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UNIVERSITY OF ALBERTA

The Courtyard Water Basins of Roman-African Houses (Tunisia)

BY

Diana K. Brulhart

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Arts

in

Classical Archaeology

Department of Classics

EDMONTON, ALBERTA

Spring 1995

ISBN 0-612-01503-3

Canada

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR:	Diana K. Brulhart
TITLE OF THESIS:	The Courtyard Water Basins of Roman-African Houses (Tunisia)
DEGREE:	Master of Arts
YEAR THIS DEGREE GRANTED:	1995

Box 28, Site 8, R.R.2
Tofield, Alberta
Canada

January 6, 1995

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "The Courtyard Water Basins of Roman-African Houses (Tunisia) submitted by Diana K. Brulhart in partial fulfillment of the requirements for the degree of Master of Arts in Classical Archaeology.

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December 6, 1994

ABSTRACT

A distinctive type of mosaic-lined basin is found in the peristyle of almost every Roman-African house. In 1980 Darmon published a basin from the House of the Nymphs at Nabeul, Tunisia, which carries the mosaic inscription *nymfarum domus*. This discovery led him to argue that these basins are a form of nymphaeum, and to make a few preliminary observations on the subject. Despite these observations, no formal study of these basins has yet been carried out, and they have yet to be generally accepted into the canon of Roman domestic nymphaea. My intention in undertaking this thesis was to study the basins of this type in Tunisia as completely as possible, in order to determine whether or not they can really be called nymphaea, and if so, to what degree they differ from the Italian type. It is my belief that these small basins were an African response to the nymphaea designs of other parts of the Roman world, their uniqueness being due to a relative scarcity of water, different building practices, and regional mosaic styles and iconography. As nymphaea, these basins fulfilled an aesthetic and sacred function; that is to say, they were looked at, not used.

Yet there is also a secular character to these African nymphaea. In Italy the sacred nymphaeum and the decorative fountain basin are both placed in a peristyle context, but are separated by location, design, and decoration. The African nymphaeum, however, combines these designs in one structure, thus merging the sacred and secular functions of water. It also employs common regional mosaic motifs, different from those found on Italian nymphaea, but which have been skillfully adapted to the sacred function of the nymphaeum. As the nymphaea in Tunisia date from the second to the fourth centuries, later than the examples known from Pompeii, their merging of functions may be seen as a move towards divesting the nymphaeum of its purely sacred connotations.

The nymphaeum is only one of three types of small basins found in Tunisian courtyards, although by far the most common, the others being a purely decorative 'fountain-basin, and a utilitarian basin which provided water for domestic use. The collection of rain water and the breeding of fish also took place in the courtyards of houses, but these activities employed large pools of a type common throughout the Empire, and will not be discussed here. The three smaller types are all included in my catalogue, but the main emphasis in this study will be on the nymphaeum itself.

I should like to express my thanks to Dr. Jeremy J. Rossiter for his assistance in preparing this thesis, to Dr. Margaret Alexander for generously providing me with a great deal of material crucial to my research, to Bill Damur for his invaluable advice, and to Patrick Conway for his help with the illustrative materials.

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Introduction

A distinctive type of mosaic-lined basin is found in the peristyle of almost every Roman-African house. In 1980 Darmon published a basin from the House of the Nymphs at Nabeul, Tunisia, which carries the mosaic inscription *nymfarum domus.*[1] This discovery led him to argue that these basins are a form of nymphaeum and to make a few preliminary observations on the subject. Despite these observations, no formal study of these basins has yet been carried out, and they have yet to be generally accepted into the canon of Roman domestic nymphaea. My intention in undertaking this thesis was to study the basins of this type in Tunisia as completely as possible, in order to determine whether or not they can really be called nymphaea, and if so, to what degree they differ from the Italian type. It is my belief that these small basins were an African response to the nymphaea designs of other parts of the Roman world, their uniqueness being due to a relative scarcity of water, different building practices, and regional mosaic styles and iconography. As shrines for the Roman water cult in the home, these basins fulfilled an aesthetic and sacred function.

Yet there is also a pronounced secular character to these African nymphaea. In Italy the sacred nymphaeum and the decorative fountain basin are both placed in a peristyle context, but separated by location, design, and decoration. The African nymphaeum, however, combines these designs in one structure, thus merging the sacred and secular functions of water. It also employs common regional mosaic motifs, different from those found on Italian nymphaea, but which have been skilfully adapted to the sacred function of the nymphaeum. As the nymphaea in Tunisia date from the second to the fourth centuries, later than the examples known from Pompeii, their merging of

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[1] J.P. Darmon, *Nymfarum Domus. Les pavements de la maison des Nymphs à Neapolis (Nabeul, Tunisie) et leur lecture*, Leiden, 1980.

functions may be seen as a move towards divesting the nymphaeum of its purely sacred connotations.

The nymphaeum is one of three types of small basins found in Tunisian courtyards, although by far the most common, the others being a purely decorative fountain-basin, and a utilitarian basin which provided water for domestic use. The collection of rain water and the breeding of fish also took place in the courtyards of houses, but these activities employed large pools of a type common throughout the Empire, and will not be discussed here. The three smaller types are all included in my catalogue, but the main emphasis in this study will be on the nymphaeum itself. All three types will be given a general treatment in the first two chapters, while the distinguishing features of the nymphaeum will be investigated fully in Chapters 3 and 4.

Archaeological Evidence

Basins are occasionally included in various inventories, and in site reports as architectural or mosaic finds, but it is fair to say that when a basin is noted in either of these formats, nothing beyond basic description has been attempted. Of the few articles in which any effort at all has been made to discuss fountains, none are concerned in a more than passing way with this particular group.[2]

Rébuffat notes "abside-nymphées" as a type confined to Algeria, Tunisia, and probably Libya, and places them in the architectural context of the peristyle. He speculates they may

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[2]These works are, in order of relevance to the African basins: René Rébuffat, "Maisons à Peristyle d'Afrique du Nord. Répertoire de Plans Publiés (I)," *MEFRA* 81, 1969, 662-685; ---, "(II)," *MEFRA* 86, 1974, 445-499; Frank Sear, *Roman Wall and Vault Mosaics*, Heidelberg, 1977; Mongi Ennaifer, *La civilisation tunisienne à travers la mosaique*, Tunis, 1972; Yvon Thébert, "Private Life and Domestic Architecture in Roman Africa," *A History of Private Life. Vol.I: From Pagan Rome to Byzantium*, Harvard University, 1987, 312-409; Suzanne Gozlan, *La Maison du Triomphe de Neptune à Acholla (Botria, Tunisie). I. Les Mosaiques*, Tunis, 1992; Henri Stern, "Fontaine de Neptune au Musée de Cherchel (Algerie)," *Antiquités africaines* 15, 1980, 285-302. Four works mention Italian fountains, which are dissimilar in type: N. Neuerberg, *L'architettura delle fontane e dei ninfei nell'Italia antica*, Naples, 1965; P. Voute, "Notes sur l'iconographie d'Ocean, A propos d'une fontaine à mosaiques découverte a Nole (Campanie)," *MEFRA* 84, 1972, 639-673; W.F. Jashemski, *The Gardens of Pompeii, Herculaneum, and the Villas Destroyed by Vesuvius, I*, New York, 1979 and P. Grimal, *Les jardins romains*, Paris, 1984 both discuss fountains as an aspect of Pompeian garden decoration.

represent a late development (after the *atrium*-style central square pool).[3] Sear, Ennaifer, and Thébert all describe these basins as a North African type in structure and iconographic themes.[4] Thébert places them in a peristyle context, while Ennaifer and Sear both note the extensive use of mosaic on the walls of the basins. Gozlan associates them with apses which have similar structure and iconography but no front wall, which she calls "substitutes for real basins," a term which I have adopted.[5] Neuerberg, Jashemski, and Grimal all discuss fountain and nymphaeum architecture in Italy as an aspect of Pompeiian garden decoration.

A summary of the knowledge of African basins contained in these works can be expressed as follows: they are found in peristyles, they represent a distinctive North African type (only the semi-circular ones are so noted), and they employ wall mosaic, which is unusual (wall mosaic being very rare in Roman architecture). It is apparent that little attention has been given to these basins. Almost nothing beyond mere description has been written concerning their iconography and architectural context. There is nowhere any investigation of their engineering and construction, their function, history, or chronology, nor of their regional character. No comparison with literary or representational evidence has been undertaken, and no complete catalogue exists. Because of the small parameters of this project, which is confined to the basins of Tunisia (roughly the area of the Roman province of Africa Proconsularis), it will be possible to address all of these questions. This particular group of basins provides an ideal opportunity, within defined limits, of combining the disciplines of archaeology, art history, religious studies, engineering, and architecture. It is hoped that this detailed and thorough approach will help to provide a clearer picture of how North Africa developed its own regional style within the broader practices of the Roman Empire, at least in the areas of architecture, mosaic, and garden decoration. In particular, this study will allow me to investigate how the water-cult of Roman religion manifested itself in the garden of the Roman-African home, by studying how the standard Roman expression of the sacred quality of water, the nymphaeum, was interpreted in

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[3]Rébuffat, *MEFRA* 81, p.662, f.2.

[4]Sear, p.29; Ennaifer, *Civilisation tunisienne*, p.25; Thebert, *Private Life*, p.362.

[5]Gozlan, *Maison de Neptune*, p.44.

colonial Africa. As ancient African gardens have as yet received no attention, this thesis may provide an incentive for others interested in this subject.

The first basin to be excavated for which any record exists was donated to the British Museum in 1844, after being removed from an unknown site in Carthage. Archaeological evidence has thus been accruing for one hundred and fifty years, but in nothing resembling an orderly fashion. Gauckler's *Inventaire*, along with Merlin's *Supplément* provides the most exhaustive listing of Tunisian mosaics, including those from basins, but these works only cover material excavated before 1915. The listings tend to be fairly concise: sometimes a description is given, but more often not. Dimensions, which would be useful to me, are rarely noted. The present location of a great many of the mosaics listed in Gauckler's *Inventaire* is unknown. Presumably, most of those left *in situ* are now destroyed or covered over, while in the nineteenth and early twentieth centuries many mosaics disappeared into private collections.

No comparable inventory has been produced to catalogue the immense number of excavations of the last eighty years, although the *Corpus des Mosaiques de Tunisie* has certainly begun the task. So far volumes have been published on the sites of Utica and Thuburbo Maius. The first fascicle of Volume 3, which covers the Antonine Bath complex at Carthage, is presently in its initial stages, but material collected so far was made available to me by the author. These volumes are very good, and one can be sure that any basin still extant from these sites will be noted in the *Corpus*.

For other sites, both Dunbabin (1978) and Sear (1977) list several basins in their selective catalogues. Museum catalogues (Bardo, Sousse, British Museum, Louvre) are another good source, although most of their holdings, particularly in Tunisia, are in storage.

The reports and publications of individual excavations also produce evidence for basins from time to time, although the scattered and inconsistent nature of these sources, as well as the great number of excavations carried out in Tunisia, makes it impossible to be completely certain of catching every single basin. Many sites, even those dug many years ago, have not yet been published or made public. Library and field research has produced evidence for one hundred and forty basins, all of which are given references in the attached catalogue (Appendix 1). Because of the diverse sources used in the compilation some

entries contain more information than others: all the information which was available to me has been included.

The quality of preservation is equally varied. In general, the older the excavation the greater the likelihood that a basin has been poorly recorded and poorly treated. However, many fairly recent excavations have lacked the resources to either lift or protect their finds. Of the basins still *in situ*, I saw none which were adequately protected from exposure, but at least the recording of those excavated in the last twenty years is more complete. In the older excavations the mosaic was often lifted, leaving the basin structure intact and exposed to destruction, so that all that now remains is the mosaic itself. In a very few instances the entire basin surface was picked up, thus preserving the vertical contour.

Architectural context is completely lacking in perhaps fifty percent of the basins listed in the catalogue. Sometimes a cryptic note, such as "in courtyard" is added. Some of the latest publications, such as Gozlan's on the House of Neptune at Acholla, carefully preserve a record of the architectural context, including floor plans and photos. At the other extreme, a floor plan is often the only remaining record of a basin, in which case it is usually impossible to differentiate between a true basin and a substitute basin.

