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THE CONTRIBUTION OF AMBER TO HERITAGE TOURISM DEVELOPMENT

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Abstract

This article explores the relationship between amber and heritage tourism, utilizing Poland as an illustrative context. Amber, a form of fossilized resin, holds significant importance across a multitude of fields, such as science, culture, and economy, having been used as a material by artists, craftsmen, and jewelers for centuries. Today, amber draws visitors to locations where it is found and to institutions that display amber collections, such as museums and galleries. Furthermore, it is an essential component of various events, including exhibitions, fairs, and amber fishing competitions. Amber also forms the foundation of many tourist routes, such as the renowned Amber Route. Owing to its deep ties with cultural heritage, amber is considered a central attraction within amber-based heritage tourism. This paper examines the current contribution of amber to the development of heritage tourism. The authors conducted a literature analysis, online source queries, evaluations of institutions (e.g., museums), and personal observations to address the topic. The article is divided into eight sections, each highlighting different aspects of the investigated subject, ultimately suggesting an adaptation of Timothy and Boyd's (2003) model to illustrate the development of amber-based heritage tourism.

Key words

Amber • heritage • heritage tourism • Poland • Baltic amber

Introduction

This article presents the relationship between amber and heritage tourism, based on the

Polish context. Amber, being a fossilized resin, holds immense significance in various fields - scientific, cultural, and economic. For centuries, it served as a raw material for artists, craftsmen, and jewelers, and its extraordinary properties and diversity were also used for scientific purposes, particularly in the study of prehistoric flora and fauna (Clark, 2010; Causey, 2011). Currently, amber attracts visitors to places of its occurrence for example, during amber harvesting (Olszewski-Strzyżowski & Wendt, 2018; Paprzycka, 2022) and to institutions presenting amber collections, such as museums and galleries (Jakubowski, 2004; Pielińska & Gronuś-Dutko, 2013; Piatkowska, 2017). It is also a key element of many events, including exhibitions, fairs, and amber-related competitions (Olszewski-Strzyżowski & Wendt, 2018). Amber also forms the basis of many tourist routes, like the Amber Route.

Amber, being an object of human interest since ancient times, has strong connections with cultural heritage. Heritage, in a broad context, includes various elements – from natural to cultural, tangible and intangible, which are passed down from generation to generation (Ashworth & Tunbridge, 1999). We categorize it according to various criteria, such as origin (natural and cultural heritage), dimension (material, immaterial) (Murzyn-Kupisz, 2010; Cudny, 2017), geographical scale (e.g., local, national, global heritage) (Graham, 1997), and type of attraction (e.g., architectural monuments, living heritage) (Timothy & Boyd, 2003).

The study focuses on analyzing the contemporary significance of amber in the context of the development of heritage tourism. The article sets three main research objectives:

- Characterization of amber as a resource and presentation of the concept and types of heritage;
- Demonstrating that amber and elements of its processing constitute a tourist attraction at the core of amber-based heritage tourism;
- Adaptation of the Timothy and Boyd (2003) model to represent the development of amber-based heritage tourism.

To accomplish the research objectives, several methods were used including literature analysis, online source inquiries, institutional assessments, and personal field observations. The article is divided into eight sections, each shedding light on different aspects of the subject under investigation. Following the introduction, the paper presents a general characterization of amber and outlines the concepts and divisions of heritage. The discussion then pivots to heritage tourism. Subsequent sections of the article highlight the most notable values of amber and tourist attractions related to amber and introduce a model of heritage tourism development based on the concept proposed by Timothy and Boyd (2003). The final section of the article serves as a summary of the research findings.

Amber – General characteristics Composition and name

Amber is variously defined and classified, and its geological age varies. It is fossilized resin of coniferous trees, consisting of a mix of hydrocarbons, resins, succinic acid, and oils. The chemical composition of amber mainly includes carbon (approx. 78%), oxygen (approx. 11%), and hydrogen (approx. 10%), as well as small amounts of sulfur and other chemical elements. Amber can contain inclusions – trapped remains of animals, plants, and inorganic elements (Encyclopedia Britannica: Amber, 2023; PWN Encyclopedia: Bursztyn, 2023).

Apart from proper names (Bernstein, succinite, etc.) amber is often referred to as a raw material or material. Terms such as mineral, fossil, fossilized material, and stone are also used. The use of the last term comes from linguistic reasons, for example, the German word Bernstein literally means "burning stone". In geological terms, amber can be classified as a deposit, as it is extracted from the earth, where deposits formed from organic substances are located (PWN Encyclopedia: Kopalina, 2023). Calling amber a fossil, per se, can be controversial because despite the inclusions found inside, it does not constitute remains of animal or plant organisms (PWN Encyclopedia: Skamielina, 2023). In the scientific literature, amber is referred

to as a natural material (Smaliychuk et al., 2021), organic gemstone (Lambert et al., 2002; Sinkevicius et al., 2015; Ostreika et al., 2021), mineral of organic origin (Edwards et al., 2007; Halbwachs, 2019), and also as fossilized plant resin (Langenheim, 1990; Drzewicz et al., 2016).

The material discussed in the article has various proper names. The term *amber* is often used to denote fossilized forms of terpenoid plant resins. However, this name is not the only one used in this context. In ancient Greece, amber was called "electron" and "lyngurion." In the Roman Empire, the terms "sucinum" or "thium" were used, and in ancient Egypt, the name "sacal" was used (Causey, 2011). In the Baltic region, where some of the world's largest amber deposits are located, different terms are used, such as "bursztyn" (in Poland) and "jantar" (in Poland and Lithuania). The term "succinite" refers to varieties of amber characterized by a succinic acid content above 3% and is mainly associated with the area of the Baltic Sea, where the largest deposits are found (Kosmowska-Ceranowicz, 2012). In Germany, the name "Bernstein" is also used, and in addition, terms like "Siegburgit" (from the city of Siegburg) and "Goitschit" (from the German amber mine Goitsche) are used (Heflik & Natkaniec-Nowak, 2011; Kosmowska-Ceranowicz, 2012). Outside Europe, for example, in Myanmar, local names like "Burmite" and "Kachin" are used (Cruickshank & Ko, 2003).

Age and occurrence

The estimated age of amber is over forty million years. It comes from the late Eocene epoch, Paleogene period. Amber usually appears in irregular nodules, rods, or drops, mainly in shades of yellow with a mix of orange, brown, and sometimes red (Encyclopedia Britannica: Amber, 2023). In Europe, amber is found in primary deposits, which are geological accumulations where the deposition of amber occurred directly from trees. On the other hand, during the Pleistocene epoch, primary amber deposits underwent erosion and transport by glaciers and then were deposited, among other places, in the basin of today's Baltic Sea, leading to the formation of secondary amber deposits. The glaciations played a very important role in the transport of amber. Amber was picked up by glacial material and transported with it, and thus was exposed to destruction, sometimes also undergoing a natural polishing process. Amber deposits lying on the seabed are washed out and often thrown ashore during storms. As a result, amber can also be collected in the beach zone of the sea, especially during stormy weather (Nieumywakin, 2019).

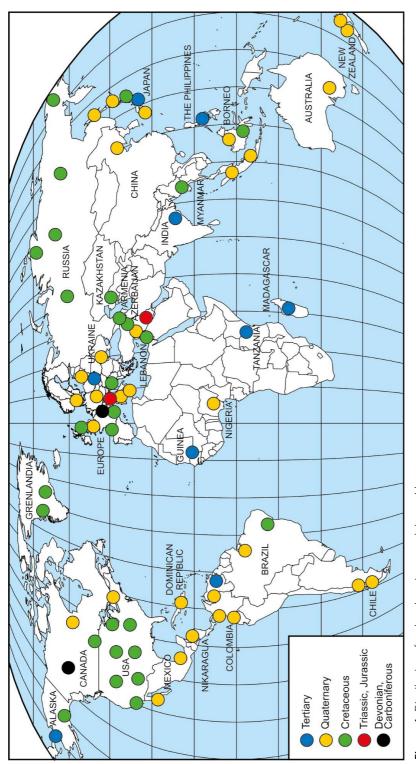
Amber is found in different regions of the world. Besides Europe, it can be found in both Americas, Africa, Asia, and Australia. Scientific research indicates its presence in such areas as Canada (McKellar et al., 2008), the United States (Grimaldi & Nascimbene, 2010), the Dominican Republic (Grimaldi 1995), Mexico (de Lourdes Serrano-Sánchez et al., 2015), Myanmar (former Burma) (Cruickshank & Ko, 2003), Australia (Penney et al., 2010), and Borneo (Jenkins Shaw et al., 2022) (Fig. 1).

