## Parcs et Jardins

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FONDATION DES PARCS ET JARDINS DE FRANCE

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# SOURCEBOOK FOR GARDEN ARCHAEOLOGY

Methods, Techniques, Interpretations and Field Examples

Edited by Amina-Aicha Malek



PETER LANG

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In memoriam Wilhelmina F. Jashemski

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#### Préface

La Fondation des Parcs et Jardins de France, créée en 2008 sous l'égide de la Fondation du Patrimoine, réunit plus de mille donateurs. Ses missions sont de préserver les jardins et parcs en France, et de rétablir connaissance et goût pour l'Art des jardins. Le conseil de la Fondation a donc décidé d'aider à la publication d'une collection, et quel meilleur domaine pour le premier volume que l'archéologie des jardins à travers le monde.

Grâce au conseil éclairé de Liliane de Rothschild, nous avons pu rencontrer Amina-Aïcha Malek, chargée de recherche au CNRS, qui poursuivait la composition d'un ouvrage réunissant 37 auteurs sur cinq continents. Conscient de la nécessité de conserver à ces travaux leur caractère international, le conseil a accepté que le premier livre de cette collection paraisse en langue anglaise.

Tout jardin résulte d'un mariage entre un lieu et un « jardinier ». Chaque civilisation a ainsi recréé ses images du paradis, lieux de plaisir, de pouvoir ou de contemplation. Toutes les formes d'art y ont été déployées, traces de l'œuvre humaine sur le lieu naturel, avec l'intelligence de son évolution inexorable. Cette précarité du vivant est le fondement de l'art des jardins. Grands ou petits, les créateurs de jardins sont les enchanteurs du monde, dont les œuvres donnent à sentir beauté et mystère de la vie.

C'est la qualité et l'esprit du lieu qui attire le « jardinier », comme la fleur séduit l'abeille. Au fil des siècles, ces lieux ont été souvent l'objet de jardins successifs et les traces anciennes ont été perdues. C'est pourquoi toute restauration ou recréation dans un endroit déjà choisi par nos ancêtres doit commencer par une recherche archéologique savante, sensible et respectueuse. Et même sans espoir de nouveau jardin, cette archéologie est une riche source de connaissance sur un art très ancien, où nature et civilisation sont en harmonie.

Didier WIRTH Président de la Fondation Chapter 25

The Islamic Gardens of Madinat Mursiya, Murcia, Spain

Julio NAVARRO PALAZÓN



CIRCUMSTANCES UNDER WHICH THE GARDEN WAS INVESTIGATED

The Spanish Historical Heritage Law, approved in 1985, made it compulsory to excavate all historical sites. Since then, archaeological interventions have become more and more frequent in every urban lot in which a new construction project interfered with the underlying archaeological substratum. These interventions always stem from cityplanning demands, which explains why they are never planned within the framework of a scientific project aimed at gathering information of historical value. Attempts to reconcile developers' and archaeologists' interests fall prey to the quest for a low-cost solution to city problems.

After over 25 years of systematic excavation in the city of Murcia (the Islamic Madinat Mursiya, a city founded in 825 A.C.), a large number of Arabo-Andalusi houses, with their respective patios and gardens, have been discovered. The constraints under which operates Spanish urban archaeology explains why, despite the large number of remains found, the information about gardens is very scarce, especially with respect to edaphic and archaeobotanic studies. However, some information about Andalusi architecture, especially in-house gardens, has been obtained, since it is most frequent to encounter houses with patios that usually contain well-demarcated earths beds with indications of cultivation, whether for ornament or not. This extends the knowledge of Andalusi gardens, since only palatial examples were previously known. The excavation of some of these patios shows the evolution of architectonic solutions attempted from the 10th to the 13th Centuries, and even to document the impact of the Christian conquest in the mid-13th century. The information now available highlights a very diverse domestic panorama, from solutions inspired by palace garden architecture on a smaller scale, to most elementary examples conditioned by the reduced dimensions of the patios, in which the garden has been reduced to a

Navarro Palazón & Jiménez Castillo 1994: 157-203.

basic rectangular *alcorque*<sup>2</sup> where one could only plant a tree. In extreme cases the garden space is completely done away with, and the surface of the patio completely paved.