Nomenclature

Up to now there has been a lack of accuracy in the nomenclature used for these structures. Earlier writers such as Gauckler used the terms "basin," "fountain," or "fountain-basin" apparently interchangeably, and not necessarily based on actual evidence for a fountain, that is a source of continuously running water. This system has been generally maintained by most authors. Rébuffat, who was attempting to define architectural features in African buildings, used the term "abside-fontaine" for the semicircular type, but again without noting variations or the actual presence or lack of fountains.[6] In response to Gozlan's observations that fountains and front walls are not always present in these structures,[7] Rébuffat changed his term to "abside-nymphée," a more general term which might include all

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[6]Rébuffat, *MEFRA* 81, p.662.

[7]see footnote n.5.

variations.[8] Rébuffat does not indicate why he adopted the word "nymphée" (he did not get it from Gozlan), but it is an apt choice, as it expresses the primary function of these structures. The use of the word "abside" is more problematic, as these structures, though typically semicircular, do exhibit some variation in shape. I am inclined instead to give the name "African domestic nymphaeum" to this type of construction, in recognition of its uniquely regional qualities. Under this general name, two sub-groups may then be defined: the "basin," which is provided with a front wall, and the "substitute basin," lacking the front wall but retaining an association with water. These two groups may be further sub-divided according to whether or not a fountain is present to provide a source of falling or jetting water, and the type of fountain used.

Representational Evidence in Ancient Art (Painting and Mosaic)

In order to make a comparison between basins as they are represented in ancient art and as they appear in archaeological excavations, two sources for garden representations will be investigated - the wall paintings of Pompeian gardens, and the floor mosaics of North Africa. Although nothing has been written about Tunisian gardens, a substantial amount of work has been done on Roman gardens in Italy, thus providing a good starting point for such an inquiry.[9]

The garden paintings of Herculaneum amd Pompeii often portray fountains, and in this regard reflect reality, since the fountain was an indispensable part of Italian garden decoration. Without exception these fountains are portrayed as marble craters or urns on pedestals, with the waterworks concealed inside, so that the water springs vertically from the bowl and spills over the rim (Fig. 1). About half of the paintings place the craters in semicircular niches, shown sometimes as part of a low masonry wall, but more often as part of a trellis fence. Otherwise the fountains are set in the garden with no architectural frame. The craters themselves are of plain or fluted marble without decoration, but the paintings in general present meditations on

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[8]Rébuffat, *MEFRA* 86, p.446.

[9]For Italy, works consulted: W.F. Jashemski, "The Campanian Peristyle Garden," *Ancient Roman Gardens, D.O.C. #7*, 1981; Pierre Grimal, *Les Jardins romains*, 1984.

the theme of the idyllic, "sacred garden," and in particular reproduce Dionysiac iconography.

Archaeology has shown that crater fountains of this exact type were common in the gardens of Pompeii and Herculaneum, which has led Jashemski to declare that the crater fountains depicted in the wall paintings match the actual fountains uncovered by excavation.[10] Grimal makes a similar point in a discussion of those paintings which portray doves drinking from a fountain.[11] There is thus a strong correlation between the representations of fountains in Italian wall paintings and the fountains used as decoration in Italian gardens of the same period. Artistic representations of the Italian nymphaeum, on the other hand, do not appear to exist.

When a similar investigation is made in Tunisia, the situation appears rather different. Two Roman houses excavated by Davis in 1857 produced mosaics depicting fountains (both are now in the British Museum). The first (*Inv.Tun.*, no.760), from the Dermech area of Carthage, depicts a crater with a fountain of water flowing from it. The crater is flanked by two drinking stags, two birds, and other animals. The other mosaic (*Inv.Tun.*, no.797), from a house on the Gamart hill on the coast north of Carthage, depicts a fountain of water flowing from a shell, accompanied by the inscription *fontes*.[12]

The famous mosaic of a large nilotic scene from El Alia in Tunisa shows a crater fountain set at the entrance to a circular garden enclosure. Grimal mentions this fountain and its surrounding greenery as an example of the "jardin schématique" in his discussion of the idealized gardens of Italy.[13]

In short, representations of fountains in Tunisia are precisely the same as those in Italy, though the medium may differ. The pictures evoke an idealized vision, which the designers in Italy attempted to realize in the actual garden. However, the most common type of fountain basins in Tunisian peristyle gardens do not in any way resemble the crater fountains depicted

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[10]Jashemski, "Campanian Peristyle Garden," p.47.

[11]Grimal, *Jardins Romains*, p.290.

[12]Gauckler in *Inv.Tun.* mentions a wall fresco from a house excavated by himself in 1905 on the Odeon Hill of Carthage, which depicted a garden with a fountain. No further description is given - as it was apparently left in situ it is presumably now destroyed.

[13]Grimal, *Jardins romains*, p.369, n.4.

in Tunisian art, either in structure or iconography.[14] Whereas the mosaics of garden scenes which include fountains maintain the general Arcadian theme found in Italy, or at most depict a watery nilotic scene, the iconography of the actual basins of Tunisia is usually marine in nature. Thus the standard in art is not reproduced on the ground in Tunisia. This implies that while paintings of gardens and garden design itself developed along similar lines in Italy, one or the other or perhaps both were imported traditions in Tunisia. The close resemblance between garden paintings in Italy and mosaics of garden scenes in Tunisia may indicate that representations of gardens in art were introduced into North Africa from Italy, although basin design emphatically was not.[15]

Representational Evidence in Ancient Literature

References to fountains and nymphaea are frequent in both Italian and African authors, especially in descriptions of gardens and nature. However, these structures are almost never realistically described, even if the inspiration for a literary passage was a real fountain in a real garden. Descriptions of gardens (and the fountains in them) in ancient literature in general aim to evoke the idyllic and sacred countryside dear to the philosopher or Dionysos worshipper, and enhance the mundane reality of the garden in order to give it a sacred reality.[16] Even when given the task of portraying a certain rich man's garden, the works of both Italian and African writers provide allegorical images which could not have actually existed there, such as sacred springs gushing from rocks, and waterfalls rushing over cliff faces, set in pastoral or wild landscapes. Most authors use the words *fons* (fountain), *salientes* (water-jets), or *nymphaeum* in this sacred allegorical sense (Vergil, Cicero,

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[14]I am aware of only two elevated marble basins found in a domestic setting in Tunisia. One is in Utica, House of the Cascade (a rectangular basin set on two small pillars), the other is in Althibouros, House of Asclepieia (a crater-type fountain).

[15]The domestic nymphaeum of Pompeii, differs architecturally and decoratively from the African type. It is possible that the Pompeian nymphaeum was derived from a Greek or Hellenistic tradition, whereas the African nymphaeum was influenced by Near Eastern designs.

[16]cf. Grimal, *Jardin romains*, p.374, discussing Lucretius, whose "spectacles evoqués dépassent les limites, assez etroites, des jardins...."

Tibullus, Propertius, Ovid, Lucretius, Pliny, Horace, and Apuleius all do so).[17]

The most likely Latin word for a peristyle water basin is *labrum*, and a search of this term has turned up examples constructed of marble (Pliny *Ep.*5,6,20; Livy 37,3,7), stone (*CIL* VIII 23991,10,a.233), and wood (Vitruvius 10,4,2), but none are of the mosaic-lined variety (hardly surprising since it was only the nymphaeum which was decorated with mosaic in Italy). One would expect that were these basins to be found in literature they would be called nymphaea, but it would appear that ancient writers did not concern themselves with the domestic nymphaeum *per se*.[18] Allegory predominates in both art and literature. It is the nymphs' grotto itself which the Roman authors wished to describe, not the peristyle water basin, itself a representation of the nymphs' grotto in architectural terms.

The sixth century African poet Luxorius warrants further investigation, for two reasons. Firstly, Luxorius lived in Carthage during the Vandal period, and thus may have seen the basins which are the subject of this inquiry, if any were still visible in the sixth century. Secondly, he occasionally describes fountains with what seems to be more realism than allegory. Five of his epigrammatic poems (Rosenblum 18, 34, 46, 61, 62) refer to fountains. Two of these (18: Garden of Fridamel, 46: Garden of Eugetus) are eulogies to the pleasure-gardens of wealthy Vandals in the allegorical style already familiar to us, in that both employ the imagery of myth to evoke the sacred woods of Diana. The metaphorical enhancement is such that it is difficult to imagine these gardens inside a peristyle. Nevertheless, Poem 46 is clearly describing a city, and thus likely a peristyle, garden. Unfortunately, the poems tell us nothing about the appearance of the fountains which he includes in his inventory.

Poems 61 and 62 are both two-line epigrams which may refer to fountain-statues or mosaic basins. No context is provided, so it is impossible to say whether or not the fountains/basins were in a public or private location. As there is considerable doubt that the titles were provided by Luxorius himself, only the

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[17]Three examples are: Propertius 4.9.25-59 (*fontes* in a nymphs' grove are encountered by Hercules); Lucretius 5.948-51 (a *nymphaeum* described as water flowing from wet rocks); Apuleius 2.4.23 (by the artist's skill a peristyle nymphaeum containing a statue of Diana and a fountain is made to seem like the real thing).

[18]Public nymphaea are occasionally mentioned (Pliny 35,12).

poems themselves will be considered.[19] Their similarities are such that they almost certainly refer to the same artistic medium, be it sculpture or mosaic.

61. Igne salutifero Veneris puer omnia flammans
Pro facibus propriis arte ministrat aquas.

62. Quam melior, Neptune, tuo sors ista tridente est.
Post pelagus dulces hic tibi dantur aquae!

It cannot be determined to what medium the poems refer, since Eros and Neptune are commonly found in Carthage both as fountain-statues and as the subjects of mosaic, but at least we see here some indication that a similar iconography to that which actually existed in Africa is being portrayed by Luxorius. Eros and marine deities are two of the most common subjects of the basin mosaics (although Oceanus is the usual deity, rather than Neptune). It is significant that in these two poems, which seem to contain a certain amount of realism, it is these subjects which are described, rather than the "sacred woods" themes which are usually associated with fountains and nymphaea in Roman literature.

The final poem to be discussed here, Rosenblum 34, is the most interesting, as it was written in praise of the construction of a new fountain, specifically called a "*nympha*," which is closely described. As this fountain was intended to provide drinking water for circus horses, it is obvious that the word no longer retained its religious associations in the sixth century. This *nympha* is found in the stable of a private circus, not in the peristyle of a house. In appearance it seems to resemble the Pompeian domestic nymphaeum of the first century, rather than the Tunisian type. The fountain is surrounded by a polychrome mosaic, apparently figural, possibly containing images of the Muses among other designs.[20] The water from the fountain falls

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[19]*Luxorius. A Latin Poet Among the Vandals*, ed. Morris Rosenblum, New York, 1961, pp.65-69. Furthermore, there are no grounds for Baehrens' emendation of the title of 62 to *in marmoreo alveo*, from *in marmore calido* (H. Happ, *Luxurius. Vol. 2 Kommentar*, Stuttgart, 1986, pp.357/8).

[20]I agree with J. Rossiter ("Stabula Equorum: Evidence for Race-horse Stables in Roman Africa," *Ve Colloquium sur l'histoire et l'archéologie de l'Afrique du Nord*, Avignon, 1990, p.43) that the words "variis metallis" refer to cut stone rather than to metal. The words "insignia" and, later on,

over curved steps (*crispatum gradum*) into a large, rectangular marble basin (which was originally a sarcophagus), and overflows by means of a channel cut in the side. The *nympha*, with its vertical mosaic, its waterfall down steps, and with a marble basin at its foot, is uncannily similar in design to the Pompeian domestic nymphaeum (see for example that in the House of the Great Fountain in Pompeii, Fig.2). As this type is not found in Tunisia, either this fountain was a unique structure, consciously imitating a design current in Pompeii five hundred years earlier, or this description is, like so many others, rooted in literary convention rather than in reality.[21]

Whether or not this particular structure actually existed in the sixth century, it bears no resemblance to the earlier nymphaeum type which is under investigation here. It must be concluded that ancient literature and art add very little to the picture provided by the archaeological evidence. For information on the Tunisian basin we must turn to archaeology.

Design and Construction

The Tunisian basin is a free-standing structure, normally placed along the line of the colonnade, rather than against a wall. The most common design is a semicircle of variable size, set at ground level, but exceptions are not unusual.[22] It is sometimes difficult to differentiate between a big *impluvium* or *piscina* and a small rectangular basin in inventories where dimensions are rarely given, nevertheless there are several examples of small basins which are obviously of the same type as the semicircular ones, but rectangular or square (El Djem, Dougga, Thuburbo Maius, Utica, and Sousse all have individual examples). An octagonal or polygonal shape is not unknown, though rare (Dougga has one example; Carthage two or three). Carthage exhibits the most variation in shape of all Tunisian sites, perhaps because of its cosmopolitan nature. In addition to the semicircles, rectangles,

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"signa", would thus refer to the figural imagery of mosaic, rather than to statues.

