

English Generic Names of Trees Native to the British Isles

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Španělský jazyk se zaměřením na vzdělávání

Autor práce: Zuzana Valešová

Vedoucí práce: Mgr. Renata Šimůnková, Ph.D.

Katedra anglického jazyka





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Jméno a příjmení: Zuzana Valešová

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Zásady pro vypracování:

Cílem práce je určit etymologický původ anglických rodových jmen stromů přirozeně se vyskytujících na Britském souostroví, porovnat, z jakých jazyků pochází, a vysledovat pravidelnosti u jednotlivých způsobů pojmenování.

Předpokladem této práce je, že tato anglická rodová jména stromů budou nejčastěji staroanglického původu.

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- 1) Obsahová analýza odborné literatury.
- 2) Vyhledání, určení, komparace a vyhodnocení etymologického původu anglických rodových jmen stromů přirozeně se vyskytujících na Britském souostroví.

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- 2) Durkin, Philip. 2014. Borrowed Words: A History of Loanwords in English. Oxford: Oxford University Press.
- 3) Hendl, Jan, Remr, Jiří. 2017. Metody výzkumu a evaluace. Praha: Portál.
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- 7) Večerka, Radoslav, et al. 2006. K pramenům slov: uvedení do etymologie. Praha: NLN.

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L.S.

prof. RNDr. Jan Picek, CSc. děkan

PhDr. Marcela Malá, M.A., Ph.D. vedoucí katedry

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ABSTRACT

Tato práce se zabývá etymologickým původem anglických rodových jmen stromů, které se přirozeně vyskytují na Britských ostrovech. Cílem bakalářské práce je kvantitativním výzkumným šetřením určit etymologický původ anglických rodových jmen stromů vyskytujících se v Irsku a Británii. Předpokladem výzkumného šetření je, že více než 50 % anglických rodových jmen bude staroanglického původu.

Výsledky odhalily, že etymologický původ zkoumaného vzorku 32 anglických rodových jmen je ve 43,8 % případů staroanglický, ve 28,1 % případů pochází z raně moderní angličtiny, ve 12,5 % případů pochází z latiny, v 6,3 % případů z řečtiny, ve 3,1 % případů ze středověké angličtiny, ve 3,1 % případů ze středověké nebo raně moderní angličtiny a ve 3,1 % případů je původ skandinávský. Předpoklad, že více než polovina anglických rodových jmen bude staroanglického původu, nebyl výzkumným šetřením potvrzen.

Klíčová slova:

Etymologie, botanická nomenklatura, původní stromy, Britské ostrovy, výzkumné šetření.

ABSTRACT

This thesis deals with the etymological origin of English generic names of trees native to the British Isles. It aims to determine the etymological origin of English generic names of native British and Irish trees via quantitative research. It is assumed that more than 50% of English generic names will be of Old English origin.

The research reveals that the etymological origin of 32 English generic names is in 43.8% of cases Old English, in 28.1% of cases Early Modern English, in 12.5% of cases Latin, in 6.3% of cases Greek, in 3.1% of cases Middle English, in 3.1% of cases Middle English or Early Modern English and in 3.1% of cases Scandinavian. Therefore, the thesis statement, that the majority of English generic names will be of Old English origin, is disproved.

Key words:

Etymology, botanical nomenclature, native trees, British Isles, research.

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INTRODUCTION

The thesis is engaged in the topic of the etymological origin of English generic names of trees native to the British Isles. The aim of this thesis is to determine the etymological origin of English generic names of native British and Irish trees by means of quantitative research. The queried research question is what the etymological origin of English generic names of trees native to the British Isles is. It is supposed that the research will result in more than 50% of English generic names being of Old English origin.

The reason for forming the thesis statement was the assumption that since native trees had already been settled in the British Isles before the Anglo-Saxon invasion (Webb 1985, 232), the effect of Old English on them might have been more prominent. Thus their denomination may be predominantly of Old English origin.

The theoretical part of the thesis may be divided into two parts – linguistic and botanical. The linguistic part discusses the ways of enrichment of the English lexicon, the periodization of the English language and the history of borrowings in English. The knowledge of these topics is crucial for accurate determination of the etymological origin and for understanding of the results.

The botanical part is concerned with native and alien status of plants, botanical nomenclature and the problematics of classification of trees and shrubs. This part enables to understand the system of denominations and it defines fundamental terms used in this thesis.

The research focuses on the determination of the etymological origin of English generic names of trees native to the British Isles. The research was based on collection of data (tree names), determination of their origin, their comparison, discovering possible regularities in denominations and evaluation of the results.

1 NEW WORDS IN ENGLISH

This thesis determines the origin of English words; therefore, it is important to be aware of the difference between borrowed words and word-creations and to distinguish them. In several cases English generic names of trees native to the British Isles are compounds, which is a crucial fact for determination of the etymological origin. For more information see the chapter 7.1.2.2 The determination of the etymological origin of English generic names.

Stockwell et al. present two sources of new words in English – borrowing and word-creation. These two sources enrich the English lexicon with new words (Stockwell, et al. 2001, 3); however, there are some lexemes that have always been in the lexicon. These lexemes arrived with the Anglo-Saxon invasion and they have been used since then. This **native vocabulary** (Crystal 2019, 134), also called **inherited** (Stockwell, et al. 2001, 3), consists not only of grammatical words (e.g. *in*), but also of lexical words (e.g. *father*) and affixes (e.g. *–ness*). Although the native vocabulary forms a small part of the English lexicon, these words are the most frequently used ones (Crystal 2019, 134).

1.1 Borrowing

Borrowing can be defined as a process when a language, called the borrowing or the receiving language, accepts lexemes or a semantic meaning from another language, called the donor or the source language, to its lexicon (Durkin 2014, 8). English has mainly borrowed from languages, such as Latin, Greek and French (Stockwell, et al. 2001, 3). A borrowing language may acquire a word form and a semantic meaning, or only the semantic meaning. Thus lexical borrowings may be divided into loan words and semantic borrowings, according to what is borrowed.

Loan words are borrowed words which are adopted from the donor language not only with its form, but also with its semantic meaning (Durkin 2014, 8). An example of a loan word is *box*, a tree of the genus Buxus (Mish, et al. 1990, 173).

Semantic borrowings are borrowings of the meaning but not of the form. However, the form of the donor language can be replaced by its translations into the borrowing language. This process is called a **loan translation** or **calque** (Durkin 2014, 8–9). An example of a loan translation is *buckthorn*, a tree of the genus Rhamnus. This compound is a translation of the modern Latin expression *cervi spina*, meaning "stag's thorn" (Onions, et al. 1966, 123).

On the other hand, an already existing word in the borrowing language can adopt a new, extra, meaning from the donor language. For example the Old English word *prōwung*, meaning "suffering", possibly adopted the extra meaning "(Christ's) passion" from the Latin word *passiō*. These borrowings are known as **semantic loans** (Durkin 2014, 8–9).

1.2 Word-creation

1.2.1 Eponyms

Eponyms are words which originate in names. These words inevitably undergo changes of their semantic meaning, for they do not reflect the original meaning of the source word.

The division of eponyms depends on the nature of the source name. Stockwell et al. distinguish eponyms based on personal names of real people, geographical names, brand names and imaginary names from literature, folklore or mythology.

Eponyms originating in personal names are often found in scientific language when a new discovery/invention is named after its discoverer/inventor (e.g. *ohm*)

(Stockwell, et al. 2001, 15–17). An example of an eponym based on an imaginary name from mythology is *may-tree*, a tree of the genus Crataegus. The word *may* has its origin in the Latin word *Māia*, which was a name of a Roman Goddess (Onions, et al. 1966, 563).

1.2.2 Compounding

Compounding is a process when two or more bases are combined to form a new lexical unit which functions grammatically and semantically as one word. Although multiple bases may be comprised, English tends to assemble two bases (Quirk, et al. 1985, 1567). Compounding is the most common means of forming new words in English (Stockwell, et al. 2001, 12).

Compounds form mainly nouns, adjectives (Crystal 2019, 232) and verbs (Fromkin, et al. 2009, 101). However, they may also create words of any other word class, such as pronouns (e.g. *anybody*), prepositions (e.g. *instead of*) and adverbs (e.g. *upside down*) (Quirk, et al. 1985, 1567). An example of a noun compound is *whitebeam*, a tree of the genus Sorbus (Mabey 1997, 207).

1.2.3 Back-formation

Crystal describes back-formation as an opposite process to derivation. In other words, back-formations are words which were derived from a longer word by eliminating of an affix. For instance, it may seem that the word *editor* was created by means of derivation from the word *edit*; while in reality, it was the other way round. *Edit* is a backformation created from the word *editor* (Crystal 2019, 140).

1.2.4 Derivation

Derivation is a process of adding derivational affixes to a base (Quirk, et al. 1985, 1520) in order to change its meaning or the word class. Bases may accept multiple affixes and hence they may become largely ramified (Biber, et al. 1999, 57–58).

