupel described how 'plenty of fishes come from all seas, rivers and streams, albeit in different amounts' (92-3), 'our water, except the one that emanates from morasses, is healthy and tasty' (93), and 'soil is, as one can conjecture, of very different kinds: close to Riga, Reval and Pärnu, as well as on the shores of the Bay of Riga it is sandy and loose, although here and there fecund as well' (98).8 By admiring bucolic landscapes, he preferred 'productive fields' (fruchtbare Feldern), 'incomparable gardens' (herrliche Gärten), and even the peasants' apple and cherry trees to rough nature (Hupel 1774, 334-36, 340, 342, 1787, 340-44). It was as though humans needed to add the finishing touches to nature in order to maintain civilization and forward progress, and nature was at its best not in its primitive state but when it became mastered and ameliorated by humans. That was not only Hupel's idea but also a widely held way of thinking in eighteenth-century Europe and European colonies (Wolloch 2011, 79-91). For instance, Carl Linnaeus (1707-1778), one of the great naturalists in the era of the Enlightenment, anticipated that the vast wilderness of Lapland would be converted into arable land and Ural cedars and Alpine fir trees would be planted on the bare Lappish fells (Koerner 1999, 79–81).

The idea that nature remains a servant of humankind manifests itself, for example, in the way in which Hupel describes morasses, although he is not as unequivocal in his attitudes toward them as many of his contemporary scholars in western and northern Europe. For Hupel, the reclamation of pristine morasses represents progress. Like many leading naturalists and philosophers in Europe, such as Count Buffon and Immanuel Kant (1724-1804) (Glacken 1967, 659-63), Hupel (1774, 93) believed that the climate changes to become temperate following the drainages of morasses. On the north side of the Baltic Sea, that same way of thinking guided the research of Pehr Kalm (1716-1779), one of the so-called Apostles of Linnaeus and a professor of Oeconomie at Åbo Akademi (Kalm and Backman 1757, preface, Kalm and Wegelius 1758, 1§, 3§, 1763; preface; Kalm and Foeder 1778, 5§, 6§). Unlike Kalm and Anton Friedrich Büsching (Büsching 1754, 680), Hupel did not believe that it was possible to tame all morasses and convert them into arable land. In response to Büsching's views on this matter, Hupel stated that a 'large part of them cannot be drained at all or even easily, for instance overgrown lakes, wide marshy areas or low-lying areas between hills from which water cannot be conveyed away' (Hupel 1774, 21-2).9 He was of the opinion that morasses can be useful in many other ways too, for example, as natural meadows and peat extraction sites, or in silviculture. The use of peat as a fuel also helped local people to conserve their decreasing forests. Hupel (1783, 214) did not perceive a substantial need for new arable land in Livonia and Estonia, which would require laborious drainage efforts in the first instance.

It is clear that utilistic values are apparent in Hupel's texts, but it would be an oversimplification to assert that they comprised the only values herein. Admiration for certain elements of nature or landscapes, a subject touched upon earlier, brings us to the question of multisensory experiences in nature, including visual and auditory sensations, feelings of temperature and humidity, as well as odors. Given the premise that nature is also a cultural construction and natural experiences are multisensory, practices related to aesthetic valuation deserve special attention (Berleant 1991, 69-75). Moreover, aesthetic values are notably tied to the question of framing and assessing nature and they can be considered a prerequisite for the development of deeper conservation values.

Feelings that Hupel's physical surroundings evoked in him are shown here and there in his writings, although he did not further develop the reasoning for that part of his observation by any means compared to such contemporaries as Immanuel Kant,

Jean-Jacques Rousseau (1712-1778), David Hume (1711-1776), and Edmund Burke (1729-1797). Among the most beautiful and picturesque places he posited were 'magnificent manor houses and their English-style landscape gardens', spruce forests ('die schönsten Tannenwälder', 'die schönsten Ressourcen'), and the Gauja River in Livonia, with its sandstone rocks and steep banks ('ein ganz hübscher breiter Strohm') (Hupel 1774, 131; Hupel 1783, 189, 194-95; Hupel 1791, 336-37, 340, 342). This valuation both showed something about Hupel's identity and contributed to the identity-building process of the region's literati. Knowledge of historical roots and the sources of wealth drew up guidelines for aesthetic valuation as well.