[21]The image of circus horses drinking from a nymphaeum may have a counterpart in a mosaic pavement from Antioch, which depicts an ass drinking from a domestic nymphaeum of the same type. (D. Levi, *Antioch Mosaic Pavements* II, no.74c,1, pp.345-6, cited by Neuerburg, p.62).

[22]It should be stated that "semicircle" is a relative term: some semicircles are more mathematically correct than others. Any apsidal shape, however elongated, is herein referred to as a semicircle.

octagons, and polygons found there, Carthage also has one circular basin (Carthage 3c). Circular or oval basins are also found in Sousse and Chebba.

Another variation found in Carthage, as well as at Bulla Regia, are the niches, either square or apsidal, found in the walls of some basins. Perhaps the most unusual shape is that of a basin in Sbeitla, which is a quatrefoil, a shape common enough for Tunisian baptismal fonts or baths, but the only example in a peristyle basin. Another basin in the House of the Cascade in Utica (Utica 2a) employs a unique design, that of a square, sloping panel attached to a small rectangular basin.

The semicircular basins are free-standing, and individually placed along the peristyle colonnade. The straight front is set flush along the line of the columns, so that the curve of the basin juts out into the central garden area. The basin is almost always flanked on either side by peristyle columns, which provide it with an architectural frame (Fig.3). Very often, where the architectural context is known, these basins are in immediate proximity to the main rooms opening off of peristyle courtyards, especially to the *triclinium*. When this is the case, the basin faces the entrance to one of these rooms across the aisle of the peristyle. This is the most common arrangement, but it should be noted that a basin is not always found to have any discernable relationship to important rooms, nor is it always on-line with the peristyle columns, indeed it occasionally blocks the aisle itself. Although a single basin is most common, a few houses had two or more, sometimes in the peristyle itself, sometimes distributed over smaller additional courtyards.

There is also another basin arrangement which is found frequently enough to merit discussion. In some cases, a large rectangular *piscina* is placed in the center of the peristyle, with either one or two semicircular basins attached to either end, or placed a short distance away. In this case the basins may or may not still be located between columns of the colonnade. (The examples of this arrangement that I am aware of are: Utica 6b, El Djem 1b [each with two attached basins]; Thuburbo Maius 4 [with two detached basins]; Carthage 7, Utica 12 [each with one attached basin].) The basins of Thuburbo Maius 4 and Utica 6 are the best preserved examples. In both cases it is believed that the *piscina* functioned as a fish breeding pool. The small basins appear to drain or overflow into the larger *piscina* rather than vice versa in the case of Utica 6, whereas there is no contact between basin and *piscina* in Thuburbo Maius 4. The House of the Fishers in Bulla

Regia also combines an ornamental basin with fish pools, but in a far more complex arrangement, as we shall see later.

Basin floors were covered in mosaic, although many of the basins now *in situ* have lost their decoration. With the exception of two basins (one in Bulla Regia, the other in the House of Dionysos in Carthage), both of which have a concrete surface, all other known basins have or had a mosaic floor.

Walls receive a slightly more varied treatment, in that they are occasionally covered with marble plaques instead of with mosaic, but existing evidence for this technique is confined to the basins in several houses in Thuburbo Maius and to House H at Utica, although baptismal fonts elsewhere (for example that of the Dermech Basilica) are treated in this way. Utica has an added refinement: two of her basins (in the House of the Cascade and in the House of the Figured Basin) have marble revetment on the bottom half of the wall and mosaic on the top half (in the "Figured Basin" the mosaic can still be seen covering the sloping rim of the wall). It is possible, though improbable, that one basin in Thuburbo Maius may have been left with its walls undecorated. The only surface it now carries is a finely applied coat of waterproof mortar. Thuburbo Maius also provides the only known example, in the House of the Protomes, of a basin with mosaic on the outside of the wall, an area which was normally simply finished with a coat of plaster.

There is a final type of basin found in peristyle gardens which will be discussed here only briefly. Several gardens contain, in addition to the decorated basins of regular shape, and the larger *piscinae,* tiny basins of highly variable shape, tucked against the walls, rather than in prominent positions. Either without mosaic or covered with simple *opus figlinum* (clay tile fragments mortared on edge), and with irregular shapes determined by a free-hand construction, these basins were obviously intended to be purely utilitarian sources of water, for the use of the gardens or for household tasks. Examples of these exist at Utica, Pupput, and Acholla: in all three cases the peristyle was also fitted with at least one decorated semicircular basin.

All Tunisian basins share the same construction method. The low wall is built up from ground level using small irregular stones and mortar (unlike the walls of large public pools, which employ large ashlar blocks). The top of the wall is often given a curved edge, a technique familiar in Tunisian baptismal fonts as well. The entire inner surface is then coated with a thick layer of pink mortar, *opus signinum*, which acts as waterproofing (the pink

colour is due to the presence of crushed tile in the mix). Special attention is given to the angles between the floor and walls, which receive a particularly thick coating. The lavishness of the waterproofing is exceptional (for example, the large public pools are grouted, not covered, with waterproof mortar), but necessitated by the construction method, which results in a very porous wall. The small surface area to be covered meant the expense and effort would not have been prohibitive. The decoration, normally mosaic, covers this waterproof surface.

Up to this point, there is no difference between the structure of either true or substitute basins. True basins have an additional feature, however: the straight side is fitted with a low wall, thus enclosing the structure so that it may hold water. The substitute basins lack this retaining wall, although they are constructed, waterproofed, and mosaic-lined in an identical fashion.

This construction method appears to be remarkably consistent all over Tunisia. A basin in the House of the Cascade in Utica is built of tiles rather than rubble, and another in Thuburbo Maius used carefully laid courses of even-sized stones, but these are exceptions. One other variation which appears to be unique to Utica (the basins of Utica are perhaps the most idiosyncratic) employs a normal construction method, but raises the basin floor several inches above ground level, and uses a much wider front wall than normal, the result resembling a bench more than a retaining wall.

The front wall is usually built using the same method as the semicircular wall, nevertheless, several basins exhibit a type of front wall which appears to be unique to North Africa.[23] In this case, the straight wall is formed of large stone panels which are inserted into grooved pillars. The joints are then filled with waterproof mortar, giving an excellent sea. (A well-preserved example of this type of front wall is that of Thuburbo Maius 8a, now in the Bardo Museum.)

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[23]Adam considers this type of wall to be a design superior to waterproofing techniques in Italy. J.P. Adam, *La Construction Romaine*, Paris, 1984, p.280.

Chapter 2. Hydraulics

Supply

Before discussing the supply and distribution of water in houses, it should be pointed out that while a great deal is known about water-use in the houses of Italy, to my knowledge no one has yet attempted to analyse water systems to the same degree in Tunisia. Investigation is concentrated on public rather than private collection and distribution, and is focused on aqueducts, large nymphaea at spring mouths, public reservoirs and dams, central water depots, and so forth. Thébert discusses water-use in the House of the Fishers at Bulla Regia, because of the unusual complexity of the system there, and Alexander and Ben-Abed give more attention than is usually found to the systems of the Houses of Neptune and of the Protomes at Thuburbo Maius. However, there remains one gap in our knowledge of private water systems which even Thébert and Alexander fail to alleviate - the question of whether the water used by particular houses came from a public source, a private source, or both. What is the relationship between water supply and use? Were the two sources combined before use, or were they directed to different locations and purposes? If so, where and how? These problems have not been addressed for Tunisian houses, an unfortunate circumstance considering their importance to my subject. Given the lack of information available, the discussion which follows must therefore be speculative.

Unlike modern urban houses, which rely completely on a public water supply, Roman houses could get their water in two different ways. Most Roman towns, including those in Tunisia, had some sort of public water system, but long before public waterworks were established the Roman house was designed to be a self-sufficient water collector, an ability it tended to retain, except in those areas where the public supply became so regular and consistent as to make private rainwater collection unnecessary (as was the case in Rome and Pompeii). In Tunisia, where the climate is hotter and drier, and a steady water source more difficult to obtain than in Italy, private and public water systems seem to have coexisted throughout the Roman period. Tunisian houses do not exhibit a widespread refitting of *impluvia*

with smaller basins, which drew water directly from the public supply system, such as is found in the houses of Pompeii.[1]

The collection of rainwater was a serious affair in Tunisia, which has few sources of good surface water. Every house had at least one cistern for water storage, fed by rainwater collected off the roof. Some houses must also have had wells, although I have not looked for such. Many had small courtyards which functioned in much the same way as *atria*, being fitted with *impluvia*. In these courtyards water poured directly off the roof into the *impluvium*, which acted as a settling tank, so that clean water could be decanted from the *impluvium* into the cisterns.[2] Peristyles often contained rain-fed *piscinae*, in which case the water would be brought by channel or pipe across the ground from the colonnade (the open central courtyard being larger in area than the *piscina*). Many houses had more than one courtyard, in order to catch as much water as possible (for example, the houses of El Djem, a particularly hot site inland, had as many as three huge *impluvia* in one house, as well as quite deep peristyle *piscinae* and immense cisterns).

Many towns in the province of Africa had no aqueducts to bring in spring water, and relied instead on rainfall, surface water, and well water, all of which were collected in huge public cisterns and reservoirs.[3] El Djem probably had an aqueduct,[4] but the water would have been poor quality surface water, brought from an upland lake kept full in summer by a dam, and the amount of water would not have been sufficient to supply the needs of the community. Cintas has estimated the flow would provide each person with only "un ou deux litres d'eau (en supposant encore que les besoins municipaux n'aient rien prélevé avant la repartition)."[5] Rainfall must have supplied the bulk of the water needed by El Djem.

Cintas' comment that the municipality would have drawn water off for its own use before distributing the remainder is apt.

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[1]I know of two such cases in Tunisia: the *impluvium* of the House of the Nymphs in Nabeul and an *impluvium* in Dougga (*Inv.Tun.*, no.552) were refitted with smaller basins.

[2]Adam, p.258.

[3]Some towns without aqueducts include Thuburbo Maius, Acholla, Chebba, and Thapsus. (B. Shaw, "Wells, Walls, and Aqueducts in the Making of Roman Africa," *Future Currents in Aqueduct Studies*, Leeds, 1991, p.82.

[4]see J. Cintas, "L'Alimentation en eau de Thysdrus dans l'Antiquité," *Karthago* 7, 1956, 181-187.

[5]---, p.187.

Vitruvius (Book 8,6) divided water distribution into three categories, with public fountains receiving the first priority, followed by public baths. Only after public needs were met was water to be sent to private homes for use in decorative fountains and the like. This seems only natural, given that private houses were usually capable of collecting their own water. In practise, this meant that in areas of inconsistent public supply or during periods of drought, public water supply to private houses could be rationed or even cut off. This is known to have occurred in Italy;[6] surely it was not uncommon in Africa, where water is even more difficult to procure. The large dams built to keep reservoirs full in the dry season, and the huge public cisterns so common in Tunisia are testament enough of its dry climate in Roman times.[7]

Distribution

As stated, it is as yet unknown how public water was distributed inside Tunisian houses, or even whether it was drawn straight from the pipe, or fed into cisterns or *piscinae* first. In Pompeii public water was kept separate from rainwater, and was drawn off the pipe, but it should be noted that the water was of different quality, being spring water brought in by aqueduct. With the exceptions of Carthage, supplied with good spring water by aqueduct from Zaghouan, and possibly Utica, public supply in Tunisia relied less on spring water than in Italy. In fact, the water delivered by public pipe would have been practically the same quality as that collected privately, therefore one may speculate that no distinction was made between public and private water within the house, either in distribution, utilisation, or "decorative treatment".

It may be possible that in some cases the peristyle basins were the distribution point for the public water supply, but as yet there is no evidence, and there are examples where this was certainly not so. For the moment it can only be said that the water used in them was clean, and that it probably made little difference to the residents whether it came from an underground spring or from the sky. In a dry country all water may be considered sacred.

