

Fascinating landscapes of “Hypnerotomachia Poliphili”: source for research of plant diversity, horticulture and culture

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Abstract

“Hypnerotomachia Poliphili” (HP) is a literary source of semi-natural and human-induced landscapes that centred on seductive environmental attributes, such as gardens, groves, pergolas and dispersed ancient ruins, which represent knowledge derived from the tradition and experience of ages. HP is the short title of one of the most influential books of the Renaissance (the first edition was published by Aldus Manutius in Venice, in 1499); it is the story of a man (Poliphilos), who falls asleep and dreams of traversing landscapes and gardens containing plants, ancient ruins and allegorical figures, in order to be reunited with his beloved (Polia). Interest in this novel has been revived, due to substantial influence on landscape and garden design. In this study, attention has been given to the botanical section preserved in the text. Paying attention to narratives provides a source for (re)considering conceptions of landscapes, nature and culture, wild and domesticated plant life. Arboreal and bush plants here quoted disclose aspects of plant diversity and ecophysiology; among a large number of plant taxa, roses, myrtle, pines, cypresses, laurels, acanthus, oaks, olive trees, juniper, ivy, thyme, oregano, violets, wormwood and cyclamens were the most frequently cited. Also, the seasonality of Mediterranean landscapes, indicated by flowering and fruit-bearing indigenous plants, can be traced through textual passages. Its wood-engraved illustrations of portrayed landscapes and botanic sketches (e.g. ferns, palms, oaks, cypresses, box trees and foliage of laurel, acanthus, grapevine and ivy) constitute evidence for both plant diversity and natural history, at the end of the fifteenth-century.

Keywords: botanical diversity, environment, living archives, plant biology

INTRODUCTION

“Hypnerotomachia Poliphili” (HP) is the short title of one of the most influential books of the Renaissance; the first edition was published in 1499 (Venice: Aldus Manutius) and has entranced book collectors, bibliophiles, scholars and typographers (Ivins, 1923; Farrington, 2015). The book was anonymous. Many people have been credited with the authorship of HP over the centuries (Griggs, 1998; March, 2015); however, the book was attributed to Francesco Colonna (1433-1527), born at Venice and lived in monasteries, on the basis of an acrostic formed by the initial elaborately decorated capital letters of 38 chapters, spelling out “*Poliam Frater Franciscvs Colvumna Peramavit*” (i.e. Brother Francesco Colonna greatly loved Polia), identifying the author (Weiss, 1961; Russell, 2013).

“Hypnerotomachia” is an invented term from three Greek words, i.e. hypnos (ύπνος: sleep), eros (έρως: love) and mache (μάχη: strife). Also, the term “Poliphili” has Greek origin meaning beloved. HP is the story of Poliphilos, who falls asleep and dreams of traversing landscapes, olive groves and gardens, representing himself as having seen many ancient things worthy of memory, in order to be reunited with his beloved Polia (Stewering and Maher, 1998).

^a Published in *Acta Horticulturae* 1189: 19–24 (2017)

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The book gained new significance half a millennium after its publication, mainly because it had a tremendous influence on landscape and garden design (Mac Dougall, 1994; Hunt, 1998; Bahador-zadeh, 2007; Priki, 2009; Prinsloo, 2009; Moyer, 2015; Morgan, 2016). In addition, landscapes presented in HP freely built from the remains of and longing for antiquity (preserving historical memory) have been diverted to designed places (Leslie, 1998; Jeffery, 2009). The variety of plants quoted in numerous passages –as vehicles for expressing historical and botanic knowledge, emotions, allegory and symbolic messages– can be considered a source of biodiversity, as the world opened up to Renaissance minds (Reeds, 1976; Colonna, 2010; Rhizopoulou, 2016). Also, it is worth mentioning that after the publication of HP, the first botanic gardens as assets to Universities of Pisa, Padua, and Florence were established and played an important role in the development of both Science and human consciousness (Reeds, 1976; Mac Dougall, 1994; Harris, 2011).

Literary sources to plants capture customs, beliefs, and traditions of the culture and the time in which they were written (Taiz and Taiz, 2011; Rhizopoulou, 2014). The rediscovery of knowledge that has been preserved in old textual sources and has not yet been fully exploited contributes to a better understanding of human-nature relationships (Main, 1996; Rhizopoulou, 2014).