Hupel longed for dense forests which were once 'rich in various animals and birds' and which 'had become scarcer near urban cores' (Hupel 1774, 93, 95, 1783, 86). By showing his personal feelings about forests, Hupel transcended stereotypical patterns of eighteenth-century topographic writing and paved the way for nature writing. A certain voice for change becomes apparent particularly where the human relationship with forests is concerned.

Assessing Baltic environment(s)

The formerly stated processes of framing and valuing nature inevitably began to produce, limit, and shape discourses on the natural environment. Through anthropocentric and utilistic lenses of observing nature, Hupel emphasized human design in the making of the ordinary Baltic landscape. By assessing this process of designing landscapes, he saw it mostly as desirable progress. By driving forward that progress in refining nature, however, humans had also made some mistakes and, thus, in these particular cases failed in their intentions of being effective stewards of valuable natural resources (Hupel 1774, 93-97, 99-101, 1777, 333-36, 487-88, 1783, 186-214; 1791, 336-37, 340, 342). Assessing nature comprised highlighting nature's treasures for the benefit of the empire and, similarly, expressing certain concerns over the wrong design of landscapes or poor stewardship of nature. These assessments were meant for those landowners and bureaucrats who had the power to make local as well as provincial decisions.

In his assessments of nature's resources, Hupel saw Baltic forests in particular as a true and unquestionable treasure and a source of wealth for the province. In Hupel's texts, forests were never represented in disparaging terms like swamps or sandy scrublands. Forests provided humans with valuable sawtimber trees and building and fuel materials and, alongside this, roused aesthetic feelings of nature's beauty. Excessive logging also engendered conservationist endeavors toward better solicitude to prevent the dwindling of growing stock (Hupel 1774, 93-7, 99-101; 1783, 186-214).

In Hupel's opinion, the problem was not so much the lack of valid forestry regulations, since there were such rules dating back to the late seventeenth century when Livonia and Estonia were part of the Swedish realm (Hupel 1783, 186-214). The Swedish Crown legislated against overcutting in 1664 by decreeing that on common land, estates were only allowed to log for their own heating and building purposes and not commercial ones. In addition, the logging of oaks, beech trees, and rowan trees on common land was forbidden, and those who deliberately caused wildfires, and were caught doing so, could be even sentenced to death. The strict penalties for illicit felling notwithstanding, the authorities noted that oaks were still being cut illicitly in Crownowned forests. In 1697, the Crown enacted a complementary forest law, which ordered gamekeepers to keep a watch on Crown-owned woods. The legislators found fault with the ways in which the locals used valuable hardwoods, particularly oaks, and often may have inflicted regional shortages of sawtimber trees. The strict laws, however, could not prevent overcutting in the region. Under Russian rule, conditions did not improve in the first half of the eighteenth century, despite new regulations imposed by the Landtag (provincial diet) in 1741 (Daniel 1929, 13-15; Karoles 1995, 44).

The problem was that landowners or landless peasants, who usually cared very little about state regulations meddling with their traditional right of forest use, did not adopt the letter of the forest regulations. In addition, the trees for logging were usually chosen roughly without very much consideration for the consequences for forestry. Together with a growing demand for arable land, timber, and firewood, that attitude led to further overcuts and scarcity of hardwoods in certain areas. Hupel judged that a more apparent change of sentiment was needed to curtail overcuts and incompetent felling. To his mind, not only were strict regulations useful but fundamental education of the locals was equally important. In this respect, novel German forestry models provided the best answer to this burning question (Hupel 1783, 186-214).