Given the scale of rainwater collection in Tunisian houses, it is unlikely that the ornamental basins would have played any

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[6]R.J. Forbes, *Studies in Ancient Technology.* Vol.1, Leiden, 1964, pp.173/4.
[7]Adam, p.260.

significant role in the system. Firstly, their small size would not have permitted the collection of more than a few litres at a time (as merely one example, the basin from Thuburbo Maius in the Bardo museum [Thuburbo 8a] has a depth of only 22 centimetres). Secondly, as their drainage holes are normally placed at the bottom of the wall, they could not have acted as decantation basins for dirty water, nor do the drains appear to lead to the cisterns in any case. Finally, if sediment were somehow settling in order to clean water for the cisterns, it is unlikely so much effort would have been expended on the floor mosaic, which often provided the only figural mosaic representation in the entire house.[8] *Impluvia* are usually given floors of large, plain, white mosaic, or painted plaster, though it must be said that they are occasionally covered with fine, polychrome mosaic. Still, it is probable that only clean water was used in the basins, a hypothesis borne out by the archaeological evidence. Information is available in three cases for the water system in use in peristyles containing ornamental basins (the House of Neptune and the House of the Protomes, both in Thuburbo Maius; and the House of the Fishers in Bulla Regia). In all three examples it is apparent that the basins represent a final destination for clean water, rather than playing any part in a collection process.

In the House of the Protomes, rainfall was collected from the roof and fed by gutters to a hole in the middle of the peristyle courtyard, between the central *piscina* and one of the semicircular basins. This hole led directly to an underground cistern. In addition, a lead pipe was found directing water into the *piscina*, which was fitted with a drainpipe. No mention is made of either intakes or drains for the two semicircular basins, which appear to have been separate from the collection system.[9]

The House of Neptune had a similar arrangement. Rainwater drained into gutters on the southeast wall of the peristyle into a hole, leading once again to a large underground cistern. Another channel evacuated used water southwards to the public sewer on the street. The semicircular basin, located on the southwest side of the peristyle was apparently unconnected, just as in the House of the Protomes.[10]

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[8]as is the case in the House of Neptune at Thuburbo Maius (*CMT* Vol.2, Fasc.1, p.142).

[9]*CMT* Vol.2, Fasc.3, p.29.

[10]*CMT* Vol.2, Fasc.1, p.142.

The House of the Fishers had an unusual system of reservoirs, which filled the main-floor peristyle (Fig.4). An intake channel led from the southwest colonnade through a complex system of large *piscinae*, one of which possessed a drain. Thébert does not state whether the water source was public or private, but the association of the intake with the colonnade implies rainwater collection. There is no underground cistern, so it is likely that these pools acted both as decantation and storage (the decantation probably took place in Pool C, which is lower and contains the drain). The two ornamental basins of the house receive water from these pools. The semicircular basin in the subterranean peristyle was fed continuously by pipe from
Pool D, the largest of the pools and the last in the system, thus obviously the clean water reservoir; while the rectangular basin on the main floor was at the very end of the whole system, receiving its water by means of an overflow from Pool C, and was therefore filled only after all other pools had reached their highest level. These basins, although connected to the collection systems, were the last to be filled, and would thus have received the same quality of water as would have been found in the cisterns of the two houses in Thuburbo, that is to say, the cleanest water available.

A large proportion of those basins which are well-preserved enough to provide conclusive evidence do not have any possible water intakes, either on the walls or on the floor. The possibility that the basins may have been fed from above by some sort of spout or fountain unconnected physically to the basin will be considered below. However, given the evidence provided by the basins themselves, the first hypothesis must be that many of them were simply hand-filled, a not unreasonable assumption considering their small size and the potential scarcity of water. The filling of much larger reservoirs was undertaken by hand in the Roman period,[11] and despite the extensive use of pipes and taps, water for the household was often still brought by hand from fountains and cisterns centrally located in the house.[12]

The main floor basin of the House of the Fishers in Bulla Regia represents a second approach, in that water was introduced by an overflow pipe from the adjoining *piscina*. Since the smaller basin has no drain, this suggests that the overflow would normally

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[11]P. Grimal, *La Civilisation Romaine*, trans. by W. Maguinness, London, 1963, p.237. The elevated reservoir at Villa de Boscoreale was hand-filled.
[12]L. Richardson, Pompeii: *An Architectural History*, Baltimore, 1988, p.63.

have been kept stopped, and opened whenever the smaller basin needed filling. The basin would then have required hand-emptying.

The possibility that these basins were filled or emptied by hand emphasizes that they may not always have held water. The implication is that they were filled on an occasional basis. However, there is considerable evidence that water flowed continuously through many of the basins. It has already been mentioned that the direction of water-flow in those basins attached to *piscinae* by overflows can be interpreted in two different ways. In the House of the Cascade and the West House in Utica, and in the House of Dionysos in Carthage, all of which lack drains, it can be postulated that, like the House of the Fishers, the basins were filled by overflow and hand-emptied, thus representing a "standing-water" type. It is equally possible that they received water continuously from a fountain or spout placed above or outside the basin, and that the water then overflowed into the larger *piscinae*. In the one example in this group where an intake is actually built into the basin proper, that of the House of the Grand Oecus in Utica (Fig. 5), it appears that water was fed into the semicircular basin along a sloping, rimmed mouth set into the center of the straight wall, and drained into the *piscina*, which implies just the sort of continuous flow suggested.

Drainage

By far the most common drainage is by means of a small hole set into the back wall, close to the floor. (In a few cases the lead pipe is still in place.) The hole is sometimes very tiny indeed, only one or two centimeters in diameter. Rather than connecting with a public sewer or with any drain leaving the house, the water apparently flowed straight into the garden of the peristyle. The drainage thus appears to have been as simple as possible, requiring no elaborate channelling.[13] In fact, two basins (Utica 3 and Thuburbo 7a) show no evidence for drainage holes of any kind, as the mosaic covers the inner surface completely, leaving no spaces for holes in the walls or floor. It is possible that they were emptied by hand. On the other hand, the utilitarian basins

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[13]Water from the basin in the subterranean peristyle of the House of the Fishers in Bulla Regia flowed out along a conduit across the court to a drain-hole in the low wall of the opposite colonnade, an elaboration in keeping with the complexity of the whole water system in this house.

mentioned earlier tend to have much larger drains, possibly because, unlike the mosaic basins, they did play a part in the system which collected rainwater into the large underground cisterns.

Interestingly, the substitute basins of El Djem and Thuburbo Maius have drainage holes in the same location as true basins, despite the fact that they could never have held water. This is further evidence that some sort of water flow occurred in them as well.

Those basins attached or connected by pipes to large *piscinae* present a more complicated arrangement for drainage. In the House of the Peacock in El Djem and in the House of the Grand Oecus in Utica the drains are placed in the normal location, connecting directly to the *piscinae*. In the Grand Oecus there is definite evidence that the basin was supplied with water from the opposite side, thus it seems likely that the basin emptied into the *piscina*, and this may have been the case in the House of the Peacock as well.

Those of the House of the Cascade and the West House in Utica, the House of Dionysos in Carthage, and the House of the Fishers in Bulla Regia all have small overflow holes connecting with their *piscinae* (in other words, the hole is placed near the top of the basin, not at the bottom). It is difficult to say which way the water may have flowed in the first three instances. Thébert states that the flow in the House of the Fishers was from *piscina* to basin,[14] but it seems significant that there are no floor drains in any of these basins, which is highly unusual. All four *piscinae*, on the other hand, did possess drains.[15] Only two interpretations are possible: either the basin was filled from the *piscina* through the overflow, which would normally have been kept stopped (lacking a drain the basin would have been emptied by hand when necessary), or water flowed from the basin to the *piscina*, from where it could be drained easily. In the latter scenario a continuous flow would thus be possible, in the form of a fountain located in or near the basin. It is probable that both of these arrangements were used in different basins.

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[14]Y. Thébert, "L'Utilisation de L'Eau dans la Maison de la Pêche à Bulla Regia," *Cahiers de Tunisie* 19, 1971, p.16.

[15]A basin in the Sousse Museum (Sousse 2) has an overflow in the front wall rather than in the semicircular wall - perhaps this basin was originally placed in a similar relationship to a *piscina* as the basin of the House of Dionysos.

Fountains

Because of the inaccuracy of terms, interpretation of the data concerning fountains contained in my catalogue is difficult. A great many of the entries are listed as fountains or fountain-basins, but it is extremely difficult to determine exactly what is meant by these terms in each case. It is probable that in most cases the word "fontaine" denotes a trickle-spout rather than a water jet. Grimal certainly differentiates between the two in his use of the Latin words *fontes* and *salientes*.[16] The sources for my catalogue, predominantly French, appear to maintain this distinction, although a *fontaine* is nowhere actually defined. Gauckler, for example, uses the word *fontaine* frequently, but in one entry he explicitly denotes a *jet d'eau* (for the basin in the House of the Hidden Room in Carthage), which implies that he made a distinction between fountains (trickle-spouts?) and water jets. Thébert, writing about African houses, states that "practically every peristyle of any size was embellished with fountains," with the most common type being the *unpressurized semicircular basin* .[17] He is obviously assuming some form of trickle-spout, and this is confirmed by his description of the water circulation as occurring by means of "holes pierced through the lip." The problem with this description is that there is in fact no archaeological evidence for such holes, as I have shown, except in the four or five cases where a basin is connected by an overflow with a *piscina*. I think in most cases a designation of "fountain" or "fountain-basin" is based on incorrect assumptions about how these basins worked, which are not verifiable.

It is possible that such assumptions have arisen from misplaced identifications with Italian basins, where trickle-spouts are common. In a situation like this where direct African evidence is so scanty, it is natural and even useful to draw parallels with Italian examples, however, the situation in Italy is itself far more complicated than suggested by this superficial association. It is my intention to look at three different types of fountains: trickle-spouts, water jets, and fountain statues, as they are found in Italy, and to determine the probability of their existence in the African nymphaeum. Such a determination is necessarily hypothetical, but no solution will be considered in the face of contrary evidence from the extant basins themselves.

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[16]Grimal, *Jardins romains*, p.295.
[17]Thébert, *Private Life*, p.361.

Trickle-spouts:

Trickle-spouts in Italy are normally wall-mounted, so that water falls into the basin, thus requiring little pressure to operate.[18] Water sometimes fell from an undecorated pipe, but generally a small, flat-backed sculpture was attached to the wall, so that the water poured from the mouth of the sculpture, most commonly carved in the shape of an animal or human head. The requirement for a vertical surface on which to mount a trickle-spout would seem to preclude its presence in the center of a peristyle, unless it were attached directly to the low wall of the basin itself (not impossible, as lead piping was used extensively in Roman houses, so that water could be brought to "virtually anywhere in the garden"[19]). Unfortunately, there is almost no evidence for trickle-spout attachments on the walls of African basins.

Trickle-spouts similar in type to those found in Italy have been found in Africa,[20] though in a public fountain context rather than in a peristyle garden. The small utilitarian basins set against the garden walls in some houses often have a large hole, placed high up, indicating that water did flow from a trickle-spout of some sort, though no sculpture is now present. The group of basins with overflows must have operated in a trickle-spout fashion, although none of these now have any sculpture attached to the overflow holes, if they ever did. Further evidence for trickle-spouts on African basins simply does not exist; as previously stated, the House of the Grand Oecus in Utica contains the only basin which even has the opening in the rim described by Thébert as the most common fountain type. The vast majority of the basins could not have had attached trickle-spouts, and the fact that I do not know of a single instance of a water mouth sculpture being found attached to a nymphaeum structure in Tunisia bears this out.[21]

One other possibility remains which cannot be ruled out, however. Pipes were often attached to columns by means of

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[18]cf. A.M. Small, *The Excavations of San Giovanni de Ruoti, Vol.I*, Toronto, 1994, p.222, where low pressure is combined with a trickle-spout.

[19]E. Dwyer, *Pompeian Domestic Sculpture*, Rome, 1982, p.117.

[20]in the shape of lionsheads (C. Bourgeois, "L'eau et les lions de Mactar," *Karthago* 20, 1982, 85-90).

[21]however, see Carthage 10: Delattre mentions sculptures and bas-reliefs found on this basin. Unfortunately no information is provided regarding context (public or private), type of sculpture, dimensions of basin, etc.

staples in order to bring water down from a higher level,[22] and Bonnin has stated that trickle-spouts were attached to both walls and columns.[23] If this is so, trickle-spouts could conceivably have been attached to the columns between which the basin is usually situated, but this must await archaeological confirmation.

