



WALTER S. JUDD & GRAHAM A. JUDD

# FLORA OF MIDDLE-EARTH

PLANTS OF J.R.R. TOLKIEN'S LEGENDARIUM

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Walter S. Judd  
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Graham A. Judd

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Walter S. Judd, Gainesville, Florida  
Graham A. Judd, St. Paul, Minnesota



# Introduction

## The Importance of Plants in J. R. R. Tolkien's Legendarium

THE GENESIS OF THIS BOOK BEGAN YEARS AGO, WHEN WE, AS FATHER AND SON, enjoyed reading *The Hobbit* and then *The Lord of the Rings* together—since then, we both have re-read these books and also *The Silmarillion* (SILM) many times—and each time the experience is not so much merely reading words on a page, but actually finding ourselves immersed in Middle-earth, as if we had awoken from sleep and found ourselves transported to a wondrous land. We share a love of the sub-created world of J. R. R. Tolkien's Middle-earth, although otherwise our interests are quite different. One of us (Graham) is an artist, specializing in printmaking, while the other (Walter) is a biological scientist, specializing in botany and plant systematics. This book is thus interdisciplinary, and in it we have joined forces to introduce the reader to the plants of Tolkien's legendarium—and to provide illustrations showing these plants, along with vignettes (in a woodcut style) of events in the history of Middle-earth in which these plants have played a key role.

Many readers of *The Hobbit* or *The Lord of the Rings* believe that the events of these books occur in an imaginary world and thus have no connection with the world around us. However, Tolkien sought to correct this misconception, stating that Middle-earth “is just the use of Middle English *middle-erde* (or *erthe*), altered from Old English *Middangeard*: the name for the inhabited lands of Men ‘between the seas.’” He went on to say that “imaginatively this ‘history’ is supposed to take place in a period of the actual Old World of this planet” (Letters: No. 165). His writings, therefore, in no way encourage an escape from reality but are instead meant to reconnect us to important elements of our internal and cultural landscape and also to impact how we interact with other individuals and with the world in which we live—including the landscapes of our natural environment. This book focuses on one of the major components of

our environment—the green plants—organisms to which many in our modern, highly technological world, have become blind. Plants are ecologically diverse and range dramatically in size—from microscopic, aquatic, green algae to the tallest flowering trees or conifers. They are critically important in maintaining a healthy biosphere—and in fact, without plants, animal (and, of course, human) life would be impossible. They provide our food, construction materials for our homes, add beauty to our surroundings, and even provide the air we breathe. In Tolkien's legendarium, plants are the primary concern of Yavanna Kementári, the Giver of Fruits and wife of Aulë, who has lordship over all the substances of which the Earth is made. As related in *The Silmarillion*, she is the “lover of all things that grow in the earth, and all their countless forms she holds in her mind, from the trees like towers in forests . . . to the moss upon stones or the small and secret things in the mould” (Valaquenta). Mythologically, the connection between Yavanna and Aulë is clear because her plants (and animals) depend upon the lands of Middle-earth, which are fashioned by her husband. Understandably, she is held in great reverence by the elves, as are the natural environments she oversees. We think Tolkien's reverence was comparable.

Tolkien's descriptions of Middle-earth are richly detailed, including succinct verbal sketches of many of its plants, and thus create a realistic stage for his dramas. His detailed treatment of plants plays a major role in the creation of this stage—providing the distinctive landscapes and natural locales of Middle-earth—from the tundra and ice-fields of the north, to the extensive prairies of Rohan, and the coniferous forests of Dorthonion, as well as the broad-leaved forests of Doriath or Fangorn and wetlands such as the Gladden Fields. The dominant species within each plant community are always mentioned, especially the trees, which Tolkien, like Yavanna, held most dear (see SILM 2). Thus, it is critical for our appreciation and understanding of Middle-earth to envision these scenes accurately. These plants, however, do more than merely provide descriptive detail, enhancing the veracity of the tales of Middle-earth. The plants within Tolkien's legendarium are actually part of the story and in ways that are more deeply significant than merely evident in the actions of Ents—anthropomorphized trees—that “speak on behalf of all things that have roots, and punish those that wrong them” (SILM 2). Their significance can be seen in the numerous connections between plants and important individuals in the myths and history of Middle-earth. For example, in the First Age (and earlier), how are we to understand the Two Trees of Valinor, fashioned by Yavanna, and why is it important that Thingol, the elven ruler of Doriath, was called the king of beech, oak, and elm? Why was his daughter, Lúthien, when first observed by Beren, dancing among the hemlock-umbels under the beeches of Neldoreth? And what is the link between her feet and the leaves of lindens? Why did hawthorns obscure the entrance to the Hidden Kingdom of Gondolin? During the Second Age, why did the elves give Aldarion, soon to become the sixth king of Númenor, a White Tree—Nimloth—and what is the connection between this tree and the White Trees of Gondor? Why did the elves bring to Númenor several different fragrant trees from Eressëa—and what did these trees look like? In the Third Age, how was pipe-weed integral to the culture of the Shire, and why was athelias (kingsfoil) useful in the hands of the king of Gondor? How did these two herbs get to Middle-earth? What is the connection of willows and the Witherwindle valley (in the Old Forest), and should willows, therefore, be viewed negatively? Why does Quickbeam love rowan-trees, and why were mallorn-trees important to Galadriel and the elves of Lothlórien?

And finally, how should we envision the herbs elanor and niphredil, and what made these two plants so sacred to the elves? Of course, many more questions come quickly to mind. We will, therefore, deal with these questions, among many others, in the following pages (and especially in Chapters 6 and 7, in which the plants of Middle-earth are considered in detail).

It is obvious from even a cursory reading of *The Lord of the Rings* that the book was written by a person who was botanically knowledgeable—but more than that—a writer who really loved plants! But we don't need to merely accept this from our interpretations of his writings. Tolkien tells us of his appreciation of plants. He said in his letter to the Houghton Mifflin Co.: "I am (obviously) much in love with plants and above all trees, and always have been; and I find human maltreatment of them as hard to bear as some find ill-treatment of animals" (Letters: No. 164). We agree: his love of plants is obvious, and it is apparent on nearly every page of *The Hobbit* or *The Lord of the Rings*. Only a writer whose eyes were open to the diversity of the natural world could have accomplished such a task—closely integrating plants into his imagined world, and, as a result, including nearly all of the trees of England (and also most European trees) within the Middle-earth of the First through the Third Ages. Since the species of trees (as well as shrubs and herbs) growing in England and other European regions are for the most part members of widely distributed genera that also occur in temperate North America and Asia, especially eastern and southeastern Asia, we can find the plants of Tolkien's Middle-earth in the forests and fields around our homes. Thus, a major goal of this book, in addition to increasing our appreciation of the imagined landscapes of Middle-earth, is to increase our respect for and understanding of the plants that grow in the natural environments that exist around us. Tolkien appreciated the beauty and diversity of the natural world, and its destruction through urbanization and industrialization angered him (unfortunately, modern followers of Saruman are not hard to find!). Thus, one of our goals is to increase the visibility of and love for plants in our modern culture. And, taking the Ents as our role-models, we hope to foster the desire to protect the forests and meadows near our homes (and across the world). Finally, the wild plants of forest and field are not our only concern. In this book, we have also described the cultivated plants of vegetable and flower gardens as well as agricultural fields, addressing the interesting and long history of plants and people (or hobbits and elves!). We should appreciate not only wild plants (as do the Ents) but also the plants of orchards and cultivated fields (like the Entwives). In the end, the fact that an investigation of the plants of Tolkien's Middle-earth reconnects us with the plants of our own world should not be surprising. Tolkien, in his essay *On Fairy-Stories*, said that "Recovery" is one of the goals of fantasy, and by this he meant "a re-gaining—regaining of a clear view" and "seeing things as we are (or were) meant to see them." Thus, in "experiencing the fantastic, we recover a fresh view of the unfantastic, a view too long dulled by familiarity" (see Verlyn Flieger, 2002, *Splintered Light*, chapter 3). Tolkien's fantasy allows us to see oaks, beeches, and pines in a fresh light.