Amber can be found in several European countries, including western and northern European countries such as Spain, France, Germany, Belgium, the Netherlands, and Sweden. It is also widespread in central and eastern European countries like Poland, Lithuania, Latvia, Belarus, and Ukraine. Notably, some of the world's largest amber deposits are found in the Baltic Sea Basin, primarily in the area extending from the island of Rügen (Germany) to the Kaliningrad region in Russia (Sambian Peninsula) (Kosmowska-Ceranowicz, 2012; Causey, 2011) (Fig. 2).

In Poland, the most popular and at the same time the richest amber deposits discovered to date are found in the following areas:

- Around Możdżanowo,
- Chłapowsko-Sambian region,
- Tuchola Forest region,
- Kurpie region,
- Parczew region.

In addition, amber deposits in varying quantities occur along the entire Baltic





Source: authors' elaboration based on Wimmer et al. (2009).

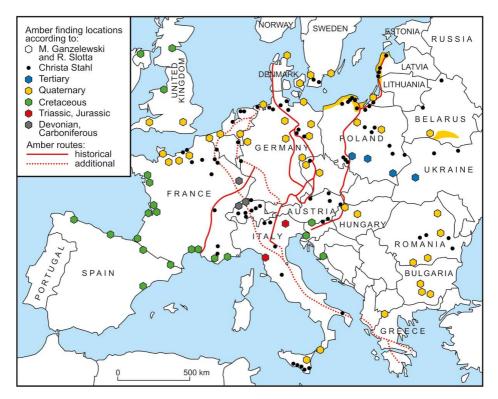


Figure 2. Location of amber deposits in Europe

Source: authors' elaboration based on Sturm (2011) after Richter (Wikimedia Commons).

Sea coast, and the appearance of amber on the beaches depends on the weather conditions. Figure 3 presents the distribution of amber occurrence in Poland.

The concept and division of heritage

Heritage, derived from the Latin term *hereditas*, legally refers to inheritance or succession, encompassing the rights and liabilities passed on to heirs and the estate of a deceased person regarded as a juridical entity (Josefsson & Aronsson, 2016). Kronenberg (2007) asserts that heritage should be seen as inherited wealth, a legacy from preceding generations, including cultural, scientific, and artistic assets. Bowes (1989: 36) expands the concept of heritage to encompass not only major historic sites but

the entire regional landscape, incorporating geographic elements, structures, villages, people, traditions, and economic activities.

Smith and Waterton (2009) view heritage as comprising old, tangible, and aesthetically pleasing elements, deemed important by experts for contemporary and future preservation. Josefsson and Aronsson (2016) highlight that individuals autonomously select and interpret elements they consider significant as heritage. This selection is influenced not only by the objective value but also by cultural and social patterns.

Heritage has evolved from a fixed category defined top-down by experts to a fluid category determined by the community receiving and transmitting the heritage (Owsianowska & Banaszkiewicz, 2015). Considering interpretations of heritage, local communities play a crucial role in defining

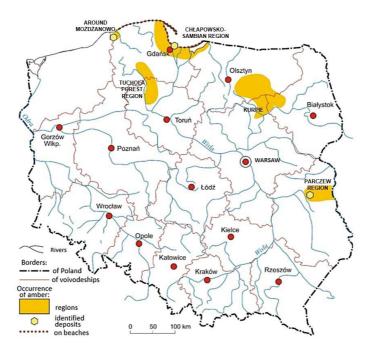


Figure 3. Main areas of amber occurrence in Poland Source: authors' elaboration based on Napora (2019).

and creating heritage (Tunbridge & Ashworth, 1996). Heritage encompasses various dimensions related to identity, power, and economy, both historical and contemporary (Tunbridge & Ashworth, 1996). It includes cultural and artistic products, elements of the natural environment, and commercial activities with a heritage component (Cudny et al., 2022).

Moreover, evaluation of heritage now considers not only expert and community opinions but also its economic and social value (Owsianowska & Banaszkiewicz, 2015). Due to its utilitarian value, heritage serves as an economic asset, particularly in promoting economic activities like tourism (Tunbridge & Ashworth, 1996; Murzyn-Kupisz, 2010, 2012; Cudny et al., 2022; Studzieniecki, 2022).

Heritage can be segmented into tangible and intangible, natural and cultural, as well as local, regional, and global heritage. Tangible heritage encompasses physical assets such as buildings, rivers, and natural elements, while intangible heritage includes values, traditions, ceremonies, lifestyles, and experiences such as festivals, art, and other cultural events (Cudny, 2017). The categorization of heritage was consolidated by UNESCO in the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, according to Ahmad (2006). The convention defines natural heritage as consisting of natural features, geological and physiographical formations, and specific sites or areas. Elements of cultural heritage include monuments, groups of buildings, and sites (Convention Concerning the Protection..., 1972: 2) (Fia, 4).

Additionally, heritage can be categorized based on geographical scale. According to Ashworth and Graham (1997), cited by Cudny (2017: 63), heritage can be classified as (a) local heritage, found at ethnic, or tribal levels, (b) national heritage, (c) European heritage, and (d) world heritage. Furthermore, Timothy and Boyd (2003: 3) categorize heritage based on the type of attraction. They

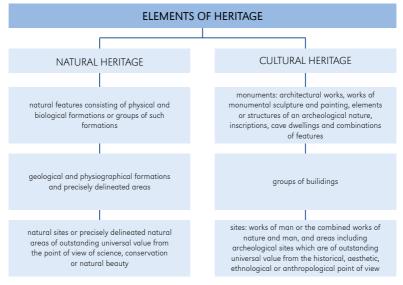


Figure 4. Elements of heritage according to their genesis

Source: authors' elaboration based on the Convention Concerning the Protection... (1972).

distinguish among natural heritage (such as protected areas), living cultural heritage (including fashion, food, and customs), built heritage (such as buildings and monuments), industrial heritage, and personal heritage.

Referring to the divisions of heritage, amber can be classified into several types of heritage that have been presented earlier. It is an element of tangible heritage, in the form of amber collections in museums and intangible as in the case of amber traditions. It is also part of natural and geological heritage (natural heritage and geoheritage), as a geological material found in natural areas and sites. Moreover, amber is an essential element of cultural heritage, represented by the Amber Trail or the Amber Room, and art collections in amber museums and galleries (Kosmowska-Ceranowicz, 2008; Pielińska & Gronuś--Dutko, 2013). Amber can also be part of local and regional heritage, according to the division proposed by Ashworth and Graham (1997), for example, in the Stegna commune in Poland. Amber heritage can also have a national, European, or even global dimension (national, European, world heritage), as in the case of the Amber Room and well-known amber museums, for example, in Gdańsk. In line with Timothy and Boyd's (2003) classification, amber is certainly an element of natural heritage and living cultural heritage.

Heritage tourism

The issue of heritage in the context of this study is closely related to the subject of heritage tourism. The latter is closely tied to culture and cultural tourism. Culture, understood as the totality of material and immaterial human achievements, includes learned and inherited patterns of behavior, everything that is created through human labor, and the product of human thought and activities. Material culture encompasses all human creations, techniques, and practical skills. Spiritual culture, on the other hand, includes all achievements related to science, art, morality, functioning as artistic works, beliefs, traditions, customs, and values recognized by people and transmitted through history (Jedrysiak, 2008: 12).