Water Jets:

Evidence for the existence of water jets, on the other hand, is indisputable, and there are good Italian parallels as well. In the house of Loreius Tiburtinus in Pompeii (II.ii.2) a fountain apse placed across the terrace facing the *triclinium* was fed by a ring of water jets set into the semicircular rim, which directed their water into the center of the apse.[24] The basin in the subterranean peristyle of the House of the Fishers in Bulla Regia worked in exactly the same way. Water brought by pipe from the main floor spurted as water jets into the basin from six holes set into the curved rim.

Although examples which can provide any indication of having had water jets, beyond the now suspect use of the term "fountain" in their description, number no more than ten, including the basin just described, these few nevertheless exhibit as much variation as do the more numerous fountains of Pompeii. The fountain which provided the House of the Cascade in Utica with its name is a unique design for which no known counterpart exists (with the possible exception of a fountain in Nola, Italy).[25] In this case the fountain (now destroyed, although the pipe remains in place) sprang from an inclined panel into a horizontal rectangular basin, which had its own central water jet as well (Fig. 6). An octagonal basin in the House of the Hidden Room in Carthage appears from the vague description by Gauckler to have been quite unusual as well, having, if my interpretation is correct, a water jet issuing from a raised semicircular basin, which took up one angle of the octagon, and pouring into the larger, mosaiced basin. The other seven all appear to have had a single water jet springing from the floor of the basin itself. In three the hole for the pipe is set against the wall (Utica 1, Utica 8, and Sousse 2).

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[22]Richardson, p.62.

[23]J. Bonnin, *L'eau dans l'antiquité: l'hydraulique avant notre ère*, Paris, 1984, p.53.

[24]Jashemski, *Gardens of Pompeii*, p.46.

[25]discussed by P. Voute ("Notes sur l'iconographie d'Ocean. A propos d'une fontaine à mosaiques découverte à Nole [Campanie]," *MEFRA* 84, 1972, 639-673).

The quatrefoil basin in the House of the Vitalis Basilica in Sbeitla had, according to Duval, a water jet in the center of the floor, as did, apparently, a basin in the House of the Aviary in Carthage. A basin now in the British Museum (Carthage 2) has the most intriguing placement: the floor mosaic is of a Head of Ocean, whose mouth, at the center of the basin, was originally a water jet, though it was later blocked up with white tesserae. The action of the water is reproduced by the mosaic, which depicts streams of water pouring from the god's mouth. The final example is merely the reference by Gauckler to a "jet d'eau" for a basin in Carthage (Carthage 5).

It may be argued that fountains would have been impractical in view of the sporadic and low-pressured public supply I have already described.[26] However, water pressure was equally low in Italy, even in Rome itself, where fountains were particularly lavish.[27] The Roman type of fountain in fact requires very little water, as the small diameter of the pipes only permitted the issue of tiny streams.[28]

In houses relying on private water collection sufficient pressure could be attained by means of an elevated water supply, as the House of the Fishers in Bulla Regia attests, where the subterranean fountain was gravity-fed from the main-floor *piscina*, and the bath by a nearby elevated cistern. As most of the houses in Tunisia did not have subterranean peristyles, a more normal arrangement would have been a main-floor fountain fed by a roof-top reservoir. Evidence for such reservoirs is naturally as rare as surviving roofs, but Adam believes they were probably common.[29] The House of Julia Felix in Pompeii had a reservoir on the roof which fed the *triclinium* fountain, and the reservoir at the Villa de Boscoreale was elevated in order to provide water under pressure.[30]

Fountain Statues:

The question of whether African nymphaea possessed fountain statues is, with one exception outside Tunisia, at the

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[26]It is interesting that five of these ten basins were converted at some time in antiquity by the removal of the fountains and the blocking of the intake holes.

[27]Bonnin, p.53.

[28]Richardson, p.62.

[29]Adam, p.336.

[30]Grimal, *Civilisation Romaine*, p.237.

moment not answerable using archaeological evidence. But just as there is a lack of positive evidence, so there is nothing to absolutely refute the possibility. The substitute basins in particular may be seen as receptacles for (admittedly no longer existing) fountain statues, in a manner completely analogous to Italian nymphaea. The problem does not lie with the basins themselves, which do not exhibit any characteristics incompatible with an association with fountains, rather it is the apparent lack of fountain statues themselves, either *in situ* or in museums, which forces this aspect of water use to become purely speculative. For this reason the evidence for Italian fountain statues will be considered first, paying as much attention to the placement of the fountains as to their appearance, in order to suggest the possibility of similar arrangements in Tunisia. In conclusion, examples of Tunisian fountain statues will be noted, although their contextual link to known basins is very tenuous indeed.

Fountain statues are found with regularity in and around Italian basins. These statues are mainly found in two shapes: craters on pedestels (as we have already seen depicted in Italian and African art), or small figural statuettes in marble or, more rarely, bronze.[31] They were placed inside basins or poured water into the basin from an exterior position. I give here only three of many examples, to illustrate the variety of possibilities. In the House of the Vettii in Pompeii the garden contained twelve small-scale statues ranged around eight marble basins, into which they poured water.[32] In House VI.xii.28 in Pompeii, a fountain statue again poured water into a footed marble basin, but in this case both were set inside a small floor-level basin.[33] An interesting arrangement from a Tunisian point-of-view is that found in the House of the Citharist in Pompeii, in which a semicircular basin, located just inside the line of the peristyle colonnade, had several, thematically-unrelated, fountain statues (a boar attacked by two dogs, a serpent, etc.) arranged on the rim of the basin, directing water into it.[34] In this case it is worth noting that if the statues had been removed in an earlier period there would not now be any indication from the basin itself that such fountains were ever employed.

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[31]Adam, p.323.
[32]Jashemski, *Gardens of Pompeii*, p.35; Richardson, p.326.
[33]Jashemski, *Gardens of Pompeii*, p.48.
[34]Dwyer, p.91.

The most intriguing aspect of the use of fountain statues in Pompeii is the unusual frequency with which they are placed in the center of semicircular niches, which can take the form of trellis fences, low walls, semicircular basins, and most interestingly the mosaic apses of nymphaea. It is particularly in the latter that the combination of an apsidal niche and a fountain statue appears to have been standard.[35]

The crater fountains have already been described in Chapter 1; Dwyer's *Pompeian Domestic Sculpture* lists the following types of statue fountains: nine birds and animals, with the water flowing from their mouths; two pine cones and one *pyxis* (a small box structure); three children or satyr children, two of them with animals, from whose mouths the water flowed, the third pouring water from the genitals; two Sileni (noted by Dwyer as the most common fountain statue in peristyle nymphaea), with the water flowing from their wineskins; three dolphin/cupid groups (one with an octopus), with the water flowing from the dolphins' mouths; and one cupid holding a mask, from which the water poured. We can thus conclude that in the majority of statue fountains, water issued from the mouths of animals. Water never flows from the mouths of human figures, instead they are provided with wineskins, masks, or animal companions for this purpose. It may also be noted that birds, animals, dolphins, and cupids/children make up the bulk of figural statuary, except in the nymphaeum, where satyr imagery is dominant.

It is not hard to imagine any one of the various arrangements noted above for a Tunisian basin, although the actual existence of such a statue near a basin in Tunisia would be rather welcome. Nor is an uninterrupted mosaic surface necessarily proof that a fountain could not have been placed inside a basin, as the pipes feeding the statue were often exposed, running along the surface of the ground, the basin, and even up the back of the statue itself, before piercing through to the mouth.[36]

So what do we have of fountain statues in Tunisia? Bourgeois has applied himself to this topic, but his work is unfortunately restricted to the site of Mactar. He has published fountain statues in the forms of a lion and a ramshead, as well as

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[35]Jashemski (*Gardens of Pompeii*, p.41-43), Richardson (p.331); Dwyer (p.47) all refer to this custom.

[36]Richardson (p.62) has noted that the Romans were seemingly untroubled aesthetically by the sight of water pipes lying everywhere exposed to view.

a lionshead trickle-spout, but as all were found in a public bath, they tell us nothing more than that fountain statues were not unknown in Africa, a less than surprising revelation.[37] Museum catalogues do not generally identify statues as fountains; however, Becatti and Kapossy have both published inventories of fountain statues in the Roman world, which include some Tunisian examples.[38] Becatti's inventory is confined to statues of nymphs and marine goddesses, four of which are given a Tunisian provenance. Tunisia provides two examples of his "Type A" marine goddess, that of a nude woman standing beside a small pillar supporting an overturned pitcher, from which the water poured. One is from the Great Baths in Oudna, and dated to the 2nd century, the other is from Carthage and now in the Bardo Museum.[39] A nude woman accompanied by an eros on a dolphin, with the water issuing from the dolphin's mouth (Type B, variant 1) was found in a public area in Dougga, and also dated to the 2nd century.[40] A fourth fountain-statue of a marine goddess, too badly damaged to identify its type, was found in Sousse.[41]

None of these four fountain-statues are given a domestic context, nor are the six fountain-statues from Tunisia listed by Kapossy, all now in the Bardo Museum. He notes three "Venus Marina" fountain-statues from Carthage, with no other context. Of these, one is the Type A statue described by Becatti, one is not described, and the third poured water from the breasts.[42] A fountain-statue of Dionysos sitting on a panther came from the Theatre at Sbeitla.[43] Two fountain-statues were found in public baths: a child/eros leaning on a dolphin was found in the Bath of the Laberii in Oudna, and a standing child/eros came from a bath in Thuburbo Maius.[44]

The Bardo Museum catalogue describes one statue with no provenance or context, a small-sized "urinating Hercules," as a fountain, the water apparently pouring from the genitals.[45]

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[37]see footnote n.20.

[38]G. Becatti, *Ninfe e Divinita Marine. Ricerche nitologiche iconografische e stilistiche. Studi Miscellanei 17,* University of Rome, 1971; B. Kapossy, *Brunnenfiguren der hellenistischen und roemischen Zeit,* Zurich, 1969.

[39]Becatti, p.19 n.12, pl.18; p.32 n.66, pl.35.

[40]---, p.22 n.21, pl.26.

[41]---, p.23 n.24, pl.29.

[42]Kapossy, pp.14/15.

[43]---, p.22.

[44]---, pp.39, 41.

[45]L. Foucher, *Guide du Musée de Sousse,* p.23.

In every case where the action of the fountain is described the water issues in the same way as in the Italian statues. In six examples the water pours from animals' mouths, in two cases from pitchers, and once from human genitals. The Venus Marina from Carthage is perhaps the most unusual case, as the water flows from the breasts. It is thus apparent that fountain-statues of equal variety and similar in type to those in Italy existed in Tunisia. What remains is to find evidence that fountain-statues were associated with domestic nymphaea.

Picard describes a small statuette of a fishing child with a dolphin which was found beside the semicircular basin in the peristyle of the House of the Cascade in Utica, perhaps the best contextual evidence available for Tunisia, although he unfortunately makes no mention of its being a fountain.[46] For incontrovertible evidence that fountain-statues were associated with the African domestic nymphaeum we must look to Algeria. It has already been noted in Chapter One that these basins are a North African type not restricted to Tunisia, but found in Algeria and Libya as well. The Cherchel Museum in Algeria has an intact semicircular mosaiced basin, which was found in a Roman villa, and which conforms in all its details to the standard domestic nymphaeum type discussed here. This basin still retains a dolphin rider fountain-statue, set on the rim of the semicircular wall at its mid-point. The water poured from the mouth of the dolphin into the basin.[47]

To conclude, it is apparent that fountain-statues were common enough in Tunisia, although none have yet been found on or near domestic nymphaea. Nevertheless, as the Cherchel example shows, the distinct possibility remains that any domestic nymphaeum may have possessed fountain statues, as an alternative to simple water jets, just as they did in Pompeii.

Association of Water with Substitute Basins

Substitute basins are concentrated in the southeast region of Tunisia (ancient Byzacena), although a few have been noted in Thuburbo Maius, northwest of Carthage. This southern region is certainly hotter and drier than the north, but keeping in mind that fountains did not require copious amounts of water, or even a

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[46]G.C. Picard, "Note sur les mosaiques de la Maison à la Cascade à Utique," *Karthago* 5, 1954, p.165.