The garden located inside a madina and within a patio delimited by domestic buildings on its four sides, is usually so constrained that it cannot use solutions offered by palace architecture. Ornamental elements such as ponds and fountains were introduced in the larger gardens, however. The evidence available present only one pond, usually leaning against the northern front of the patio,3 and none shows a pair of ponds facing one another that led to the type of cross-shaped garden still visible in the Castle of Monteagudo4 or at Santa Clara la Real in Murcia.5 The cultivated area follows a square or rectangular pattern. inside which a pond leans against the north porch, highlighting the greater importance of the north facade in this domestic architecture.6 The pond is surrounded by a cultivated surface on three of its four sides. Usually the garden surface is located lower than the surrounding platform, thus making it into a sunken garden. At least, seven units with a pond have been documented inside the madina. They date between the 10th and 13th centuries, although the best preserved ones can be dated to the second half of the 12th and the beginning of the 13th century. The dimensions of the patios usually range from between 9 and 12 meters. Often a porch presides over the patio, on the shorter or at least on the northern side along the pond.

Gardens without a pond are much more numerous. They are reduced to a square or rectangular surface of highly variable dimensions, usually located in the center of the patio. Their size varies with the type of house, although they usually appear in patios less than 9 meters large. The cultivated zone frequently disappears in the smallest cases or is reduced to simple *alcorques* 40 centimeters wide.

The architecture follows a series of forms independent of size and presence of a pond. The garden architecture uses diverse materials and various solutions to facilitate water flowing in and out of the garden.



Detail of a domestic garden found in Trapería street (Murcia). First half of the 13th century.

Regarding the construction materials, whereas stone and brick are both used as construction materials between the  $10^{\rm th}$  and  $13^{\rm th}$  centuries, brick eventually replaced stone. In the oldest cases the patios are always paved with heavy stone slabs, whereas in more recent ones the use of the brick tends to be general.

The sunken bed dug below the surface of the garden where a tree is planted in Andalusia.

Navarro Palazón 1991; Manzano Martínez, López Martínez & Fernández González 1993: 404-416.

<sup>&</sup>lt;sup>4</sup> Navarro Palazón & Jiménez Castillo 1993: 433-453; Navarro Palazón & Jiménez Castillo 1995: 63-104.

Navarro Palazón 1998 : 97-139.

This type of garden has been known since antiquity and was studied by Torres Balbás 1945: 170-177.

Bibliography

Stone is used sparingly, and always on the upper platform (andén) as edges of the narrow surrounding canals that prevent rainwater from the tile roofs from flooding cultivated zones. Slabs of very light color sandstone were carved with a pronounced molding on one side that. once placed on the edge of the walkway and next to the red brick pavement, formed the narrow surrounding canal. In the corners they followed peculiar circular forms equally carved in the stone slabs that projected toward the interior of the garden. The combination of these two materials in the platforms (andenes) was especially beautiful, due to the two-color contrast between the red of the ceramics, and yellowish white of the stony curb. This juxtaposition also allowed the complete shaping of the narrow surrounding canal. The band of brick laid out jack-on-jack (in long soldier course) formed the internal side of the conduit while the angular stone slabs formed their base and the external side. Less elaborate variants are also found in Murcia made with mortar and located lower, within the garden, although they are less frequent than the narrow stone canal on top of the passageway. An elementary system of water evacuation was found in a 10th century house where no surrounding molding prevented the flow of rainwater: it was evacuated by individual culverts whose mouths were located at two corners of the garden opening at ground level. To avoid the habitual drag of earth and organic material, the scuppers were equipped with ceramic containers. lebrillos or alcadafes, functioning as filters.

In only a few cases were the technical devices for bringing in and driving out irrigation water documented. It is obvious that small surfaces were watered manually thanks to the general presence of wells in every house. The proximity of the underground water table everywhere in Murcia on the one hand facilitated its extraction with simple buckets, and on the other hand maintained the humidity levels of the garden, especially in the cases in which the garden surface was sunken. The choice of sunken gardens was not accidental, since it not only allowed the humidity level to be maintained without frequent irrigation, but also provided aesthetic effects by allowing contemplation of the vegetal mantle from the top of the walkways.

In the patios with a pond, it is supposed that some watering would have been done by letting out the water stored there, thus allowing for its renewal. In these cases it is very probable that the system of supply worked by means of water wheels.

Translated from Spanish by Michel Conan

ALMAGRO GORBEA Antonio, JIMÉNEZ CASTILLO Pedro, NAVARRO PALAZÓN Julio & Antonio ORIHUELA UZAL, 2008, "Jardins d'al-Andalus," *Jardins du Maroc*, 11, p. 11-32.

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The pavement along the pond that hangs over the sunken garden as a platform hangs over the rails in a railway station.