The relationship between tourism and culture has been emphasized by numerous

authors (Przecławski, 1997; McKercher & du Cros, 2002; Richards, 2018). Several authors distinguish cultural tourism as a separate type of tourism (Kowalczyk, 2008; Mikos von Rohrscheidt, 2008; Richards, 2021). Buczkowska (2008: 27) argues that cultural tourism focuses on culture as the primary or dominant element, encompassing both products from the past (broadly defined as cultural heritage) and contemporary culture and ways of life of specific groups or regions. Based on this definition, travel that involves visiting heritage-related sites demonstrates a close connection to culture. It is considered a form of cultural tourism (Mikos von Rohrscheidt, 2008), and is treated as an independent type of tourism known as heritage tourism (Timothy & Boyd, 2003), which is also considered synonymous with cultural tourism (Buczkowska, 2008).

Zeppel and Hall (1992) believe that heritage tourism focuses on the examination of remnants from the past, natural landscapes, and the experience of local cultural traditions. Poria (2001: 57) defines heritage tourism as "a subgroup of tourism in which the motivation for visiting a place is based on the heritage characteristics of the place according to the tourist's perceptions of the site in relation to their own heritage." As Poria suggests (2001: 55), heritage in the context of tourism is linked to tourist products, attractions, motivations, resources, industry, business, and the segmentation of tourists. Timothy and Boyd (2003) state that history, culture, local communities, and the environment are part of heritage, defining its value, interpretation, and tourism management in a specific place and space.

Timothy and Boyd (2003: 7-9) presented a model of heritage tourism. According to their model, heritage operates within two types of environments: phenomenal and behavioral. The phenomenal environment reflects the actual surroundings consisting of nature, culture, and human-made structures. The behavioral environment, on the other hand, represents the environment into which elements of the phenomenal environment pass through a filter of human values. According to the model, heritage in the form of physical and social facts exists in the objective phenomenal environment, while it becomes part of the behavioral environment only when society perceives it as having a utilitarian function, as a commodity with market value that can be sold to visitors. At the core of creating heritage tourism is the heritage tourism experience, which is connected to the demand generated by tourists for heritage attractions. The heritage experience is shaped by factors including supply and demand, heritage conservation, authenticity, impact management of heritage attractions, heritage interpretation, and politics related to heritage.

Heritage attractions serve as the foundation for heritage tourism. Lew (1987: 554) defines tourist attractions as "all those elements of a non-home place that draw discretionary travelers away from their homes. They usually include landscapes to observe, activities to participate in, and experiences to remember." Timothy and Boyd (2003) see heritage attractions as the central component of heritage tourism. They distinguish several types of heritage attractions, including natural attractions, craft centers and workshops, sociocultural attractions (e.g., museums, galleries), festivals, countryside, and treasured landscapes (including coastal areas) (pp. 20-22). In the context of this article, attractions connected to geoheritage are of particular importance. Geoheritage encompasses the elements and features of Earth's geodiversity, either individually or in combination, which are considered to have significant value for intrinsic, scientific, educational, cultural, spiritual, aesthetic, ecological, or ecosystem reasons, and therefore deserve conservation (Crofts et al., 2020, cited in Urban et al., 2021: 17). Geoheritage includes geological structures, rocks, minerals, landforms, and processes that illustrate Earth's history, the evolution of human life, and environmental changes, possessing not only scientific but also cultural (including tourism) and educational functions (e.g., promoting knowledge about Earth's structure and history) (Newsome et al., 2018; Urban et al., 2021).

From the perspective of the subject of this article, amber and its products, collections such as those in museums, traditions, and other elements related to amber (e.g., beliefs, religious rituals, health properties, events, etc.) constitute heritage attractions. As Lew (1987) wrote, attractions, such as amber and its products, draw travelers away from their homes and form the basis for the growth of heritage tourism. Heritage tourism is focused on the examination and experience of the remnants from the past, environment and natural landscapes, and local traditions which form tourist products and are the basis for the growth of the tourism business (Zeppell & Hall 1992; Poria 2001; Timothy & Boyd 2003).

The value of amber in the context of heritage tourism

Value can be defined as the significance assigned to something, whether it is a material object, an abstract idea, or a belief. It is a subjective assessment that reflects an individual's or society's perception of the importance, utility, or desired worth of a specific element (Schwartz, 1992). In the case of heritage, value, in the eyes of experts and the general public, is a fundamental factor in qualifying various elements existing in the real environment (phenomenal environment) and including them in the behavioral environment, where it becomes a tourist attraction serving as the basis for the development of heritage tourism (Timothy & Boyd, 2003). In the case of amber, there are several values we can associate with various forms of heritage described earlier in this article, starting from spiritual values related to beliefs in the supernatural properties of amber, using it to decorate paintings or sacred figures, to using it in religious and pseudo-religious rituals. In this case, we deal with amber as an attraction for tourism related to heritage referring to customs, beliefs, and religions (Tab. 1). The next two groups of values are related to legends, fairy tales, and literary works, as well as medical properties of amber itself and products made from it. The following two values encompass artistic and material worth of amber. These are extremely important values, stemming from treating it as a gemstone and using it in jewelry, art, and ornaments. This generates tourism aimed at collecting amber, for example on the Baltic coast (element of natural heritage), visiting amber extraction sites also on an industrial scale (industrial heritage), participating in amber fairs and exhibitions (heritage and business events), or visiting exhibitions and regional or art museums with its collections. The historical value is related to expeditions for amber (e.g., as part of the Amber Route), the history of amber processing (amber processing workshops), and historical events adorned with amber gifts. In this case, the tourist value is stories related to amber (tourist trails. reconstruction events, historical collections) (Tab. 1). In addition, amber has also left its mark on place names (toponymy) (e.g., in Poland Amber Mountain, Jantar), surnames and people's names (anthroponymy) (e.g., the Polish surname Bursztynowicz, the English name Amber) and their family history and traditions, thus entering into the cultural heritage of places and regions as well as personal heritage (see: Zariņa & Krumberga, 2018). It should be emphasized that depending on the scale of impact and value, the heritage associated with amber can be of a global, national, regional, or local character.

Amber from fossil to heritage attraction

Amber harvesting

In Europe, the places where tourists seek (fish, harvest) amber are primarily the southern coasts of the Baltic. Areas where amber appears after storms include German islands such as Rugia, Hiddensee, Usedom (shared with Poland), the East Frisian Islands on the German North Sea coast, and beaches in the Kaliningrad Oblast (Russia) and Lithuania.

In Poland, amateur amber harvesting is also extremely popular. It is allowed on beaches and in the shallow coastal areas. However, this activity is prohibited in protected areas,

| | | Value | Examples of tangible heritage elements | Examples of intangible heritage elements |
|---------------------------------------|----------------------------|--|--|---|
| Type of heritage according to genesis | cultural | Spiritual – e.g., ancient Greek beliefs and the beliefs of peoples of the Baltic Sea basin, religions of East Asia | Amber "incense", religious figures, sacred images made of amber | Belief in the supernatural significance of amber, religious experiences (rituals), the smell of incense, belief in the magical properties of the sun stone |
| | cultural | Fictional – e.g., fairy tales, legends, literary works | Reproductions, archival photos associated with legends (e.g., about the lost Amber Room), records/diaries, copy of the Amber Room in Tsarskoye Selo (Pushkin city - Russia) | Local identity, based on herit- age and legend, an impression of dissatisfaction and interest in history, Ripa Succini - the Amber Coast - the Vistula Spit Literary works (e.g., <i>Nine</i> <i>Princes in Amber</i> by R. Zelazny) |
| | natural and cultural | Medical – e.g., medicines and medical products based on amber | Medical products for sale; amber powder, tincture, serum product, amber soup | Improvement of well-being, taste, smell, preserved original recipes for medicines containing amber (including M. Coperni- cus' recipes) |
| | cultural | Artistic - e.g., jewelry, paintings, sculptures, other works of art and tourist souvenirs | Works of art, investment of capital, subject of trade; tourist souvenir | Aesthetic impressions, memo- ries, emotions |
| | natural and cultural | Material – e.g., amber collec- tions and amber products in museums, galleries, at fairs; raw material obtained during fishing and gathering, tourist routes related to the collection and trade of amber | Collections and products presented/exchanged, e.g., raw amber, amber jewelry, art made of and/or with amber, presenta- tion venue, "amber" Gdańsk, "amber" Kraków | Bonds formed, building nation- al, regional, local identity based on amber heritage; bonds/rela- tionships established between people, the impression of being in touch with art and history, experiences and thoughts resulting from contact with the works; export income, prestige associated with possession |
| | cultural | Historical - e.g., amber expedi- tions (e.g., from the times of Nero, the Amber Route from Aquileia in Italy to the Baltic Sea), traditions of amber extraction and processing | Historical trade route, amber as a raw material and its historical products – gifts for rulers, figures, traditional tools for processing raw material and making jewelry | Experiences passed on, legal norms (traditional and statu- tory) related to the extraction, processing, and sale of amber, amber processing workshops |
| | cultural | Toponymic - including the naming of spaces and places associated with amber | Road signs, street names, places, information boards | Functioning names such as Am- ber Mountain, Amber Street, Jantar, Amber Highway (A-1), Amber Baltic Hotel in Międzyzdroje, Amber Arena, Amber Expo, etc.; names of tourist trails e.g., Amber Green- ways; associations, symbols, elements of spatial orientation |
| | cultural | Anthroponomastic - including surnames and first names as- sociated with amber | Documents, artifacts, family mementos | Surnames and first names e.g., Bursztynowicz, Bernstein, Amber; family traditions, senti- mental journeys |

