

## Bibliography

- Attia, Shady. "The Role of Landscape Design in Improving the Microclimate in Traditional Court-yard-Buildings in Hot Arid Climates." Geneva, Switzerland: Wageningen University, The Netherlands, 2006.
- Bargebuhr, Frederick P. *The Alhambra: A Cycle of Studies on the Eleventh Century in Moorish Spain*. Walter de Gruyter, 1968.
- Bennison, Amira K, and British Academy. *The Articulation of Power in Medieval Iberia and the Maghrib*, 2014.
- Dodds, Jerrilynn Denise, ed. *Al-Andalus: The Art of Islamic Spain*. New York: Metropolitan Museum of Art : Distributed by H.N. Abrams, 1992.
- García-Pulido, Luis Jose. "Análisis Evolutivo Del Territorio de La Alhambra (Granada)." Doctoral Thesis, Universidad de Granada, 2008.
- Gharipour, Mohammad. *Persian Gardens and Pavilions: Reflections in History, Poetry and the Arts*. London; New York: I.B. Tauris, 2013.
- Grabar, Oleg. *The Alhambra*. Cambridge, Mass.: Harvard University Press, 1978.
- Moore, Charles W., William J. Mitchell, and William Turnbull Jr. *The Poetics of Gardens*. Reprint edition. Cambridge, MA: The MIT Press, 1993.
- O'Hara, Christine Edstrom. "Moorish to Modern." *Pacific Horticulture Society*, July 2012. <http://www.pacifichorticulture.org/articles/moorish-to-modern-ancient-lessons-for-contemporary-gardens/>.
- Ruggles, D. Fairchild. *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*. University Park, Pa.: Pennsylvania State Univ Pr, 2003.
- . *Islamic Gardens and Landscapes*. Philadelphia: University of Pennsylvania Press, 2008.
- Salmerón Escobar, Pedro, and Diana Kelham. *The Alhambra: Structure and Landscape*. Granada; Jaén; Córdoba: Patronato de la Alhambra y Generalife ; Tinta Blanca Editor ; Editorial Almuzara, 2007.
- Sullivan, Chip, and Marc Treib. *Garden and Climate*. New York: McGraw-Hill, 2002.
- T.F. Editores, CA. *Alhambra and the Generalife: Official Guide*. Madrid: T.F. Editores, S.L.C., 2011.



The author and his sister, Jeanne, on the Torre de la Vela in 2005

## Illustrations

- Front Cover D. Fairchild Ruggles, "The Lindaraja Mirador" in *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*, 2003.
- Back Cover Girault de Prangey, "Cuesta de los Molinos" in *Impressions of Granada and the Alhambra*, 1837.

### I.

Fig. 1-1 Abraham Cresques, "Atlas de Cartes Marines, Dit [Atlas Catalan]." (manuscript, 1375), Espagnol 30, Département des manuscrits, <http://gallica.bnf.fr/ark:/12148/btv1b55002481n>.

Fig. 1-2 DieBuche, "Map of Expansion of Caliphate," July 3, 2010, Adapted from <http://guides.library.iit.edu/content.php?pid=27903&sid=322018> (via Image:Age\_of\_Caliphs.png), traced on high resolution version of Image:BlankMap-World6.svg. Information from The Times Concise Atlas of World History ed. by Geoffrey Barraclough published by Times Books Ltd. ISBN 0-7230-0274-6 pp. 40-41., [https://commons.wikimedia.org/wiki/File:Map\\_of\\_expansion\\_of\\_Caliphate.svg](https://commons.wikimedia.org/wiki/File:Map_of_expansion_of_Caliphate.svg).

Fig. 1-3 A.H. Fitzwilliam-Hall, "An Introductory Survey of the Arabic Books of Filāha and Farming Almanacs," Archive, *Filaha Texts*, (October 2010), <http://filaha.org/introduction.html-JK-25-03-2011>.

Fig. 1-4 Jerrilynn Denise Dodds, ed., *Al-Andalus: The Art of Islamic Spain* (New York: Metropolitan Museum of Art : Distributed by H.N. Abrams, 1992). xxvi.

Fig. 1-5 José Luiz Paulo and Jbriveiro1, *Pórtico*, February 5, 2013, Own work, [https://commons.wikimedia.org/wiki/File:Portico\\_%26\\_Gardens\\_-\\_Madinat\\_al-Zahra.JPG](https://commons.wikimedia.org/wiki/File:Portico_%26_Gardens_-_Madinat_al-Zahra.JPG).