If the plants of Tolkien's *legendarium* are the trees, shrubs, and herbs of our own world, one might ask: What about plants such as elanor, niphredil, alfirin, simbelmynë, pipe-weed, or the White Tree of Gondor? Are these simply the creation of Tolkien's imagination, or do they also have links to our own world. The answer, we think, is both—certainly these plants, as Tolkien explained, "are lit by a light that would not be seen ever in a growing plant" (Letters: No. 312) in our world—so they arise, some

more and others less, out of his imagination and are used in specific ways in the story in order to clarify aspects of elven, human, or hobbit culture. They are artistic creations, enhancing the wonder and mystery of Tolkien's imaginative world. But it is also important to keep in mind that perhaps all of the imaginative plants of Middle-earth are based, at least in part, on species of our own world. For example, Tolkien suggested that *niphredil*—if seen in the light of our world—would be “simply a delicate kin of a snowdrop,” while *elanor* would be “a pimpernel (perhaps a little enlarged) growing sun-golden flowers and star-silver ones on the same plant” (Letters: No. 312). As early as 1956, Tolkien commented that “Botanists want a more accurate description of the mallorn, of *elanor*, *niphredil*, *alfirin*, *mallos*, and *simbelmynë*” (Letters: No. 187), and we trust that many readers have a similar desire. We have, therefore, done the necessary detective work to connect these imaginative plants with their sources and provide such accurate descriptions. We believe that this botanical knowledge will enrich the experience of those who have read (or are reading) Tolkien's works. This book explores the interactions between plants and the speaking-peoples of Middle-earth—such as humans, hobbits, elves, or ents—whether such plants are the common oaks, pines, or grasses found in the sunlight of our world or are those plants lit by a more imaginative light, such as *niphredil* or *elanor*. Thus, we attempt in this book to synthesize information from diverse realms: Tolkien's writings, etymology (the evolution of words), botany and plant systematics (study of plants and their evolutionary relationships), and artistic endeavors.

In Chapter 2, we consider the plant communities of Middle-earth and how these were distributed in the landscapes of the First through the Third Ages. We also compare these vegetation types to those of Europe, temperate North America, and northern China today. Chapter 3 is focused on the major groups of photosynthetic organisms, especially the green plants. The characteristics of these organisms and their evolutionary relationships are briefly considered. The language of descriptive botany is the topic of Chapter 4, and here we define (and illustrate) the technical terms used in our descriptions of the plants of Middle-earth, which in Chapter 5 are included in an identification key (highlighting the distinctive features of each plant). The Two Trees of Valinor (i.e., *Telperion* and *Laurelin*, the most important trees of Tolkien's legendarium) are the subject of Chapter 6. In Chapter 7, we provide detailed treatments for all of the 141 plants of Middle-earth. For each of the 100 most important plants of Tolkien's imaginative world, we include (1) the common and scientific names, along with an indication of the family to which the plant belongs; (2) a brief quote from one of Tolkien's works in which the plant is referenced; (3) a discussion of the significance of the plant in the context of Tolkien's legendarium; (4) the etymology, relating to both the English common name and the Latin (or Latinized) scientific name, and, where relevant, the name in one or more of the languages of Middle-earth; (5) a brief description of the plant's geographical distribution and ecology; (6) its economic importance; and (7) a brief description of the plant. Most of these are also provided with a woodcut-style illustration (as an aid to identification), along with an inset illustrating one of the events in the history of Middle-earth in which the plant played a role. The remaining less important species are gathered into one of four categories: Plants of Ithilien, Food Plants of Middle-earth, Bree Names, and Hobbit Names. Finally, in Chapter 8, we consider the topic of the art of Tolkien's Middle-earth, with an emphasis on how the artwork in this book should be interpreted.

The 141 plants considered in this book are those that are mentioned in any of the following works by J. R. R. Tolkien: *The Hobbit* (Hobbit), *The Lord of the Rings* (LotR), *The Adventures of Tom Bombadil* (TATB), *The Silmarillion* (SILM), *Unfinished Tales of Númenor and Middle-earth* (UT), *The Lays of Beleriand* (Lays; i.e., the Third Volume of *The History of Middle-earth*), *The Epilogue* (i.e., chapter 11 in the Ninth Volume of *The History of Middle-earth*), *The Wanderings of Húrin* (in the Eleventh Volume of *The History of Middle-earth*), and *The Children of Húrin* (CoH). Quotations from any of these works are indicated by the abbreviations (within parentheses) and indicated by chapter (for *The Hobbit*, *The Silmarillion*, and *Children of Húrin*), by poem number (for the *Adventures of Tom Bombadil*), by poem number and line (for the *Lays of Beleriand*), by book number and chapter (for *The Lord of the Rings*), and by part number and chapter (for the *Unfinished Tales*). Of course, a voluminous literature on the writings of J. R. R. Tolkien exists, and a few of these are also cited where appropriate. We hope that our detailed treatment of these plants will create a visual reference—and legitimacy—for both the plants growing in our forests, meadows, and marshes, as well as those that we have received as gifts from Tolkien's imagination.

## Plant Communities of Middle-earth

THE LANDSCAPE OF MIDDLE-EARTH FROM THE FIRST TO THE THIRD AGES, and especially during the period covered by *The Hobbit* and *The Lord of the Rings*, supported an array of vegetation types similar to those of Europe, temperate North America, and, to a lesser extent, northern China today. We will introduce each of these major plant zones or biomes of Middle-earth, in turn, giving their general distribution and comparing them to the similar biomes of north-temperate regions today. Each of the plant zones or biomes is mapped in this chapter (see Figures 2.1 through 2.11), and, in addition, a useful map of the vegetation of Middle-earth can be found in *The Atlas of Middle-earth*, by K. W. Fonstad (1991). Following this overview, we will discuss the environmental modifications brought about by the activities of humans, hobbits, elves, and the like.

### ARCTIC TUNDRA AND POLAR DESERT

The first of these biomes is arctic tundra (including polar desert communities), which in the First Age occurred in the far north where Aman approached Middle-earth at the Helcaraxë, a region of grinding ice, and in the vast regions north of the Ered Engrin (Iron Mountains). In the Third Age, such vegetation occurred on the Cape of Forochel, other territories surrounding the Ice Bay, and across the Northern Waste, far north of the Grey Mountains (Figure 2.1). These regions were dominated by mosses, lichens, grasses, sedges, and low shrubs, but, in more favorable localities, tall-shrub tundra developed, which was dominated by dwarf willows (*Salix*), birches (*Betula*), and low alders (*Alnus*). However, many regions were barren, nearly devoid of plant life, with the ground consisting only of bare soil or frost-shattered rocks and pebbles. In such localities, the few low herbs were restricted to cracks in the cold, dried soil. Northward, the land became completely desolate and covered by snow and ice. In the First Age, these regions were largely controlled by Morgoth, and very few of the events related in the *Silmarillion* took place in them. However, Fëanor abandoned Fingolfin, his sons, as well as Galadriel and Finrod, and their followers, in the far north of Aman, forcing



**FIGURE 2.1** *Arctic tundra and polar deserts in western Middle-earth of the Third Age.*

them to cross the Helcaraxë, with its “cruel hills of ice” (SILM 9) in order to reach Middle-earth. During the Third Age, Arvedui, the last king of Arnor (the Northern Kingdom), was forced into the lands just south of the Ice Bay by the Witch-king of Angmar. He was there aided by the Snowmen of Forochel, with whom he left the Ring of Barahir before departing on an elven ship (sent by Círdan) that tragically soon sank in a blinding snowstorm, being blown back on and crushed against the ice-sheet that extended far out from the lands around the Ice Bay (see LotR, Appendix A (iii)). The bitter cold of the region of the Ice Bay can only partly be explained by its high latitude. Tolkien noted that the cold had lingered there since the First Age, when the region had been close to Morgoth’s stronghold of Angband. Even during the Third Age it was close to Carn Dûm, controlled by the Witch-king whose power increased in winter and waned in summer. Mythologically, therefore, the bitter cold of this region can be seen as part of an attempt by Morgoth, and later Sauron, to distort and damage Middle-earth through extreme cold (although these evil beings also employed extreme heat,