The sustainable use of forests and its German model (nachhaltende Nutzung) was Hupel's focal ambition when it came to his assessment of nature's resources in Livonia and Estonia. Saxon mining administrator Hans Carl von Carlowitz (1645–1714), who in turn was influenced by writings of English scholar John Evelyn (1620–1706) on silviculture, and by new forestry regulations imposed by Louis XIV of France, originally formulated the practice Hupel wished to promote. As a cameralist bureaucrat, von Carlowitz wished to promote greater economical use of forests compared to the common disregard for forestry. The main principle of Carlowitz's theory was that the annual volume cut must not exceed the annual growth increment. That approach to forestry was later adopted as a guideline for modern forestry but in the eighteenth century the reality was usually completely different. Overcutting generated regional scarcity of a vital raw material not only in the Baltic provinces but also, for example, in Bavaria, Denmark, England, France, Prussia, Saxony, Sweden, and Switzerland (Hasel and Schwarz 2006, 307; Huss and Von Gadow 2012). Naturally, Hupel was not alone in considering forests as the embodiment of the natural world in need of protection against exploitative private interests on behalf of the common interest in the future. As Joachim Radkau states, replacing previous exploitation with a sustainable silviculture that guaranteed the balance between woodcutting and regrowth became the motto of the eighteenth and nineteenth centuries (Radkau 2008, 213-14). Hupel's contribution to the chorus of shrill alarms crying out for state intervention and enhanced supervision to tackle the impending shortage of wood has, however, not been recognized and acknowledged before.

Having lived for years in the region, Hupel became an eyewitness to overcutting and its environmental and economic impact. His contribution to nature writing thus springs from very personal experiences and feelings, and it resonates with attitudes that a certain harmonious symbiosis between nature and culture benefiting both sides was shaken up in this respect. In Topographische Nachrichten he described how forests once alive with all kinds of animals and birds have nowadays become fewer in number' (Hupel 1774, 93). 10 Hupel stated that the main causes for that loss were slash and burn cultivation techniques still used by settlers and the overuse of wood as a building material or fuel. Hupel saw that the thriving distillation business based in Baltic manor houses also affected the condition of forests. According to Hupel, the loss



of pristine forests from the 1740s-1770s was most extensive in the island of Oesel (Saaremaa) and some parts of Livonia near the urban cores (Hupel 1774, 95, 303).

Hupel repeated his concern about the misuse of valuable forest resources in Nordische Miscellaneen in the 1780s and offered tangible proposals for improvements. He explained how people in inhabited areas, particularly in Livonia, bemoaned the increasing scarcity of firewood and sawtimber trees hampering their everyday life. Hupel argued that more often 'the most fabulous sawtimber trees had already been felled', leaving 'trees of only little value' remaining. Hupel saw that the loss was due to 'apparent defects in forestry practices' and the 'damaging misuse of forests'. To tackle the loss, the prevalent misuse of forest resources should cease. Hupel, however, did not advance any arguments for perceiving forests primarily as conservation areas, such as medieval-style holy groves, and quite the contrary, considered the utilization of forests as necessary. The issue was 'the reorganization of forestry practices' and 'the education of land owners' so that they would internalize the focal principles of the sustainable use of forests (Hupel 1783, 186-87). Hupel suggested that manor houses burdened by the scarcity of forests should 'survey their remaining hardwood resources in the first instance' and then significantly 'restrict the use of wood for heating and building purposes'. In these areas, peat could replace wood as a fuel (Hupel 1783, 199, 214). Moreover, Hupel thought that it was of utmost importance to improve the state of fire prevention in rural villages and hamlets since human-induced forest fires inflicted a great deal of damage. Hupel (1783, 194-95, 206-10) proposed that 'every manor house should engage a fire guard', and there should preferably be 'building and firefighting plans in every village to prevent blazes'.

Hupel showed clear concerns about conventional attitudes toward forests. Where did his concerns originate? By promoting the entrenchment of originally German ideas about the sustainable use of forests, Hupel acted rather as a proponent of eighteenthcentury forestry than as a conservationist in a modern sense. He did not propose some parts of nature to be protected from human activities; instead, he advocated better regulation of these activities. Although he saw birds and mammals as a natural part of luscious forests, he did not advance that reasoning to cover environmental ethical questions; instead, he merely mentioned in passing that the loss of forests and animal species was interrelated. Hupel considered human-induced deforestation as a temporary and reversible flaw (Hupel 1783, 204).