Fig. 1-6 Maler, *Die Geschichte von Bayâd Und Riyâd*, Deutsch: Papier, 1200s, Vatikan, Bibliotheca Apostolica, [https://commons.wikimedia.org/wiki/File:Maler\\_der\\_Geschichte\\_von\\_Bay%C3%A2d\\_und\\_Riy%C3%A2d\\_002.jpg](https://commons.wikimedia.org/wiki/File:Maler_der_Geschichte_von_Bay%C3%A2d_und_Riy%C3%A2d_002.jpg).

Fig. 1-7 Jerrilynn Denise Dodds, ed., *Al-Andalus: The Art of Islamic Spain* (New York: Metropolitan Museum of Art : Distributed by H.N. Abrams, 1992), xxvi.

Fig. 1-8 Jules Goury, Owen Jones, and Pascual de Gayangos, *Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones* (London: O. Jones, 1842), <http://archive.org/details/Planselevations1Gour>.

Fig. 1-9 Dodds, *Al-Andalus*, xxviii.

Fig. 1-10 Wilhelm Von Gail, *Patio de Arrayanes. Perspectiva de La Galería Sur Con Personajes Junto a La Alberca. Al Fondo Se Adivina El Patio de Los Leones*, accessed November 29, 2015, <http://www.alhambra-patronato.es/ria/handle/10514/5620>.

### II.

Fig. 2-1 Goury, Jones, and Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones, Plate XLVIII.

Fig. 2-2 Château de Vincennes (Francia) Procedente de Service Historique de l'Armée de Terre, "Plano de Granada Y La Vega, Con El Recinto de La Alhambra," Copia, Papel fotográfico, Impresora

a color, 37 x 42 cm., s.e., 0 - 99 (Château de Vincennes (Francia): Service Historique de l'Armée de Terre, 1811), <http://www.alhambra-patronato.es/ria/handle/10514/5618>.

Fig. 2-3 James Cavanah Murphy and Thomas Hartwell Horne, *The Arabian Antiquities of Spain* (London: Cadell & Davies, 1815), [http://archive.org/details/gri\\_33125008545499](http://archive.org/details/gri_33125008545499).

Fig. 2-4 D. Fairchild Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain* (University Park, Pa.: Pennsylvania State Univ Pr, 2003).

Fig. 2-5 Ibid. 97.

Fig. 2-6 Ibid. 46.

Fig. 2-7 Jerrilynn Denise Dodds, ed., *Al-Andalus: The Art of Islamic Spain* (New York: Metropolitan Museum of Art : Distributed by H.N. Abrams, 1992). 57.

Fig. 2-8 Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*. 157.

Fig. 2-9 Luis Jose García-Pulido, "Análisis Evolutivo Del Territorio de La Alhambra (Granada)" (Doctoral Thesis, Universidad de Granada, 2008). C4.

Fig. 2-10 Ibid. C14.

Fig. 2-11 CA T.F. Editores, *Alhambra and the Generalife: Official Guide* (Madrid: T.F. Editores, S.L.C., 2011). 242.

Fig. 2-12 Sieg0, "El Rio Darro Y Sus 14 Puentes," Consino.blogspot.com, September 25, 2011, <http://cansino.blogspot.com/2011/09/el-rio-darro-y-sus-14-puentes.html>.

Fig. 2-13 T.F. Editores, *Alhambra and the Generalife*. 243.

Fig. 2-14 Ibid. 242.

Fig. 2-15 Goury, Jones, and Gayangos, *Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones*. Plate 17.

Fig. 2-16 Chip Sullivan and Marc Treib, *Garden and Climate* (New York: McGraw-Hill, 2002). 195.

Fig. 2-17 D. Fairchild Ruggles, *Islamic Gardens and Landscapes* (Philadelphia: University of Pennsylvania Press, 2008). 16.

Fig. 2-18 Ibid.

Fig. 2-19 Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*. 58.

Fig. 2-20 Luis José García-Pulido, *El territorio de la Alhambra: evolución de un paisaje cultural memorable*, 2013. 25.

Fig. 2-21 Alhambra. Alzado En Perspectiva Desde La Torre de Las Infantas a La Torre de La Vela, Original, Papel vegetal, Tinta, 24 x 87 cm., 1/1.000, 0, accessed November 18, 2015, <http://www.alhambra-patronato.es/ria/handle/10514/5310>.