as we will see later). It is appropriate that “the light of the eyes of Melkor”—as related in *The Music of the Ainur*—“was like a flame that withers with heat and pierces with a deadly cold.” In North America, the tundra and polar desert biome extends from western and far northern Alaska across northern Canada to Greenland. In Europe, tundra occurs in northern regions of Scandinavia and Russia (across northern Siberia). This vegetation type is absent from southeastern Asia. Tundra regions are characterized by more or less continuous darkness in the middle of winter, and they are snow-covered for much of the year. The water in the soil and rock below it is frozen to a great depth (i.e., the permafrost), with only the surface layer thawing during the brief summer. In this region, we certainly see extreme cold in action! However, it would be a mistake to think that in Tolkien’s legendarium the tundra biome should be viewed as somehow defective or evil. This is clearly evident in Ilúvatar’s statement (in the *Ainulindalë*) that even the themes of Melkor (= Morgoth) have been taken up into the Music of Creation, resulting in the “devising of things more wonderful, which he himself hath not imagined.” Thus Ulmo’s conception of water is in the end enhanced, with the cold of Morgoth resulting in the wonder of the snowflake and his heat leading to the beauty of clouds and rain, neither of which had been part of Ulmo’s original theme in the Music. Therefore, this biome, however harsh, should be viewed as a valued part of our natural world: it is both good and beautiful, as are all of the vegetational biomes (being part of a good creation; see also Dickerson & Evans, 2006, *Ents, Elves, and Eriador*, and Bernthal, 2014, *Tolkien’s Sacramental Vision*).

### **BOREAL CONIFEROUS FOREST (TAIGA) AND MONTANE CONIFEROUS FORESTS**

Forests dominated by conifers (i.e., various cone-bearing plants) occurred in the First Age primarily in Dorthonion (Pine-land, in Sindarin), a highland region dominated by an extensive pine forest (*Pinus*), and the Ered Luin (Blue Mountains) and Ered Wethrin (Shadowy Mountains), the higher slopes of which supported both pine and fir (*Abies*) forests (Figure 2.2). In the Second Age, forests of fir and larches (*Larix*) occurred in the mountains of Forostar and Andustar (in Númenor; see Figure 2.3). In the Third Age, coniferous forests existed in southern Mirkwood, which was dominated by a dense fir forest, but most such forests occurred in the major mountain ranges (i.e., the Ered Luin [Blue Mountains], Hithaeglin [Misty Mountains], and Ered Nimrais [White Mountains]) (see Figure 2.4). In these montane forests, pines, firs, and larches predominated (mixed with a few broadleaved species, such as birches [*Betula*] and rowans [*Sorbus*]). Of course, some conifers also grew intermixed with broadleaved trees in various predominantly broadleaved, temperate forests (see the later section “Cool- to Warm-Temperate, Deciduous Forests”). In fact, the regions of highest conifer diversity seemed to be the mixed deciduous forests of northern Ithilien, on the western slopes of the Ephel Dúath (the western fence of Mordor), which in the time of *The Lord of the Rings* had only recently fallen under the control of Sauron. These diverse forests included many broadleaved species intermixed with pines, firs, true cedars (*Cedrus*), junipers (*Juniperus*), and cypresses (*Cupressus*). In North America, a band of boreal coniferous forests occurs immediately south of the tundra biome, and this constitutes the boreal forest biome (or taiga). A similar taiga zone occurs across northern Europe from Scandinavia and northern Russia,



**FIGURE 2.2** *Montane coniferous forests in Beleriand (First Age).*



**FIGURE 2.3** *Montane coniferous forests of Númenor (Second Age).*



**FIGURE 2.4** *Montane coniferous forests of western Middle-earth of the Third Age.*

and across Siberia, extending eastward into extreme northern China. These forests are dominated by various species of spruce (*Picea*), fir, pine, larch, and white-cedar (*Thuja*). Some deciduous, broadleaved trees also occur in such forests, especially poplars or aspens (*Populus*), willows (*Salix*), birches, and alders (*Alnus*). This broad, boreal forest zone intergrades with coniferous montane forests, which occur in the western mountains of North America (e.g., Rocky Mountains, Coastal Ranges) and in the various mountainous regions of Europe (e.g., the Alps, Pyrenees, Carpathian and Caucasus Mountains, and mountains of the Balkan Peninsula). Coniferous trees of North American montane forests include (in addition to those listed for the taiga) Douglas fir (*Pseudotsuga*), hemlocks (*Tsuga*), junipers, various “cedars” and cypresses (*Callitropsis*, *Calocedrus*, *Chamaecyparis*, *Thuja*), redwoods (*Sequoia*),

and giant sequoias (*Sequoiadendron*). European montane conifers—both boreal and montane—are less diverse, including only firs, spruces, larches, pines, cypresses (*Cupressus*), and junipers. Some of the intermixed broadleaved species include alders, birches, ironwoods (*Ostrya*), maples (*Acer*), oaks (*Quercus*), poplars and aspens, willows, and mountain-ashes or rowans. Finally, above the tree line in mountainous regions, especially on high mountain summits, slopes, and ridges, there exists a region dominated by herbs and low shrubs—an alpine vegetational zone. It is interesting that the boreal forest zone is absent in Middle-earth, with barren mountainous regions, grasslands, and/or scrublands (i.e., a zone occupied by stunted trees and shrubs) occurring to the south of the zone of ice and tundra. In contrast, montane coniferous forests seem to be as well-developed in Middle-earth as they are in the mountains of Europe and North America today. Many of the key events in the history of Middle-earth occurred in such conifer-dominated forests. For example, in the First Age, Treebeard walked in the winter “among the pine-trees upon the highland of Dorthonion” (LotR 3: IV). Barahir, Beren, and their followers fought the orcs who had invaded Dorthonion during and after the Battle of Sudden Flame, and their struggles occurred both in pine forests and in high alpine meadows. And, later, Beleg wandered in the haunted pine forests of Dorthonion, searching for Túrin, who had been captured by orcs, and there, with the help of Gwindor, rescued him. During the elves’ escape from Gondolin, Glorfindel fought with a balrog in a high pass of the Encircling Mountains. He died there, allowing the refugees (led by Tuor and Idril) to escape. And, in that high place, a “green turf came” and “yellow flowers bloomed upon it amid the barrenness of stone” (SILM 23)—certainly a reference to an alpine meadow. In the Third Age, it was in pine forests, intermixed with larches and firs, high on the eastern slopes of the Misty Mountains, that Gandalf, Bilbo, and the dwarves were trapped by orcs and wargs. While recovering in Rivendell, Frodo, on the very day of the Council of Elrond, told Gandalf that he would love to go walking and get into the pine woods covering the higher elevations north of Elrond’s home. Firs dominated the forests near the eastern gates of Moria where the company, now led by Aragorn, briefly rested, and firs dominated the landscape of Dunharrow, where the muster of Rohan occurred and where Aragorn led those who followed him under the Dwimorberg, the Haunted Mountain. And Sam and Frodo struggled in the ravines of the Emyn Muil among twisted birch and gaunt fir. There are numerous illustrations of Middle-earth landscapes by Alan Lee and Ted Nasmith, and one of our favorites shows Túrin Turambar trudging through the snow in Dor-lómin, seeking Morwen, with the fir-clad slopes of the Ered Wethrin in the background (see *The Silmarillion*, opposite page 221, illustrated by Ted Nasmith). Tolkien’s illustration “The Misty Mountains looking west from the eyrie toward Goblin Gate” shows well the characteristic form of fir trees (see illustration no. 38, in W. G. Hammond and C. Scull’s *The Art of the Hobbit*). Finally, the haunted pine forest of Taur-na-Fúin was beautifully illustrated by Tolkien (see no. 48, in *The Art of the Hobbit*).