Hupel's assessment of overcutting and regional forest scarcity appeared at the same time that the issue became ever more noticeable in the Baltic province, and legislators tried to get involved in the issue. The regulation of 1774 set limits on the felling of hardwood in Crown-owned forests but it also decreed the right of peasants to supply cities and towns with firewood without noticeable hindrance. As for private land owned by country houses, the decision-making power was in the hands of noble land owners (Daniel 1929, 17). That was the target group to which Hupel primarily wished to disseminate information on new German forestry practices.

All things considered, it is difficult to say what Hupel's influence was on the situation in question. Given the broad distribution of his writings and his correspondence with other Enlightenment-minded Baltic Germans, it is likely that he had some influence on the matter, at least by having been actively involved in the debates and by disseminating knowledge on new forestry practices. The Governor General George von Browne (1762-1791) began to foster the reconstruction of forestry practices, and he mooted several proposed rules aimed at rectifying the unfavorable situation at the

Landtag in the mid-1780s. Many of these motions, however, did not come into effect. In 1789, the Landtag eventually guided private land owners to plan afforestation of untapped bushes and to encourage sharecroppers to do the same. Nevertheless, as the rule mostly functioned as a quideline, a lord of a manor could still do as he pleased in relation to his woods. Demand for wood grew at the end of the eighteenth century, having been fueled by the distilleries, glassworks, and sawmills, which mushroomed over the years, and the deterioration of forested areas continued in more or less the same vein. The overcutting issue remained unresolved until the nineteenth century although some improvements were put into effect by a few Baltic German landowners who mostly followed new German forestry practices (Daniel 1929, 17-20). Some country houses employed foresters to map and take care of the estate's forest resources, but the training and competence of these employees varied greatly (Meikar 2007, 8). Moreover, the Livonian Public Benefit and Economic Society became an active proponent of the modernization of forestry practices in the region later in the early nineteenth century (Karoles 1995, 45).

Hupel was the first learned Balt to include assessments of nature's resources in his topographical writings in such a comprehensive manner and style. He was by no means the only one who contributed to that kind of assessment of 'nature's treasures' in his era in the region, but given the breadth of his scholarly works, it is of the utmost importance to understand his role in the narrative of late eighteenth-century Baltic environmental thinking.

Hupel's concern over the state of forests was genuine but at the same time, the damage human activities may have caused on pristine bogs and mires did not evoke similar concerns about their future. Quite the contrary: Hupel considered that morasses had only indirect value so that they may be tapped to promote agriculture or to produce an alternative fuel to over-consumed wood (Hupel 1774, 21-22, 93, 96, 99-101, 1783, 214). That reasoning raises additional questions about whether an object, in this case nature, is ever appraised with disinterestedness (Berleant 1991, 69-75). In this case, Hupel's ambition, in relation to the assessment of the natural environment, was to reach a refined landscape with well-tended fields, gardens, and forests for the aesthetic and economic benefit of humans. Not only did that require the adaptation of nature but also of local people to new developments.

Conclusion

August Wilhelm Hupel's written legacy created the first comprehensive geographical treatise of nature and the built environment of the Baltic provinces and makes him a fascinating subject for those who study early modern Baltic environmental history and thinking. Such German scholars as Friedrich Gladov and Anton Friedrich Büsching sketched Baltic nature and landscape in the early- and mid-eighteenth century, but it was Hupel who really pioneered describing the natural environment of the region in a thorough and comprehensive manner. Both aesthetic and utilistic values toward Baltic nature can be found in his writings. Although Hupel has not previously been associated with nature writing, some parts of his texts can be viewed within that framework, assuming that nature writing is being understood in its broadest sense as a literary work that provides insights into the many physical realities that comprise an area or a region.