 Table 1. Analyzed values of amber and the associated types of heritage

dune areas, cliffs, and forests. It is important to remember that amateur amber collecting should not disturb tourists' rest, damage soil structures, or the seabed. In Poland, amber can be found, for example, on the beaches of Sobieszewo Island, Ustka, and in the Stegna commune. Due to the natural conditions, the geological structure of the area, proximity to the Vistula estuary, and favorable climate conditions, the Stegna area is one of the most popular places in Poland for amber collecting. Particularly large amounts of the raw material occur after periods of stormy weather, on the beach between Mikoszewo and Jantar (Paprzycka, 2022).

It is worth noting that the value of amber found by a tourist on the beach usually has little to do with its economic or utility value, for instance as a jewelry raw material. Even a small lump of resin can be priceless to its owner. The value of amber has a distinctively individual, subjective, and emotional character. Although amber is guite common in the Baltic area, it does not lie "everywhere and always." People searching for amber have to be a bit lucky to find even a small piece. The greater the joy when they come across it. A find is usually treated as a stroke of luck, a confirmation of prosperity and success in life. This is always accompanied by positive emotions, experiences, and encounters. Wendt and Bógdał-Brzezińska (2018) observe that due to its geographically limited range, amber perfectly fits into the archetype of the golden fleece, and its "acquisition" complements holiday experiences like the satisfaction derived from victory in popular computer games. The search for amber responds to a guite common human need to collect unique, natural, and authentic artifacts, documenting the place and manner of rest. Hence the beach expeditions of modern Argonauts.

Of course, the function of memory should not be overlooked. Amber can be a wonderful holiday souvenir – an object that carries memories, certain meanings constitutive for the individual who owns it. This simplest keepsake brought home from vacation has the extraordinary power to transport its owner multiple times to another, "that" world – distant places and past times. Its sight and touch trigger holiday memories, bringing back the most personal events and situations – experienced adventures, people met, places visited. The associated sentimentality, nostalgia, longing for holidays, stereotypical images, and rituals, but also dreams of future journeys often find their reflection in artistic creations. An example might be the lyrics of a popular Polish song sung by Irena Santor, "There are no more wild beaches, on which I collected amber." (lyrics author: Krzysztof Logan Tomaszewski, translated from "No More Wild Beaches," 2023).

Museums

Museums are institutions dedicated to the preservation and interpretation of humanity's tangible evidence and environment. They house unique items that serve as valuable material for study and research, often taken out of their original context. These items provide a direct means of communication with viewers that cannot be replicated through other media. Museums are established for various purposes, including scholarly engagement, education, enhancing local quality of life, promoting civic pride, recreation, and tourism. All museums share a common objective: preserving and interpreting aspects of society's heritage, educating the public, and presenting heritage to the audience (Encyclopedia Britannica: Museum, 2023). Several publications discuss museums as institutions that maintain and preserve heritage, including those related to heritage tourism in general (Kirshenblatt-Gimblett, 1998; Alivizatou, 2016), as well as museums that showcase amber specifically (Jakubowski 2004; Kosmowska-Ceranowicz, 2008; Clark 2010; Pielińska & Gronuś-Dutko, 2013; Piatkowska, 2017). It should be emphasized that museums are among the most important cultural goods and constitute one of the most important tourist attractions, among others for heritage tourism (Jędrysiak, 2008, 2009).

It is estimated that there are at least 150 museums in Poland that have amber exhibits (Pielińska & Gronuś-Dutko, 2013). The most important are undoubtedly institutions where amber is the main theme of the exhibition. These include The Amber Museum, a branch of the Gdańsk City Historical Museum, the Amber Inclusion Museum of the University of Gdańsk, and the collection of Professor Jan Koteja at the University of Silesia in Katowice. In addition to state museums, there are also smaller private museums (in Jantar, Jarosławiec, Krakow, Słupsk, or Stegna). Large amber exhibitions are located in multidisciplinary natural and geological museums. The most important of these are the Museum of the Earth of the Polish Academy of Sciences in Warsaw (exhibition "Amber – Poland and the World") and the Natural History Museum of the Institute of Systematics and Evolution of Animals of the Polish Academy of Sciences in Krakow (temporary exhibition in 2023 "Amber – Treasure of Poland") (Fig. 5). Particularly spectacular are the masterpieces of amber artistry gathered in art museums, especially in the State Art Collections

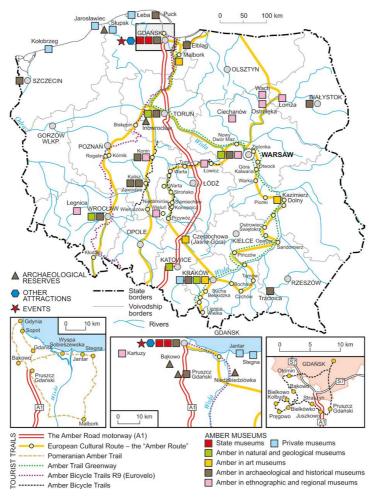


Figure 5. Touristic utilization of amber heritage in Poland

at Wawel, the Princes Czartoryski Museum, a branch of the National Museum in Krakow, the Castle Museum in Malbork, and the collections of the Pauline monastery at Jasna Góra. Although they have fewer exhibits, they are of high artistic, historical, and emotional value (owned by eminent personalities). Contemporary artistic jewelry is presented by the Museum of Goldsmith Art - a branch of the Nadwiślańskie Museum in Kazimierz Dolny. Interesting amber collections are also owned by archaeological and ethnographic museums. In the first group, the Archaeological Museum of the City of Gdańsk (permanent exhibition "With Amber through the Millennia"), the State Archaeological Museum in Warsaw (ambers in the exhibition "Prehistory of Polish Lands") and the Archaeological and Historical Museum in Elblag (amber treasures from Truso, reconstruction of an old amber workshop) stand out. Among the ethnographic museums with the most valuable amber collections in Poland, the North-Mazovian Museum in Łomża (collection of Kurpie ambers by Adam Chetnik), the Museum of Kurpie Culture in Ostrołeka, and the State Ethnographic Museum in Warsaw should be mentioned first

Trails

As Stasiak (2007) claims, tourist trails can be treated objectively as an element of the tourist base. They can also be treated subjectively, and then they are not just a means to explore the main attractions of a given area. In the subjective approach, they become a tourist attraction in themselves. In this case, there are a number of motives that encourage tourists to use tourist trails as a specific type of attraction. These motives include active rest, spiritual experiences (e.g., religious), experiencing strong sensations (e.g., as part of trails for extreme sports), as well as exploring the world according to a certain key theme (like thematic trails) (Stasiak et al., 2014).