[47]Stern, "Fontaine de Neptune," pp.285-302.

public aqueduct, can the arguments be made that their lack of water-retaining ability is due entirely to a shortage of water, or that they have no association with water at all? Such are Gozlan's conclusions in her discussion of the substitute basins of Acholla and El Djem. Her desire to dissociate them from contact with water leads her to say that "ces absides n'ont de lien avec une fontaine que dans la mesure où elles permettent de puiser dans la citerne. Leur décor n'est d'ailleurs pas forcément lié à l'eau."[48] My analysis of the substitute basins of El Djem has led me to a different interpretation, namely that as a type of African nymphaeum their connection to water is in fact their main purpose, and that they were probably kept wet by fountains.

The interior of the apses in El Djem are covered with the same thick layer of waterproofing mortar as basins elsewhere, an incomprehensible labour if they were not intended to come into contact with water, and they are equipped with the same drainholes into the central garden, another indication that water was present. In the absence of a retaining wall only two possibilities present themselves: either the mosaics were simply splashed with water (the dryness of the climate would cause rapid evaporation, however), or they received continuous wetting from fountains, with the water draining into the garden or into channels.

Many, though by no means all, of the substitute basins in both Acholla and El Djem have large holes in the center of their floors. Foucher, the excavator at El Djem, clearly believed they were receptacles for fountain fittings, as he makes clear in *Thysdrus* (1961), wherein he describes apses with holes as "fontaines", but does not use this word for apses without holes. The holes themselves are called pumpholes. (In *Thysdrus* [1960], published a year earlier, the holes are described as well-heads, but he apparently changed his view in the later publication.) Gozlan, however, states uniquivocally that the holes served only to draw water from the cisterns located below. Both opinions are speculative, since as far as I know there has been no excavation undertaken to determine the exact relationship, if there is one, between the holes and the cisterns. The large size of the holes may indicate a well-head, as Gozlan believes, though they lack the raised stone surround normally found around such features.

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[48]S. Gozlan, "La maison de Neptune à Acholla-Botria (Tunisie), problemes posés par l'architecture et le mode de construction," *Karthago* 16, 1973, p.88.

In any case, even their absence does not preclude the existence of fountains, nor a lack of water. Many true basins do not have discernable intakes, either, and no one has suggested that they were dry. Gozlan has tried to explain the existence of apses which do not have even a well-hole as necessitated by a need for symmetry, but in the House of the Dolphins in El Djem the substitute basin without a hole is not placed symmetrically to the one with a hole, nor is it even an apse (it is a rectangle). Neither can the large central apse of the House of Neptune in Acholla, placed in a much more prominent position than the two side-apses containing holes, be explained away by an argument of mere symmetry, since it has no counterpart.

Surely the association of water with these structures cannot be doubted. It is difficult to explain their function in terms of simple utility or architectural enhancement. This group can be firmly placed within the genre of the African nymphaeum, and must therefore have served the same purpose as the basins. A comparison with Pompeian nymphaea is illuminating in this regard, because there the most typical arrangement is that of a fountain statue set into a semicircular, mosaiced niche (i.e. an apse like those discussed here, not a basin). In some nymphaea, the fountain statues in their apses provided the only source of water.[49]

A final observation concerns the mosaics of this particular group, in response to Gozlan's statement that because their iconography is not necessarily linked to water, their function may not be either. Of the six mosaics under discussion by Gozlan (three in the House of Neptune in Acholla; one each in the House of the Peacock, the Domus Sollertiana, and the House of Ali Slama Bousla in El Djem), three are marine scenes, two are floral or vegetal, and one is geometric (pelts). Since half are marine scenes, would it not be equally possible to argue that the prevalence of water iconography implies a water-related function? Further, if function and iconography <u>are</u> to be related, why then is it that the central apse in the House of Neptune (with no well-hole link to the cisterns, and therefore supposedly no connection with water at all) is the one which contains the marine scene, while the two side-apses, which <u>do</u> have a demonstrable link to water via their well/fountain holes, contain floral mosaics?

Although marine scenes make up the majority of the mosaics of African nymphaea, a substantial percentage of true

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[49]Richardson, p.331.

basins, which definitely held water, do not have water-related iconography either. It is not a given that nymphaea must necessarily contain mosaics with water motifs; in fact, marine scenes are extremely rare in Italian nymphaea, where Dionysiac or "sacred countryside" themes are far more common. By Pompeian standards, what makes the mosaics of these apses unique for nymphaeum iconography is that they have any marine scenes at all. It is only their predominance in the African nymphaeum which persuades the viewer that a connection between water and water iconography is indispensable, but this is most certainly not the case.

Chapter 3. Mosaic

Subject-Matter[1]

The predominance of the "marine scene" (the most general description of a group which includes many different motifs) as the major subject of the mosaics of the nymphaeum has already been noted. The relationship between the water-related function of the basins and the water-based iconography of the mosaics has been stressed on all previous discussions of the subject, but the existence of non-marine subjects has not been noted (except by Gozlan, who uses such to argue against a water function for substitute basins). Darmon, in describing the images which would form the catalogue of domestic nymphaeum mosaics, were one to be compiled, mentions only the marine motifs.[2] Varied and extensive as these images are, they do not make up the totality of the basin mosaics. Of the mosaics listed in the catalogue, a full forty percent do not depict marine motifs of any kind (see Chart 1, p.50, for a breakdown by subject). It is possible that the lack of recognition of such a large non-marine component has resulted in an artificially strengthened association between water iconography and the presence of water. This is not to say that such an association is completely irrelevant; however, it has obscured what I believe to be the more fundamental theme: namely the depiction of "nature" (in the ancient sense), be it marine or otherwise.

The sacred vision of the "nymphs' grotto" in classical mythology embraces several related motifs, any of which would be suitable for artistic representation on a nymphaeum. The central idea of course is that of the mystery and fertility of nature, expressed paramountly by the grotto itself, the source of fresh water, and the home of the Naiads. The sacred grove surrounding the grotto is included in the overall concept of deified nature, allowing deities like Diana, Venus, and Dionysos and their attendants a place in the nymphaeum pantheon. A connection between the grotto and the sea was established in both Homer and Vergil. In the Odyssey (13, 96ff) the grotto is placed at the head of a cove watched over by Phorcys, the Old Man of the Sea.

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[1]Stylistic and chronological aspects of the mosaics are beyond the scope of this thesis. I shall address the significance of the iconography and the use of mosaic on water basins.

[2]Darmon, *Nymf. Domus*, pp. 149/50.

The related passage in the Aeneid (1, 159ff) follows Homer closely: the cave (*nymfarum domus*) is sheltered by a shady grove, also placed at the head of a very similar cove. Sea deities were a part of this particular mythology, indeed an important part, since the sea shared the same mysterious, fertile power as the spring waters themselves, perhaps even more so. Phorcys, Neptune, Tethys, and Amphitrite form the pantheon of sea gods, along with lesser deities such as the Nereids (the salt-water equivalent to the Naiads). Oceanus in particular embodies both salt and fresh water, and so is ideal for nymphaeum iconography.

Marine Scenes:

The marine scene is the most common genre found in Tunisian mosaics.[3] It is certainly not confined to the domestic nymphaeum. Dunbabin includes the marine scene as one of the four most common genres in the traditional repertory of classical mosaic, found all over the classical world, in all periods.[4] Nevertheless, it must be said that this group seems to have had a proportionately greater position in the mosaics of North Africa than anywhere else, for reasons that remain unclear. This general tendency to favour water iconography is continued in the African nymphaeum, which thus attains a character quite different from the Pompeian nymphaeum, on which marine scenes are extremely rare.[5] Nevertheless, this kind of scene is associated with the domain of the nymphs in classical myth, and is found in other nymphaea contexts, especially in the East, and in public nymphaea in North Africa.

It is the Dionysiac imagery which predominates in the Pompeian nymphaeum, along with idyllic landscape scenes. As already noted, marine deities are absent, although the House of the Centenary united paintings of sea animals with mosaics of landscapes and wild animals on its nymphaeum.[6] But nymphaea in other parts of the world certainly did portray marine deities. A

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[3]Ennaifer, *Civilisation tunisienne*, p.74.

[4]K. Dunbabin, *The Mosaics of Roman North Africa. Studies in Iconography and Patronage*, Oxford, 1978, p.7.

[5]I know of only two fish scenes associated with domestic nymphaea in Pompeii, both of which were paintings rather than mosaic: Jashemski, *Ancient Roman Gardens*, pl.19 (House of Diomede), pl.182 (House of the Centenary). The Pompeian nymphaeum is at least forty years earlier than the earliest Tunisian example, and its Dionysiac imagery may derive from a different tradition (perhaps Greek rather than Near Eastern?).

[6]Jashemski, *Gardens of Pompeii*, p.111.

nymphaeum in Antioch was dedicated to Okeanos,[7] and public *nymphaea* in Africa and Gaul were also dedicated to marine deities. In Aupert's words, "le culte des divinités des eaux est attesté pour les nymphées."[8] It would thus appear that, faced with the wide range of subject-matter appropriate for a nymphaeum, all of which relate in some way to "nature," the African mosaicist chose three out of five times to produce marine scenes, not simply because the basins held water, but because the appropriateness of these images for nymphaea dovetailed nicely with a preference in Africa for these kinds of pictures.

The marine scenes proper may be divided into four categories, although combinations of two or more often occur on a single basin. A "catalogue" of marine fauna is, figurally, the simplest representation. In this group various kinds of sea animals are scattered over the surface, set against a white background. Water is indicated by small zigzags in contrasting colours, interspersed among the animal figures. The animals themselves are realistically portrayed, so much so that individual species of fish are readily identifiable, as well as mollusks, crustaceans, eels, and watersnakes.

As the animals depicted in these mosaics are predominantly salt-water creatures, there is no possibility of their imitating any real fish which could have been kept in the fresh-water basins, even though the odd fresh-water fish, such as a trout, occasionally slips into the catalogue. Actually, it seems that, iconographically, no particular distinction is made between salt or fresh water, although the repertory of the mosaicists heavily favours the former. This design may be elaborated into a fishing scene by the addition of fishermen, usually seated in small boats, who employ lines or nets to capture the scattered fish. A third type is the water fantasy, populated with mythological beings such as erotes, nereids, or tritons, who are shown either fishing or riding dolphins or hippocamps. Finally, sea deities themselves may be represented, the most common being Oceanus in the form of a mask; Neptune is also found, though more rarely. The first three categories have already been the subject of exhaustive analysis by many other writers,[9] so I will confine my comments on the marine component of the iconography to a discussion of the two

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[7]J. Malalas, *Chron.*287, 10, cited by P. Aupert, *Le Nymphée de Tipasa et les Nymphées et "Septizonia" Nord-Africains*, Rome, 1974, p.119.

[8]Aupert, p.120.

[9]see especially Darmon, *Nymf.Domus*, pp.84-90; the volumes of the *CMT*; Voute, pp.646-651.

marine deities, Oceanus and Neptune, whose presence on the Tunisian nymphaeum seems to have had a special significance.

(a) Oceanus

The mask of Oceanus, found on six basins, is a good example of the way the African artist gave greater significance to a previously quite neutral motif. The importance of this particular deity in African art is exceptional. Foucher postulates that it may have been substituted for a Phoenician water deity,[10] a suggestion echoed by Dunbabin, who tentatively connects its popularity to "some element which was strong in the African, specifically the Punic, religious consciousness".[11] His appearance varies slightly from mosaic to mosaic, but Pauline Voute has provided a list of general characteristics:

> crab or lobster claws, antennae, a wild or languid expression, and often certain elements which seem to give an impression of mystery and the unknown, appropriate to the realm of water. These are vegetalised or shell ears, foamy cheeks and cheekbones from which seaweed fins project, and various fish entangled in the hair or escaping from the ears or beard.[12]

The motif itself was part of the traditional repertory and was originally a purely decorative element used for borders. Its development has been traced from an acanthus scroll pattern into a vegetal mask, which later took on sea deity attributes.[13] Its normal function was as a small corner decoration, so that four masks are regularly found on one pavement. The small Oceanus mask is common enough in Italy and Gaul, where it was used in black and white mosaic.[14] In Tunisia as well it continued to be used as a border motif on polychrome pavements, and to decorate

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[10]L. Foucher, *Inventaire des mosaiques, Sousse*, Tunis, 1969, p.122.
[11]Dunbabin, p.154.
[12]Voute, p.656.
[13]Dunbabin, p.149.
[14]Voute, p.646.

pottery.[15] A unique domestic nymphaeum in Nola, Italy, published by Pauline Voute, which has links to African nymphaea, also has an Oceanus mask in each corner. It must be stressed, however, that although Oceanus is found as a corner decoration on Tunisian pavements, he is never depicted in this way on the Tunisian domestic nymphaeum.