Although Hupel was concerned with physical geographical aspects in his writings to some extent, his primary interest focused on human relations with, and across, space and place. In Hupel's times, among scholars in the field of geographical and topographical studies, a dichotomy characterized the perceptions of the environment(s) of a region. Hupel outlined surrounding environment(s) through borderlines he placed between nature and culture and at the intersection of nature and culture. First, there were places for mercantile activities and encounters across borders. Then there were spaces with completely different characters. Hupel placed certain abstract yet strongly cultural borderlines between coastal areas and the interior on the one hand, and populated places and 'wilderness' on the other. As a typical eighteenth-century representative of literati, he preferred vibrant towns and bucolic landscapes to rough nature in which the refining touch of humans had not yet appeared. Hupel's definition of 'wilderness' (Wildnis, Wüste), however, did not actually connote 'wasteland' but was more a term that referred to something that is outside or on the outermost edge of civilization.

Generally speaking, Hupel saw and assessed nature as a treasure trove of resources created by the Almighty. Thus, with these attitudes he related to an eighteenthcentury Lutheran view guided by teleological idea of God's design and purpose in nature. That anthropocentric thought took for granted that humans had the privilege and even the necessity to utilize nature to flourish and to discover the wisdom of Creation. He saw that even though nature possessed some self-regulating properties and was efficacious by essence, its splendor presumed paternal solicitude to some extent, although not everywhere. Having stated so, Hupel stood for the view that humans have responsibilities for nature up to a point. That reasoning, however, did not arise with disinterestedness but was interconnected with his aesthetic and utilistic values, as well as framing and assessing nature.

Hupel's general view of the Baltic environment(s) was idyllic and teleological, underlining that God had bestowed good conditions upon the inhabitants of the region. It is clear that utilistic values are apparent in Hupel's texts but it would be an oversimplification to purport them to comprise the only values herein. There was unquestionably one nature type toward which Hupel had both utilistic and aesthetical values. Forests provided humans with valuable resources and aroused aesthetical feelings of beauty. Moreover, excessive logging encouraged conservationist ambitions. In Hupel's texts, forests were never represented in disparaging terms. On the contrary, they met with thoughts of better solicitude to prevent the dwindling of growing stock. By showing his personal feelings about forests, Hupel transcended stereotypical patterns of eighteenth-century topographic writing and showed the way for nature writing as well. A certain voice for change becomes apparent in this respect.

Hupel learnt of, and witnessed, overcutting and its environmental and economic impact while living in Livonia. The main causes for the loss of the once very lush forests in certain areas in Livonia and Estonia were, according to Hupel, the slash-andburn cultivation techniques still used by many sharecroppers and the overuse of wood as a building material or fuel. To tackle the issue, he considered that forestry practices should be reorganized as per the instructions of novel German forestry models, and that the education of land owners should be improved so that they could internalize the focal principles of the sustainable use of forests (nachhaltende Nutzung).

By promoting the entrenchment of what were originally German ideas of sustainable use of forests, Hupel acted as a proponent of new forestry practices rather than as a conservationist in the modern sense. After all, he understood human-induced deforestation as a temporary and reversible flaw. Hupel's ambition was to reach a refined landscape with well-tended fields, gardens, and forests for the aesthetic and economic benefit of humans.



Hupel's way of perceiving places stemmed from and related to the central ideas of the emerging eighteenth century, for example, cameralist geography, in which utility was emphasized and nature was seen as a space for mobilization. Hupel and other geographers and topographers in the Age of Enlightenment often started their reasoning by asking how widely nature already served civilization or cultivation in a broad sense. Nature was labeled as the array of resources in that thought. The cameralist thoroughness and calculation within that geographical field of enquiry brought about an endeavor to catalogue the parts of nature by using their utility or harmfulness as a measure. The prevailing civilization, however, also contained certain responsibilities for, and to, nature particularly regarding forests, and in this regard it differed from ancient cultures as well as from the medieval principles of environmental stewardship. Hupel threw aside early modern Christian ideas of protected holy groves and was in favor of eighteenth century scientifically grounded measures. The civilization-building process drew strength from the firm belief in progress and, furthermore, was closely tied to regional identity and self-perception-building processes.