The present work was conducted in an effort to present perception of botanical and naturalistic aspects preserved in HP and released at the turn of the fifteenth century.

MATERIALS AND METHODS

The book was written in an invented language combining ancient Latin, Italian and ancient Greek, and is repleted with Greek terms and words based on a mix of Latin and Greek, which have been notoriously difficult for both contemporary and current readers (Trippe, 2002; Kirkham, 2015; White, 2015; Rhizopoulou, 2016). Botanical information cited in HP and mentioned in the present study is based on the first complete English translation (Colonna, 2005; Chishty-Mujahid, 2009). Plants retrieved from HP are sorted by genus, taxon and species according to the International Plant Name Index (<http://www.ipni.org>). The endeavour to match plant names quoted in HP (i.e. English and Latin names, colloquial, antique and transliterated Greek names) with scientific binomials was based on assiduous literary and archival research (Stannard, 1964; Wellisch, 1978; Hunemorder, 1983; Elliott, 1992; Cristofolini and Mossetti, 1998; Radcliffe-Smith, 1998; Collins, 2000; Gledhill, 2008; Nowick, 2015). Generic plant names followed by spp. refer to several species within a genus and sp. to a taxon in a genus of uncertain binomial name and specific identity, while relevant textual passages from HP are given in square brackets.

RESULTS AND DISCUSSION

Texts have historically played a part in people's perceptions of landscapes and provide a source for reconsidering conceptions of wild and cultivated plants, which have had a very important place in human life. The literary source HP constitutes information for functioning and featuring of plants at a time from which comparable documentary sources are very scarce (Sillasoo, 2009). Recently, evidence has been found for 285 botanical descriptions coordinated with 672 textual passages in HP (Rhizopoulou, 2016). The most frequently quoted plants are myrtle (*Myrtus communis* L.), pine (*Pinus* spp.), cypress (*Cupressus sempervirens* L.), laurel (*Laurus nobilis* L.), acanthus (*Acanthus* sp.), oaks (*Quercus* spp.), juniper and savin (*Juniperus* spp.), thyme (*Thymus* sp.), violets (*Viola* spp.), wormwood (*Artemisia* sp.), orange trees (*Citrus aurantium*), cyclamens (*Cyclamen* spp.) and cultivated varieties of roses (*Rosa* spp.) [g7', l5', z5'], which were prominent among other flowering plants. The frequency of plant quotations in HP might reflect traits of a distinctive vegetation of natural surroundings and/or plants grown in monastery gardens (Touw, 1982; Kiser, 2003; Muñoz and Alcantara, 2013).

Plant taxa, contributing to landscapes' aesthetics, may be used as an indicative code, in order to understand human-nature relationship over time (Day, 2013; Abbate et al., 2015). Strawberry trees (*Arbutus unedo* L.), myrtle (*M. communis*), laurel (*L. nobilis*), box tree (*Buxus sempervirens* L.), cedar (*Cedrus* sp.), fig tree (*Ficus carica* L.), oleander (*Nerium*

oleander L.), olive (*Olea europaea* L.), labdanum (*Cistus* sp.), oregano (*Origanum* spp.), pines (*Pinus* sp.), oaks (*Quercus* sp.), thyme (*Thymus* sp.) and vines (*Vitis vinifera* L.), all quoted in HP, are intimately connected with the vegetation of Mediterranean ecosystems. Also, a wide range of blossoming plants cited in HP contributed to a seasonality consistent with flowering spring [m4'], yellow harvest [16, m5] and autumn vintage [m5]. Evidently, colourful garlands of violets (*Viola* sp.), myrtles (*M. communis*), laurels (*L. nobilis*), crimson and scarlet roses (*Rosa* sp.) [df', f8', i5, o5'] indicated spring, i.e. the main flowering season in the Mediterranean region (Rhizopoulou and Pantazi, 2015). Also, phenological traits of plants, mentioned in textual passages of HP, reveal plant life cycles (Palang et al., 2005). As an integral quality of landscapes, the seasonality greatly interweaves with human livelihood systems (Harris, 2013).