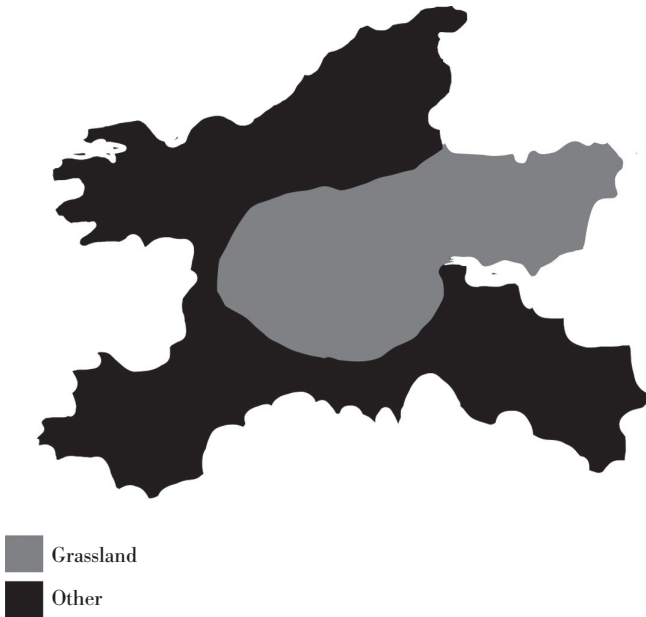
### GRASSLANDS, PRAIRIES, AND STEPPES

Grass-dominated landscapes were common in Middle-earth. In the First Age, tall grasses covered the beautiful plain of Ard-galen (Figure 2.5), which was used for grazing horses by the men of Hithlum but perished in the Battle of Sudden Flame.



**FIGURE 2.5** *Grasslands of western Middle-earth of the First Age.*

It became a burned and desolate waste and was thereafter called Anfauglith, the Gasping Dust. Shorter grasses dominated the plains east of Ard-galen and north of Maglor's Gap, and these were destroyed in the same battle. Finally, the northern portion of Hithlum, west of Ard-galen and on the eastern side of the Ered Wethrin, was also grass-dominated (Figure 2.5). In the Second Age, grasslands dominated the central portion of Númenor (which was called Mittalmar), and these prairies surrounded the tall mountain Meneltarma, sacred to the worship of Eru Ilúvatar (Figure 2.6). The grazing of sheep was centered in the region of Emerië, which was beloved by Erendis. The Orrostar (Eastlands) peninsula was originally dominated by taller grasses but later became the major grain-producing region of Númenor. In the Third Age, prairies characterized Rohan, with shorter grasses dominating in the East Emmet and taller grasses in the West Emmet—a large region east and south of Fangorn and extending southward to the White Mountains (Figure 2.7). Through the midst of this broad grassland flowed the Entwash, with its floodplain covered by sedge- and reed-dominated wetlands. Grasslands also dominated the adjacent northern portion of Gondor (Anórien), and, just to the south in Lebennin, grasslands occurred among scattered woodlands. Smaller and more discontinuous grassland regions occurred farther north, in the valley of the Anduin River, east of the Misty Mountains, and in the Barrow Downs and South Downs, located east of the Old Forest. Finally, a dry short-grass prairie occurred just south of the Sea of Rhûn, and this expansive prairie also occupied the southeastern portion of Mordor (i.e., Nurn and region around the Sea of Núrn, which was



**FIGURE 2.6** *Grasslands of Númenor (Second Age).*

surrounded by saline flats), extending as far south as Khand (Figure 2.7). The grasslands of Nurn were, however, much degraded, and mainly occupied by vast fields tended by Sauron’s slaves. All these grasslands were undoubtedly similar to those occurring in our prairies and steppes today. Grasslands dominate the central portion of North America, extending from southern Canada, through the Great Plains of the United States, and ending in central Mexico. In these regions, limited rainfall and frequent fires limit the growth of trees. The dominant grasses in North American prairies are *Agropyron*, *Andropogon*, *Bouteloua*, *Buchloe*, *Calamovilfa*, *Koeleria*, *Muhlenbergia*, *Panicum*, *Poa*, *Shisachyrium*, *Sorghastrum*, *Sporobolus*, and *Stipa*. Eurasian grasslands occur from eastern Romania and Ukraine, eastward across Asia to northern China. The dominant grasses in these regions are *Agropyron*, *Cleistogenes*, *Festuca*, *Koeleria*, *Leymus*, *Poa*, and *Stipa*. The grasslands of both North America and Eurasia also support various sedges (*Carex*) as well as a diverse array of broadleaved herbs and low shrubs. It is interesting that grasslands are characteristic of the central regions of both North America and Eurasia. Finally, this biome has been much altered on all continents by agricultural activities. Although individual prairie grasses are not mentioned in Tolkien’s writings, we suspect that the grasslands of Middle-earth were likewise dominated by a diverse array of species. Grasslands are a conspicuous part of our mental image of Middle-earth due to the importance of the Rohirrim (Riders of Rohan) in the events at the end of the Third Age—who can forget the moment when Aragorn, Gimli, and Legolas first encountered the grass of Rohan, which “swelled like a green sea up to the very foot of the Emyn Muil” or their meeting with Éomer, who exclaimed, “Have you sprung out of the grass?” (LotR 3: II). The expansive prairies of Rohan are shown in an illustration by Alan Lee (see *The Lord of the Rings* illustrated by Alan Lee,



**FIGURE 2.7** *Grasslands of western Middle-earth in the Third Age.*

opposite page 448). Grasslands were much less conspicuous in the First Age, and their destruction by “rivers of flame” (SILM 18) running down from Thangorodrim in the Battle of Sudden Flame is probably the most memorable event connected with these early grassy plains; Ard-galen then became Anfauglith. The crossing of this plain, now a place of “ashes and dust and thirsty dune” (Lays III: line 3478), by Lúthien and Beren in the fell forms of monstrous bat and werewolf is perhaps just as dramatic, especially as related in *The Lay of Leithian* (see lines 3456–3485 and painting by Ted Nasmith in the illustrated *Silmarillion*, opposite page 176).

### DESERTS

The largest expanse of desert habitat in Middle-earth occurs in the far south, in the lands of the Haradrim (i.e., the Haradwaith) (Figure 2.8). However, these warm to hot deserts (and their unique plants) are nowhere described in Tolkien’s writings.



**FIGURE 2.8** *Deserts of western Middle-earth in the Third Age.*

In North America, deserts occur in the extreme southwest—in California, Nevada, Arizona, New Mexico, and western Texas—and represent warm areas with low rainfall. Such regions are dominated by a diverse array of arid-adapted plants, including many with very small, leathery leaves, succulent stems, and thorns or spines. Deserts, with similarly adapted plants, occur in Eurasia from north and east of the Caspian Sea and extend eastward to northern China. Deserts and semi-deserts also occur just south of Europe, in northern Africa. During the Third Age of Middle-earth, for more than 2,000 years, the Haradrim (or Southrons) frequently attacked Gondor but were repeatedly defeated. Their troops used giant war-elephants called *mûmakil*, one of which Sam was delighted to see in Ithilien. They were one of the major forces allied with Mordor in the battle of the Pelennor Fields, during which Théoden attacked and threw down their chieftain and standard bearer. But these events occurred in Gondor, so, in *The Lord of the Rings*, as mentioned earlier, we do not find any description of these southern deserts, and thus none of the plants of Middle-earth treated in this

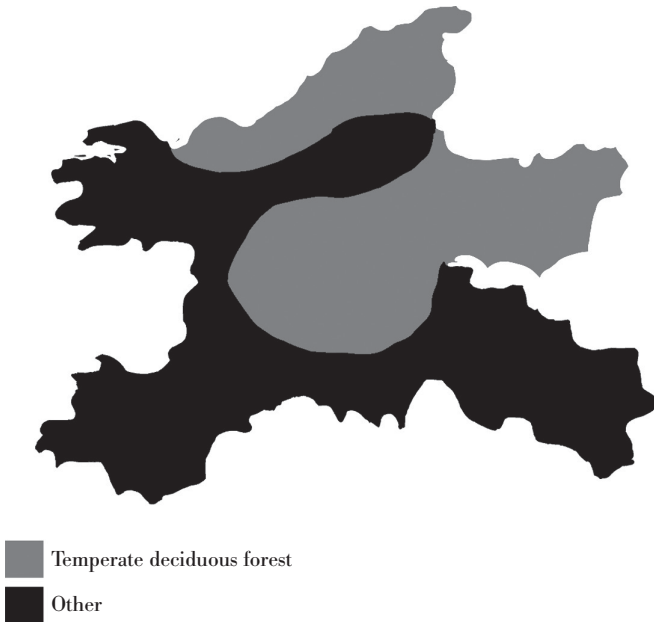
book is representative of this common biome. Deserts are thus quite peripheral to the history of Tolkien's Middle-earth; yet they are not entirely absent, as in Appendix A, I (iv), we read of Ciryaher, king of Gondor, who with his troops crossed the River Harnen and defeated the people of these southern deserts. Unfortunately, these events are only very briefly related.

