

Botany for Scribes

A Field Guide to Vines in Borders

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A Brief History of Thyme

European scholars have long drawn from works preserved from Greek and Roman scientists, artists, and thinkers. Classical and medieval studies of plants were largely restricted to pharmacopias, such as the *De Materia Medica*, written by Dioscorides between 50-70 AD. This work was copied primarily in Latin, Greek, and Arabic, and combined with other pseudo-naturalist studies such as various books from Pliny's *Natural History*. However, works in this group were rendered more and more stylized and moralistic as they were copied over time, and so strayed from their original purpose. This overlaps into references of plants in other forms of literature, persisting late into our period, in which plants serve as symbolic or philosophical vehicles.

Another school of thought in the classical world was more empirical. Theophrastus was Greek, living in the 4th ce BCE, who studied under both Plato and Aristotle, and succeeded him as master of the Lyceum. He wrote many scholarly works, but became best well known for his botanical writings. In the first part of his *Enquiry into Plants*, Theophrastus describes the first classification system of plants, separating them into groups based on how their stems divide as they arise from the root:

A tree is a thing which springs from the root with a single stem, having knots and several branches, and it cannot easily be uprooted; for instance, olive, fig, vine. A shrub is a thing which rises from the root with many branches; for instance, bramble Christ's thorn. An under-shrub is a thing which rises from the root with many stems as well as many branches; for instance, savory, rue. A herb is a thing which comes up from the root with its leaves and has no main stem, and the seed is borne on the stem; for instance, corn and pot-herbs.

He also lists the main components of plants for his classification system as being root, stem, branch, twig; but then also describes characteristics of leaf, flower, fruit, bark, wood, core, fibers, and veins to distinguish between cultivated and wild types of plants. However, Theophrastus gives his readers the admonition to make their own science practical when examining plants:

For these reasons then, as Ave are saying, one must not make a too precise definition; we should make our definitions typical.

Throughout medieval scholastic culture, the bulk of natural knowledge was embodied in compilations of classical works such as *De Materia Medica*, those which ascribed mystical properties and moralistic meanings to the natural world. Images of plants presented with a flat, stylized, 'pressed' appearance, as the learned reader was supposed to 'read in' the meaning behind the symbolism employed. However, in the thirteenth century, medical texts began emerging from the school in Salerno incorporating botanical, natural illustrations plants, along with the lore and compounding instructions – harkening back to Theophrastus and his like.