In HP, landscapes are coordinated with multivalent, associative emotions, metaphors and human-nature interactions. For example, tradition associated with predominant evergreen foliage, ancient ivy-clad trees (Rose, 2003) and stands of evergreen trees –where the sunlight could not penetrate to reach the damp soil– is presented in HP [a3, d6']. Also, rushes (*Juncus* sp.), reeds (*Arundo donax* L.) and sedges (*Carex* sp.) were grown in wet places and on marshy ground [t8']. Dewy grass and damp habitats, repeatedly mentioned in HP, might indicate a prolonged period of rainfall and flooding (Camuffo and Enzi, 1995). Water plants are mentioned as well arranged among water lotuses (*Nelumbo nucifera* Gaertn.) and ~~white~~-water lilies (*Nymphaea alba* L.) [h7]. Water plays an essential role in all the garden history and especially at the Baroque garden that features theatrical fountains (Olonetzky, 2007). Centaury (*Centaurea cyanus* L.), navelwort (*Umbilicus rupestris* [Salisb.] Dandy), sharp thistles, prickly cedars, and other spiny plants [a3] had sprouted over and among neglected and exposed historical ruins. Pellitory and hammerwort (*Parietaria* spp.) were grown in dry cracks of tombs [c8', n1', r4']. Cock's crest (*Echinochloa crus-galli* L.), oxeye (*Buphthalmum salicifolium* L.), saltwort (*Glaux maritima* L.) and wormwood (*Artemisia* sp.) were grown in wall fissures, and purslane (*Portulaca oleracea* L.), known in Italy since Roman Times (Buldrini et al., 2013), on sandbanks [p2'] (Rhizopoulou, 2016). Gradually, plant species adapted to the harsh environment of brackish soils, crevices, caves and archaeological sites become objects of study (Papafotiou et al., 2009; Rhizopoulou and Kapolas, 2015).

The novel HP has mainly owed its fortune to its woodcuts, which convey information about gardens, monuments, inscriptions, and landscapes (Appell, 1889; Pagliarini, 2015). It appears that approximately fifty woodcut engravings illustrate botanic elements as features of variable sceneries and objects of art. The woodcuts combine a penetrating eye for landscapes and artistic skill; therefore, trees, such as cypresses (*Cupressus* sp.), box-tree (*Buxus sempervirens* L.) and palms (*Phoenix* sp., *Chamaerops humilis* L.), as well as the foliage of laurel (*L. nobilis*), acanthus (*Acanthus* sp.), vine (*V. vinifera*) and ivy (*Hedera helix* L.) can be recognized. The wood engraved landscapes, representing biological, historical and cultural features may also be viewed as supplemental information of what had been admired by the composer of HP.

Land use, human-induced habitat changes and anthropogenic activity had profound consequences on the distribution of species and the dynamic of natural Mediterranean ecosystems, over centuries (Rhizopoulou, 2004; Mercuri et al., 2010; Capotorti et al., 2013; Pretelli et al., 2013; Kumbaric and Caneva, 2014; Rhizopoulou, 2014; Rhizopoulou et al., 2015). For example, woodlands of deciduous and evergreen oaks [s8] in geographical localities of the origin of HP have changed with the growth of urban societies and landscape settlement (Falcucci et al., 2007). In HP, biological, physical, historical and cultural landscape components have been synthesized. This material used in combination with archives reveals valuable information about plant life; multi-dimensional perception of landscapes and changes that have occurred over the centuries (Szafranska, 1989; Ryan, 2011), though further research is required.

CONCLUSIONS

The novel “Hypnerotomachia Poliphili” is a literary source and witness of semi-natural and human-made environment, at the turn of the fifteenth century. Numerous plants have been presented as vehicles for expressing emotions, metaphors and historical knowledge, and have bridged environmental and botanical attributes with cultural components. Indigenous Mediterranean shrubs and herbs, ornamentals and fruit-bearing trees are the most frequently cited. International biodiversity awareness in the context of the threat presented by climate change heightens the interest in Mediterranean landscapes, i.e. in a region that has been identified as one of the world’s biodiversity hotspots. In this concept, literal perception of plants, half a millennium ago, represents evidence of botanical lore that was prevalent in medieval times.