### COOL- TO WARM-TEMPERATE, DECIDUOUS FORESTS

Dense broadleaved, deciduous forests as well as open woodlands were widespread in Middle-earth (Figures 2.9, 2.10, and 2.11). The former (i.e., dense forests) are indicated by treelike shading in the maps associated with *The Hobbit*, *Lord of the Rings*, and *Silmarillion*, whereas the latter (i.e., open woodlands) are not shown, being represented merely by a white background (and thus not distinguished from grassland, tundra, or desert biomes). Broadleaved forests, whether dense or open, predominate in the history of Middle-earth, and they are described in detail in Tolkien's writings. We here briefly describe the major forested regions but mention only a few of the key events that took place under their entangled branches. In the First Age, the protected region of Doriath, the home of Thingol and Melian and enclosed by the Girdle of Melian, was densely forested: it included the Forest of Brethil in the west and Neldoreth in the north, with the River Esgalduin separating this forest from Region in the south (Figure 2.9). These forests were dominated by beeches (*Fagus*),



**FIGURE 2.9** *Temperate, deciduous forests of Beleriand (First Age).*



**FIGURE 2.10** *Temperate, deciduous forests of Númenor (Second Age).*

oaks (*Quercus*), elms (*Ulmus*), and horse-chestnuts (*Aesculus*). In fact, Thingol is called “the king of beech and oak and elm” (Lays III: line 72). Beeches, especially, dominated the forest of Neldoreth—and Treebeard sang of walking in “the beeches of Neldoreth” (LotR 3: IV) in the autumn. After Lúthien rescued Beren from the dungeons of Sauron, they returned to the woods of Doriath:

resting in deep and mossy glade;  
 there lay they sheltered from the wind  
 under mighty beeches silken-skinned  
 and sang of love that still shall be,  
 though earth be foundered under sea. (Lays III: lines 3221–3225)

Beeches grew near the gates of Menegroth (as shown in the illustration by Alan Lee, opposite page 96, in *The Children of Húrin*), and even the pillars of this great underground dwelling were “hewn in the likeness of the beeches of Oromë” (SILM 10). The forest of Brethil was dominated by beeches (as indicated by its name), along with numerous oaks and birches (see illustration opposite page 192 by Alan Lee, in *The Children of Húrin*, and illustration opposite page 224 by Ted Nasmith, in *The Silmarillion*). However, Region was a mixed forest, with beeches, oaks, elms, hollies (*Ilex*), lindens (*Tilia*), and yews (*Taxus*), among other trees. The nearby forest of Nan Elmoth, just east of Doriath (and south of the River Celon) was floristically similar to that of Region, but its trees were “the tallest and darkest in all Beleriand” (SILM 16). Melian had walked there in the twilight of Middle-earth, and this forest was also the home of the Dark Elf, Eöl. Just to the west of Doriath and along the southern slopes of



**FIGURE 2.11** *Temperate, deciduous forests of western Middle-earth in the Third Age.*

the Ered Wethrin was another beech forest that surrounded the beautiful Lake Ivrin—the woods of Núath. The beautiful and ancient beeches of this forest, many of which grew near the shores of this lake, are described in the *Lay of the Children of Húrin*; their gray trunks “marched in majesty” and their “translucent” and “golden russet” leaves were blown in the morning breezes (Lays I: lines, 1512–1514). It was in this forest, on the shores of Lake Irvin, that Túrin received healing from grief after the death of his friend Beleg.

Much farther south, where the River Narog joined the Sirion, was the beautiful forest of Nan-Tathren, which was swampy, dominated by willows (*Salix*), and under the protection of Ulmo. Nan-Tathren (Sindarin for Willow-vale) was visited by Voronwë, who told Tuor that the willows of this forest were the fairest of all the region’s plants, describing them as “pale green, or silver in the wind” and stating that “the rustle of their innumerable leaves” was like a “spell of music.” Time seemed to nearly stand still, and in this forest he stood for days “knee-deep in the grass and listened” and “wandered,

naming new flowers” (UT 1: 1). This forest was also described by Treebeard, who sang of walking “in the willow-meads of Tasarinan” in the spring, exclaiming: “Ah! The sight and the smell of the Spring in Nan-tasarion!” (LotR 3: IV). South of Nan-Tathren and just north of the Bay of Balar was Nimbrethil, a woods dominated almost exclusively by white birches (i.e., various species of *Betula* having lovely, smooth, and white trunks, as indicated by its name, which is Sindarin for white birch). It was timber from these trees that Eärendil, with the help of Cirdan, used in making Vingilot, his ship, the *Foam-Flower*, in which he and Elwing sailed to Valinor. Eastward, across the Sirion from Nimbrethil, was the great forest Taur-im-Duinath, which filled all the land between the River Sirion in the west and the River Gelion in the east. The dominant trees of this forest, which was peripheral to the major events in the history of the First Age, are not described. The last of the major densely forested regions of Beleriand in the First Age occurred on the western slopes of the Ered Luin and was dissected by the seven rivers of Ossiriand. This region was given by Thingol to Denethor, the lord of the Nandor (Green-elves), and these elves long lived among these trees. Treebeard sang of wandering in the summer “in the elm-woods of Ossiriand” (LotR 3: IV), although undoubtedly other trees also occurred there. The dominance of elms in this region is not surprising, given that most elms prefer the low, wet soils of river floodplains. This large forest is not indicated on the map of Beleriand that accompanies *The Silmarillion* (but it is shown in the vegetation map on page 185 in K. W. Fonstad’s, 1991, *The Atlas of Middle-earth*).

In Númenor (during the Second Age; Figure 2.10) the peninsulas of Andustar, Hyarnustar, and Hyarrostar were largely covered by a diverse, mixed broadleaved forest (in which grew birch, beech, oaks, and elms, among many others). Beginning in the days of Tar-Aldarion, there were many tree plantations in the Hyarrostar, which provided timber for ship-building.

In the First Age and early Second Age, the dense forests of Eriador, west of the Ered Luin, were much more extensive than those shown in the map accompanying *The Lord of the Rings*. As Treebeard much later told Merry and Pippin, “there was all one wood once upon a time from here [Fangorn] to the Mountains of Lune, and this was just the East End” (LotR 3: IV). In fact, this plant biome was so common and widespread that it was used to represent Middle-earth itself, as seen in the elven song to Elbereth that Frodo heard in the Hall of Fire, which pictures the singer as gazing at Elbereth’s stars “*o galadhremmin ennorath*” (LotR 2: I; “from tree-tangled Middle-earth”; see also discussion in T. Shippey’s, 2002, *J. R. R. Tolkien: Author of the Century*). By late in the Third Age, these woods were much dissected, and large areas formerly occupied by dense forest now instead supported a landscape of open woodland or scrub. This destruction of the original virgin forest of the region, described by Treebeard as similar to the forest of Lothlórien, “only thicker, stronger, younger” (LotR 3: IV) was the result of years of forest clearing, especially by humans and dwarves, and also the burning and cutting of trees associated with the military campaigns and destructive environmental policies of Morgoth and later Sauron (and, to a lesser extent, Saruman). There is, therefore, some justification for the hatred of the trees of the Old Forest for those “that go free upon the earth, gnawing, biting, breaking, hacking, burning”: as related by Tom Bombadil, the trees considered orcs, humans, dwarves, and even hobbits to be “destroyers and usurpers” (LotR 1L VII; see also discussion in *Taking the Part of Trees: Eco-Conflict in Middle-earth*, by V. Flieger, 2000, and *Representations of Nature in Middle-earth*, edited by M. Simonson, 2015).