There are a lot of attractions in the form of tourist trails related to amber worldwide and in Poland. The most important of these is undoubtedly the Amber Route (Fig. 5). This is a historically significant trade route, which thousands of years ago was used by ancient traders to transport amber from the Baltic Sea region in the north to the Mediterranean Sea in the south. Today, this route is a European cultural and tourist trail. offering a number of attractions related to amber heritage. The route crosses different countries in Europe, including Poland, Germany, Russia, Austria, Slovenia, and Italy. Along this route, there are numerous places of cultural, historical, and natural significance that illustrate the rich heritage of Europe. Travelers who choose this route can visit numerous heritage sites, historic cities, archaeological sites, museums, and natural landscapes. From the amber processing centers in Gdańsk, Poland, to the ancient Roman ruins in Aquileia, Italy, the Amber Route offers a rich array of tourist experiences. In Poland, the Amber Route includes some of the most beautiful and important historical places, like Malbork and Gdańsk, famous for amber jewelry production, and Krakow, with its historical churches and castle (Fig. 5).

Another trail of national and regional importance is the Pomeranian Amber Route. It is a tourist route, with the main motif of amber passing through the municipalities of Kolbudy and Pruszcz Gdański (Fig. 5). The trail is divided into two sections, the Otomin-Kolbudy section (from Otomin to Kolbudy) and the Radun section (from Kolbudy to Pruszcz Gdański). On the Otomin-Kolbudy section, there is the inanimate nature reserve Amber Mountain, on which there is an exploited quarry - a former amber mine. On the Radun section, the trail reaches the International Baltic Cultural Park Faktoria, where visitors can become acquainted with the work of a former amber craftsman (in an amber craftsman's hut), see amber collections, and learn about the course of the historical amber trail (Faktoria, 2023; Amber Trail PTTK, 2023; Amber Route, 2023).

The next tourist trail related to amber heritage is the Amber Trail Greenways (Fig. 5). This is an international route running through Poland, Slovakia, and Hungary, following the ancient amber trade route. This trail, used by the Celts and flourishing in Roman times, was not only a trade route but also a communication and sociocultural one. Currently, the Amber Trail Greenways serves as a guide to the material and spiritual heritage of the regions it traverses. On the trail, tourists can visit eco-museums, taste local products, discover valuable natural sites and architectural monuments. Important events promoting ecotourism and environmental protection are held annually on the trail. Today's symbol of the route is the rowan tree, whose orange fruits resemble amber. The route includes a bicycle route connecting places attractive in terms of sightseeing, nature, culture, and history, as well as a network of thematic paths and local loops. In Poland, the trail is located from Lipnica Wielka to Niepołomice, with plans to extend it to the Baltic Sea. The Amber Trail Greenways aims to promote sustainable development and an active lifestyle, respecting nature, landscape, and cultural heritage related to amber (Amber Trail Greenways, 2023).

In addition to the above, there are also other bicycle trails related to amber in Poland. These include, for example, the EuroVelo 9 cycle route. This route, stretching over 2,050 kilometers from the Baltic to the Adriatic, although not the longest route in the EuroVelo network, has significant tourist values. Through the diversity of landscapes, encompassing sea, river, and mountain areas, this route guarantees multidimensional experiences at every stage of its traversal. The beginning of the route is located on the Baltic coast, while its end is at the Adriatic, allowing for contrasting water sensations. During the EuroVelo 9 journey, it is possible to encounter the diversity of culinary traditions of local communities in such countries as Poland, the Czech Republic, Austria, Slovenia, Italy, and Croatia. This route is often referred to as the Amber Route, referring to the historical trade routes along which amber was transported from the Baltic region to the Mediterranean basin (EuroVelo 9, 2023).

Events

Tourist attractions related to amber include events. "Events, by definition, have a beginning and an end. They are temporal phenomena, with planned events the event program or schedule is generally planned in detail and well publicized in advance" (Getz, 2007: 18). According to Getz (2008) there are diverse types of events, according to their themes. These types include cultural celebrations, political and state, arts and entertainment, business and trade, educational and scientific events, sporting competitions, recreational, and private events. From the perspective of this article, the most important are events related to arts and entertainment (e.g., amber exhibitions and works made from this material), as well as business and trade events (e.g., amber fairs). In addition, the authors believe that amber-related training, courses, or amber processing shows can also be classified as smaller events. They also attract participants from all over Poland, who come for learning or professional purposes (as part of business tourism).

In Gdańsk, the International Amber and Jewelry Fair AMBERIF takes place - the largest in Poland and one of the most important trade events in the jewelry industry in Europe (Komorowska, 2018). This is a place where visitors can encounter avant-garde projects and discover the latest trends in amber craftsmanship. The fair presents various products, such as silver and gold jewelry with amber, decorative amber items, gemstones, silver and gold jewelry, tools, and materials for jewelry manufacturing companies. In the Designers' Gallery, visitors can also see unique collections of designer jewelry manufactured by individual creators. The fair is accompanied by jewelry exhibitions (e.g., in the Amber Museum in Gdańsk), conferences and presentations on amber and jewelry. The event has a thirty-year tradition, and over two hundred exhibitors from Poland and abroad participated in its spring edition in March 2023 (Amberif, 2023; Amberif Spring, 2023).

One of the most original and consciously created promotional events is the World Amber Fishing Championships in Jantar (Olszewski-Strzyżowski & Wendt, 2018). The town of Jantar has always been associated with amber. The old Amber Trail began in the vicinity of Jantar. Today, it is a popular area for amber harvesting and the venue for World Amber Fishing Championships in Jantar, where participants compete to catch as many pieces of amber as possible in a set time. A committee then weighs the amber to determine the winner. Competitors use scoops and rakes to catch amber, searching for it in their designated costal area. Qualifications take place on the beaches of other towns, while the finals are held in Jantar, a village in the Stegna commune (XXIII World Amber Fishing Championships, 2023).

Another amber-related tourist event is the World Amber Days, organized since 2018 during the summer by the Amber Museum in Kołobrzeg. This event cultivates local traditions related to amber. The program includes amber sieving, fishing, and grinding competitions; jewelry shows; dance shows; a medieval amber craftsman workshop; and pyrotechnics using amber dust; as well as a presentation of art stands and musical concerts (V World Amber Days, 2023).

In addition to the large events described earlier related to amber in Poland, a number of smaller events are organized, related to the presentation of amber (e.g., amber collections exhibitions, amber jewelry, etc.), shows, courses, and training workshops (for people interested in processing amber). For example, exhibitions, courses, and shows are organized by the International Amber Association in Gdańsk (International Amber Association, 2023), the Amber Academy from Krakow (Amber Academy, 2023), the Amber Manufacture at the Amber Museum in Gdańsk (Amber Manufacture, 2023), the Amber Museum in Kołobrzeg (Amber Museum, 2023) or the Kurpie Museum in Wachu (Kurpie Museum, 2023). In addition, there is a wide offering of craftsmen and artists who present shows and workshops for smaller groups, during which they present amber processing technology (e.g., in Mikoszewo or Krynica Morska).

Model of the development of heritage tourism based on amber

Summarizing the issue presented in the article, it must be stated that amber, the places where it is presented and harvested, items produced using it (including jewelry, works of art, and medicines), and events such as fairs, as well as spiritual elements (like religious beliefs), are an important part of heritage and constitute significant tourist attractions. Referring to the earlier-quoted division of heritage based on the type of attraction according to Timothy and Boyd (2003), amber and its products are part of natural heritage, living cultural heritage, and industrial and personal heritage. Referring again to the model of heritage tourism presented in the work of Timothy and Boyd (2003), it should be emphasized that its development is not possible without a heritage tourism experience, which is the core of heritage tourism. Meanwhile, the tourism experience relies primarily on the presence of extraordinary tourist attractions (Stasiak, 2013), which in our case are the various elements related to amber described in the article

We adopted the framework of heritage tourism presented by Timothy and Boyd (2003) to the case study of the role of amber in the development of heritage tourism. As mentioned, tourist attractions including elements of heritage related to amber form the core that drives the development of heritage tourism. However, the transition from heritage to attraction, and consequently to heritage tourism, is a complex and multifaceted process. Elements of heritage related to amber are part of the phenomenal heritage present in the physical world, distinguished by Timothy and Boyd (2003). In our environment, there are collections of amber, places where it is harvested and caught, works of amber art, and their collections. However, for the phenomenon of heritage tourism to occur, these elements must transition into what

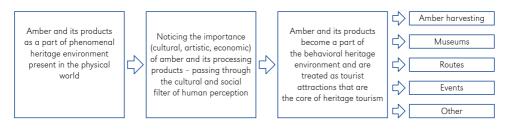


Figure 6. Model of the development of heritage tourism based on amber.