Notes

- 1. On Burke's theory of identification, see Burke (1950).
- 2. Original German texts (translated by the author): 'Die Wälder und Sümpfe machen fast das Ganze der Erdfläche aus, auf welcher die Städte, Flecken, Höfe, Dörfer und urbaren Ländereien nur als Punkte erscheinen' and 'Liefland gehört mehr zu den Wüsten und aus Wildnissen bestehenden, als zu den angebauten Ländern'.
- 3. Original German text (translated by the author): 'Einige Gütern haben zu viel brauchbares Land; es fählt ihnen an Händen: Andre müssen Kosten und Mühe anwenden, durch Kanale Graben und Ausrottung des Waldes, die aber nicht in jeder Gegend zu empfehlen ist, ihren ehlenden nassen Boden zum Kornbau geschicht zu machen'.
- 4. Original German text (translated by the author): 'Bey so mancherley wichtigen Hindernissen und Beschwerben hat die Stadt dennoch ihre Größe und der dasige Handel seinen ausnehmenden Schwung, dem einzigen Fluß zu verdanken'.
- 5. Original German text (translated by the author): 'Das Ausbauen hat Moräste trocken und unsre Luft wirklich gesunder, auch wohl etwas wärmer gemacht'.
- 6. Original German text (translated by the author): 'Und durch eine kleine vernünftige Hülfe gelangt man mit Riesenschritten zu seinem Zweck'.
- 7. Original German text (translated by the author): 'Liefland ist ein größtentheils ebenes wasserreiches, mit Wäldern und noch mehr Morasten durchwebtes, aber dabey gnugsam fruchtbares und an mancherlen vorzüglichen Produkten gesegnetes Land'.
- 8. Original German text (translated by the author): 'Alle Seen, Flüsse und Bäche sind, obgleich in verschiedenen Verhältniß, fischreich...,' 'Unser Wasser, nur das aus Morasten nicht, ist gesund und wohlschmeckend', 'Das Boden ist wie man leicht errachten kann, sehr verschieden: bey Riga, Reval und Pernau, ingleichen am Ufer des rigaischen Busens sandig und locker, dabey hier und da dennoch fruchtbar...'.
- 9. Original German text (translated by the author): '...ein großer Theil derselben kann gar nicht, noch weniger leicht, ausgetrocknet werden, z.B. verwachsene Seen, weite morastige Strecken, und zwischen Anhöhe liegende Niedrigungen, denen man keinen Abfluß schaffen kann'.
- 10. Original German text (translated by the author): 'Die von allerley Thieren und Gevögel wimmelnden Wälder sind in neuern Zeiten etwas dünner geworden'.

Disclosure statement

No potential conflict of interest was reported by the author.



Funding

This work was supported by the Academy of Finland [267309].

Notes on contributor

Esa Ruuskanen is an Academy Research Fellow in the Department of History at the University of Oulu where he has been a faculty member since 2011. He also works as the person responsible for the minor subject in Environmental Humanities at the University of Oulu.

His research interests lie in the area of environmental history and the environmental humanities with a focus on environmental values and conservationism. In recent years, he has focused on humanpeatland relationships and the emergence of conservation ideas and policies in eighteenth- and nineteenth-centuries Baltic Sea area and the United Kingdom. He has collaborated actively with researchers in several other disciplines of the humanities, particularly with environmental philosophers and cultural geographers.

References

Berleant, A. 1991. Art and engagement. Philadelphia: Temple University Press.

Bowen, M. 1981. Empiricism and geographical thought from Francis Bacon to Alexander von Humboldt. Cambridge: Cambridge University Press.

Burke, K. 1950. A rhetoric of motives. Berkeley: University of California Press.

Büsching, A. F. 1754. Neue Erdbeschreibung, Erster Theil. Schaffhausen: Hurter.