There are two groups of affixes in English – prefixes and suffixes. Prefixes are derivational morphemes which are attached before a base. On the opposite, suffixes are derivational morphemes which stand after a base (Crystal 2019, 138). In general, prefixes tend to modify the semantic function of the base, while suffixes influence mainly its grammatical function such as the word class.

Depending on whether a prefix or a suffix is attached, the derivational process may be divided into **prefixation** and **suffixation**. These processes may be denominated together as **affixation** (Quirk, et al. 1985, 1539–1546). An example of suffixation is *aspen*, a tree of the genus Populus. The word *aspen* was formed by *asp* and the suffix *-en* (Onions, et al. 1966, 55).

Some authors, such as Stockwell et al. and Quirk et al., do not consider affixation as the only derivational process and they also include conversion (Stockwell, et al. 2001, 12) (Quirk, et al. 1985, 1558). **Conversion,** or **functional shift**, is a process when a new word is created without attaching an affix. Conversion produces mainly nouns, adjectives and verbs. For example, the noun *brake* was converted into a verb without any outer change (Crystal 2019, 139).

1.2.6 Abbreviations

Abbreviations are words which are reduced and shortened (Quirk, et al. 1985, 1580). Abbreviations are one of the most distinctive features of present-day English despite the fact that their popularity has already been increasing since the 19th century. The reason for using abbreviations is the tendency to economize the language and this trend manifested itself especially in scientific, technological and specialized language (Crystal 2019, 130).

Quirk et al. distinguish two types of abbreviations – clippings and acronyms. **Clipping** is a process when part of a word, especially of a noun, is shortened. For example, *advert* is shortened from *advertisement* (Quirk, et al. 1985, 1580–1581).

Acronyms are words which are created from the initial letters of each abbreviated word (e.g. LA = Los Angeles). Quirk et al. distinguish two types of acronyms – those which are pronounced as a sequence of letters (they may be called **alphabetism** (Quirk, et al. 1985, 1581) or **initialism** (Crystal 2019, 130)) and those which are pronounced as one single word (Quirk, et al. 1985, 1581–1582).

Blends, also called **portmanteau words,** are abbreviations which are formed of reduced forms of two words such as *smog* (smoke + fog) (Crystal 2019, 130–141). Quirk et al. consider blending as a type of compounding (Quirk, et al. 1985, 1583).

1.2.7 Other sources

Neologisms, or **creations** *de novo*, are new words which are formed without following any already existing word or word part (e.g. *nylon*). Still, new words are created *de novo* exceptionally (Stockwell, et al. 2001, 5).

Reduplication is a process when part of a word or a whole word is repeated (e.g. *fifty-fifty*). However, this process occurs rarely (Stockwell, et al. 2001, 18) and the majority of created words are informal or familiar (Quirk, et al. 1985, 1579).

Another rarely used process of words-formation is the creation of **echoic words**. These words aim to imitate sounds, for example, *buzz* (Stockwell, et al. 2001, 18).

2 THE PERIODIZATION OF THE ENGLISH LANGUAGE

Since this thesis determines the etymological origin, it is essential to know how the periods of the English language are classified and bounded. The periodization of the English language was crucial for determining and specifying generic names which were of English origin. For more information see the chapter 7.1.2.2 The determination of the etymological origin of English generic names.

According to Crystal and Stockwell et al., the English language may be classified into four main periods — Old English, Middle English, Early Modern English and Modern English (Crystal 2019, 5) (Stockwell, et al. 2001, 30). Durkin refers to the latest period as Later Modern English (Durkin 2014, 7). Burnley divides English into five periods — Old English, Early Middle English, Later Middle English, Early Modern English and Modern English (Burnley 2013, 1–315).

This division into periods is based on diversity and linguistic changes which the language underwent during its history. Each period is specific with regard to its grammar, lexicon and pronunciation. Nevertheless, as the linguistic changes did not occur together in one moment and it often lasted many years until some change was accepted, the accurate delimitation of the periods is problematic. Moreover, many linguists interpret this division differently and they state different boundaries (Durkin 2014, 7).

2.1 Old English – Middle English

Crystal, Stockwell et al. and Hogg concur that the beginning of the English language is dated to the 5th century when the Germanic tribes of the Angles, the Saxons and the Jutes invaded the British Isles (Crystal 2019, 7) (Stockwell, et al. 2001, 30) (Hogg 2002, 1). Generally, the year 449 is considered as the year when the

English language was born. However, in reality, the language did not arise in one year, but it lasted many years until the linguistic character of the British Isles was changed (Stockwell, et al. 2001, 28–30).

Both Crystal and Burnley mark the boundary between Old English and Middle English with the end of the 11th century (Crystal 2019, 30) (Burnley 2013, 65). According to Crystal, the year 1066 cannot be regarded as the boundary between Old English and Middle English. Although the strong linguistic and social influence of the Norman invasion is unquestionable, it took many years before it affected the language in a considerable way (Crystal 2019, 30). In accordance with this explanation, neither Durkin determines the boundary between Old English and Middle English with the year 1066. However, Durkin moved the boundary around the year 1150 (Durkin 2014, 7).

Stockwell et al. date the end of Old English to the year 1066. Nevertheless, Stockwell et al. admit that it is not possible for a language to change so abruptly. Furthermore, Old English possessed some Middle English features before the invasion and vice versa. The reason for limiting the Old English period with the year 1066 is its suitability (Stockwell, et al. 2001, 30).

It may seem that the Norman invasion was the cause of the birth of Middle English. However, Hogg deconstructs the belief that the Norman invasion had such an important formative influence on Old English. The Norman invasion in 1066 affected mainly the lexicon and this change could be observed as late as in the 13th century. Hogg supports his claim with the fact that the Viking invasion had a bigger and wider effect on Old English than the Norman invasion, yet this influence was limited geographically (Hogg 2002, 130–131).

2.2 Middle English – Early Modern English

The period of Middle English may be divided into another two periods – Early Middle English and Later Middle English. Burnley dates the Early Middle English period between 1100 and 1300 and the Later Middle English period between 1300 and 1500. The first period was mainly influenced by French owing to the Norman Conquest. On the other hand, the second period was characterized by the increasing importance and use of the Middle English language and by the emergence of the most important and known medieval literature (Burnley 2013, 65–137).

Dating of the end of the Middle English period is problematic and there is not one generally accepted boundary. The first possible boundary may be the year 1476 when the printing press was established in England by William Caxton. The second option may be c. 1500 when the use of printing press enhanced. Thirdly, the boundary may stand between 1400 and 1450, after the time of Chaucer, when the pronunciation underwent crucial changes (Crystal 2019, 56). The last option may be the year 1492 when the New World was discovered (Stockwell, et al. 2001, 39).

Crystal does not strictly delimit the boundary, he attaches to the years between 1400 and 1450 (Crystal 2019, 30–56). Stockwell et al. use the date 1476 (Stockwell, et al. 2001, 30). Durkin and Burnley concur with c. 1500 when the use of printing press became more widespread (Durkin 2014, 7) (Burnley 2013, 211).

2.3 Early Modern English – Modern English

There are many different possibilities how to date the Early Modern English period. Crystal delimits this period as the time between Chaucer and Johnson, i.e. approximately 1400–1800 (Crystal 2019, 56). Stockwell et al. are more precise and propose two possible boundary dates between Early Modern English and

Modern English. The first date is the year 1755 when Samuel Johnson published his *Dictionary of the English Language*. The second date is 1776, the year of American independence (Stockwell, et al. 2001, 39). Burnley delimits Early Modern and Modern English with the year 1800 claiming that English may be considered as a language of international importance since then (Burnley 2013, 211). According to Durkin, the end-date of the Early Modern English period may be c. 1700 or c. 1750. However, the reason for choosing these dates is not fully clarified (Durkin 2014, 7).

2.4 Modern English – Future

The contemporary period is the period of Modern English (Stockwell, et al. 2001, 30), even though the language has considerably changed since the end of the 18th century (Crystal 2019, 80). The English of the latest decades may be called present-day English (Durkin 2014, 7).

Crystal perceives the future of English in the post-Brexit Europe optimistically. He predicts birth of various "Euro-Englishes", which would differ from each other. Therefore, the decline of English after Brexit is not probable and the post-Brexit Europe is more likely to face a new Englentrance than Englexit (Crystal 2019, 124).

2.5 The periodization used in the thesis

The periodization of the English language adopted by this thesis follows the concept of Crystal in view of the fact that his publication *The Cambridge Encyclopedia of the English Language* is the most current work used in this thesis.

According to Crystal, the division of English is following:

- Old English (5th century–1100)
- Middle English (1100–1400/1450)
- Early Modern English (1400/1450–1800)
- Modern English (1800–present) (Crystal 2019, 7–80).

3 THE HISTORY OF BORROWINGS IN ENGLISH

English generic names of trees native to the British Isles include borrowings from foreign languages; therefore, the history of borrowings in English must be mentioned in this thesis. Understanding of their history may enlighten and help to understand the results of the research – why the words originated in certain languages and not in others, why they entered the lexicon in certain periods, etc. For more information see the chapter 7.1.2.2 The determination of the etymological origin of English generic names.