Source: author's elaboration based on Timothy and Boyd (2003).

is known as the behavioral heritage environment. This is possible when their value is recognized and appropriately appreciated. This, in turn, requires assessment through a cultural and social filter. These goods must be properly read and evaluated through this filter of human perception to be classified into the behavioral heritage environment (Timothy & Boyd, 2003). Such assessments are made by decision-makers (e.g., museum directors, gallery owners, artists, representatives of tourism companies, or local authorities), tourists, and other people, including residents of areas where amber resources are present. When the importance of goods related to amber was appreciated, they became part of the behavioral world. As a result, they have been evaluated and have a certain artistic and economic value.

Therefore, amber and its products began to be presented publicly, protected from destruction (e.g., in museums); they became the subject of trade and began to be treated as a tourist attraction worth seeing (e.g., in galleries, at amber fairs, in museums) and acquiring (e.g., during fishing or collecting amber on beaches). In this way, amber became an element creating the heritage experience and a basis for the development of heritage tourism (Fig. 6).

Summary

Amber is an inseparable part of the Polish coast. So natural and obvious that tourists vacationing on the Baltic Sea cannot really imagine their holidays without contact with it (whether in its natural form or processed by humans), without even thinking that this fossil does not appear at all on most of the world's seacoasts. Therefore, amber should be recognized as a true treasure of Poland, one of the three (along with salt and coal) national riches (Kosmowska-Ceranowicz, 2008). It is a unique, distinctive feature of the southern coasts of the Baltic, which enriches the holiday experiences of tourists in a special way and can serve as a kind of keystone, a core for strategic actions related to tourism development - in terms of creating product offerings, promoting the region, and building regional and cross-border organizational structures (see: Studzieniecki & Suchodolska, 2009; Studzieniecki, 2018; Studzieniecki et al., 2020).

The research objectives outlined in the introduction to this article have been achieved. The multifaceted analysis conducted in this article demonstrates unequivocally that amber and its products are resources that have the characteristics of heritage, which is preserved, developed, and passed on to future generations. This fossil simultaneously forms part of natural and geological heritage (natural heritage and geoheritage) and cultural heritage. More than two thousand years of amber extraction has led to the creation of specific methods and traditions of its harvesting, processing, and use, both in the utilitarian and artistic spheres, creating a unique intangible heritage. On the other hand, various forms of collecting and presenting amber, as well as a wide commercial offer, constitute tangible heritage. The significance and rank of this heritage can be local, regional, national, and even global.

It was proven that amber and its products constitute a tourist attraction of Poland and are at the core of heritage tourism. Amber heritage in Poland has "always" been used consciously by tourism; starting from simple searches for amber on the beach, through numerous stalls with holiday souvenirs made of this fossil resin, to exhibitions of valuable amber artifacts and works of art in state museums. However, in the last thirty years, one can observe an intensification of several types of actions and initiatives aimed at transforming amber heritage into unique tourist attractions, and then their commercialization. Among many possible examples, the most spectacular ones should be mentioned: the construction of the largest altar in the world (and monstrance) in the church of St. Bridget in Gdansk; the organization of thematic events, led by the World Championships in Amber Fishing in Jantar and the International Amber and Jewelry AMBERIF Fair in Gdansk; the creation of a separate monothematic Amber Museum in Gdansk and many private museums and galleries; and the creation of amber tourist routes (cycling, car). The complement to these large ventures is the creation of countless souvenir shops, specialist jewelry salons, and amber workshops, creating "amber" streets in Gdansk (Mariacka Street, Długie Pobrzeże, Długi Targ), and for example in Krakow (Grodzka Street, Sukiennice). Amber has therefore transformed from a typical seaside souvenir into one of the branded souvenirs from Poland.

Another significant achievement of the article is the application of the Timothy and Boyd model (2003) to present the development of amber-based heritage tourism. The model perfectly fits the development of tourism based on amber. Amber and its products have long been part of the phenomenal heritage environment. Only in the twenty-first century, however, did they move into the sphere of the behavioral heritage environment. This happened thanks to a broad appreciation of their cultural, social, and economic value, recognition as a unique, one-of-a-kind achievement of many generations, both on the objective level of experts and decision-makers, and on the subjective level - in the common perception of residents and primarily tourists.

This article is only of an exploratory, identifying nature. Further stages of research on amber tourism should include in-depth studies on the possibilities of creating (branded) tourist products based on amber heritage, as well as using this heritage to promote tourism in cities, regions, and countries or creating supranational organizations and structures supporting tourism (economy) development based on it. Comparative analyses of tourism based on amber in countries where this heritage plays as big a role as in Poland (e.g., Germany, Baltic countries) would also be interesting.

Editors' note:

Unless otherwise stated, the sources of tables and figures are the author's, on the basis of their own research.

References

- V World Amber Days (2023). https://i-kolobrzeg.pl/wydarzenie-1459-v_swiatowe_dni_bursztynu_w_kolobrzegu-szczegoly-56830.html
- XXIII World Amber Fishing Championships (2023). https://stegna.pl/aktualnosci/2023/lipiec/xxiii-mistrzostwa-swiata-w-polawianiu-bursztynu-jantar-07-09-07-2023
- Alivizatou, M. (2016). Intangible heritage and the museum: New perspectives on cultural preservation. London: Routledge. https://doi.org/10.4324/9781315426372

Amber Academy (2023). http://www.akademiabursztynu.pl/

Amber Manufacture (2023). https://www.amber.com.pl/bursztynowy-szlak/220-manufaktura-bursztynu

Amber Museum. (2023). http://muzeumbursztynu.kolobrzeg.pl/warsztaty/

Amber Route. (2023). https://pomorskie.travel/artykuly/szlak-bursztynowy/

Amber Trail Greenways. (2023).

https://malopolska.szlaki.pttk.pl/849-pttk-malopolska-szlak-bursztynowy-greenways

Amber Trail PTTK. (2023). http://pomorskieszlakipttk.pl/szlaki-piesze/bursztynowy/

- Amberif. (2023). https://amberif.pl/en/
- Amberif Spring. (2023). https://www.trojmiasto.pl/amberif

Ashworth, G. J. (2011). Heritage in ritual and identity. In C. Brosius & K. Polit (Eds), *Ritual, Heritage and Identity. The Politics of Culture and Performance in a Globalized World* (pp. 19-38). London: Routledge. https://doi.org/10.4324/9780367818005-3

Ashwort, G. J. & Graham, B. (1997). Heritage, identity and Europe. *Tijdschrift voor Economische en Sociale Geografie*, *88*(4), 381-388. https://doi.org/10.1111/j.1467-9663.1997.tb01632.x

Ashworth, G. J. & Tunbridge, J. E. (1999). Old cities, new pasts: Heritage planning in selected cities of Central Europe. *GeoJournal*, 49(1), 105-116. https://doi.org/10.1023/A:1007010205856

Bowes, R. G. (1989). Tourism and heritage: A new approach to the product. *Recreation Research Review*, 14(4), 35-40.

Buczkowska, K. (2008). Turystyka kulturowa. Przewodnik metodyczny. Poznań: AWF w Poznaniu.

Causey, F. (2011). Amber and the Ancient World. Los Angeles: Getty Publications.

Clark, N. D. (2010). Amber: Tears of the gods. Edinburgh: Dunedin Academic Press.