Büsching, A. F. 1754. Neue Erdbeschreibung: Erster Theil, welcher Dänemark, Norwegen, Schweden, das ganze russische Reich, Preußen, Polen, Ungarn, und die europäische Türken, enthält. Schaffhausen: Hurter.

Büsching, A. F. 1775. Vollständige Topographie der Mark Brandenburg. Berlin: Verlag der Buchhandlung der Realschule.

Daniel, O. 1929. Mets ja metsandus Eestis. Tallinn: J. & A. Paalmanni Trükk.

Donnert, E. 1984. "Das Russische Imperium im Urteil des deutsch-baltischen Aufklärungsschriftstellers August Wilhelm Hupel im 18. und beginnenden 19. Jahrhundert." Journal of Baltic Studies 15 (2-3): 91-97. doi:10.1080/01629778400000021.

Donnert, E. 2008. Agrarfrage und Aufklärung in Lettland und Estland. Livland, Estland und Kurland im 18. und beginnenden 19. Jahrhundert. Frankfurt am Main: Peter Lang.

Glacken, C. J. 1967. Traces on the Rhodian shore: Nature and culture in western thought from ancient times to the end of the eighteenth century. Berkeley: University of California Press.

Gladov, F. 1716. Einleitung in die neueste Geographie. Leipzig: Johann Ludvig Gleditsch und M.G. Weidmann.

Hasel, K., and E. Schwarz. 2006. Forstgeschichte: Ein Grundriss für Studium und Praxis. Remagen: Kessel. Hupel, A. W. 1774. Topographische Nachrichten von Lief- und Ehstland, Erster Band. Riga: Hartknoch.

Hupel, A. W. 1777. Topographische Nachrichten von Lief- und Ehstland, Zweyter Band. Riga: Hartknoch.

Hupel, A. W. 1781. "Vorbemerkung." Nordische Miscellaneen. Ersten Band.Riga: Hartknoch.

Hupel, A. W. 1783. "Kürzere Aufsätze, III, Über das Forstwesen in Lief- und Ehstland." Nordische Miscellaneen, 7. Stück: Liefländische Landtags-Ordnung, nebst andern kürzern Aufsätzen.

Hupel, A. W. 1787 "Abschnitt. Das Platte Land, und dessen Benutzung." Nordische Miscellaneen, 13. und 14. Stück: Bemerkungen über Ingermanland, als den beträchtlichsten Theil des jetzigen St. peterburgschen

Hupel, A. W. 1791. "Kurze Nachrichten, Anekdoten, sagen und Anfragen, Über die Gartenliebhaberen in Lief- und Ehstland." Nordische Miscellaneen, 27. und 28. Stück: Diplomatische Bemerkungen aus den liefländischen Urkunden gezogen, nebst andern kürzern Aussätzen.

Hupel, A. W. 1992. Topographische Nachrichten von Lief- und Ehstland, Erster Band. Tallinn: Revalia.

Huss, J., and F. Von Gadow. 2012. "Einführung in das Faksimile der Erstausgabe der Sylvicultura oeconomica von H. C. von Carlowitz, 1713." In Sylvicultura oeconomica: Hausswirthliche Nachricht und Naturmäßige Anweisung zur Wilden Baum-Zucht Faksimile der Erstauflage Leipzig 1713, edited by H. C. Von Carlowitz. Remagen-Oberwinter: Kessel.



Jürjo, I. 1990. ""Lesegesellschaften in den baltischen Provinzen im Zeitalter der Aufklärung: Mit besonderer Berücksichtigung der Lesegesellschaft von Hupel in Oberpahlen", part 1." Zeitschrift für Ostmitteleuropa-Forschung 39 (1-4): 540-571.

Jürjo, I. 1991. ""Lesegesellschaften in den baltischen Provinzen im Zeitalter der Aufklärung: Mit besonderer Berücksichtigung der Lesegesellschaft von Hupel in Oberpahlen", part 2." Zeitschrift für Ostmitteleuropa-Forschung 40 (1-4): 28-56.