Borrowings are word forms and/or word meanings adopted to one language (borrowing/receiving language) from another language (donor/source language) (Durkin 2014, 8). The problematics and the definition of borrowings are more broadly discussed in the chapter *1.1 Borrowing*.

Through the history, the English lexicon has been influenced by more than 300 languages (Crystal 2019, 136). Nonetheless, there are 3 languages which have had a more prominent impact on English than the other ones – French, Latin and Greek. The problematics of borrowings from these three languages lies in the fact that they are interconnected and they influence each other. Many Greek words were converted into Latin ones (Latinized) and many Latin words were influenced by French (Gallicized) before entering the English lexicon. As a result, the determination of the origin of borrowed words may be inaccurate or misleading (Kaytaria 2001, 255).

3.1 Old English (5th century–1100) (Crystal 2019, 7)

Languages which mainly influenced and enriched the Old English lexicon were Latin and Scandinavian. Other languages which provided some borrowings, although to a lower extent, were French and Celtic. There were also a few Old Saxon borrowings in the lexicon as a result of copying and translating of Old Saxon texts (Crystal 2019, 8–27).

Latin borrowings had influenced the Old English lexicon even before the Old English language was born. The Anglo-Saxon tribes had been in contact with Latin before they invaded the British Isles in the 5th century; and therefore, their language had already included some Latin words. These words were mainly from military, administrative or commercial field (Stockwell, et al. 2001, 32). However, distinction between pre-invasion and post-invasion borrowings is problematic and inaccurate. Crystal states that there were no more than 200 Latin borrowings in the early post-invasion lexicon.

Latin borrowings in Old English may be divided into two periods. The first period lasted approximately until the year 1000 and the borrowings were mainly connected with everyday life and they were borrowed from spoken Latin. On the contrary, borrowings in the second period were adopted from classical Latin and they were more of technical, ecclesiastical and academic character. This change was caused by the scholarly and religious renaissance at the time.

Scandinavian borrowings penetrated into the Old English lexicon due to the Danish invasions and settlement in the north-east of Britain in the period from the 8th to the 11th century (Crystal 2019, 8–25). Words adopted from Old Norse, the language of Viking invaders, were especially common words (e.g. *sky*) and place names (Stockwell, et al. 2001, 33).

Borrowings from French remarkably influenced the Middle English lexicon; however, some French words had already entered into Old English (e.g. *prison*). This French influence was caused by several factors. First of all, the bond between France and England became stronger in the 10th and the 11th century. Consequently, Edward

the Confessor spent more than two decades in French exile before returning to England. Moreover, considerable part of the English clergy studied in France.

The Celtic language had almost no impact on the Old English lexicon as there were a small number of borrowings. **Celtic borrowings** may be found in regional dialects or place names, such as *Avon*, *Kent* and *Dover*. In fact, a few Celtic borrowings in Old English originated in Latin on account of the language impact of missionaries from Ireland (e.g. *cross*) (Crystal 2019, 8–27).

Typical borrowings for Old English period were semantic borrowings (Durkin 2014, 9). Loan translations were also widely used, especially later in the period. On the contrary, this type of borrowing has seldom arisen in the Modern English lexicon (Crystal 2019, 27).

According to Stockwell et al., the Old English lexicon consisted of about 25 000–30 000 words, of which 3% were of Latin or Greek (via Latin) origin (Stockwell, et al. 2001, 31–32). Durkin estimates that Old English possessed about 34 000 words, of which about 600 words, i.e. 1.75%, were borrowed directly from Latin (Durkin 2014, 100). Such word is, for example, *pear*, a tree of the genus Pyrus (Costello, et al. 1991, 994). Crystal claims that the lexicon consisted of 3% of loan words. This indicates the fact that the Old English lexicon was Germanic in the first place (Crystal 2019, 27).

3.2 Middle English (1100–1400/1450) (Crystal 2019, 30)

The Norman Conquest in 1066 commenced a bilingual period as both English and French were spoken. French became the language of the court and it also penetrated into the ecclesiastical field (Crystal 2019, 30). On the other hand, English was the language of lower classes, which formed the vast majority, about 90–98% of

the population (Stockwell, et al. 2001, 35). Nonetheless, Durkin observes that the country was, in fact, trilingual. Latin remained the dominant language among the clergy although it was studied via French (Durkin 2014, 229).

In this post-Conquest period English accepted mainly French words. However, especially in the 14th and 15th century, English adopted considerable amount of Latin words, which penetrated into the lexicon directly from Latin or via French. Crystal claims that at the end of the 14th century approximately 10 000 French lexemes and thousands of Latin lexemes had entered the English lexicon.

The dominant group of **French borrowings** were represented by nouns. French borrowings included all fields, e.g. administration, medicine, arts, everyday language and abstract nouns. However, the borrowings did not always replace their Old English equivalents in cases when they existed. In some cases there were two co-existing forms, a French one and an English one.

Latin borrowings were primarily adopted in technical and professional fields, e.g. administration, law, religion and science (Crystal 2019, 46–135).

Scandinavian borrowings penetrated into the lexicon also in the Middle English period, though in a lower extent than French. The borrowings appeared mainly in the Eastern and the Northern part of the country as a consequence of the Danelaw, the location of Scandinavian settlers. Due to the falling prestige of English after the Conquest, Scandinavian borrowings commenced to be established in writing (Burnley 2013, 66–67).

French, Latin and Scandinavian were not the only languages which influenced the English lexicon in this period. **Borrowings from other languages**, such as Spanish, Portuguese, Russian and Arabic, were also adopted, especially via French.

The Conquest caused the most remarkable change in the history of the English lexicon. At the beginning of the Middle English period the lexicon was formed by more than 90% of Old English words, yet at the end, Old English words represented about 75% of the lexicon (Crystal 2019, 48–135).

3.3 Early Modern English (1400/1450–1800) (Crystal 2019, 56)

The Early Modern English lexicon was strongly affected by the Renaissance and the amount of foreign borrowings raised remarkably during this period. This phenomenon is one of the most characteristic features of Early Modern English (Crystal 2019, 60).

General interest in ancient Rome and Greece caused the increase of borrowings from these languages with the Latin language serving as a mediator for Greek borrowings. Latin and Greek borrowings represented words from scientific, technological and art field, such as *datum* and *method*. Scientific and technological terms were frequently adopted directly from Latin, other borrowings penetrated into the lexicon via French (Kavtaria 2001, 257–258).

Other Roman languages which provided new words were French, Italian, Spanish and Portuguese (Crystal 2019, 60). Furthermore, Early Modern English received new words from a French dialect spoken in Paris – Parisian. **Parisian borrowings** were not influenced by English and they maintained their French spelling and pronunciation such as *ballet*. Parisian borrowings often originated in Latin (Kavtaria 2001, 258).

Due to discoveries and exploring of the world, the Early Modern English lexicon adopted words from more than 50 languages. They included also local languages from North America, Africa and Asia (Crystal 2019, 60).

3.4 Modern English (1800–present) (Crystal 2019, 80)

The Modern English lexicon has undergone a great growth. Latin, together with French, has remained an important source of new words (Burnley 2013, 319–320). Nevertheless, although the borrowings from French and Latin form a considerable part of all borrowings, their adoption has decreased remarkably in comparison with the previous periods (Durkin 2014, 300–301).

Languages which enriched the language in the 19th century were, for example, Italian, Russian, German and Spanish. In many cases, Spanish borrowings penetrated into the lexicon via the American continent. Furthermore, on account of colonial connections and commercial expansion, the lexicon adopted words from more remote languages, e.g. Hindustani, Japanese, Sanskrit and African languages (Burnley 2013, 320).

At the beginning of the second half of the 20th century the amount of borrowed words started to increase. According to Crystal, the number of new words adopted since the 50's may be higher than during the Middle English period. This phenomenon may be explained by the fact that English has become the world language; and therefore, it is in contact with languages and cultures all over the world. Hence new lexemes have commenced to penetrate numerously into the lexicon and this trend is still ongoing (Crystal 2019, 136).

4 THE STATUS OF PLANTS

4.1 Native and alien plants

Based on the way of introduction into a certain geographical area, plants may be classified as native or alien (Webb 1985, 232). Since there is no scientific unity in the determination of native and alien status, one clear definition cannot be made. Nonetheless, the operative criteria used for classification are altogether common to various interpretations.

The most crucial criteria are palaeobotanical/fossil and historical evidence. In general, fossil evidence serves for determining native status, whereas historical evidence is fundamental when determining alien status.

Another important factor that influences the distinguishing is the fact whether the plant was introduced independently or by humans and their activities. Natural dispersal (e.g. the wind) and distribution by means of animals are considered as the independent introduction. The introduction by humans includes not only intentional distribution but also the unintentional one (Preston, et al. 2004). Moreover, the human influence embodies dispersal via domestic animals.