It is not Oceanus' appearance or attributes which have changed on the nymphaea, rather it is his size and location which increase his significance (Fig. 8). On all six basins a single Oceanus is placed in the center of the composition and magnified immensely. The enormous head with its huge eyes, staring forward or to the left from the middle of the basin, dominates all other elements. Surrounded variously by vegetation or marine life, fishing scenes, or nereids and tritons, Oceanus fills the center of the floor in all but one example; in the House of the Nymphs at Nabeul he is set in the center of the semicircular wall. (This mosaic is dated to the second quarter of the fourth century, and is the latest of the group.)

On these basins, Oceanus is obviously no longer simply decorative. His presence now has religious significance. He is here as the god of salt and fresh waters. Darmon has made this argument for the basin at Nabeul, and concluded that "le bassin tout entier évoque la présence, au coeur de la maison, d'Okéanos lui-même, dans sa double acception: dieu personnel et élément aquatique".[16] The religious character of this exact type of Oceanus has been discussed at length by Dunbabin, in reference to examples found on pavements in houses and baths in Africa. She is in no doubt that single, centrally placed masks of Oceanus were not considered to be decorative alone, rather, "the artists wished their work to express a religious concept of some sort."[17]

The six basin mosaics should obviously be included in this group, despite Dunbabin's seeming reluctance to do so.[18] Darmon has said that where Oceanus is found in a "cadre

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[15]see Voute pp.660-69 for examples in Africa.

[16]Darmon, p.88.

[17]Dunbabin, p.153.

[18]Dunbabin includes an Oceanus from a basin found in Carthage, now in the British Museum, in her list of masks which exhibit symbolic power, even though elsewhere she specifically excludes Oceanus masks on semicircular peristyle basins from this group, considering them to be decorative only.

cultuel bien précis" he must be regarded as mythologically significant, and he has convincingly shown that the basin in the House of the Nymphs does provide just such a religious context.[19] I see no reason to exclude any of the other five masks of Oceanus from the same assessment.

Dunbabin believes that the transformation of Oceanus into a symbolic motif on African mosaic occurred in the late third to early fourth centuries, as part of the general trend of that period towards the new style of increased "hieratic" abstraction.[20] However, Oceanus appears as a symbolic power on the nymphaea mosaics throughout the three hundred years of their existence, starting in the second century, and continuing to the end of the fourth (Chart 2). The association which Dunbabin makes between the new artistic style of the later period and the iconographic transformation of Oceanus is misleading. Certainly, the formalistic search for hieraticism alters the appearance of Oceanus somewhat, but neither his central position nor his monumentality are affected, as these were already present from a much earlier period. Iconographic and stylistic changes do not necessarily occur simultaneously, but may develop along separate paths. The religious character of Oceanus as he is found on nymphaea is as evident on the earliest example (Thuburbo 8a) as on the latest (Nabeul 1a). His presence on nymphaea throughout late antiquity in Africa thus argues against the idea, expressed by Dunbabin, of a revival of "talismanic" (as opposed to truly "worshipful") paganism in the late third and fourth centuries; rather, it suggests the persistence of "worshipful" pagan religion to the end of the fourth century. Aupert believes the public nymphaeum cult in Africa held on in later centuries, despite the pressure of Christianity,[21] and Thébert, commenting on the rarity of Christian motifs in mosaics of late Roman-African houses, wonders "whether Christianity penetrated the African ruling class very deeply until quite late, the fifth century at the earliest."[22] The nymphaeum mosaics support the hypothesis that the Oceanus motif was given symbolical significance as early as the second century, a situation which tallies more readily with the idea that he

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[19]Darmon, p.87.
[20]Dunbabin, p.157.
[21]Aupert, p.120.
[22]Thébert, *Private Life*, p.397.

represented something important to the "Punic religious consciousness" than does a very late transformation during the time when Christianity was intensifying its pressure. The result of this pressure is to be seen rather in the decline of the domestic nymphaeum, which we see occurring at the end of the fourth century.

(b) Neptune

Representations of Neptune, on the other hand, though rarely found on nymphaea, may provide more evidence for at least an iconographic change in the art of the late third century. Its scarcity on domestic nymphaea makes it difficult to draw firm conclusions as to its development and function in this context. There are only two African nymphaeum mosaics of Neptune (Oudna 5, Thuburbo Maius 3). As both examples place the deity at the center of the composition, in the same position as the Oceanus mask, they may be seen as a later addition of a newly popular god to the standard nymphaeum iconography, replacing in these two instances the normal representation of Oceanus (Fig. 7). Neptune is an obvious choice as the more personified god of water.

Sacred Countryside Scenes:

Nature scenes, which make up approximately twenty percent of the mosaics in the catalogue, may be divided into two types. The first are depictions of the "harvesting" of nature by mankind, in scenes of hunting or in images of game birds and animals in landscape settings. The second category depicts "non-edible" nature, and includes garden scenes and still-lifes of garden motifs, such as songbirds and flowers, as well as one mosaic from Mactar depicting Venus in a garden. Although nature scenes are fewer in number than marine scenes, they nonetheless represent a sizeable group, and are common throughout the three hundred years of the Tunisian nymphaeum's existence. They also correspond more closely to the iconography of the Italian nymphaea, where garden scenes, landscapes with buildings, fantasy architecture, and nature deities are prevalent.[23]

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[23]Sear, p32.

(a) Hunting and Game Animal Themes

When the marine and non-marine scenes are taken together it would appear that the most distinctive aspect of Tunisian nymphaeum iconography is the inclusion of scenes of the harvesting of nature, in the forms of fishing, hunting, and trapping, which represents an addition to the typical Italian scenes of nature "at rest." While the Italian iconography certainly portrays the abundance of nature, it is the African mosaicist who takes the more literal approach in depicting the actual use humankind makes of the gifts of the nature deities.

This group is distinct from the fishing scenes only in the sense that the act of harvesting takes place on dry, or at least marshy, land. Indeed it is possible that the use of hunting and trapping motifs on the nymphaeum was a logical development from the more commonly found fishing scene, since every example of this type in the catalogue contains (or retains) some element of water, either within the scene itself or on another part of the basin mosaic. The connection between the realms of water and land appears marked, or even emphasized, always within the broader context of the natural world. This link is most easily made by the presence of a marsh, in which both water and land animals may be found. There is only one known "nilotic" mosaic (complete with pygmy hunters) on a domestic nymphaeum,[24] however, there are several depictions of marshes with game birds and animals, often intermingling with fish (Fig. 9).[25] The *euripus* feeding the basin in the House of the Aviary in Carthage was covered with a mosaic combining hunting and fishing scenes in a landscape of water, marsh, fields, and forest: this is perhaps the most complete expression of the totality of life-giving nature on any of these mosaics.[26]

In the one case, on a mosaic from Sousse (Sousse 3), where no marsh is present in the scene itself, water still makes its presence felt on the basin. The wall mosaic depicts amphitheatre beasts in a landscape setting, while the floor is

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[24]Sousse 5.

[25]Thuburbo Maius 4b, Oudna 1, El Djem 4, possibly Bulla Regia 3b.

[26]Although the *euripus* is a common feature of Italian domestic nymphaea, this is its single occurrence in Tunisia.

decorated with a marine mosaic. This technique of placing a marine scene along with other nature scenes on different parts of the basin is more commonly found in the second category of garden scenes.

(b) Garden Themes

Most of the mosaics in this group may be classed as still-lifes, in that they evoke the garden with decorative motifs rather than by presenting us with a complete scene. Three types of motifs are used: flowers (in planters, in all-over decorative patterns, in garlands, or growing from the ground); fruits (in baskets or on the plant); and species of birds associated with gardens, such as songbirds or peacocks (shown free, caged, or in medallions).[27] A semicircular mosaic from the House of the Arsenal in Sousse, which by its architectural context and appearance is classifiable as a nymphaeum of the substitute basin type, combines game animals (a gazelle and ducks) with fruit, flowers, and vegetables in what Dunbabin calls a still-life of *xenia*-motifs.[28] In one case two pairs of erotes holding wreaths are set directly in front of the basin, along with the inscription *utere felix* (Carthage 1).

There are only two mosaics which portray actual gardens rather than individual motifs. The upper wall and rim of the basin in the House of the Figured Basin in Utica (Utica 3) is covered with a garden scene in which stand three human figures, all in frontal poses. The central figure is a male (identified tentatively as a "gladiator or soldier");[29] a woman stands on either side of him. The identities of these three figures are so far undetermined. This basin, dated to the late fourth century, was one of the last nymphaea to be built in Tunisia, and it exhibits other anomalies besides the presence of humans on its mosaic. Given the types of images found on other nymphaeum mosaics, I would expect these figures to represent a nature deity and attendants, but such an identification does not seem possible, nor does the central

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[27]for examples see Acholla 1b, Carthage 1, Carthage 3b, Oudna 4, Thuburbo 1b, Thuburbo 8a, Utica 2a.

[28]Dunbabin, p.269.

[29]*CMT Vol.I, Fasc.I*, p.126.

male figure bear any resemblance to early representations of Christ. This mysterious scene must await further analysis.

Another mosaic also portrays three figures in a garden, but in this case they are readily identifiable as Venus flanked by two erotes (Mactar 1b). The goddess is placed at the center of the composition, and is shown adjusting her sandal, leaning on a small tree for support (Fig. 10). The erotes on either side of her hold pots or baskets of plants. Picard has dated the peristyle in which this mosaic was found to the late second century, and Bourgeois has detected two stages of construction, to the earlier stage of which the Venus basin is assigned.[30] This basin is therefore not of late date, and cannot be seen as a later replacement of earlier iconography, rather, this Venus seems to be a unique representation on Tunisian domestic nymphaea. She fits easily into the central theme of the nymphaeum, however, that of the fertility and abundance of nature, and is at least iconographically appropriate for this context.

The majority of the mosaics mentioned above retain a connection with water iconography, since they are found on basins which also possess marine mosaics of one kind or another. On Carthage 1 the garden motifs and inscription were placed directly in front of the basin, the floor of which was paved with a marine mosaic. Carthage 3b was built with semi-circular and rectangular niches, alternately paved with scenes of flowers and fish. Oudna 4 depicted birds in medallions, apparently inserted in a sea of fish. In a few cases garden motifs are found on the walls or rim of the basin, while the floor is covered with a marine scene (Thuburbo 8a, Utica 2a). Utica 3 employs the same technique, although the "marine scene" on its floor is merely a geometric pattern of zigzags, which may or may not have been intended to convey the idea of water (see below).

Only four basins in this group do not possess water-related iconography on their mosaics at all (Acholla 1b [two basins], Mactar 1b, and Thuburbo 1b). Interestingly enough, however, the peristyles in which these basins were found all contained another semicircular basin, in each case paved with a marine scene.

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[30] C. Bourgeois, "Les bassins de la Maison de Venus," *Recherches archéologiques franco-tunisiennes à Mactar I, i.*, Rome, 1977, p.216.

Magical Symbols:

Those motifs which may, by their "seemingly arbitrary magical symbolism,"[31] be distinguished from images which acquire significance by context are rare. In fact, of the many magical symbols found on African mosaics,[32] only the millet stalk and the gorgon's head are in evidence on the basin mosaics, and even these two are uncommon. The millet stalk generally plays a minor compositional role, as a decorative border or as a small space-filling element, although it is occasionally granted a more prominent position. Regardless of its position it always functions as a good luck symbol, at least in Africa.[33] The gorgon's head, on the other hand, may be said to be apotropaic only when it is found as the main element of a composition, since it was widely used for decorative borders without particular symbolic value.[34]

The millet stalk is attested for on only two basins (Bulla 2a and Thuburbo 8b). On Thuburbo 8b it is the dominant motif on an otherwise purely geometric mosaic, whereas it is used as a decorative (though prominent and distinctive) border on the floor of Bulla 2a. It must be said that severe damage to the mosaics of many basins, as well as inadequate descriptions of many more, may be partly responsible for the scarcity of this particular symbol, as borders are often in poor condition or overlooked by scholars traditionally more interested in the central scene.