Jürjo, I. 2004. Liivimaa valgustaja August Wilhelm Hupel 1737–1819. Tallinn: Riigiarhiiv.

Jürjo, I. 2006. Aufklärung im Baltikum. Leben und Werk des livländischen Gelehrten August Wilhelm Hupel (1737-1819). Cologne: Böhlau.

Kalm, P., and A. Backman. 1757. En Oeconomisk Beskrifning, Huru Sådana Kjärr Kunna Göras Nyttiga, Hvirifrån Vatnet Ej Kan Ledas med Diken. Åbo: Academy of Åbo.

Kalm, P., and A. M. Foeder. 1778. Tanckar Om Den Wärckan Som Et Lands Upodling Har på Des Climat. Åbo: Academy of Åbo.

Kalm, P., and E. Wegelius. 1763. Tankar om Nödwändigheten at Utdika och Upodla Kärr och Måssar I Finland. Åbo: Academy of Åbo.

Kalm, P., and J. Wegelius. 1758. Försök om Hushållningens Hinder och Hjelp i Kimi-Lappmark. Åbo: Academy of Åbo.

Karoles, K. 1995. Eesti metsad ja metsandus. Tallinn: Eesti Riiklik Metsaamet.

Kasekamp, A. 2010. History of the Baltic states. Basingstoke: Palgrave Macmillan.

Kirby, D. 1990. Northern Europe in the Early Modern Period: The Baltic World 1492-1772. Basingstoke: Routledge.

Knoll, M. 2013. Die Natur der menschlichen Welt: Siedlung, Territorium und Umwelt in der historischtopografischen Literatur der Frühen Neuzeit. Bielefeld: Transcript.

Knoll, M. 2009. "'Sauber, lustig, wohlerbaut' in 'einer angenehmen ebene': Abgrenzung und Integration zwischen Siedlung und naturaler Umwelt in der topografischen Literatur der Frühen Neuzeit." In Natur als Grenzerfahrung: Europäische Perspektiven der Mensch-Natur-Beziehung in Mittelalter und Neuzeit, edited by L. Kreye, C. Stühring, and T. Zwingelberg. Göttingen: Universitätsverlag Göttingen.

Koerner, L. 1999. Linnaeus: Nature and nation. Cambridge: Harvard University Press.

Meikar, T. 2007. "Metsaametkonna formeerumine Balti kubermangudes 18.–19. sajandi vahetusel." In Metsanduslikust haridusest Eesti Vabariigi eel, edited by T. Meikar, 5-16. Tartu: Estonian University of Life Sciences.

Morton, T. 2009. Ecology without nature: Rethinking environmental aesthetics. Cambridge: Harvard University Press.

Passmore, J. 1980. Man's responsibility for nature. London: Duckworth.

Pietarinen, J. 1992. "The principal attitudes of humanity towards nature." In Philosophy, humanity, and ecology: Philosophy of nature and environmental ethics, edited by H. Odera Oruka, 290–294. Nairobi: Proceedings of the World Conference of Philosophy 1991.

Radkau, J. 2008. Nature and power: A global history of the environment. Translated by Thomas Dunlap. New York: Cambridge University Press.

Tschida, D. A. 2012. "Yellowstone National Park in Metaphor." In Observation points: The visual poetics of national parks, edited by T. Patin, 119-139. Minneapolis: University of Minnesota Press.

Watling, T. 2009. Ecological imaginations in the world religions: An ethnographic analysis. London: Bloomsbury Academic.

Withers, C. 1996. "Encyclopaedism, modernism and the classification of geographical knowledge." Transactions of the Institute of British Geographers 21 (1): 275–298. doi:10.2307/622937.

Withers, C., and D. N. Livingstone. 1999. "Introduction: On geography and enlightenment." In Geography and Enlightenment, edited by C. Withers, and D. N. Livingstone, 1-14. Chicago: University of Chicago Press.

Wolloch, N. 2011. History and nature in the Enlightenment: Praise of the mastery of nature in the eighteenth-century historical literature. Farnham: Ashgate.