Convention Concerning the Protection of the World Cultural and Natural Heritage. (1972). Retrieved from https://whc.unesco.org/archive/convention-en.pdf

Crofts, R., Gordon, J. E., Brilha, J., Gray, M., Gunn, J., Larwood, J., Santucci, V. L., Tormey, D. & Worboys, G. L. (2020). Guidelines for geoconservation in protected and conserved areas. (Best Practice Protected Area Guidelines Series No. 31.). IUCN. https://doi.org/10.2305/IUCN.CH.2020.PAG.31.en

Cruickshank, R. D. & Ko, K. (2003). Geology of an amber locality in the Hukawng Valley, northern Myanmar. *Journal of Asian Earth Sciences*, *21*(5), 441-455. https://doi.org/10.1016/S1367-9120(02)00044-5

Cudny, W. (2017). The Ironbridge Gorge Heritage Site and its local and regional functions. *Bulletin of Geography. Socio-economic Series, 36*, 61-75. https://doi.org/10.1515/bog-2017-0014

Cudny, W., Jolliffe, L. & Guz, A. (2022). Heritage event as tourist attraction: The case of Dymarki Swietokrzyskie, Poland. *GeoJournal*, 87(4), 2975-2992. https://doi.org/10.1007/s10708-021-10407-4

Drzewicz, P., Natkaniec-Nowak, L. & Czapla, D. (2016). Analytical approaches for studies of fossil resins. *TrAC Trends in Analytical Chemistry*, *85*, 75-84. https://doi.org/10.1016/j.trac.2016.06.022

Edwards, H. G., Farwell, D. W. & Villar, S. E. J. (2007). Raman microspectroscopic studies of amber resins with insect inclusions. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 68(4), 1089-1095. https://doi.org/10.1016/j.saa.2006.11.037

Encyclopedia Britannica: Amber. (2023). https://www.britannica.com/science/amber

Encyclopedia Britannica: Museum. (2023). https://www.britannica.com/topic/museum-cultural-institution

EuroVelo 9. (2023). https://en.eurovelo.com/ev9

Getz, D. (2007). Event studies: Theory, Research and Policy for Planned Events. Oxford: Butterworth-Heinemann.

Getz, D. (2008). Event tourism: Definition, evolution, and research. *Tourism Management, 29*(3), 403-428. https://doi.org/10.1016/j.tourman.2007.07.017

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- Grimaldi, D. (1995). The age of Dominican amber. In K. B. Anderson & J. C. Crelling (Eds.), Amber. Resinite and Fossil Resins (pp. 203-217). Washington D.C.: American Chemical Society. https://doi.org/10.1021/bk-1995-0617.ch011
- Grimaldi, D. & Nascimbene, P. C. (2010). Raritan (New Jersey) amber. In D. Penney (Ed.), *Biodiversity of Fossils in Amber from the Major World Deposits* (pp. 167-191). Manchester: Siri Scientific Press.
- Halbwachs, H. (2019). Fungi trapped in amber a fossil legacy frozen in time. *Mycological Progress, 18*(7), 879-893. https://doi.org/10.1007/s11557-019-01498-y
- Heflik, W. & Natkaniec-Nowak, L. (2011). Gemmologia. 2nd edition, Kraków: Antykwa.
- Henderson, J. (2011). Understanding and using built heritage: Singapore's national monuments and conservation areas. *International Journal of Heritage Studies*, *17*(1), 46-61. https://doi.org/10.1080/13527258.2011.524006
- Faktoria (2023). https://faktoria-pruszcz.pl/en/about-faktoria/
- International Amber Association (2023). https://www.amber.org.pl/en/wystawy
- Jakubowski, K. (2004). Geological heritage and museums. *Polish Geological Institute Special Papers*, 13, 21-28.
- Jenkins Shaw, J., Solodovnikov, A., Bai, M. & Żyła, D. (2022). New Burmese Amber Rove Beetle Fossils Assigned to the Rare Extant Subfamily Coomaniinae (Coleoptera: Staphylinidae). *Insects*, *13*(9), 767. https://doi.org/10.3390/insects13090767
- Jędrysiak, T. (2008). Turystyka kulturowa. Warszawa: PWE.
- Jędrysiak, T. (2009). *Turystyka muzealna. Współczesne formy turystyki kulturowej.* Poznań: Wydawnictwo AWF.
- Josefsson, J. & Aronsson, I.-L. (2016). Heritage as life-values: A study of the cultural heritage concept. *Current Science*, *110*(11), 2091-2098. https://www.jstor.org/stable/24908138
- Kirshenblatt-Gimblett, B. (1998). *Destination Culture: Tourism, Museums and Heritage*. Berkeley: University of California Press.
- Komorowska, J. (2018). Historia naszyjnika zdobionego bursztynem... Narodziny "Amberifu". In: D. J. Olszewski-Strzyżowski (Ed.), Bursztyn. Wczoraj – dziś – jutro (pp. 51-62). Gdańsk: Wydawnictwo Akademii Wychowania Fizycznego i Sportu.
- Kosmowska-Ceranowicz, B. (2008). Glowing stone: Amber in Polish deposits and collections. *Przegląd Geologiczny*, *56*(8/1), 604-610.
- Kosmowska-Ceranowicz, B. (2012). Amber in Poland and in the World. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego.
- Kowalczyk, A. (2008). *Turystyka kulturowa. Spojrzenie geograficzne*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego.
- Kronenberg, M. (2007). Turystyka dziedzictwa przemysłowego próba sprecyzowania terminologii. In T. Burzyński (Ed.), Dziedzictwo przemysłowe jako strategia rozwoju innowacyjnej gospodarki, Materiały z IV Międzynarodowej Konferencji Naukowo-Praktycznej, Zabrze 6-7.09.2007. Katowice: Wydawnictwo GWSH.
- Kurpie Museum (2023). http://kurpie.com.pl/
- Lambert, J. B. & Poinar, G. O. (2002). Amber: The organic gemstone. *Accounts of Chemical Research*, *35*(8), 628-636. https://doi.org/10.1021/ar0001970
- Langenheim, J. H. (1990). Plant resins. *American Scientist*, 78(1), 16-24. https://www.jstor.org/stable/29773859
- Lew, A. A. (1987). A framework of tourist attraction research. *Annals of Tourism Research*, *14*(4), 553-575. https://doi.org/10.1016/0160-7383(87)90071-5
- de Lourdes Serrano-Sánchez, M., Hegna, T. A., Schaaf, P., Pérez, L., Centeno-García, E. & Vega, F. J. (2015). The aquatic and semiaquatic biota in Miocene amber from the Campo La Granja mine

(Chiapas, Mexico): Paleoenvironmental implications. *Journal of South American Earth Sciences, 62*, 243-256. https://doi.org/10.1016/j.jsames.2015.06.007