However, some scientists imply more criteria which are essential when determining the status of plants in the British Isles. For example, Webb introduces no less than eight criteria. The criteria are – fossil evidence, historical evidence, habitant, geographical distribution, frequency of known naturalization, generic diversity, reproductive pattern and potential means of introduction of the plants. Each criterion is applicable only to a limited amount of plants and some of these criteria serve more or less like a clue, rather than crucial evidence.

The definitions of plant status proposed by Webb, in compliance with his eight criteria, are following. A native plant is one which evolved in the British Isles or it was introduced there before the Neolithic period, either independently or by humans. A plant may also be considered native if it arrived after the beginning of the Neolithic period. However, in this case, the introduction independent of humans and their activities is imperative. On the contrary, an alien plant is one which was introduced to the British Isles by humans, human activities or domestic animals during the Neolithic period of after it (Webb 1985, 232–235).

On the other hand, Pyšek et al. do not take the time of introduction into account. According to Pyšek et al., a native plant is one which was introduced to the British Isles independently of human activities from an area where it was considered native. By contrast, alien plants arrived in the British Isles as a consequence of human activities. An alien plant can also be introduced independently of humans; nevertheless, it should arrive from an area where it is considered alien (Pyšek, et al. 2004, 135).

4.2 Definitions proposed by the Online Atlas of the British and Irish Flora

In the *Online Atlas of the British and Irish Flora* plants are classified as native or alien in accordance with the definitions of Preston et al. (Preston, et al. 2002, 10) (Roy, et al. 2019). Preston et al. do not consider the time of plant introduction as vital when determining native and alien status. According to Preston et al., a native plant is one which evolved *de novo* in the British Isles

or it was introduced there without human intervention from an area where it was considered native. An alien plant is defined as one which was introduced by humans or it arrived independently from an area where it was considered alien (Preston, et al. 2002, 10).

5 BOTANICAL NOMENCLATURE

5.1 Definitions

5.1.1 Scientific and common names

Common names, or vernacular names, are names used for denominating organisms and they are unique to every language. Frequently, these names mirror some physical aspect of the organism (Turland 2019, 10). For example, *whitebeam*, meaning "white tree", was denominated after its white leaves (Mabey 1997, 207).

Scientific names started to develop in the 16th century and since the universal language was Latin, they were formed from Latin words. Hence they are also called Latin names. The fundamental idea of establishing scientific names was that they would be used and understood worldwide and they would prevent inevitable confusions (Turland 2019, 11). An example of a scientific name is *Prunus padus*, which is the equivalent for the English common name *bird cherry* (Mabey 1997, 197).

5.1.2 Nomenclature vs taxonomy

Nomenclature is a system of scientific names which denominates organisms. On the other hand, taxomony, also called systematics, is a science which classifies organisms in a system (Turland 2019, 11).

5.2 The history of botanical nomenclature

5.2.1 Carl Linnaeus and binomial nomenclature

Biological nomenclature originates in the year 1753 when Carl Linnaeus (Karthick, et al. 2012, 551), also known as Carolus Linnaeus or Carl von Linné,

published the first edition of *Species Plantarum*. In his works *Species plantarum* (1753) and *Systema naturae* (1758) Linnaeus created a system of denominating organisms called a binomial nomenclature, also known as binominal or binary, which means "two-name". In this system a species is denominated by two names. The first one, which refers to the genus of the species, is called generic and the second one is called a specific epithet (Turland 2019, 11). For example, *Quercus petraea*, *Quercus* is the generic name referring to the genus of a tree and *petraea* is its specific epithet (Roy, et al. 2019b).

5.2.2 From Linnaeus to the International Code of Botanical Nomenclature

The binomial system created by Linnaeus laid foundations for following biological nomenclatures. Nonetheless, it underwent various changes since its creation and many scientists and organizations influenced the development of the nomenclature, e.g. Alphonse Pyramus de Candolle, British Association of Advancement of Science and International Association for Plant Taxonomy (IAPT).

The rules for biological nomenclature were written for the first time in the 19th century and they denominated not only plants, but also animals, hence biological nomenclature. Consequently, rules for botanical nomenclature were released in 1904 and they were adopted by the Vienna Botanical Congress the following year. These rules for denominating plants were called the International Code of Botanical Nomenclature (ICBN). Since 1905, the ICBN was amended and changed by the International Botanical Congresses to its recent form (Karthick, et al. 2012, 551).

5.2.3 The International Code of Nomenclature for Algae, Fungi and Plants and the Shenzhen Code

Botanical nomenclature received a new title at the XVIII International Botanical Congress held in Melbourne in 2011. Since the beginning of the year 2012 the ICBN was no longer used and it was replaced by the International Code of Nomenclature for Algae, Fungi and Plants (ICN) (Karthick, et al. 2012, 551). The INC determines the rules for denominating plants, algae and fungi, no matter whether they are fossil or non-fossil. In addition, this nomenclature embodies blue-green algae, chytrids, oomycetes, slime moulds, photosynthetic protists and their taxonomically related non-photosynthetic groups.

The most recent Congress was the XIX International Botanical Congress held in Shenzhen in 2017. The resulting rules are called the Shenzhen Code and it is the current code that governs the botanical nomenclature (Turland, et al. 2018).

6 TREES AND SHRUBS

What differentiates trees and shrubs from other plants is the perennial woody stem. However, there is no exact definition that would differentiate trees from shrubs (Kuhns 2019).

According to Kuhns, a tree is a plant which has typically one perennial woody stem which is bound to be erect and has at least 7.62 centimetres in diameter. Furthermore, a mature tree should be at least 3.96 metres high. On the other hand, a shrub is a plant which usually has more than one perennial woody stem which may or may not be erect. Shrub stems should not have more than 7.62 centimetres in diameter and a mature plant should measure less than 3.96 metres (Kuhns 2019).

Brickell et al. define trees as perennial woody plants which usually have one stem and a crown formed of branches. Still, some trees may have more than one stem which may have grown naturally or on account of pruning (Brickell, et al. 2011, 28). Contrary to Kuhns (Kuhns 2019), Brickell et al. state that trees may measure less than 1 metre in height (Brickell, et al. 2011, 58).

Brickell et al. define shrubs as perennial woody plants with multiple stems forking at or near the ground. According to Brickell et al., shrubs may measure more than 6 metres, which is again in contradiction with the claim of Kuhns (Kuhns 2019). Yet, the majority of shrubs do not reach more than 3 metres (Brickell, et al. 2001, 108).

Both Kuhns and Brickell et al. admit that their definitions may be misleading and inaccurate (Kuhns 2019) (Brickell, et al. 2001, 108). The borderline between trees and shrubs cannot be precisely declared due to the fact that in some cases a shrub may correspond with a definition of a tree and vice versa (Kuhns 2019).

Brickell et al. illustrate this fact with *dogwoods*, shrubs of the genus Cornus, which may have only one stem (Brickell, et al. 2001, 108).

Distinguishing the difference between trees and shrubs was fundamental for this research as it deals only with trees, not shrubs, native to the British Isles. Since there is no clear definition of a tree and a shrub, this thesis follows the categorization of Roy et al. in the *Online Atlas of the British and Irish Flora*, see 7.1.2.1 Collecting of generic names and finding of suitable English equivalents. However, Roy et al. do not state what definitions they follow (Roy, et al. 2018).

7 THE ORIGIN OF ENGLISH GENERIC NAMES OF TREES NATIVE TO THE BRITISH ISLES

7. 1 Research methodology

7.1.1 Aim, research question and thesis statement

The aim of this quantitative research is to determine the etymological origin of English generic names of trees native to the British Isles. The queried research question is what the etymological origin of English generic names of trees native to the British Isles is. The thesis statement of the research is that the majority of English generic names of trees native to the British Isles will be of Old English origin, i.e. more than 50% of English generic names will originate in Old English.

The thesis statement arose from the assumption that since native trees had already been naturalized in the British Isles in the time of the Anglo-Saxon invasion, not after it (Webb 1985, 232), Old English might have affected their denomination more than any other language.

7.1.2 Research stages

The research may be divided into 3 consecutive stages:

- The collecting of generic names of trees native to the British Isles and finding of suitable English equivalents
- 2. The determination of the etymological origin of English generic names
- 3. The analysis of the results

7.1.2.1 Collecting of generic names and finding of suitable English equivalents

The first step in the research was to create a list of scientific generic names of native British and Irish trees and to find their English generic name equivalents. The list of tree names was compiled using the website *Online Atlas of the British and Irish Flora* (Roy, et al. 2018). It includes species which were determined by the *Online Atlas of the British and Irish Flora* (Roy, et al. 2018) as "a tree" or "a tree or shrub". English generic name equivalents were collected from the *Online Atlas of the British and Irish Flora* (Roy, et al. 2018) and *Flora Britannica* (Mabey 1997).

The list of tree names contains 26 scientific generic names and 32 English equivalents. The list is part of the chapter 7.2 The list of trees native to the British Isles.