Fig. 2-22 Goury, Jones, and Gayangos, *Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones*. Plate 1.

Fig. 2-23 Gordon Loud, *Khorsabad, Part 1: Excavations in the Palace and at a City Gate* (Chicago: The University of Chicago Press, 1936), <https://oi.uchicago.edu/research/publications/oip/oip-38>.

khorsabad-part-1-excavations-palace-and-city-gate.

Fig. 2-24 Ibid.

Fig. 2-25 Oleg Grabar, *The Alhambra* (Cambridge, Mass.: Harvard University Press, 1978). 109.

Fig. 2-26 Ibid. 110.

Fig. 2-27 Ibid. 283.

Fig. 2-28 Girault de Prangey, *Impressions of Granada and the Alhambra* (Reading: Garnet, 1837). Plate 30.

Fig. 2-29 Goury, Jones, and Gayangos, *Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones*. Plate 3.

Fig. 2-30 Adnan Morshed, *Alhambra, Palace of the Myrtles, Court of the Myrtles*, 1994, Archnet, <http://dome.mit.edu/handle/1721.3/15229>.

Fig. 2-31 Girault de Prangey, *Impressions of Granada and the Alhambra*. Plate 30.

Fig. 2-32 John Moody, *Patio de Los Leones*, 2005.

Fig. 2-33 Goury, Jones, and Gayangos, *Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones*. Plate 15.

Fig. 2-34 "Hanging Gardens of Babylon," Wikipedia, the Free Encyclopedia, January 25, 2016, [https://en.wikipedia.org/w/index.php?title=Hanging\\_Gardens\\_of\\_Babylon&oldid=701591639](https://en.wikipedia.org/w/index.php?title=Hanging_Gardens_of_Babylon&oldid=701591639).

Fig. 2-35 David Stronach and Hilary Gopnik, "Pasargadae," Encyclopedia Iranica, July 20, 2009, <http://www.iranicaonline.org/articles/pasargadae>. Figure 3.

Fig. 2-36 Ruggles, *Islamic Gardens and Landscapes*. 41.

Fig. 2-37 Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*.

Fig. 2-38 Jeffrey Hays, "Bedouin Nomadic Life," Facts and Details, January 2012, <http://factsanddetails.com>.

### III.

Fig. 3-1 Charles W. Moore, William J. Mitchell, and William Turnbull Jr, *The Poetics of Gardens*, Reprint edition (Cambridge, MA: The MIT Press, 1993). 39.

Fig. 3-2 Autodesk, *Flow Design* (Cambridge, MA: Harvard Graduate School of Design, 2015).

Fig. 3-3 Instituto Geográfico Nacional, "Modelo Digital Del Terreno (MDT05-LIDAR), Cuadricula 1009." (Instituto Geográfico Nacional, 2010), <http://www.ign.es/ign/layoutIn/modeloDigitalTerreno.do>.

Fig. 3-4 Girault de Prangey, *Impressions of Granada and the Alhambra* (Reading: Garnet, 1837). Plate 12.

Fig. 3-5 Norbert Lechner, *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*, 3 edition (Hoboken, N.J: Wiley, 2008). 69.

Fig. 3-6 Autodesk, *Flow Design*.

Fig. 3-7 Instituto Geográfico Nacional, “Modelo Digital Del Terreno (MDT05-LIDAR), Cuadricula 1009.”

Fig. 3-8 Transsolar KlimaEngineering, “Yearly Wind Speed Normals in Granada, Spain” (Transsolar KlimaEngineering, 2015).

Fig. 3-9 Autodesk, Flow Design.

Fig. 3-10 Instituto Geográfico Nacional, “Modelo Digital Del Terreno (MDT05-LIDAR), Cuadricula 1009.”

Fig. 3-11 Lechner, Heating, Cooling, Lighting. 269.

Fig. 3-12 Ibid. 70.

Fig. 3-13 Autodesk, Flow Design.

Fig. 3-14 Instituto Geográfico Nacional, “Modelo Digital Del Terreno (MDT05-LIDAR), Cuadricula 1009.”

Fig. 3-15 Jules Goury, Owen Jones, and Pascual de Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones (London: O. Jones, 1842), <http://archive.org/details/Planselevations1Gour>.

Fig. 3-16 Lechner, Heating, Cooling, Lighting. 267.

Fig. 3-17 Chip Sullivan and Marc Treib, Garden and Climate (New York: McGraw-Hill, 2002). 177.