Literature cited

- Abbate, G., Bonacquisti, S., Burrascano, S., Giovi, E., Giuliani, A., Pretto, F., and Scassellati, E. (2015). Woody flora as a predictor of vascular plant richness: An insight in Italy. *Plant Biosyst.* 149, 565–573 <http://dx.doi.org/10.1080/11263504.2013.870251>.
- Appell, J. W. (1889). The dream of Poliphilus. Facsimiles of one hundred and sixty-eight woodcuts in the “Hypnerotomachia Poliphili”, Venice, 1499 (Cornell University, NY: W. Griggs), pp.186.
- Bahador-zadeh, Y. (2007). An illustrative narration of Hypnerotomachia Poliphili through gardens of Renaissance (Doctoral dissertation), Cornell University, Ithaca NY.
- Buldrini, D.F., Bandini-Mazzanti, M., and Bosi, G. (2013). The history of the *Portulaca oleracea* aggregate in the Emilia-Romagna Po Plain (Italy) from the Roman Age to the present. *Plant Biosyst.* 148, 622–634 <http://dx.doi.org/10.1080/11263504.2013.788098>.
- Camuffo, D., and Enzi, S. (1995). Reconstructing the climate of northern Italy from archive sources. In *Climate since AD 1500*, 2nd edn, R.S. Bradley, and P.D. Jones, eds. (London: Routledge), p.143–154.
- Capotorti, G., Del Vico, E., Lattanzi, E., Tilia, A., and Celesti-Grapow, L. (2013). Exploring biodiversity in a metropolitan area in the Mediterranean region: The urban and suburban flora of Rome (Italy). *Plant Biosyst.* 147, 174–185 <http://dx.doi.org/10.1080/11263504.2013.771715>.
- Chishty-Mujahid, N.Q. (2009). A tenth-anniversary appreciation of Joscelyn Godwin’s translation of the Hypnerotomachia Poliphili: the strife of love in a dream (First paperback edition, 2005.). *Pomegranate* 11, 279–292 <http://dx.doi.org/10.1558/pome.v11i2.279>.
- Collins, M. (2000). *Medieval herbals: the illustrative traditions* (London: British Library and University of Toronto), pp.334.
- Colonna, F. (1499). *Hypnerotomachia Poliphili* (Venice: Aldus Manutius), pp.468.
- Colonna, F. (2005). *Hypnerotomachia poliphili: The strife of love in a dream* (J. Godwin, Trans.) (London: Thames & Hudson), pp.476.
- Colonna, S. (2010). La nascita dell' architettura del giardino rinascimentale nell' Hypnerotomachia Poliphili. *Bollettino Telematico dell' Arte* 1–23.
- Cristofolini, G. and Mossetti, U. (1998). Interpretation of plant names in a Late Medieval medical treatise. *Taxon* 47, 305–319 <http://www.jstor.org/stable/1223760>.
- Day, J. (2013). Botany meets archaeology: people and plants in the past. *J. Exp. Bot.* 64, 5805–5816 <http://dx.doi.org/10.1093/jxb/ert068>.
- Elliott, B. (1992). Victorian gardeners and botanical nomenclature. *Bot. J. Linn. Soc.* 109, 473–483 <http://dx.doi.org/10.1111/j.1095-8339.1992.tb01445.x>.
- Falcucci, A., Maiorano, L., and Boitani, L. (2007). Changes in land-use/land-cover patterns in Italy and their implications for biodiversity conservation. *Landscape Ecol.* 22, 617–631 <http://dx.doi.org/10.1007/s10980-006-9056-4>
- Farrington, L. (2015). Though I could lead a quiet and peaceful life, I have chosen one full of toil and trouble: Aldus Manutius and the printing history of the Hypnerotomachia Poliphili. *World Image* 31, 88–101 <http://dx.doi.org/10.1080/02666286.2015.1023076>.