7.1.2.2 The determination of the etymological origin of English generic names

The second step in the research was to determine the etymological origin of English generic names of native British and Irish trees. The etymological origin was stated after consulting several sources. The following sources were used to determine the origin: Oxford Dictionary of English Etymology (Onions, et al. 1966), Webster's College Dictionary (Costello, et al. 1991), Webster's Ninth New Collegiate Dictionary (Mish, et al. 1990), Online Etymology Dictionary (Harper 2019e), A Dictionary of the English Language (Johnson 1768), The New Universal Etymological English Dictionary (Bailey 1756), Lexicons of Early Modern English (Lancashire 2018), The American Encyclopaedic Dictionary Volume 4 (Hunter, et al. 1898), Universal Dictionary of the English Language Volume Four (Hunter, et al.

1990), English Etymology (Kluge, et al. 1898), Flora Britannica (Mabey 1997), The Imperial Dictionary of the English Language Vol. IV. (Ogilvie, et al. 1898), An Etymological Dictionary of the English Language (Skeat 1882) and Encyclopaedia Britannica Vol. II. (Smellie, et al. 1773).

The origin of English generic names was determined in the chapter 7.3 The etymological origin of English generic names. In this chapter it was described through which languages English generic names penetrated into English, their etymological origin and the names settled in the English lexicon. Each English generic name was described and determined separately.

When determining the etymological origin, it was preferred to consider the origin English rather that Germanic, even though the English language on its own developed and originated in Germanic (Hogg 2002, 13). If the origin was determined to be English, it was further distinguished whether it was of Old English, Middle English, Early Modern English or Modern English origin, according to Crystal's periodization of the English language. The periodization is following:

- Old English (5th century–1100)
- Middle English (1100–1400/1450)
- Early Modern English (1400/1450–1800)
- Modern English (1800–present) (Crystal 2019, 7–80).

However, the Germanic roots were mentioned when determining the origin. The word *tree* may serve as an example. The origin of the word *tree* is in the Old English word $tr\bar{e}o(w)$, which developed from the hypothetical Germanic form trewam (Onions, et al. 1966, 939).

Several problematic situations arose during the research, which complicated the etymological determination. These complicated cases involved compounds,

the word *buckthorn*, dating of the first use of words in English, changes in meaning, word form and spelling changes, and changes of the word class.

In case of compounds, the language in which the compound was used for the first time as a whole was considered to be the original one. This was owing to the fact that the compound and its meaning did not exist before, even though its bases did. Nevertheless, the origin of bases of the compound was also described and determined. The compound *may-tree*, a tree of the genus Crataegus, may serve as an example. The word *may* originates in Latin and the word *tree* has its origin in Old English (Onions, et al. 1966, 563–939). However, the compound as a whole was used for the first time in the 16th century; therefore, it was determined to be of Early Modern English origin (Mabey 1997, 209).

Another problematic case was the compound *buckthorn*, a tree of the genera Frangula or Rhamnus. This compound arose from the modern Latin expression *cervi spina*, which was translated into English. So the words are English, but the meaning arose from Latin (Onions, et al. 1966, 122–918). However, since the compound was formed and appeared in the lexicon in the second half of the 16th century (Costello, et al. 1991, 178), for the purpose of this thesis, the origin was determined to be Early Modern English.

The third problematic case was dating. Different dating of the first use of a word appeared in the majority of cases; however, it did not generally influence their determination. For instance, the word *birch*, a tree of the genus Betula, was dated differently by two authors. According to Mish et al., the word *birch* appeared in the lexicon before the 12th century (Mish, et al. 1990, 153). On the other hand, Costello et al. date its use before the 10th century (Costello, et al. 1991, 138). Since Crystal dates the period of Old English between 5th century and the year 1100

(Crystal 2019, 7–30), it is clear that in this case the different dating did not influence the determination of the word.

Nevertheless, there were two cases in which the different dating influenced the following determination. They were the cases of *hornbeam*, a tree of the genus Carpinus, and *rowa*n, a tree of the genus Sorbus. In both cases there were two authors in contradiction with another author. This thesis preferred the date which was supported by two authors rather than the one which was supported only by one author.

Another problem which arose with dating was the case when a word entered the lexicon in the first half of the 15th century. Crystal does not state clear boundary between the Middle English period (1100–1400/1450) and the Early Modern English period (1400/1450–1800) (Crystal 2019, 30–56). So when a word was dated to this indefinite period, it was not strictly categorized. The word was determined to be of Middle English or Early Modern English origin, leaving the precise period of its origin unclear.

In one case there were no data about the entrance of the word to the English lexicon. It was the case of *sea-buckthorn*, a tree of the genus Hippophae. Several sources had to be consulted and an approximate dating was stated for the purpose of this thesis. The word *sea-buckthorn* was included in the *Encyclopaedia Britannica Vol. II* (Smellie, et al. 1773, 787); therefore, it is clear that this denomination was in use in the second half of the 18th century. This thesis considered this date as the date when *sea-buckthorn* entered the lexicon.

When a word underwent a change in its meaning, the origin of the word was dated to the period in which the word gained the new meaning. This was the case of *spindle*, a tree of the genus Euonymus. *Spindle* as a denomination for a tree was used

for the first time in the 16th century (Mish, et al. 1990, 1136). The word possessed a completely different meaning before which was not connected with the denomination of the tree (Onions, et al. 1966, 854). Therefore, for the purpose of this thesis, it was determined to be of Early Modern English origin.

Word form or spelling changes were also not considered as a reason for new determination when the meaning of the word remained. This means that although the word changed its form or spelling, the origin was determined according to the original form. The reason for this determination was the fact that the word still possessed the original meaning. For instance, *lime*, a tree of the genus Tilia, developed from the Old English word *lind* (Costello, et al. 1991, 787). Therefore, *lime* was considered to be of Old English origin despite the fact that its word form was changed. Another considerable change in word form underwent *maple*, a tree of the genus Acer. The word originates in the Old English words *mapeltrēow* or mapulder, but the independent use of the word *maple* is dated back to the 14th century. Nonetheless, the word was determined to be of Old English origin (Onions, et al. 1966, 554).

The last problematic aspect was a change of the word class. The change of the word class was also not regarded as a reason for new determination when the meaning remained. For example, *aspen*, a tree of the genus Populus, entered the lexicon in the 14th century and at first it was used as an adjective. *Aspen* was created by suffixation from the Old English noun *asp*, which was a denomination for the tree. In the 16th century the word *aspen* started to be used as a noun (Onions, et al. 1966, 54–55). This thesis observed this process as a change of the word class and it determined the origin to be Old English.

7.1.2.3 The analysis of the results

The analysis of the final results consisted of quantitative evaluation of the etymological origin of English generic names of native British and Irish trees. Firstly, the data were evaluated for the whole entity of English generic names, and subsequently, each period was evaluated separately. In addition, the etymological origin of compounds and their bases was further analysed.

The research aimed to enlighten the results on the basis of the theoretical grounds presented in the thesis. Nevertheless, some phenomena could not be explained and detecting their occurrence would require further research. See the chapter 7.4 Results.

7.2 The list of trees native to the British Isles

Generic name	English generic name	
Acer	maple	
Alnus	alder	
Arbutus	strawberry-tree	
Betula	birch	
Buxus	box	
Carpinus	hornbeam	
Crataegus	hawthorn	
	may-tree	
Euonymus	spindle	
Fagus	beech	
Frangula	buckthorn	
Fraxinus	ash	
Hippophae	sea-buckthorn	
Juniperus	juniper	
Malus	apple	
	crab-apple	
Pinus	pine	
Populus	aspen	
	poplar	
Prunus	blackthorn	
	cherry	
Pyrus	pear	
Quercus	oak	
Rhamnus	buckthorn	
Salix	willow	
Sambucus	elder	
Sorbus	rowan	
	service-tree	
	whitebeam	
Taxus	yew	
Tilia	lime	
Ulmus	elm	

Table 1: The list of trees native to the British Isles

7.3 The etymological origin of English generic names

Acer (maple)

The word *maple* originates in the Old English words *mapeltrēow* or *mapulder*, meaning "maple tree". The independent use of the word *maple* is dated back to the 14th century (Onions, et al. 1966, 554). Since *maple* possesses the same meaning as *mapeltrēow* or *mapulder* and it also developed from these words, *maple* is determined to be of Old English origin.

Alnus (alder)

Alder developed from the Old English words alor or aler (Onions, et al. 1966, 23). The term aller was used until the 18th century, but forms with added -d have been used since the 14th century (Harper 2019a). The word meaning "alder", although with a different spelling, was used before the 12th century (Mish, et al. 1990, 69), possibly already before the 10th century (Costello, et al. 1991, 33). Therefore, it is determined to be of Old English origin.

Arbutus (strawberry-tree)

The word *strawberry* is derived from Old English *strēa(w)beriģe* or *strēowberiģe* (Onions, et al. 1966, 874). The origin of the word *tree* is in the Old English word *trēo(w)*, which was a development of the hypothetical Germanic form *trewam* (Onions, et al. 1966 939). The compound *strawberry-tree* was used for the first time in the first half of the 15th century (Costello, et al. 1991, 1321). Hence it is of Middle English or Early Modern English origin.