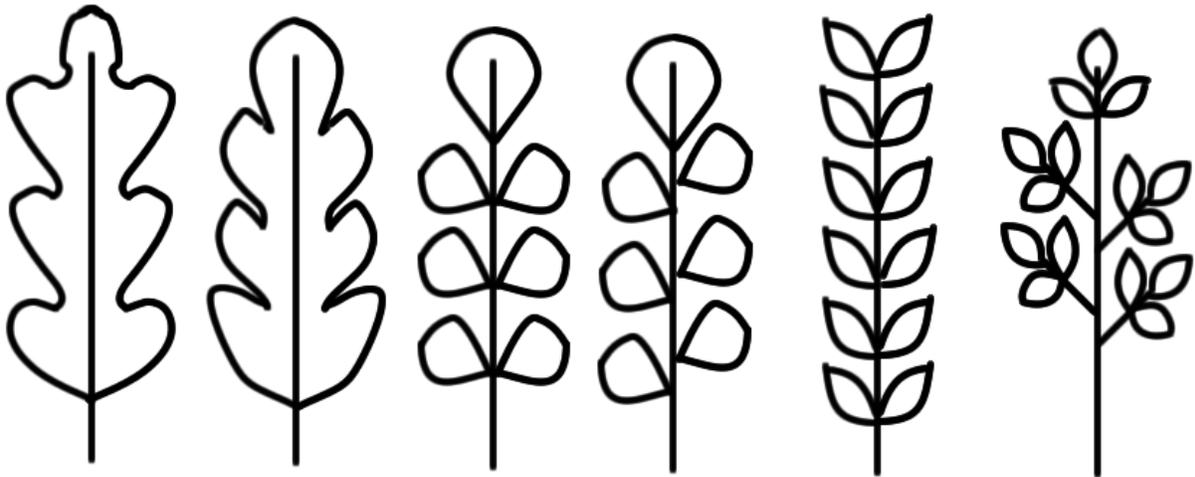
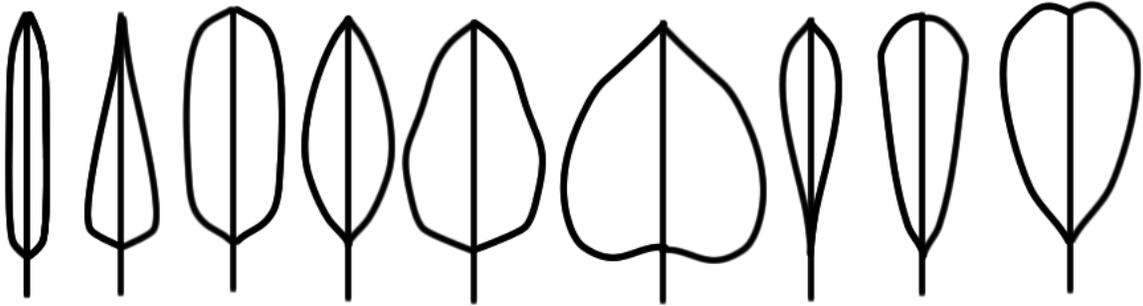
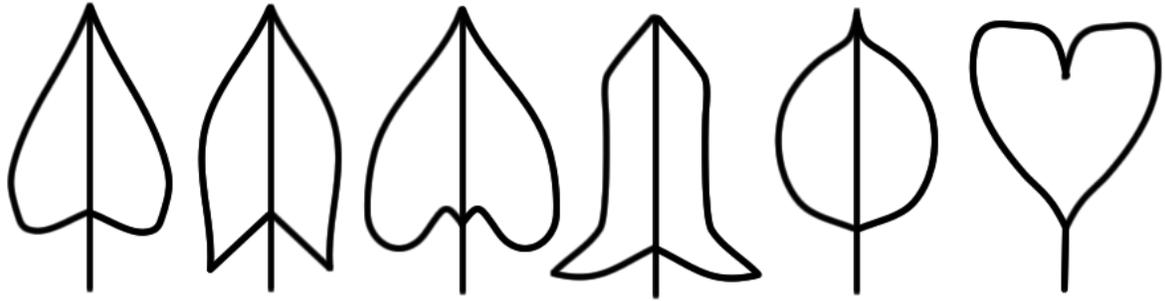
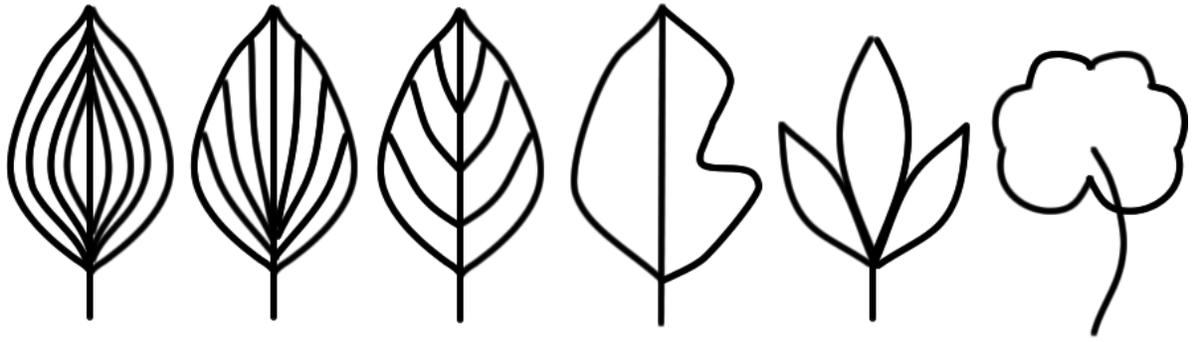
One such text, *Compendium Salernitanum*, based on writings of the physician Matthaeus Platearius, catalogues hundreds of plants and animals, depicting them in recognizable rather than formulaic images. By the fifteenth century, as classicism was embraced in Europe, scientists, scholars and physicians began to favor the more realistic and empirical approach to studying nature. Note the “Bramble” from an early copy of Dioscorides’ work, and the natural depiction in layers of a berry bramble. By the sixteenth century, with the explosion of printed texts and pamphlets being produced on presses, emerged a new style of illustration: the woodcut. Known as the “German Fathers of Botany,” Leonhart Fuchs, Otto Brunfels, and Heironymus Bock, were able to disseminate their own contributions to botany quickly and effectively in the scholarly community thanks to this medium.