By the time of the war against Sauron, the dense, broadleaved forests of Middle-earth (see areas indicated by tree-shading in the map of the West of Middle-earth in *The Lord of the Rings*) were few and far between and were represented west of the Misty Mountains only by (1) the remnants of the forests of Ossiriand (just west of the Ered Luin), occupying the small portion of Beleriand still extant; (2) the forests of the North Farthing, the Green-hill Country, and the Woody End of the Shire; (3) the Old Forest, just east of the Shire; (4) the Chetwood near Bree; and (5) the forests of the Trollshaws and nearby Rivendell, near the western slopes of the White Mountains. These forests were quite diverse, with different species dominating depending upon exposure, soil conditions, and hydrology. The dominant trees, however, were alders (*Alnus*), ashes (*Fraxinus*), beeches, birches (*Betula*), elms, firs (*Abies*), hawthorns (*Crataegus*), hazels (*Corylus*), horse-chestnuts, lindens, oaks, pines (*Pinus*), sloes (*Prunus*), wild apples (*Malus*), and willows, and, as the hobbits noted in the Old Forest, “strange and nameless trees of the denser wood” (LotR 1: VI). Holly trees (*Ilex*) seem to have occurred mainly in the region of the former elven land of Eregion (Hollin). Floristically similar forests also occurred east of White Mountains, and the most important of these were (1) the forest of northern and central Mirkwood, (2) the forest near the northeastern shore of the Sea of Rhûn, and (3) Fangorn forest, just east of the southern portion of the Misty Mountains. Of these forests, Fangorn was the most diverse, probably having all of the trees listed earlier as well as rowans (*Sorbus*) and strange holly-like trees with stiff upright flower-spikes (possibly *Banksia*). Nearly all of these forests are intimately connected to the events related in *The Hobbit* and *The Lord of the Rings*—from Bilbo and the dwarves’ hike along the elven path through Mirkwood (see watercolor by Alan Lee opposite page 128 in illustrated edition of *The Hobbit*) and the first meeting of Frodo, Sam, and Pippin with the elves in the Woody End (see watercolor by Alan Lee opposite page 96 in illustrated edition of *The Lord of the Rings*), to the hobbits meeting Tom Bombadil along the Witherwindle, discovering three stone trolls in the Trollshaws while being led by Aragorn, or Merry and Pippin meeting Treebeard and Quickbeam in Fangorn (see watercolor of Merry and Pippin in Fangorn forest by Alan Lee, opposite page 480 in the illustrated *Lord of the Rings*). These and many other events take place under a canopy of mixed, broadleaved hardwoods.

In North America, such deciduous, broadleaved forests are characteristic of the eastern half of the United States (although in many regions the forest has been much fragmented by agricultural activities or urban growth). This region is dominated by broadleaved, mainly deciduous species of trees, although evergreen species become more common in the southern portions of this widespread forest. In addition, on the sands of the southeastern US coastal plain, pines often become a dominant element in the landscape. The forest composition is diverse and varies with climatic regime, hydrological conditions, and soil type. Dominant trees include ashes, bays (*Persea*), beeches, birches, chestnuts (*Castanea*), cherries (*Prunus*), dogwoods (*Cornus*), maples (*Acer*), hickories (*Carya*), hollies, horse-chestnuts, elms, lindens or basswoods, magnolias (*Magnolia*), mulberries (*Morus*), oaks, pines, sugarberries or hackberries (*Celtis*), sweetgums (*Liquidambar*), tupelos (*Nyssa*), tulip-poplars (*Liriodendron*), and walnuts (*Juglans*). Such cool to warm temperate forests are extremely widespread in Europe, occurring in a broad east–west zone from Spain eastward to Russia and Kazakhstan, often bounded by boreal, coniferous forests to the north and (at least in eastern Europe) grasslands to the south. The deciduous forests of Europe are quite similar to

those of eastern North America but are somewhat less diverse and are dominated by broadleaved species such as ashes, beeches, birches, chestnuts, horse-chestnuts, elms, lindens, maples, and oaks, but also include needle-leaved species such as pines and hemlocks (*Tsuga*). Finally, temperate broadleaved forests also occur in eastern Asia, especially central and northern China, Korea, and Japan. The species diversity of these forests is much greater than comparable forests of Europe and North America (as is evident from the species numbers provided in the plant treatments; see Chapter 7).

Two of the forested regions of Middle-earth were rather distinctive and so are discussed separately later. These are the forests of Lothlórien and Ithilien. The forest of Lothlórien, the dwelling place of Galadriel and Celeborn, was unique in Middle-earth, being dominated by majestic mallorn trees (see treatment of this tree in Chapter 7 and illustration no. 157 in *J. R. R. Tolkien: Artist and Illustrator*, by W. G. Hammond and C. Scull, 1995). Mallyrn were brought to Middle-earth by the elves with the assistance of Tar-Aldarion, the sixth king of Númenor, and this was the only region where they were common. This forest here is considered as kind of temperate broadleaved forest because the mallorn leaves turn golden yellow in the autumn. However, the trees were only tardily deciduous, with the leaves being held during the winter and only dropping in the spring when the trees came into bloom. Of course, mallorn forests have no counterpart in the forests of North America or Europe today (although they are somewhat reminiscent of mature beech forests—but more open and park-like). They represented an attempt by the elves (essentially horticultural in nature) to enhance the natural beauty found in temperate forests. We, like the elves of Lothlórien, appreciate the beauty of nature. Thus, we also attempt to enhance the beauty of our native trees and shrubs, for example, through the selection and breeding of genotypes with red leaves even during the growing season or those with weeping or twisted branches. And, of course, a similar impulse underlies the breeding of plants with enlarged, doubled, or otherwise more striking flowers.

The forests and open woodlands of Ithilien were almost equally distinctive (see watercolor showing Sam and the Oliphaunt in illustrated *The Lord of the Rings* opposite page 688). They were exceptionally diverse and contained many broadleaved evergreens, such as bays (*Laurus*), boxwoods (*Buxus*), olives (*Olea*), holm oaks (*Quercus ilex*), and myrtles (*Myrtus*), as well as conifers (e.g., true cedars [*Cedrus*], cypresses [*Cupressus*], junipers [*Juniperus*], and pines). Many resinous and aromatic species, such as terebinths (*Pistacia*), myrtles, cedars, and various medicinal or culinary herbs, also grew in these forests. They were floristically very similar to Mediterranean forests and woodlands, which characterize southern Europe today, especially in regions very close to the Mediterranean Sea. In fact, the forest of Ithilien appears especially similar to the forests of Greece and coastal Turkey, which, like all Mediterranean forests, develop in regions with dry summers and rainy winters. Of course, many key events in Tolkien's legendarium occurred in Lothlórien and Ithilien. We may first think of the meeting of Frodo and Galadriel or the visions revealed to Frodo and Sam in her Mirror. Our mental image of Cerin Amroth, the heart of Lothlórien, a hill crowned by two rings of trees—the outer of birches “leafless, but beautiful in their shapely nakedness,” and the inner of mallyrn, “still arrayed in pale gold” (LotR 2: VI)—also is enduring. Of course, in Ithilien, Frodo and Sam are revived after their experience at the Gate of Mordor, and it is also where they first met Faramir, receiving unexpected help in their quest.

Forests and woodlands frequently are interspersed with more open habitats that develop as a result of edaphic or hydrological conditions. Two of these communities are conspicuous in Tolkien's descriptions of Middle-earth and are discussed here: (1) heathlands and moorlands and (2) various other wetland habitats. Heaths and moorlands are moist to wet open habitats (i.e., without trees or with only a few scattered trees or shrubs). They develop on quite acidic and low-nutrient soils and are dominated by grasses and grasslike plants such as sedges (*Carex*, *Scirpus*, and related genera), cotton-grass (*Eriophorum*), rushes (*Juncus*), and mat-grass (*Nardus*); occasional herbs, such as blackberries (*Rubus*); and ericaceous shrubs, such as heather (*Calluna*), heath (*Erica*), bilberry, whortleberry, and relatives (*Vaccinium*), and crowberry (*Empetrum*). Mosses are common, especially peatmoss (*Sphagnum*), and bracken (*Pteridium*), a widely distributed fern, occasionally forms dense brakes. In the First Age, the largest regions dominated by moors were the highlands of Dorthonion, especially the vicinity of Tarn Aeluin (see illustration opposite page 161 by Ted Nasmith, in the illustrated *Silmarillion*), where Barahir, Beren, and their few followers made their lair when they were hunted by the forces of Morgoth, and much of the vast plain between the Rivers Sirion and Narog, in which was situated Amon Rûdh, a prominent hill that for a time was the home of Túrin Turambar. In the Second Age, high moors occurred in the northern peninsula of Númenor. In the Third Age, moorlands are mentioned as occurring in the Shire (the North Moors) and on the summit of Dol Baran, the southernmost of the foothills of the Misty Mountains, but they probably also occurred in other hills of this range and are recorded from the highlands near Rivendell. Several of the previously listed plants are included in Tolkien's writings, but it is interesting that he did not mention either cotton-grass, which is striking when in fruit, or crowberry, with its showy, purple-black, subglobose fruits—both are common moorland species in the British Isles.