Betula (birch)

According to Onions et al., the word *birch* arose from the Old English words *birće* or *bierće*, which developed from the hypothetical Germanic form *berkjōn* (Onions, et al. 1966, 96). However, both Harper and Mish et al. claim that *birch* originates in the Old English word *beorc*, which Onions et al. consider to be only a related synonym of the words *birće* or *bierće* (Harper 2019b) (Mish, et al. 1990, 153) (Onions, et al. 1966, 96). According to Mish et al., the word *birch* entered the lexicon before the 12th century (Mish, et al. 1990, 153), yet Costello et al. state that the word already existed before the year 900 (Costello, et al. 1991, 138).

Buxus (box)

The word *box* developed from the Latin word *buxus*, which developed from the Greek word *púxos* (Onions, et al. 1966, 111). *Box* entered the lexicon before the 12th century (Mish, et al. 1990, 173), possibly even before the year 950 (Costello, et al. 1991, 163).

Carpinus (hornbeam)

The word *hornbeam* is a compound that consists of *horn* and *beam* (Harper 2019c). The word *horn* has its origin in Old English *horn*, which developed from the hypothetical Common Germanic forms $\chi ornaz$ or $\chi ornam$ (Onions, et al. 1966, 448). The word *beam* is an obsolete form for a "tree". It has its origin in the Old English word $b\bar{e}am$, which was a development of the probable Western Germanic form *bauma* (Onions, et al. 1966, 82).

According to Mish et al., the compound *hornbeam* already appeared in the 14th century (Mish, et al. 1990, 581). However, Harper and Costello et al. claim that it did

not enter the lexicon until the 16th century (Harper 2019c) (Costello, et al. 1991, 646). Since the entrance in the 16th century is supported by two authors, the word is determined to be of Early Modern English origin.

Crataegus (hawthorn)

The compound *hawthorn* originates in the Old English compounds *hagaþorn* or *haguþorn*, which were formed of the Old English words *haga/hagu* and *þorn* (Onions, et al. 1966, 431–918). *Hawthorn* entered the English lexicon before the 12th century (Mish, et al. 1990, 557), but it may have been used even before the 10th century (Costello, at al. 1991, 615).

Crataegus (may-tree)

May has origin in the Old French word mai, which developed from the Latin word Maius. The Latin word Maius, designating the month of May, developed from the Latin word Māia, which was a denomination for a Roman goddess. The origin of the word tree arose from the Old English word trēo(w), which developed form the hypothetical Germanic form trewam (Onions, et al. 1966, 563–939). The compound may-tree was used for the first time in the 16th century (Mabey 1997, 209); therefore, it is of Early Modern English origin.

Euonymus (spindle)

Spindle has its origin in the Old English word spinel, meaning "rod for spinning" (Onions, et al. 1966, 854). Since the tree wood was used for making spindles (for spinning), it was denominated spindle itself (Skeat 1882, 581).

Spindle as a denomination for a tree was used for the first time in the 16th century (Mish, et al. 1990, 1136). Hence it originates in Early Modern English.

Fagus (beech)

The word *beech* originates in the Old English word $b\bar{e}\acute{c}e$, which developed from Germanic, probably from $b\bar{o}kj\bar{o}n$ (Onions, et al. 1966, 84). *Beech* was in use before the 12th century (Mish, et al. 1990, 140), but according to Costello et al., it was used even before the 10th century (Costello, et al. 1991, 122).

Frangula (buckthorn)

The compound *buckthorn* is formed of the words *buck*, meaning "male deer", and *thorn*. *Buck* originates in the Old English word *buc*, which developed form the hypothetical Germanic form *bukkaz*. The word *thorn* has its origin in Old English *born*, which developed from Common Germanic *burnuz*.

This compound arose from a translation of the modern Latin expression *cervi spina*, which means "stag's thorn" (Onions, et al. 1966, 122–918). *Buckthorn* was formed in the second half of the 16th century (Costello, et al. 1991, 178). Owing to this fact the origin is determined to be Early Modern English.

Fraxinus (ash)

The word ash has its origin in the Old English word asc, which developed from the hypothetical Common Germanic form askiz (Onions, et al. 1966, 54). Ash appeared in the lexicon before the 12^{th} century (Mish, et al. 1990, 107); alternatively, it was already used before the 10^{th} century (Costello, et al. 1991, 80).

Hippophae (sea-buckthorn)

Sea-buckthorn is a compound formed of sea and another compound buckthorn. The word sea has its origin in Old English $s\bar{\alpha}$, which developed from the hypothetical Common Germanic form saiwiz.

Buckthorn appeared in the lexicon in the 16th century and it is formed of buck, meaning "male deer", and thorn. Buck has its origin in Old English buc, which developed form the hypothetical Germanic form bukkaz. Thorn originates in Old English porn, which developed from Common Germanic purnuz. The compound buckthorn is a translation of the modern Latin expression cervi spina, meaning "stag's thorn".

There are no data about the origin of the word *sea-buckthorn* or the period in which the word was used for the first time. The word *buckthorn* entered the lexicon in the 16th century; therefore, the word *sea-buckthorn* was formed in the 16th century or later (Onions 1966, 122–918). The word neither occurs in *A Dictionary of the English Language* (Johnson 1768), *The New Universal Etymological English Dictionary* (Bailey 1756), nor in *Lexicons of Early Modern English* (Lancashire 2019). Nevertheless, it occurs in *Encyclopaedia Britannica Vol. II* (Smellie, et al. 1773, 787), *The American Encyclopaedic Dictionary Volume 4* (Hunter, et al. 1898, 3595), *Universal Dictionary of the English Language Volume Four* (Hunter, et al. 1900, 4164) and *The Imperial Dictionary of the English Language Vol. IV* (Ogilvie, et al. 1898, 8).

As the denomination *sea-buckthorn* is mentioned in the first edition of the *Encyclopaedia Britannica Vol. II* (Smellie, et al. 1773, 787), it is proven that this denomination was used in the second half of the 18th century. Crystal delimits the Early Modern English period with the dates 1400/1450–1800 (Crystal 2019, 30–56).

The word *buckthorn* entered the lexicon in the second half of the 16th century (Costello, et al. 1991, 178) and the word *sea-buckthorn* was already in use in the second half of the 18th century (Smellie, et al. 1773, 787). Consequently, for the purpose of this thesis, the origin of *sea-buckthorn* is determined to be Early Modern English.

Juniperus (juniper)

The word *juniper* was adopted from the Latin word *jūniperus* (Onions, et al. 1966, 500). The word entered the lexicon in the second half of the 14^{th} century (Costello, et al. 1991, 733).

Malus (apple)

The word *apple* originates in the Old English word *æppel*, which was a development of the hypothetical Common Germanic form *aplu*- (Onions, et al. 1966, 44). *Apple* entered the lexicon either before the 10th (Costello, et al. 1991, 67) or the 12th century (Mish, et al. 1990, 97).

Malus (crab-apple)

Crab-apple is a compound formed of the words *apple* and *crab*. The word *apple* arose from the Old English word *apple*, which was a development of the hypothetical Common Germanic form *aplu-* (Onions, et al. 1966, 44). *Apple* entered the lexicon before the 10th century (Costello, et al. 1991, 67), or alternatively, before the 12th century (Mish, et al. 1990, 97).

Crab was adopted from the Scandinavian lexicon; however, the source word is unknown (Kluge, et al. 1898, 50). The word crab appeared in the lexicon in the first

half of the 14th century. The compound *crab-apple* was used for the first time in the first quarter or the 18th century (Costello, et al. 1991, 315). This means that it is of Early Modern English origin.

Pinus (pine)

The word *pine* has its origin in the Latin word *pīnus* and it was adopted via Old French (Harper 2019d). The word entered the lexicon before the 11th (Costello, et al. 1991, 1026) or the 12th century (Mish, et al. 1990, 893).

Populus (aspen)

The word *aspen* is formed of the word *asp* and the suffix *-en*. *Asp* originates in Old English *æspe*, which developed from the hypothetical Germanic form $asp\bar{o}n$. The suffix *-en* has its origin in the Old English suffix *-en*, which was a development of the hypothetical Common Germanic form $-\bar{\imath}naz$.

The word *aspen* appeared in the lexicon in the 14th century and at first it was used as an adjective. As a substantive denominating a tree of the genus Populus, it was used for the first time in the 16th century and it arose from collocations such as *aspen leaf*.

The word changed its word class several times. Since the source word *asp* possessed the same meaning as *aspen* (Onions, et al. 1966, 54–311), for the purpose of this thesis, the origin of *aspen* is determined to be Old English.

Populus (poplar)

The word *poplar* was adopted in the second half of the 14th century (Costello, et al. 1991, 1050) from the Anglo-Norman word *popler*. *Popler* originates in Old French *poplier*, which developed from the Latin denomination *pōpulus* (Onions, et al. 1966, 696).

Prunus (blackthorn)

Blackthorn is a compound formed of black and thorn. The word black arose from Old English blæc or blac-. Thorn has its origin in the Old English word porn, which developed from Common Germanic purnuz (Onions 1966, 97–918). The compound blackthorn was formed in the second half of the 14th century (Costello, et al. 1991, 143). Thus it originates in Middle English.