“Bramble” from the *Vienna Dioscorides*, 591 A.D., Greek. Containing also the *Carmen de herbis* with Arabic notations added later. (image: Wiki Commons)

Modern Botany Facts and Terms

In the botanical world, Europe has the poorest distribution of vines of all continents (except for Antarctica!). In Europe, there are over 11,000 indigenously occurring plant species, only 24 of which are either woody or herbaceous climbers. In comparison, North American temperate forests contain about 50 species, and even more than that are recorded so far in Southern Hemisphere forests of the same type. Of the European species, only 10 different families are represented, including: Ranunculaceae (clematis) in central Europe, Cannabaceae (hops, marijuana) in the Northern hemisphere, Curcubitaceae (melons, cucumber) in Eurasia and the Middle East, Fabaceae (peas) in all non-arctic regions, Convolvulaceae (bindweed, morning glory) in diverse temperate areas, Rosaceae (roses, apples, stone fruits, strawberries, raspberries, almonds) primarily across the Northern hemisphere, Araliaceae (ivy, ginseng) with varied distributions, Dioscoreaceae (yams, bryony) in warm temperate and tropical areas, Apiaceae or Umbelliferae (carrots, parsley, cumin, dill, anise) and Solanaceae (nightshade, tomato, eggplant, peppers) also with varied distributions. True climbers in these last two families seem not to be appearing in Europe in our period, however.

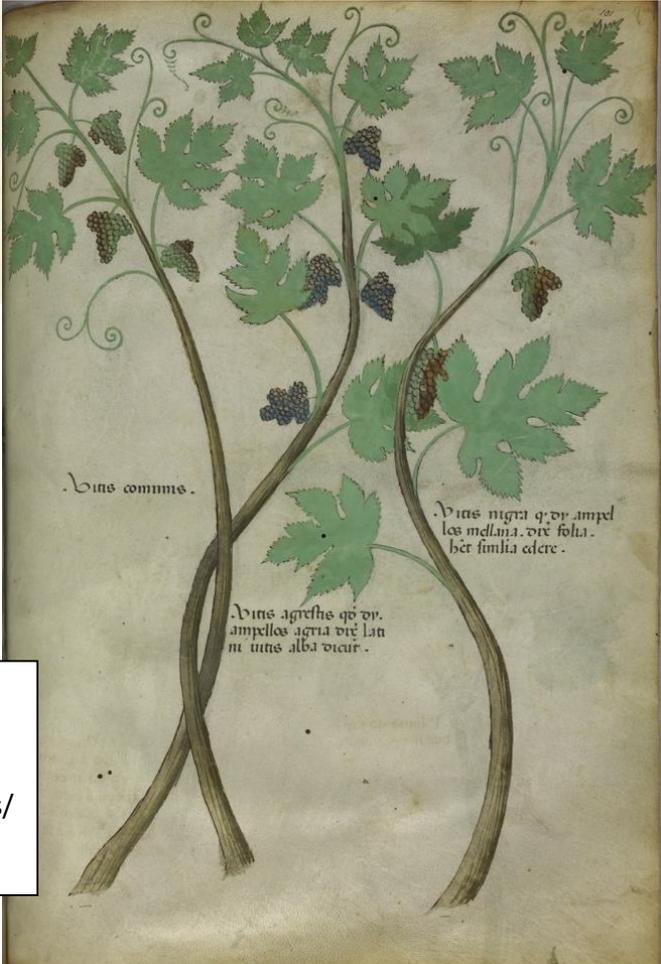
Climbers may be characterized by stem composition and climbing habit. **Lianas** are woody-stemmed and form canopies of leaves, even competing with trees (such as grapes). **Vines** are herbaceous and do poorly in dense competition (such as cucumbers). **Scandent** plants are scramblers that spread over other plants for support (such as raspberries). Climbers may use **tendrils**, **advantageous roots**, **spines**, **twining** growth patterns to secure themselves. The shoots emerge with special properties, also: **thigmotropism** (rapid growth in response to contact pressure), and **circumnutation** (daily clockwise or counterclockwise sweeping movement). On the following page, you will have the opportunity to classify leaf characteristics.