- McKellar, R. C., Wolfe, A. P., Tappert, R. & Muehlenbachs, K. (2008). Correlation of Grassy Lake and Cedar Lake ambers using infrared spectroscopy, stable isotopes, and palaeoentomology. *Canadian Journal of Earth Sciences*, 45(9), 1061-1082. https://doi.org/10.1139/E08-049
- McKercher, B. & Du Cros, H. (2002). *Cultural Tourism: The Partnership Between Tourism and Cultural Heritage Management*. New York: Haworth Press.
- Mikos von Rohrscheidt, M. (2008). *Turystyka kulturowa. Fenomen, potencjał, perspektywy*. Gniezno: GWSHM Milenium.
- Murzyn-Kupisz, M. (2010). Barbarzyńca w ogrodzie? Dziedzictwo kulturowe widziane z perspektywy ekonomii. Zarządzanie Publiczne, 13, 19-32.
- Murzyn-Kupisz, M. (2012). *Dziedzictwo kulturowe a rozwój lokalny*. Kraków: Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie.
- Napora, A. (2019). Geological and deposit facts of the presence of Baltic amber (succinite) in Poland. https://www.amber.com.pl/bursztyn/bursztyn-baltycki/3075-geologiczno-zlozowe-fakty-obecnoscibursztynu-baltyckiego-sukcynitu-w-polsce
- No More Wild Beaches (2023). https://www.tekstowo.pl/piosenka,irena_santor,juz_nie_ma_dzikich_plaz.htm
- Olszewski-Strzyżowski, D. J. (2018). Próba określenia preferencji w zakupie wyrobów z bursztynu, przez turystów krajowych i zagranicznych, wyrażona przez wybrane galerie bursztynu z województwa pomorskiego. In D. J. Olszewski-Strzyżowski (Ed.), *Bursztyn. Wczoraj – dziś – jutro* (pp. 163-180). Gdańsk: Wydawnictwo Akademii Wychowania Fizycznego i Sportu.
- Olszewski-Strzyżowski, D. J., & Wendt, J. A. (2018). Historia mistrzostw świata w poławianiu bursztynu. In D. J. Olszewski-Strzyżowski (Ed.), *Bursztyn. Wczoraj – dziś – jutro* (pp. 19-38). Gdańsk: Wydawnictwo Akademii Wychowania Fizycznego i Sportu.
- Ostreika, A., Pivoras, M., Misevičius, A., Skersys, T. & Paulauskas, L. (2021). Classification of objects by shape applied to Amber Gemstone Classification. *Applied Sciences*, *11*(3), 1024. https://doi.org/10.20944/preprints202008.0336.v1
- Owsianowska, S. & Banaszkiewicz, M. (2015). Trudne dziedzictwo a turystyka. O dysonansie dziedzictwa kulturowego. *Turystyka Kulturowa, 11,* 6-24.
- Paprzycka, J. (2022). *Bursztyn jako walor turystyczny na przykładzie gminy Stegna*. Master's thesis written at the Institute of Urban Geography, Tourism, and Geoinformation during the seminar of Assoc. Prof. Waldemar Cudny.
- Piatkowska, K. (2017). Museum Institutions in Monuments-Positive and Negative Aspects of Adaptation: The New Amber Museum and Museum of Science in Gdansk, Poland. *IOP Conference Series: Materials Science and Engineering*, 245(5). https://doi.org/10.1088/1757-899X/245/5/052080
- Pielińska, A. & Gronuś-Dutko, B. (2013). Amber in collections of Polish museums. In B. Kosmowska-Ceranowicz, W. Gierłowski & E. Sontag (Eds), *The International Amber Researcher Symposium. Amber. Deposits – Collections – The market*. Gdańsk, Poland, 22-23.03.2013 (pp. 88-90). https://www.amber. com.pl/bursztyn/muzea-i-zbiory-bursztynu/116-polska/2800-bursztyn-w-kolekcjach-polskich-muzeow
- Poria, Y. (2001). Clarifying Heritage Tourism: Distinguishing Heritage Tourists from Tourists in Heritage Places. Doctoral Dissertation, University of Surrey, Guildford, UK.
- Przecławski, K. (1997). Człowiek a turystyka zarys socjologii turystyki. Kraków: Albis.
- PWN Encyclopedia: Bursztyn (2023). https://encyklopedia.pwn.pl/haslo/bursztyn;3882208.html
- PWN Encyclopedia: Kopalina (2023). https://encyklopedia.pwn.pl/haslo/kopalina;3925524.html
- PWN Encyclopedia: Skamielina (2023). https://encyklopedia.pwn.pl/szukaj/skamielina.html
- Richards, G. (2018). Cultural tourism: A review of recent research and trends. *Journal of Hospitality and Tourism Management, 36*, 12-21. https://doi.org/10.1016/j.jhtm.2018.03.005

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- Richards, G. (2021). Rethinking Cultural Tourism. Cheltenham: Edward Elgar Publishing. https://doi.org/10.4337/9781789905441
- Rygula, A., Klisińska-Kopacz, A., Krupska, P., Kuraś, E., & del Hoyo-Meléndez, J. M. (2021). The surface degradation of Baltic amber: The depth-profiling analysis and its application to historical object. *Journal of Raman Spectroscopy*, *52*(1), 123-129. https://doi.org/10.1002/jrs.5942
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. Advances in Experimental Social Psychology, 25(1), 1-65. https://doi.org/10.1016/S0065-2601(08)60281-6
- Silberberg, T. (1995). Cultural tourism and business opportunities for museums and heritage sites. *Tourism Management*, *16*(5), 361-365. https://doi.org/10.1016/0261-5177(95)00039-Q
- Sinkevicius, S., Lipnickas, A. & Rimkus, K. (2015). Automatic amber gemstones identification by color and shape visual properties. *Engineering Applications of Artificial Intelligence*, *37*, 258-267. https://doi.org/10.1016/j.engappai.2014.09.011
- Smaliychuk, A., Ghazaryan, G. & Dubovyk, O. (2021). Land-use changes in Northern Ukraine: Patterns and dynamics of illegal amber mining during 1986-2016. *Environmental Monitoring and Assessment*, 193(8), 1-18. https://doi.org/10.1007/s10661-021-09317-2
- Smith, L. & Waterton, E. (2009). Heritage, Communities and Archaeology. London: Bloomsbury.
- Stasiak, A. (2007). Szlaki turystyczne zagospodarowanie, atrakcja czy produkt turystyczny? In P. Kuleczka (Ed.), *Szlaki turystyczne a przestrzeń turystyczna* (pp. 45-53). Warszawa: Polskie Towarzystwo Turystyczno-Krajoznawcze Zarząd Główny.
- Stasiak, A. (2013). Tourist product in experience economy. *Turyzm/Tourism*, 23(1), 27-35. https://doi.org/10.2478/tour-2013-0003
- Stasiak, A., Śledzińska, J. & Włodarczyk, B. (Eds.) (2014). *Szlaki turystyczne. Od pomysłu do realizacji.* Warszawa – Łódź: Wydawnictwo PTTK "Kraj".
- Studzieniecki, T., & Suchodolska, T. (2009). Dziedzictwo bursztynu a rozwój turystyki. In: T. Studzieniecki (Ed.), Dziedzictwo i turystyka w Europie XXI wieku – dystanse i przenikanie kultur (pp. 85-96). Gdynia – Lubieszynek: Academia Europa Nostra.
- Studzieniecki, T. (2018). Promocja dziedzictwa bursztynu w krajowej i międzynarodowej współpracy terytorialnej. Bursztyn. *Wczoraj – dziś – jutro* (pp. 65-81). Gdańsk: Wydawnictwo Akademii Wychowania Fizycznego i Sportu.
- Studzieniecki, T. (2022). Conditions and opportunities for using Baltic amber heritage in the development of territorial cooperation. *Pskov Journal of Regional Sciences*, 18(1), 14-23. https://doi.org/10.37490/S221979310017342-9
- Studzieniecki, T., Jakubowski, A. & Meyer, B. (2020). Transnational tourist destination management: A case study of the Baltic Sea Region. *Baltic Region*, *12*(3), 127-146. https://doi.org/10.5922/2079-8555-2020-3-8
- Sturm, B. (2011). Amber: An introduction to organic chemistry. Science in School, 19, 36-42.
- Timothy, D. J. & Boyd, S. W. (2003). Heritage Tourism. Harlow: Pearson Education.
- Tunbridge, J. E. (2008). Plural and multicultural heritages. In P. J. Howard & B. Graham (Eds.), *The Ashgate Research Companion to Heritage and Identity* (pp. 299-315). Aldershot: Ashgate Publishing Limited.
- Tunbridge, J. E. & Ashworth, G. J. (1996). Dissonant Heritage: The Management of the Past as a Resource in Conflict. Chichester, New York: Wiley.
- Urban, J., Migoń, P. & Radwanek-Bąk, B. (2021). Dziedzictwo geologiczne. *Przegląd Geologiczny*, 69(1). https://doi.org/10.7306/2021.1
- Urry, J. (1995). How societies remember the past. The Sociological Review, 43(1), 46-65.
- Wendt, J. A., & Bógdał-Brzezińska, A. (2018). Złote runo współczesnych argonautów bursztyn jako marka turystyczna w Internecie w latach 2009-2018. In D. J. Olszewski-Strzyżowski (Ed.), Bursztyn. Wczoraj – dziś – jutro (pp. 109-121). Gdańsk: Wydawnictwo Akademii Wychowania Fizycznego i Sportu.

- Wimmer, R., Rascher, J., Krumbiegel, G., Rappsilber, I. & Standke, G. (2009). Bitterfelder Bernstein ein fossiles Harz und seine geologische Geschichte. *GMIT Geowissenschaftliche Mitteilungen*, 38, 6-15. https://doi.org/10.23689/fidgeo-3891
- Zariņa, A. & Krumberga, K. (2018). Territoriality of signs: Amber in the State's semiotics in Latvia. *GeoJournal*, *83*, 101-118. https://doi.org/10.1007/s10708-016-9759-2
- Zeppel, H. & Hall, M. C. (1992). Arts and Heritage Tourism. In B. Weiler & M. C. Hall (Eds). *Special Interest Tourism* (pp. 47-69). London: Belhaven.