Prunus (cherry)

Cherry originates in the Middle English words cheri(e) or chiri(e), which were adopted from Old Northern French cherise. Cherise developed from Medieval Latin ceresia, which had its origin in the Greek word kérasos (Onions, et al. 1966, 167). The word cherry was used for the first time in the first half of the 14th century (Costello, et al. 1991, 133).

Pyrus (pear)

The word *pear* arose from the Old English words *pere* or *peru*, which developed from the hypothetical popular Latin word *pira*. *Pira* is the plural form of Latin *pirum*, which is of unknown origin (Onions, et al. 1966, 660). Costello et al.

claim that *pear* appeared in the lexicon before the 11th century (Costello, et al. 1991, 994), while Mish et al. date its use before the 12th century (Mish, et al. 1990, 865).

Quercus (oak)

Oak has its origin in the Old English word $\bar{a}c$, which developed from the hypothetical Common Germanic form aiks. The Old English form $\bar{a}c$ or its varieties are nowadays present in the lexicon in some words determining places, such as Acton or Agden (Onions, et al. 1966, 619). The word entered the lexicon before the 12^{th} century (Mish, et al. 1990, 813), or possibly already before the year 900 (Costello, et al. 1991, 932).

Rhamnus (buckthorn)

The compound *buckthorn* is formed of the words *buck*, meaning "male deer", and *thorn*. *Buck* has its origin in Old English *buc*, which developed from the hypothetical Germanic form *bukkaz*. The word *thorn* originates in Old English *born*, which developed from Common Germanic *burnuz*.

This compound arose from translating the modern Latin expression *cervi spina*, which means "stag's thorn" (Onions, et al. 1966, 122–918). *Buckthorn* entered the lexicon in the second half of the 16th century (Costello, et al. 1991, 178) and for this reason the origin is determined to be Early Modern English.

Salix (willow)

The word *willow* originates in Old English *welig* (Onions, et al. 1966, 1007). The word entered the lexicon before the 12th century (Mish, et al. 1990, 1350); however, it might have been in use even before the 10th century (Costello, et al. 1991, 1525).

Sambucus (elder)

Elder has its origin in the Old English word ellærn, which probably originated in the (Old) High German form ahorn (Onions, et al. 1966, 305). The word elder was in use before the 10th century (Costello, et al. 1991, 430), or alternatively, it appeared in the English lexicon before the 12th century (Mish, et al. 1991, 400).

Sorbus (rowan)

The word *rowan* is of Scandinavian origin, yet the source word is unknown (Onions, et al. 1966, 775). Onions et al. and Mish et al. claim that *rowan* entered the lexicon in the 16th century (Onions, et al. 1966, 775) (Mish, et al. 1990, 1027). Mish et al. actually dates it back to the year 1548 (Mish, et al. 1990, 1027). On the other hand, according to Costello et al., the word did not enter the English lexicon before the years 1795–1805 (Costello, et al. 1991, 1173). This thesis prefers the dating of Onions et al. and Mish et al., because is it supported by two authors.

Sorbus (service-tree)

The word *service* comes from the plural of *serve*, which developed from Old English *syrfe*, a development of the hypothetical form *surbjōn*. *Surbjōn* was an adoption of the hypothetical popular Latin form *sorbea*, which had its origin in the

Latin word *sorbus*. The word *tree* arose from the Old English word $tr\bar{e}o(w)$, which developed from the hypothetical Germanic form trewam (Onions 1966, et al. 812–939).

The denomination *service-tree* appeared in the English lexicon in the first half of the 16th century (Costello, et al. 1991, 1225); therefore, it is of Early Modern English origin.

Sorbus (whitebeam)

White has its origin in Old English hwīt, which developed from the hypothetical Germanic form xwītaz, a developed form of the hypothetical form xwittaz. The word beam, an obsolete word meaning "tree", arose from the Old English word bēam, which was a development of the probable Western Germanic form bauma (Onions, et al. 1966, 82–1004). The first use of the compound whitebeam is dated back to the 18th century (Mabey 1997, 207). Consequently, it is of Early Modern English origin.

Taxus (yew)

Yew originates in the Old English words $\bar{\imath}w$ or $\bar{e}ow$, which developed from the probable Common Germanic form $\bar{\imath}xwaz$ or from the forms $\bar{\imath}zwaz$, $\bar{\imath}xw\bar{o}$ or $\bar{\imath}zw\bar{o}$ (Onions, et al. 1966, 1020). The word was in use either before the 10^{th} (Costello, et al. 1991, 1546) or the 12^{th} century (Mish, et al. 1990, 1368).

Tilia (lime)

The word *lime* is an alternation of the obsolete denomination *line*, which originated in the Old English word *lind*. *Lime* in this form appeared in the lexicon in the first half of the 17th century (Costello, et al. 1991, 787). Although the word did not maintain its original spelling and form, the meaning remained unchanged. Due to this fact *lime* has its origin in Old English.

Ulmus (elm)

Elm has its origin in the Old English word *elm* (Onions, et al. 1966, 307). The first use of the word is dated before the 11th century (Costello, et al. 1991, 434), or alternatively, before the 12th century (Mish, et al. 1990, 404).

7.4 Results

Generic name	English generic name	Etymological origin
Acer	maple	Old English
Alnus	alder	Old English
Arbutus	strawberry-tree	Middle or Early Modern English
Betula	birch	Old English
Buxus	box	Greek
Carpinus	hornbeam	Early Modern English
Crataegus	hawthorn	Old English
	may-tree	Early Modern English
Euonymus	spindle	Early Modern English
Fagus	beech	Old English
Frangula	buckthorn	Early Modern English
Fraxinus	ash	Old English
Hippophae	sea-buckthorn	Early Modern English
Juniperus	juniper	Latin
Malus	apple	Old English
	crab-apple	Early Modern English
Pinus	pine	Latin
Populus	aspen	Old English
	poplar	Latin
Prunus	blackthorn	Middle English
	cherry	Greek
Pyrus	pear	Latin
Quercus	oak	Old English
Rhamnus	buckthorn	Early Modern English
Salix	willow	Old English
Sambucus	elder	Old English
Sorbus	rowan	Scandinavian
	service-tree	Early Modern English
	whitebeam	Early Modern English
Taxus	yew	Old English
Tilia	lime	Old English
Ulmus	elm	Old English

Table 2: The etymological origin of English generic names of trees native to the British Isles

The research deals with 32 English generic names, of which all of them are etymologically determined, i.e. from 32 obtained and determined English generic names 32 of them are the object of the final analysis.

The answer to the research question, what the etymological origin of English generic names of trees native to the British Isles is, is following. The analysis shows that the etymological origin of English generic names of trees native to the British Isles is in 43.8% of cases Old English, in 28.1% of cases Early Modern English, in 12.5% of cases Latin, in 6.3% of cases Greek, in 3.1% of cases Middle English, in 3.1% of cases Middle English or Early Modern English and in 3.1% of cases Scandinavian.

The research does not confirm the thesis statement, that the majority of English generic names of trees native to the British Isles will be of Old English origin, taking into account that only 43.8% of English generic names are of Old English origin. Still, the amount of Old English names is high in respect of the fact that about 85% of Old English words are not used anymore (Crystal 2019, 27). Moreover, the majority of compounds consist of Old English bases, see the chapter 7.4.1 Compounds.

The research reveals that 78.1% of English generic names possess English origin and only 21.9% of denominations are borrowed from foreign languages. According to Crystal, there are over 70% of loan words in the Modern English lexicon. Crystal does not state the amount of other types of borrowings (Crystal 2019, 27). Nevertheless, borrowings that are included in those 21.9% are only loan words. Apparently, there is a lower rate of loan words among English generic names of native British and Irish trees than in the whole lexicon. This may indicate that this part of the lexicon has maintained its Germanic features. This claim may be

deconstructed by the fact that some compounds include foreign bases, but they are still determined to be of English origin. However, the research shows that only 30% of compounds contain a foreign base and 70% of them consist purely of Old English bases. For more details see the chapter 7.4.1 Compounds.

Words with English origin appeared in periods of their denomination, i.e. a word with Old English origin occurred in the Old English period, etc. Latin and Greek borrowings penetrated into the lexicon during the Old English or the Middle English period. The denomination of Scandinavian origin occurred in the Early Modern English period which was unusual. Scandinavian borrowings tended to enter the lexicon during the Old English or the Middle English period, not later (Crystal 2019, 25–48).