Depending on the time period and cultural center of your focus, different degrees of detail will be needed to reproduce the desired style. Let us examine the progression of the rendering of grape vines, *vitis vinifera*, one of the most important vines economically and culturally in Europe:



“Grape” from *De Materia Medica*, Dioscorides, Greek, 1st ce., copied in Arabic in Bagdad, 621 AD. (Image: http://www.muslimheritage.com/uploads/Fig_8c_Dioscorides_Materia_Medica.JPG)



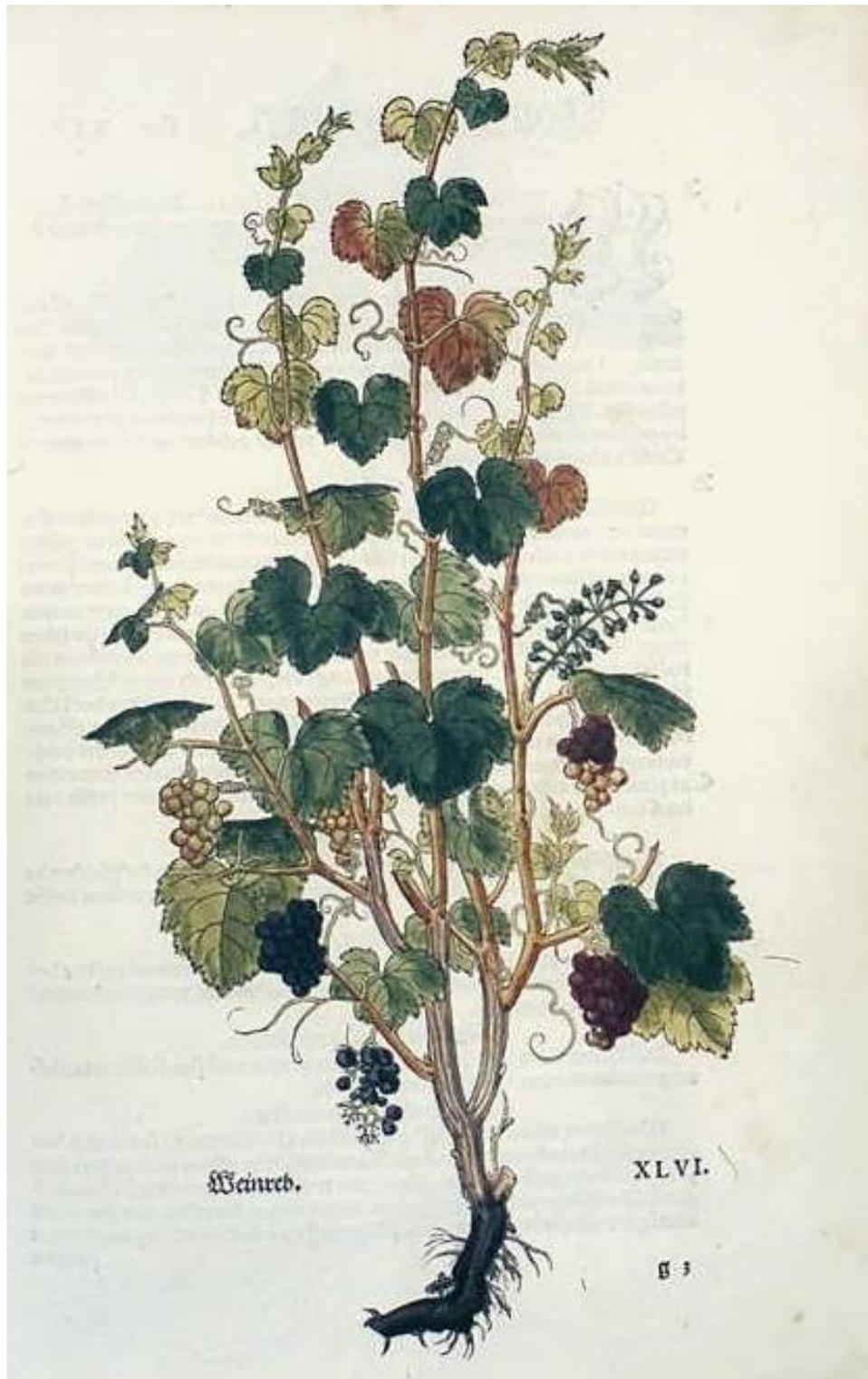
“Common [Grape] Vine” from *Tractatus de Herbis*, Lombardy, Italy, 1440. Sloan 1406, British Library. (Image: <http://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=7796&>)