École des Hautes Études en Sciences Sociales of Paris, France, and professional degrees in architecture from the Ecole Polytechnique d'Architecture et d'Urbanisme of Algiers, Algeria and the École d'Architecture de Paris la Villette, France. Her dissertation, entitled, "Le sentiment de la nature dans les domus de l'Afrique romaine, II°-V° siècle" (1991) developed into further research on understanding the daily life experiences of nature in the domus in Roman Africa principally and in the other Roman provinces. She has collaborated to several garden excavations (the Petra Pool and Garden Project, Jordan; the garden at the Villa Arianna, Stabiae, Italy; the garden of Horace's Villa, Licenza). Currentely she is the Project Director of the Mission archéologique de Lambèse, Tazoult, Algeria. She is co-founder and current vice-chair of the Society for Garden Archaeology.

Jacques MONNIER graduated in Archeology at the University of Lausanne in 1996. After several excavations in Switzerland and France, he worked as teaching assistant at the University of Lausanne, where he supervised excavations at the Roman villa of Orbe (Canton of Vaud, Switzerland) and Bibracte (Mont Beuvray, France). Member of the Swiss Institute in Rome (2002-2003), he prepares a doctoral thesis on rural settlements of Late Antiquity in Switzerland. Since 2008, as head of the Roman Department at the Office of Archaeology in the Canton of Fribourg, he supervises rescue excavations and research projects.

Dr. Julio NAVARRO PALAZÓN is Researcher at the Spanish National Research Council (Consejo Superior de Investigaciones Científicas, CSIC). He is an Archaeologist specialized in Islamic Archaeology and works at the School of Arabic Studies (Escuela de Estudios Árabes) of Granada since 2001. He leads the research group Laboratory of Urban Archaeology and Architecture (Laboratorio de Arqueología y Arquitectura de la Ciudad. LAAC). For eighteen years he was the director of the Centre for Arabic and Archaeological Studies (Centro de Estudios Árabes y Arqueológicos) "Ibn Arabi" of Murcia, a city founded in 825 A.D. In that position he developed systematic excavations in order to study the Muslim city and its palaces (the Castillejo de Monteagudo and those discovered inside the Santa Clara la Real monastery among others). He was responsible for the research project that excavated the old al-Andalus city of Siyasa (near Cieza, in the province of Murcia) during the 1980s. In 1989 he worked with Dr. Antonio Almagro in the excavations of the Umayyad Palace at Amman (Jordan). During the 1980s he studied the ceramic productions of Murcia in the Medieval Islamic period, a research that led to the publication of two books in 1986. Since the 1990s his work focuses on the residential architecture and decoration of Al-Andalus in the 12th and 13th centuries, as well as the broader issue of Islamic Urbanism. He directed the archaeological excavations of the Alcázar de Guadalajara (13<sup>th</sup>-15<sup>th</sup> centuries) between 2005 and 2007. At present he leads the scientific research being conducted at the palace of the Alcazaba de Onda (Castellón), an eleventh century building with a cross-shaped garden.

Kenkichi ONO is a Japanese garden historian. He graduated from Kyoto University in 1978, and was granted a doctorate from that university in 1998. He entered Nara National Cultural Properties Research Institute in 1987 and now is a director of the Cultural Heritage Department of the Institute. He has been engaged in the surveying of extant old gardens throughout the country as well as the archaeological investigation of the ancient Nara palace and capital site. Hakkutsuteien Shiryo [Archaeologically Investigated Japanese Gardens], which he compiled and the institute published in 1998 is the most comprehensive work of garden archaeology in Japan.

Michele PALMER is a licensed Landscape Architect and Lecturer in the Department of Landscape Architecture at Cornell University, where she has taught site engineering and design courses since 2002. She holds the Master of Landscape Architecture degree from Cornell and a B.A. in the History of Art from Colgate University. She is a partner in Templeton Landscape Architecture & Planning and works closely with TG Miller, PC, civil engineers. While her practice covers a broad scale of work, from residential gardens to higher education campus projects, she is noted for her expertise in site engineering and storm water management. She has served as author of the licensing examination questions in this area for the national Landscape Architect Registration Examination of the United States. In the field of archaeology, she is currently working on the site construction and water management at the Villa Arianna at Stabiae, Italy and is co-founder and treasurer of the Society for Garden Archaeology. Joe Prentice works for Northamptonshire Archaeology, England, which undertakes archaeological projects of all periods but has developed a specialization of garden archaeology. Projects that Prentice has conducted include the supervision of the excavation of the Privy Garden, Hampton Court Palace, various aspects of Lord Burlington's 18th century garden at Chiswick, London, the 16th century Fountain Garden at Bolsover Castle, Derbyshire amongst others. He is currently working with the National Trust on various garden features at Stowe, Buckinghamshire. He has also carried out landscape studies for clients proposing restoration of wider designed landscapes funded by The Heritage Lottery Fund. This organization is currently funding major projects, which address not only gardens but also whole estates including buildings. He has recently produced a report on the landscape at Wollaton Hall, Nottingham in