Origin	Amount of names	Percentage
Old English	14	43.8%
Early Modern English	9	28.1%
Latin	4	12.5%
Greek	2	6.3%
Middle English	1	3.1%
Middle English or Early Modern English	1	3.1%
Scandinavian	1	3.1%

Table 3: The etymological origin of English generic names (numerical data)

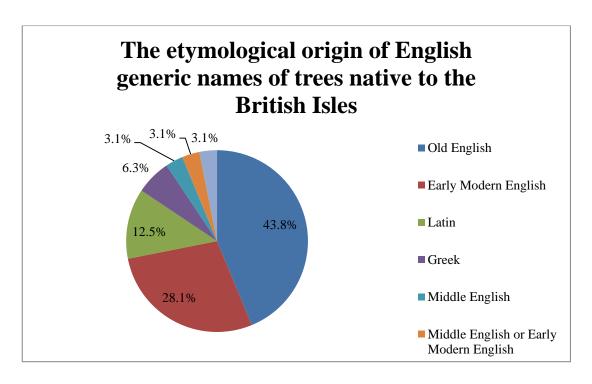


Figure 1: The etymological origin of English generic names of trees native to the British Isles

7.4.1 Compounds

The majority of compounds are composed of Old English bases. Seventy per cent of compounds possess purely Old English bases, 20% are composed of Old English and Latin bases and 10% are composed of Old English and Scandinavian bases. Although compounds are determined according to the period of their formation, their bases possess predominantly Old English origin. Seventy per cent of compounds were created during the Early Modern English period, 10% during the Middle English or Early Modern English period, 10% during the Middle English period and 10% during the Old English period.

Compound	Etymological origin	Etymological origin of bases
strawberry-tree	Middle / Early Modern	strawberry – Old English
	English	tree – Old English
hornbeam	Early Modern English	horn – Old English
		beam – Old English
hawthorn	Old English	haw – Old English
		thorn – Old English
may-tree	Early Modern English	may - Latin
		tree – Old English
buckthorn	Early Modern English	buck – Old English
		thorn – Old English
sea-buckthorn	Early Modern English	sea – Old English
		buck – Old English
		thorn – Old English
crab-apple	Early Modern English	crab – Scandinavian
		apple – Old English
blackthorn	Middle English	black – Old English
		thorn – Old English
service-tree	Early Modern English	service – Latin
		tree – Old English
whitebeam	Early Modern English	white – Old English
		beam – Old English

Table 4: The etymological origin of compounds and their bases

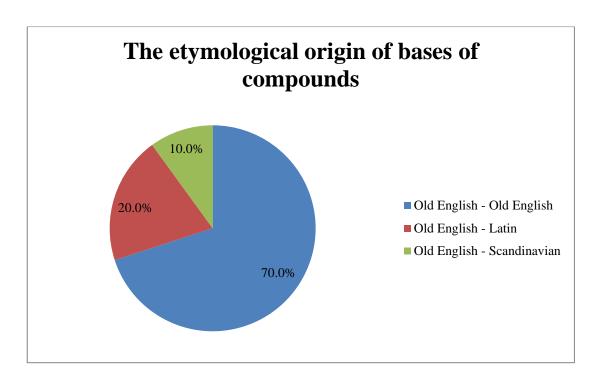


Figure 2: The etymological origin of bases of compounds

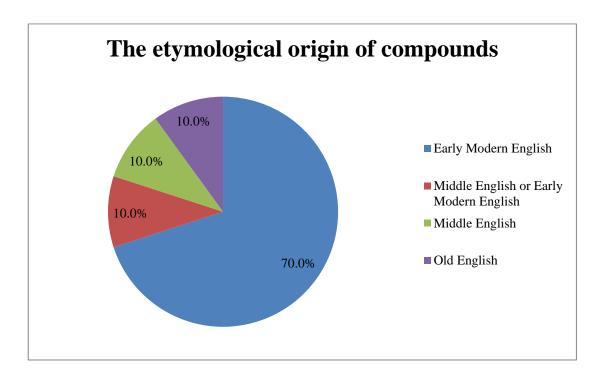


Figure 3: The etymological origin of compounds

7.4.2 The Old English period

During the Old English period the lexicon acquired English generic names which were in 82.4% of cases of Old English origin. Latin borrowings represented 11.8% and Greek borrowings formed 5.9%. According to Crystal, the Old English lexicon possessed 3% of loan words (Crystal 2019, 27). Since the English generic names borrowed during the Old English period were only loan words, it is clear that the rate of foreign words is much higher among tree names than in the whole Old English lexicon. The reason for this phenomenon is unknown and would require further research.

THE OLD ENGLISH PERIOD		
Generic name	English generic name	Origin
Acer	maple	Old English
Alnus	alder	Old English
Betula	birch	Old English
Buxus	box	Greek
Crataegus	hawthorn	Old English
Fagus	beech	Old English
Fraxinus	ash	Old English
Malus	apple	Old English
Pinus	pine	Latin
Populus	aspen	Old English
Pyrus	pear	Latin
Quercus	oak	Old English
Salix	willow	Old English
Sambucus	elder	Old English
Taxus	yew	Old English
Tilia	lime	Old English
Ulmus	elm	Old English

Table 5: The etymological origin of English generic names in the Old English period

7.4.3 The Middle English period

Middle English lexicon acquired four English generic names, of which three were foreign borrowings. During this period Latin and French borrowings were frequent (Crystal 2019, 49), but surprisingly, the lexicon did not acquire any French borrowing. In some cases French served as a mediator for borrowings from Latin. Similarly, Latin functioned for the Greek borrowing.

THE MIDDLE ENGLISH PERIOD		
Generic name	English generic name	Origin
Juniperus	juniper	Latin
Populus	poplar	Latin
Prunus	blackthorn	Middle English
Prunus	cherry	Greek

Table 6: The etymological origin of English generic names in the Middle English period

7.4.4 The Middle English or Early Modern English period

Since the word *strawberry-tree* was created in the first half of the 15th century, it cannot be clearly determined. Crystal does not state a definite border between Middle English and Early Modern English, it is around 1400/1450 (Crystal 2019, 30–56). For this reason, the definite determination of *strawberry-tree* would require deeper research.

THE MIDDLE ENGLISH OR EARLY MODERN ENGLISH PERIOD		
Generic name	English generic name	Origin
Arbutus	strawberry-tree	Middle or Early Modern
		English

Table 7: The etymological origin of English generic names in the Middle English or Early Modern English period

7.4.5 The Early Modern English period

The English lexicon accepted one Scandinavian borrowing during the Early Modern English period; other English generic names were compounds. Scandinavian borrowings in this period were not common as Scandinavian borrowings entered the lexicon mainly during the Old English or the Middle English period (Crystal 2019, 25–48). Explanation for this phenomenon is not known and an extra research would be needed.

Although the amount of borrowings enlarged significantly during this period (Crystal 2019, 60), it did not affect generic names of native trees as the rest of denominations were compounds. The only Latin influence in this period is represented by the compound *buckthorn*, which is a translation of a modern Latin expression, and bases in compounds *may-tree* and *service-tree*.

As much as 70% of compounds among English generic name were formed during this period, see the chapter 7.4.1 Compounds. Reason for such a high occurrence of compounds during this period is unknown and would require further research.

THE EARLY MODERN ENGLISH PERIOD			
Generic name	English generic name	Origin	
Carpinus	hornbeam	Early Modern English	
Crataegus	may-tree	Early Modern English	
Euonymus	spindle	Early Modern English	
Frangula	buckthorn	Early Modern English	
Hippophae	sea-buckthorn	Early Modern English	
Malus	crab-apple	Early Modern English	
Rhamnus	buckthorn	Early Modern English	
Sorbus	rowan	Scandinavian	
Sorbus	service-tree	Early Modern English	
Sorbus	whitebeam	Early Modern English	

Table 8: The etymological origin of English generic names in the Early Modern English period

CONCLUSION

This thesis dealt with the etymological origin of English generic names of trees native to the British Isles. It aimed to determine the etymological origin of English generic names of native British and Irish trees via quantitative research. The research question inquired what the etymological origin of English generic names of trees native to the British Isles was. It was assumed that more than 50% of English generic names would be of Old English origin.

The research was based on the theoretical grounds which were divided into two parts. The linguistic part of the theory introduced topics of the enrichment of the English lexicon, the periodization of the English language and the history of borrowings in English. The part engaged in botany included the topics of native and alien status of plants, botanical nomenclature and the problematics of classification of trees and shrubs.

The research succeeded to determine all 32 English generic names of native British and Irish trees. The thesis statement, that the majority of English generic names would be of Old English origin, was disproved. English generic names of trees native to the British Isles originated only in 43.8% of cases in Old English. The origin of the rest was in 28.1% of cases Early Modern English, in 12.5% of cases Latin, in 6.3% of cases Greek, in 3.1% of cases Middle English, in 3.1% of cases Middle English or Early Modern English and in 3.1% of cases Scandinavian.

Although the majority of English generic names was not of Old English origin, 78.1% of names originated in English. The research revealed that 28.1% of denominations originated in Early Modern English, which was not expected. This makes Early Modern English the second most common source of English generic names, just after Old English.

The research hoped to discover evidence of Celtic influence on tree names, considering the prominent status of trees in the Celtic culture (Monaghan 2004, 452–453). However, this expectation was not fulfilled.

The final analysis discovered that during some periods the English lexicon acquired unusual borrowings or higher amount of compounds than in other periods. With respect to the character of this thesis, these phenomena could not be explained and their clarification would require further research.

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