Another text which must be considered in this study, the *Tacuinum Sanitatis*, was composed by Ibn Butlan of Baghdad in the 11th ce. This work was distinctly different from contemporary or previous herbals, in that it was composed with a lay-audience in mind. Later copies featured plants 'in situ' very naturalistically rendered, in which plants may be easily recognizable, while the text itself shrank from long tables of information to very brief, easy to read summaries.



“Grapes” from *Tacuinum Sanitatus & Historium Plantarum*. Lombardy copy, late 14th ce. (Image: Gode Cookery, Source: Arano, Luisa Cogliati. *The Medieval Health Handbook: Tacuinum Sanitatis*.; CD image available to view from the Getty Research Library.)

“(Wine) Grapes” from *Tacuinum Sanitatus*, Ibn Butlan of Bagdad. Arabic, trans. to Latin. Southern German copy from mid 15th ce. (Image: <http://www.pinterest.com/pin/471118810990779341/>)



"Grapevine" woodcut from *Das Krautbuch*, Leonhart Fuchs. Written in Latin, Tübingen, 1542.
(Image: <http://www.waimann.de/abbild/112.html>)

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On-line Resources:

“Grapevines at the Cloisters,” Metropolitan Museum of Art site:

<http://blog.metmuseum.org/cloistersgardens/2009/03/13/grapevines-at-the-cloisters/>

“Herbal,” Catalogue of Illuminated Manuscripts, British Library site:

<http://www.bl.uk/catalogues/illuminatedmanuscripts/GlossH.asp>

“Sloan 4016,” Catalogue of Illuminated Manuscripts, British Library site:

<http://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=7796&>

“M.S. Ashmole 1462,” Medieval Bestiary, Bodleian Library, University of Oxford site:

<http://bestiary.ca/index.html>,

<http://www.bodleian.ox.ac.uk/dept/scwmss/wmss/medieval/mss/ashmole/1462.htm>

“Renaissance Herbals: Plantarum Aetatis Novae Tabulae” Smithsonian Libraries site:

<http://www.sil.si.edu/digitalcollections/herbals/aboutherbals.htm>

UCLA Life Sciences Department, “Climbing Plants,” digital textbook.

<http://www.botgard.ucla.edu/html/botanytextbooks/lifeforms/climbingplants/index.html>

“Vine,” A Modern Herbal, by Mrs. M. Grieve, 1931. Hypertext at:

<https://www.botanical.com/botanical/mgmh/mgmh.html>

And, Just for Fun...

<http://www.carrotmuseum.co.uk/manuscripts.html>

http://gernot-katzers-spice-pages.com/engl/spice_bot.html