- Gledhill, D. (2008). *The names of plants* (Cambridge: Cambridge University Press), pp.426.
- Griggs, T. (1998). Promoting the past: the Hypnerotomachia Poliphili as antiquarian enterprise. *World Image* 14, 17–39 <http://dx.doi.org/10.1080/02666286.1998.10443940>.
- Harris, S. (2011). *Planting paradise: cultivating the garden, 1501-1900* (Oxford: Bodleian Library), pp.142.
- Harris, W. (2013). *The ancient Mediterranean environment between science and history* (Leiden Boston: Brill), pp.74.
- Hunemörder, C. (1983). Aims and intentions of botanical and zoological classification in the Middle Ages and Renaissance. *Hist. Phil. Life Sci.* 5, 53–67 <http://www.jstor.org/stable/23328302>.
- Hunt, J.D. (1998). Experiencing gardens in the Hypnerotomachia Poliphili. *World Image* 14, 109–118 <http://dx.doi.org/10.1080/02666286.1998.10443944>.
- Ivins, W. (1923). The Aldine Hypnerotomachia Poliphili of 1499. *Bulletin of the Metropolitan Museum of Art* 18, 249–252 <http://www.jstor.org/stable/3254956>.
- Jeffery, S. (2009). A history of the gardens of Versailles. *Gard. Hist.* 37, 128-130 <http://www.jstor.org/stable/40649676>.
- Kirkham, V. (2015). Hypno what? A dreamer's vision and the reader's nightmare. *World Image* 31, 102–111 <http://dx.doi.org/10.1080/02666286.2015.1023007>
- Kiser, L.J. (2003). The garden of St. Francis: Plants, landscape, and economy in thirteenth-century Italy. *Environ. Hist.* 8, 229–245 <http://www.jstor.org/stable/3985710>.
- Kumbaric, A., and Caneva, G. (2014). Updated outline of floristic richness in Roman iconography. *Rendiconti Lincei* 25, 181–193 doi <http://dx.doi.org/10.1007/s12210-013-0279-4>.
- Leslie, M. (1998). The Hypnerotomachia Poliphili and the Elizabethan landscape entertainments. *World Image* 14, 130–144 <http://dx.doi.org/10.1080/02666286.1998.10443946>.
- Mac Dougall, E.B. (1994). *Fountains, statues and flowers: studies in Italian gardens of the sixteenth and seventeenth centuries* (Washington, DC: Dumbarton Oaks), pp.355.
- Main, A.R. (1996). Ghosts of the past: where does environmental history begin? *Environ. Hist.* 2, 97–114 <http://www.jstor.org/stable/20723000>.
- March, L. (2015). Leon Battista Alberti as author of Hypnerotomachia Poliphili. *Nexus Network J.* 17, 697–721 <http://dx.doi.org/10.1007/s00004-015-0262-8>.
- Mercuri, A.M., Sadori, L., and Blasi, C. (2010). Archaeobotany for cultural landscape and human impact reconstructions. *Plant Biosyst.* 144, 860–864 <http://dx.doi.org/10.1080/11263504.2010.514137>.
- Morgan, L. (2016). Anciently modern and modernly ancient: ruins and reconstructions in sixteenth-century Italian landscape design. *Stud. Hist. Gard. Des. L.* <http://dx.doi.org/10.1080/14601176.2016.1154315>.
- Moyer, A. E. (2015). The wanderings of Poliphilo through Renaissance studies. *World Image* 31, 81–87 <http://dx.doi.org/10.1080/02666286.2015.1023006>.
- Muñoz, J.M., and Alcantara, J. (2013). The value of indicator species for landscape characterization. *Plant Biosyst.* 147, 418–428 <http://dx.doi.org/10.1080/11263504.2012.751062>.
- Nowick, E. (2015). *Historical common names of Great Plains plants, with scientific names index. Vol. I: Common names* (University of Nebraska – Lincoln: Zea E-Books), pp.485.
- Olonetzky, N. (2007). *Sensations, a time travel through garden history* (Basel: Birkhäuser), pp.127.
- Pagliarini, F. (2015). La xilografia di Polifilo davanti alle tre porte dell' Hypnerotomachia Poliphili. *Bollettino Telematico dell' Arte* 786, 1–11 <http://www.bta.it/txt/a0/07/bta00786.html>.
- Palang, H., Fry, G., Jauhiainen, J.S., Jones, M., and Sooväli, H. (2005). Landscape and seasonality-seasonal landscapes. *Landsc. Res.* 30, 165–172 <http://dx.doi.org/10.1080/01426390500044259>.
- Papafotiou, M., Kanellou, E., and Economou, G. (2009). Alternative practices for vegetation management in archaeological sites - The case of Eleusis. *Acta Hort.* 881, 879–883 <http://dx.doi.org/10.17660/ActaHortic.2010.881.148>
- Pretelli, M., Ugolini, A., and Fabbri, K. (2013). "Historic plants as monuments" preserving, rethinking and re-using historic plants. *J. Cult. Herit.* 14(3), S38–S43 <http://dx.doi.org/10.1016/j.culher.2012.12.013>.