It is clear that wetlands were close to Tolkien's heart, and many are depicted in great detail in his writings. Major wetlands of the First Age include (1) the marshes of Nevrast; (2) the fens of Serech, north of Tol Sirion and between the Ered Wethrin and the mountains of western Dorthonion; (3) the Aelin-uial (Meres of Twilight), near the southwestern corner of Doriath; and (4) the marshes of the delta of the River Sirion. The species of these wetlands are not described in detail; instead, the presence of reeds (*Phragmites australis*) is emphasized. The brothers Húrin and Huor fought the orcs of Morgoth beside the fens of Serech at the end of the Nirnaeth Arnoediad (Battle of Unnumbered Tears), and it was there that their heroism allowed Turgon and his forces to escape, although in the end Huor was slain and Húrin taken captive. Later Tuor, Huor's son, wandered in the beautiful marshes of Nevrast before finding in Vinyar the armor left for him by Turgon, and he there received his quest from Ulmo to find the Hidden Kingdom of Turgon and deliver the message of Ulmo. Nienor and her mother Morwen (Húrin's wife) were ferried over the Meres of Twilight on their search for Túrin, Nienor's brother and Morwen's son, and, soon thereafter, Nienor was bewitched by the dragon Glaurung. Finally, near the end of the First Age, when all of the elf kingdoms had fallen, Tuor and his wife Idril, the daughter of Turgon, moved from the refuge of Nan-Tathren southward to the marshes of the Mouths of the Sirion. They dwelt there for a while in peace until they set sail "into the sunset and the West" (SILM 23). Why are so many events in the lives of Húrin and Huor and their children (of the House of Hador), connected with wetlands? Perhaps because Ulmo, the

Lord of Waters, never abandoned humans and elves, even when they lay under the wrath of the Valar; his power was focused in rivers and wetlands, and he had chosen the House of Hador to accomplish his purpose. In Númenor, during the Second Age, the only major wetland occurred near the mouths of the River Siril, where there were “wide marshes and reedy flats” (UT 2: I). In the Third Age, extensive wetland habitats occurred (1) in the Shire (Overbourn Marshes); (2) the Midgewater Marshes east of Bree; (3) the Nin-in-Eilph (Swanfleet), where the Mithethel joined the Glanduin River; (4) the Loeg Ningloron (Gladden Fields), along the Anduin River, north of Lórien; (5) along the Entwash, especially where it joined the Anduin River to form the Nindalf (Wetwang); and (6) in the adjacent Dead Marshes (see watercolor by Alan Lee opposite page 656 in illustrated *The Lord of the Rings*). Characteristic species of these wetlands—in order of their conspicuousness—include reeds (*Phragmites australis*), flag-lilies or yellow iris (*Iris pseudacorus*), rushes (*Juncus*), and sedges (*Carex*, and relatives). Undoubtedly many other plants occurred in these regions as well, especially waterlilies (*Nymphaea*), which are mentioned as occurring in several rivers and ponds. Again, these localities are connected with key events in Tolkien’s narrative. The One Ring was lost in the Gladden Fields, and Isildur died there as he struggled among “great rushes and clinging weeds” (UT3: I). There the Ring lay there for well over 2,000 years until found by Déagol, and it was then almost immediately taken by Sméagol (Gollum). Aragorn led the four hobbits through the Midgewater Marshes on their way to Rivendell, and, in these marshes, they were tormented by flies and “came upon pools, and wide stretches of reeds and rushes” (LotR 1: XI). Much later, when the fellowship had become divided, Gandalf, Aragorn, Legolas, and Gimli passed through the wetlands adjacent to the Entwash, with grass “so high that it reached above the knees of the riders” and “broad acres of sedge waving above wet and treacherous bogs” (LotR 3: V). Frodo and Sam, led by Gollum, struggled through the “dead grasses and rotting reeds” of the Dead Marshes (LotR 4: II). As Gandalf and Galadriel returned north after the war of the ring, they crossed a river and saw to their west the Swanfleet wetlands, where “countless swans housed in a land of reeds” (LotR6: VI). Except for the Dead Marshes, such wetlands, although they can be difficult to traverse, are viewed as places of beauty—and in both *The Silmarillion* and *The Lord of the Rings* they are often associated with birds.

### COMPARISON OF THE TREES OF MIDDLE-EARTH WITH THOSE OF ENGLAND

Contrary to what some readers of the *Hobbit* or the *Lord of the Rings* may think, Middle-earth is our own world. As Tolkien stated in a letter sent to Houghton Mifflin Co., “‘Middle-earth’ . . . is not a name of a never-never land without relation to the world we live in . . . It is just a use of Middle English *middle-erde* (or *erthe*), altered from Old English *Middangeard*: the name for the inhabited lands of Men ‘between the seas’” (Letters: No. 165). Thus, we should not be surprised, as outlined earlier, that the plant biomes and communities of Middle-earth bear a striking resemblance to those of Europe and especially England. And since the flora of Europe is closely related to that of temperate regions of Asia and North America, we can find the plants of Middle-earth in the meadows and forests near our homes—at least if we live in the temperate regions of the Northern Hemisphere.

It is useful, therefore, to compare the trees native to England with those occurring in the landscapes of Middle-earth. Detailed presentations of each of the trees of Middle-earth can be found in Chapter 7, along with a discussion of their importance in Tolkien's legendarium. Here, we merely summarize some interesting distributional patterns. Of the 34 genera of trees occurring in Tolkien's legendarium, almost all are European natives (although most of these are quite broadly distributed in the Northern Hemisphere, so they also grow in temperate Asia and North America). The only exceptions are oranges (*Citrus x aurantium*, Sweet Orange Group) and camellias (species of *Camellia*, including tea, *C. sinensis*, and ornamentals, such as *C. japonica*), and both of these are native to eastern Asia. Both plants also are of minor importance in Tolkien's writings—with oranges only mentioned in the poem *Errantry*, and the genus *Camellia* noted only in the name Camellia Sackville, included among the Baggins of Hobbiton (see LotR, Appendix C) and in the reference to tea in Chapter 1 of *The Hobbit* and *The Lord of the Rings*. Both are edibles, and we can assume that they were imported into the Middle-earth of the Third Age. Of those Middle-earth trees occurring in Europe, 20 are native to England, and the remaining 13 do not occur natively there (although some of these have been introduced and have become naturalized, and many are grown as cultivated ornamentals). Those Middle-earth trees occurring natively in the British Isles include alders (*Alnus*), ashes (*Fraxinus*), beeches (*Fagus*), birches (*Betula*), box or boxwood (*Buxus*), elms (*Ulmus*), gorse (or whin; *Ulex*), hawthorns (*Crataegus*), hazels (*Corylus*), hollies (*Ilex*), junipers (*Juniperus*), lindens (*Tilia*), oaks (*Quercus*), pines (*Pinus*), poplars (*Populus*), rowans (*Sorbus*), sloe (and plums, cherries; *Prunus*), wild apples (*Malus silvestris*, with *M. domestica* presumably introduced at an early date), willows (*Salix*), and yews (*Taxus*). Amazingly, this list includes all of the trees native to England except for maples (*Acer*, represented by *A. campestre*) and hornbeams (*Carpinus*, represented by *C. betulus*). Both maples and hornbeams are widely distributed in temperate regions, occurring in Europe, Asia, and North America. It is a mystery why these two trees were omitted from Tolkien's legendarium—especially maples, which are widely used as shade or ornamental trees. Maples have, however, made their way into Middle-earth lore in a peripheral way: Alan Lee's illustration of Cerin Amroth, which clearly shows mellyrn and birches, is decorated by a border showing the smooth gray trunks of mallorn-trees and the autumn-yellow leaves of sugar maples (*Acer saccharum*)! The imaginative *Beyond Middle Earth* (Williams, 2014) suggests, on the basis of no actual data, that *A. campestre* and other species of *Acer* (e.g., *A. platanoides* and *A. pseudo-platanus*) grew in the Middle-earth of the Third Age. In addition, two related species, buckthorn (*Rhamnus catharticus*) and alder-buckthorn (*Frangula alnus*), occasionally reach tree size and are native to England but are not mentioned in Tolkien's writings. Tolkien states (again in Letter No. 165) that he is "much in love with plants and above all trees," and this is easily seen in the fact that he manages to include all but two (or four, if we include the largely shrubby buckthorns) of the trees native to England in his legendarium. Only someone whose eyes were open to the wonderful diversity of temperate plant communities—and the plants that comprise them—could have done this and done it as well as Tolkien has, including in his writings succinct but salient characterizations of nearly all of these trees. But additionally, as noted earlier, Tolkien has included within his legendarium many other European trees that are not native in England. These include bays (*Laurus*), cedars (*Cedrus*, which occurs