Fig. 3-18 Goury, Jones, and Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones.

Fig. 3-19 UCLA AUD, Climate Consultant (Los Angeles: University of California Los Angeles Architecture and Urban Design, 2015), <http://www.energy-design-tools.aud.ucla.edu/climate-consultant/request-climate-consultant.php>.

Fig. 3-20 Garzon, View into Hall of Ambassadors toward Northeast, B & W print, unknown, Fine Arts Library, [http://archnet.org/media\\_contents/2331](http://archnet.org/media_contents/2331).

Fig. 3-21 Oleg Grabar, The Alhambra (Cambridge, Mass.: Harvard University Press, 1978). 268.

Fig. 3-22 Lechner, Heating, Cooling, Lighting. 268.

Fig. 3-23 John Moody, Flow and Humidity of Air through the Palacio de Comares, 2015.

Fig. 3-24 Goury, Jones, and Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones. Plate 13.

Fig. 3-25 Unknown, Court of the Lions, perspective drawing, Architecture, Urban Planning, and Visual Arts, Archnet, accessed February 17, 2016, <http://dome.mit.edu/handle/1721.3/23209>.

Fig. 3-26 Manuel López Reche, Alhambra. Patio de Los Leones. Planta. Disposición de Las Plantas Del Jardín, accessed November 6, 2015, <http://www.alhambra-patronato.es/ria/handle/10514/3903>.

Fig. 3-27 Del : Manuel López Bueno, “Partal. Balcón de Casa árabe. Alzado,” Plano, (October 5, 2009), <http://www.alhambra-patronato.es/ria/handle/10514/3710>.

Fig. 3-28 CA T.F. Editores, Alhambra and the Generalife: Official Guide (Madrid: T.F. Editores, S.L.C., 2011).

Fig. 3-29 Goury, Jones, and Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones. Plate 19.

Fig. 3-30 Patricia Alonso Alonso, “Passive House Ventilation Systems” (Escola Universitaria da Arquitectura Técnica, Universidade da Coruña, n.d.), <http://slidegur.com/doc/231738/passive-house-ventilation-systems>.

Fig. 3-31 Goury, Jones, and Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones. Plate 10.

Fig. 3-32 Alonso, “Passive House Ventilation Systems.”

Fig. 3-33 John Moody, 2015.

Fig. 3-34 Sullivan and Treib, Garden and Climate. 101.

Fig. 3-35 Ibid.

Fig. 3-36 Transsolar KlimaEngineering, “Granada Soil Temperature” (Transsolar KlimaEngineering, 2015).

## IV.

Fig. 4-1 Jules Goury, Owen Jones, and Pascual de Gayangos, Plans, Elevations, Sections, and Details of the Alhambra, from Drawings Taken on the Spot in 1834 by Jules Goury, and in 1834 and 1837 by Owen Jones (London: O. Jones, 1842), <http://archive.org/details/Planselevations1Gour>.

Fig. 4-2 Kevin Mark Low, Sala de Las Hermanas (Hall of the Two Sisters), Northeast Corner, Detail of Carved Stucco Wall Ornament and Muqarnas Dome, photo, 1990, Aga Khan Visual Archive, Dome, <http://dome.mit.edu/handle/1721.3/104967>.

Fig. 4-3 Girault de Prangey, Impressions of Granada and the Alhambra (Reading: Garnet, 1837). Plate 26.

Fig. 4-4 Kevin Mark Low, Palace of the Lions, photo, 1990, Aga Khan Visual Archive, Dome, <http://dome.mit.edu/handle/1721.3/105002>.

Fig. 4-5 José María Mezquita, Patio de Los Arrayanes, 1904, Fine Arts Museum of Granada.

Fig. 4-6 Girault de Prangey, Impressions of Granada and the Alhambra.

Fig. 4-7 John Moody, Detail of Roof Shingles over Tower, color photo, 2005.

Fig. 4-8 D. Fairchild Ruggles, Gardens, Landscape, and Vision in the Palaces of Islamic Spain (University Park, Pa.: Pennsylvania State Univ Pr, 2003). Color Plate 9.

Fig. 4-9 Girault de Prangey, Impressions of Granada and the Alhambra.

Fig. 4-10 Low, Palace of the Lions.

Fig. 4-11 John Moody, When Landscapes Became Representations (Diagram), Drawing, 2015.

Fig. 4-12 Girault de Prangey, Impressions of Granada and the Alhambra. Plate 2.