- Priki, E. (2009). Elucidating and enigmatizing: the reception of the Hypnerotomachia Poliphili in the early modern period and in the twentieth and twenty-first centuries. *eSharp* 14, 62–90.
- Prinsloo, J.N. (2009). I'm not there: on the *ex-situ* experience of landscape architecture in texts. *S. Afr. J. Art Hist.* 24, 161–173 <http://hdl.handle.net/2263/13458>.
- Radcliffe-Smith, A. (1998). Three-language list of botanical name components (Kew: Royal Botanic Garden), pp.143.
- Reeds, K.M. (1976). Renaissance humanism and botany. *Ann. Sci.* 33, 519–542 <http://dx.doi.org/10.1080/00033797600200481>.
- Rhizopoulou, S. (2004). Symbolic plant(s) of the Olympic Games. *J. Exp. Bot.* 55, 1601–1606 <http://dx.doi.org/10.1093/jxb/erh222>.
- Rhizopoulou, S. (2014). "Portrayals" of long-lived Mediterranean plants linked to virtues. *Plant Biosyst.* 146, 1358–1361 <http://dx.doi.org/10.1080/11263504.2014.980356>.
- Rhizopoulou, S. (2016). On the botanical content of Hypnerotomachia Poliphili. *Bot. Lett.* 163, 191–201 <http://dx.doi.org/10.1080/23818107.2016.1166070>.
- Rhizopoulou, S., and Kapolas, G. (2015). *In situ* study of deep roots of *Capparis spinosa* L. during the dry season: Evidence from a natural "rhizotron" in the ancient catacombs of Milos Island (Greece). *J. Arid Environ.* 119, 27–30 <http://dx.doi.org/10.1016/j.jaridenv.2015.03.010>.
- Rhizopoulou, S., and Pantazi, H. (2015). Constraints on floral water status of successively blossoming Mediterranean plants under natural conditions. *Acta Bot. Gallica* 162, 97–102 <http://dx.doi.org/10.1080/12538078.2014.991753>.
- Rhizopoulou, S., Papafotiou M., and Kanellou H. (2015). Sustainable plant diversity in the archaeological landscape of Amphiareion. Paper presented at: 14th Congress of the Hellenic Botanical Society (Patras, Greece: Plant Biology).
- Rose, G. (2003). *The romantic garden* (London: Frances Lincoln), pp.168.
- Russell, J. (2013). The annotated copy of Hypnerotomachia Poliphili at the Chapin Library, Williams College, Inc. *C699. BSRS* 30, 9–13.
- Ryan, J.C. (2011). Cultural botany: toward a model of transdisciplinary, embodied, and poetic research into plants. *Nat. Cult.* 6, 123–148 <http://dx.doi.org/10.3167/nc.2011.060202>.
- Sillasoo, Ü. (2009). Plants in Late Medieval festivals and customs in written and pictorial sources from southern central Europe. *Environ. Arch.* 14, 76–89 <http://dx.doi.org/10.1179/174963108X345720>.
- Stannard, J. (1964). A fifteenth-century botanical glossary. *Isis* 55, 353–367 <http://www.jstor.org/stable/228580>
- Stewering, R., and Maher, L. (1998). The relationship between world, landscape and Polia in the Hypnerotomachia Poliphili. *World Image* 14, 2–10 <http://dx.doi.org/10.1080/02666286.1998.10443938>.
- Szafranska, M. (1989). The philosophy of nature and the grotto in the Renaissance garden. *J. Gard. Hist.* 9, 76–85 <http://dx.doi.org/10.1080/01445170.1989.10408269>.
- Taiz, L., and Taiz, S.L. (2011). The biological section of the Voynich manuscript: a textbook of medieval plant physiology? *Chron. Hort.* 51, 19–23.
- Touw, M. (1982). Roses in the middle ages. *Econ. Bot.* 36, 71–83 <http://www.jstor.org/stable/4254352>.
- Trippe, R. (2002). The "Hypnerotomachia Poliphili" image, text, and vernacular poetics. *RenQ* 4, 1222–1258 <http://dx.doi.org/10.2307/1262102>.
- Weiss, R. (1961). A new Francesco Colonna. *Ital. Stud.* 16, 78–83 <http://dx.doi.org/10.1179/its.1961.16.1.78>.
- Wellisch, H.H. (1978). Early multilingual and multiscript indexes in herbals. *The Indexer* 11, 81–102.
- White, I. (2015). Multiple words, multiple meanings, in the Hypnerotomachia. *World Image* 31, 74–80 <http://dx.doi.org/10.1080/02666286.2015.1023005>.