in Turkey, adjacent to the European continent), ebony and relatives (*Diospyros lotus*, with other species of tropical Africa and Asia), firs (*Abies*), horse-chestnuts (*Aesculus*), laburnums (*Laburnum*), larches (*Larix*), olives (*Olea*), cornel (*Cornus mas*, but other species of *Cornus* are native to England), cypresses (*Cupressus*), myrtles (*Myrtus*), tamarisks (*Tamarix*), and terebinths (*Pistacia terebinthus*). He included such European trees because the history of Middle-earth is geographically wide-ranging, occurring across hundreds of miles and in an array of vegetational zones. The climates and floras of Rohan, Lothlórien, or Ithilien are much different from that of the Shire, and this vegetational diversity, therefore, is reflected in the plants encountered by those involved in these historical events. Finally, the plants of Middle-earth are not merely descriptive detail—part of the background of various scenes—but, as stressed in Chapter 1, are actually involved in the story.

### **PLANT COMMUNITIES, AS ALTERED BY HOBBITS, HUMANS, ELVES, OR ANGELIC BEINGS (MAIAR OR VALAR)**

It is often important (and ecologically useful) to consider the changes in plant communities resulting from the activities of humans: for example, many of the forests of the Northern Hemisphere have been cut for timber or destroyed in connection with conversion of the land to agricultural use, and an even larger percentage of grassland habitats have been lost to agricultural uses (converted to croplands or pastures). Human activities also have modified fire regimes in many regions, with resulting changes in floristic composition. Finally, certain economically valuable species have been selectively eliminated from the landscape through commercial extraction or introduced diseases. Thus, the landscapes of Europe or North America are much different today than they were before these regions were occupied by large human populations. The same is true of the landscapes of Middle-earth—except that those landscapes also had been impacted by hobbit, elven, and dwarven cultures, as well as by angelic beings (such as the Valar or their assistants, the Maiar). Thus, we here briefly discuss such vegetational changes to the plant biomes and communities introduced earlier. We will also describe the agricultural landscapes of Middle-earth.

The vegetation of the Shire was undoubtedly originally a temperate, mixed hardwood forest dominated by deciduous broadleaved trees (such as oaks, ashes, elms, lindens, alders, birches, and willows) along with a few conifers (e.g., mainly pines and firs). However, by the time of the War of the Ring, many of the forests had been cut, and a significant proportion of the land had been converted to pastures and fields. Hobbits were good agriculturalists; they were close to the land—in fact living in burrows—and worked hard to achieve a sustainable agricultural practice. Their fields and pastures were intermixed with hedgerows and small woods (providing a source of firewood but also protecting habitats for wildlife). This mixture of villages, agricultural land, and wild habitats resulted in the beauty of the Shire. Their major crops were the grains wheat (*Triticum*) and barley (*Hordeum*), and their garden vegetables included cabbages and turnips (*Brassica*), potatoes (*Solanum*), carrots (*Daucus*), onions (*Allium*), beans (*Phaseolus*), peas (*Pisum*), cucumbers (*Cucumis*), and lettuce (*Lactuca*). Pipe-weed (*Nicotiana*) was also grown in the Shire, especially in the Southfarthing, and was used for smoking (an invention of hobbits and introduced into the Shire by Tobold Hornblower). They grew cotton (*Gossypium*), flax (*Linum*), and hemp (*Cannabis*) for their fibers, which were valuable in making cloth and ropes. Clovers (*Trifolium*) and

sweet clovers (*Melilotus*), along with various grasses, were grown for fodder for grazing animals. In their gardens, they certainly grew various culinary herbs and spices, such as peppermint and spearmint (*Mentha*), thyme (*Thymus*), sage (*Salvia*), and parsley (*Petroselinium*), although some spices (e.g., pepper [*Piper*] and cardamom [*Elettaria*]) were received in trade. They also maintained vineyards and orchards—growing grapes (*Vitis*), hops (*Humulus*), apples (*Malus*), and plums and cherries (*Prunus*). And their gardens probably also contained strawberries (*Fragaria*). Their crops were largely from the Old World, with a few significant exceptions such as pipe-weed (see treatment of this issue in Chapter 7). Hobbits maintained lawns and gardens in order to beautify their homes, and common plants of their flower gardens included roses (*Rosa*), sunflowers (*Helianthus*), marigolds (*Calendula*), nasturtians<sup>1</sup> (*Tropaeolum*), snapdragons (*Antirrhinum*), gillyflowers (*Dianthus*), pansies (*Viola*), peonies (*Paeonia*), poppies (*Papaver*), lilies (*Lilium*), and daffodils (*Narcissus*). Of course their yards, gardens, and fields also contained weeds—and a few of these are mentioned in Tolkien’s writings (e.g., amaranths [*Amaranthus*], dandelions [*Taraxicum*], daisies [*Bellis*], fireweeds [*Chamerion*], mugworts [*Artemisia*], sweet clovers [*Melilotus*], and thistles [*Cirsium*])—undoubtedly there were many others!).

Agricultural activities in human communities are described in less detail in Tolkien’s writings, but their crops were probably similar to those of the hobbits. As described in the *Children of Húrin*, many of the folk of Haleth, during the First Age, lived in the forest of Brethil and in the surrounding woodlands; they lived by hunting and farming, keeping pigs in the forests (where they often ate wild roots, nuts, and acorns) and growing crops in clearings. A striking contrast is seen when these scattered homesteads are compared to the much more developed agriculture of Gondor, in the Third Age. When Merry looked out from the top level of Minas Tirith, he saw “the Pelennor laid out before him, dotted into the distance with farmsteads and little walls, barns and byres” (LotR 5: I). Clearly, this was an area of intense agriculture supporting those living in the city. The agriculture of the people of Rohan depended more on pasture lands than intensely cultivated fields, although these also were present. Just before the battle of Helm’s Deep, Théoden looked back down the valley toward the Westfold, telling Aragorn, “This was a rich vale and had many homesteads” (LotR 3: VII) that were then being burned by the forces of Saruman. We should imagine many of the Rohirrim living in scattered homesteads not that different from those of the folk of Haleth, except that they occupied a grassland landscape—not a forested one. In the Third Age, however, discounting densely settled regions such as the vicinity of Minas Tirith (or, to a much lesser extent, Edoras), most of Rohan and Gondor were occupied by prairies, woodlands, and forests not much altered by human hands. Again, part of the appeal of both Rohan and Gondor is that the environment is mixed—including towns and villages, agricultural lands, and wild habitats.

What about the regions occupied by elves? The major elven kingdoms of the First Age, such as Doriath, Nargothrond, and Gondolin, must have been supported by vast fields and orchards, and although these are nowhere described in the *Silmarillion*, they are glimpsed in *The Lay of the Children of Húrin* (see Lays I: lines 1794–1801).

<sup>1</sup> We follow J. R. R. Tolkien’s preferred spelling here, instead of the more common “nasturtiums”; see Chapter 7.