One basin was decorated with a gorgon's head (Mokenine 1), and the position of the head in a central medallion, bordered by fish and volutes, implies that it is here as a magical symbol, intended to attract protection and good luck to the household.[35]

Geometric and Unpatterned Mosaics:

A large number of basins have either geometric patterns or even plain white mosaic as their central decoration (of the catalogue listings approximately 15% have geometric mosaics, another 9% are covered with plain white tesserae).[36] In some

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[31]Dunbabin, p.161.

[32]see Dunbabin for a comprehensive listing, pp.161-172.

[33]This symbol appears to be unique to North Africa. Dunbabin, p.171.

[34]---, p.163.

[35]The peacock was also used as a symbol of good fortune from the third century; nevertheless, the one instance of a peacock (Utica 2a) was probably intended simply as an appropriate motif for a garden scene, its normal function in the second century.

[36]Naturally, many more possessed geometric borders, but an investigation of border decoration is beyond the scope of this thesis.

cases no description beyond the term "geometric" is provided, but basins still *in situ* provide numerous examples of the kinds of patterns employed. The zigzag or chevron pattern occurs most often (Fig. 11). While there are no more than one or two examples of any other pattern, the zigzag is dominant on eight basins. The frequency with which the zigzag occurs and the tendency to see this particular pattern as a stylized representation of water waves[37] may lead to an assumption that the zigzag was widely used on nymphaea as a replacement for figural scenes, a poor-man's marine scene, as it were. However, this would be misleading, because the zigzag is heavily concentrated in only one urban centre, Thuburbo Maius, and is found in several very substantial houses, one of which also possessed a basin with an elaborate, figural, marine scene.[38] At the moment I am not inclined to automatically connect the zigzag with marine iconography. Although it may well have been designed as such by a local workshop in Thuburbo Maius, it did not gain wide currency, and its single occurrences in Thina, Bulla Regia, and Utica may have been for decorative purposes only, without reference to water, like the other geometric patterns, which cannot have been anything more than aesthetically pleasing designs.

There are five of these patterns, as follows: perspective cubes (Bulla 2a, Thuburbo 5), ribbons and lotuses (Althibouros 1A, Utica 4), scrolls (Bulla 3a), hexagons (Bulla 8), and pelts (El Djem 5). There are ten basins paved with plain white mosaic, as well as one covered with unpatterned polychrome tesserae.[39]

Unlike hunting and garden scenes, geometric mosaics are rarely accompanied by marine mosaics. Only two out of twenty basins with a central geometric motif have marine iconography on the margins or rim (Bulla 2a, Bulla 8), and of the group paved with unpatterned mosaic, only one has a marine scene on the walls (El Djem 4).

Inscriptions:

Writing on these mosaics is confined to four examples, three of which are inscriptions proper, while the fourth simply contains two named erotes, *Navigius* and *Naccara* (Carthage 9). Naming

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[37]see for example Darmon, *Nymf.Domus*, p.91.

[38]Basins with zigzag patterns are: Thuburbo Maius 2, 7a, 7b, 8b, 10; Thina 1; Utica 3; Bulla Regia 3c.

[39]Basins with unpatterned mosaic are: Bulla 1, Chebba 1, Dougga 3a, El Djem 4, Sousse 7, 9, Utica 6a, 6b, 11, 13a, 14b.

figures on mosaics was fashionable in the third century, though mythological figures are not commonly treated in this way. It is more often the contemporaries and familiars of the patron who are accompanied by names.[40] A pavement in the House of the Horses in Carthage has an eros named *Vernaclus*, and a *piscina* in the Sousse Museum (Foucher *Inv.Sousse* 57.159) also contains four named erotes. Therefore, although unique for a domestic nymphaeum, named erotes were not unknown.

The three inscriptions are each distinctive, and quite unrelated in type. The most interesting for my purposes is that on the large basin from Nabeul (Nabeul 1a) which has provided the house it was found in with its name: *nymfarum domus*. The significance of this inscription will be discussed in Chapter 4. The inscription is placed on the top of the semicircular wall and thus forms part of the basin mosaic itself.

The other two inscriptions are set on the floor immediately in front of the straight wall, as a mosaic border. The basin from the House of Ariadne in Carthage (Carthage 1) was furnished with the words *utere felix*, no doubt a simple wish for good fortune of a type common in Tunisia.[41] The inscription in front of a basin in the House of the New Hunt in Bulla Regia (Bulla Regia 10) is of another sort entirely, and adds a new element to the nymphaeum, one which is found nowhere else. The inscription is in Greek (ΕΝ ΕΑΥΤΩΤΑCΕΛΠΙΔΑCΗΧΗ) which may be translated as "put your hopes in yourself." The philosophical nature of this admonition is quite unprecedented in the iconography of the Tunisian nymphaeum, and must be seen as an anomaly, perhaps due to the particular interests of a learned patron.

Interpretation:

The scholar is frequently warned against attaching too much symbolic importance to motifs which are widely-diffused and more often than not used merely for decoration. The ancient mosaicist drew on a standard repertory to fulfil commissions of all kinds, and there were few, if any, motifs which were so intrinsically symbolic that they could not be widely used decoratively, with no particular meaning attached. This includes every motif found on the basin mosaics. There were never two distinct categories of images, one appropriate for secular expressions, and the other for sacred. In classical art function did

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[40]Dunbabin, p.60.

[41]see Dunbabin pp.162/3 for other examples of this type.

not generally play a major role in determining the kinds of motifs appropriate for particular settings. The mosaicist was generally at liberty to draw on the whole canon of images at any time, and it was really the choice of the image and its placement in juxtaposition with other images which provided its "meaning," if any were intended.

However, there is no doubt that the ancient artist most certainly did on occasion intend to portray symbolic subjects for religious reasons. Due to the nature of Roman iconography it is impossible to determine the exact significance of a particular image when examined in isolation, because of its constant occurrence in many different settings, for different reasons. Instead one must examine its context, its position in a composition, its relation to other motifs, its frequency of occurrence in similar settings, and the presence or lack of other kinds of motifs accompanying it.

African mosaic was in fact more sensitive to its architectural setting than most ancient mosaic. Although the repertory was often indiscriminately used simply to decorate a surface, a greater proportion of mosaics in Africa than elsewhere in the Roman world were designed to enhance the function of the space they decorated.[42] When all the basin mosaics are analysed as a group it becomes apparent that certain choices were being made as to what sort of iconography should be used and not used. Marine, hunting, and natural landscape scenes were ubiquitous in Africa, but so were many other types of scenes, none of which are found on the basin mosaics. Notably absent, especially considering their frequent appearance in African mosaic in general, are scenes of daily life, including farm life, seasonal cycles, and domestic life (with the exceptions of hunting and fishing in natural, as opposed to rural, environments, or still-lives of *xenia* harvested from nature). Also missing are the amphitheatre and circus scenes so common on Tunisian floor mosaics, the literary subjects, and any reference whatsoever to Dionysiac imagery. The total absence of Dionysos on these mosaics is one of the important differences between the Pompeian domestic nymphaeum and the African, and it must be assumed that Africa did not adopt its nymphaeum iconography from Italy, nor perhaps the shape of the nymphaeum itself, which also differs significantly.

It is thus clear that certain images were felt to be suitable for the nymphaeum, while others were not. All of the figural mosaics,

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[42]Dunbabin, p.126.

which make up seventy-five percent of the total, portray one basic theme: the fertility of Nature and the glad abundance she provides for man, which is, of course, the religious purpose of the nymphaeum.[43] On the African nymphaeum it is the fertility of water which dominates, though not exclusively. Dunbabin has noted that images of Venus, gardens, birds, flowers, and fruits are a "general evocation of the beneficial favour of Nature,"[44] and she ascribes images of sea life to the same desire when commenting on their widespread use in African houses.

> Perhaps...the representation of the rich profusion of the fruits of the sea, like those of the land, was regarded as having the power of increasing or preserving the prosperity of the house.[45]

Both the scenes of abundant nature and the presence of the deities Oceanus, Neptune, and Venus, who are always portrayed centrally with flanking attendants, are fully compatible with the traditional mythology of the nymphs' grotto. The most innovative feature for nymphaeum iconography is the collection of "harvesting" scenes, that is scenes of hunting and fishing. African mosaics are full of such scenes. The depiction of human activity, a greater literalism, and a strong interest in vibrant daily life, are all distinguishing aspects of African art, which had a well-developed repertory of such images from the second century. Though non-traditional, there is nothing in these images which could be said to be incompatible with nymphaeum mythology, indeed, they simply emphasize the link between the gifts of Nature and the humans receiving them. The artist was apparently free to make use of the full reservoir of images available to him, both traditional and new, as long as the images chosen suited the mythology of the nymphaeum.

The African predilection for marine motifs should be seen as the reason for giving them first-place on the nymphaeum. There is again no difficulty in using marine scenes in this context. Africa and the eastern provinces both emphasized the watery component in the myth of the nymphs' grotto in their art. It has been proposed[46] that marine scenes were deemed appropriate for these basins largely because the presence of actual water in many of

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[43]I exclude the gorgon's head mosaic from Mokenine, which seems to be the single anomaly.

[44]Dunbabin, p.166.

[45]---, p.126.

[46]Dunbabin, p.151.

them suggested it, however, as I have shown above, these marine scenes have a well-established relevance to the mythology of the nymphs' grotto, and I would therefore argue that it is not necessary to reduce the significance of such imagery in this context from an evocation of "sacred water" to one merely of "water," especially since the actual water in these basins was also meant to evoke the primordial life-giving water personified by the deity Oceanus. Equally, an argument that only marine scenes are appropriate in this context leaves out all the other non-marine imagery found on these mosaics. In fact the whole range of images (marine, landscape, hunting, fishing, and garden scenes) were chosen because of their suitability for the cult of the nymphs' grotto, or in other words, because of their religious significance. This iconography is paramountly an expression of a nature cult. It is no more useful to argue that basins with marine scenes contained water than that basins with non-marine scenes did not.

Wall Mosaic

Wall mosaic in the Roman world is quite rare, but it is known to have had its origins in nymphaeum decoration. In fact, until the first century A.D. wall mosaic is only found on nymphaea, where it originally began as inlays of shells, marble chips, and, later, coloured glass, applied to the curved surfaces of the walls, in an effort to imitate the appearance of natural grottoes.[47] The questions I wish to address here are whether the presence of wall mosaics on Tunisian water basins can be used to argue for their function as nymphaea, and if not, whether the use of wall mosaic in Tunisian houses represents a change from earlier practices in the area of domestic decoration.

In the second century the use of wall mosaic in Italy expanded to include mithraea, tombs, and the occasional garden entrance wall (in the latter position it seems to have been an attempt to incorporate the whole garden into the nymphaeum, as a "sacred grove"). Mosaic also began to be used on vaults, and in baths, presumably because of associations with the nymphaeum made by the presence of curved walls and water. By the third century wall mosaic had been adopted for use in Christian baptisteries, for the same reasons. It is apparent that, with the

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[47]Sear discusses the development of wall mosaic in the Roman world, pp.20-30.

exceptions of vaults and baths, all other contexts for wall mosaic in Italy in the Roman period were religious.

The peristyle houses of Pompeii were extravagantly paved with mosaics, but wall mosaic is only found in one location: on the nymphaeum in the peristyle. The peristyles of Pompeii contained a great variety of pools, basins, and decorative fountains, none of which were ever covered with mosaic. This is a point I wish to stress, because it would seem that the mere presence of water was not enough to encourage the use of wall mosaic. In the Pompeian house it is only the nymphaeum which is so treated. The conclusion must be that in the Italian house wall mosaic was associated intimately with religion, more specifically with the nymphaeum. Thus a mosaic fountain discovered in an Italian house may be identified as a nymphaeum with a high degree of confidence.

Unfortunately, one cannot say the same of mosaic basins in Tunisian houses. There is not there the same division as we find in Pompeii between mosaic nymphaea and decorative basins and fountains (which were painted or carved). In Africa from the second to fourth centuries wall mosaic is found in three contexts: public nymphaea, baths, and peristyles.[48] In the peristyle it is not only the nymphaeum which is so treated; wall mosaic is also found on *piscinae* and decorative fountains, neither of which can be considered in any way sacred. This may be seen as a development in which wall mosaic in the home has begun to lose its symbolic significance and is considered appropriate for decorative fountains and pools. The secularization of wall mosaic which we see in baths is equally apparent in Tunisian houses. Whether this trend originated in Tunisia or developed at the same time in Italy and Africa remains to be seen, but it seems to have been an established practice in Tunisia by the second century.[49] In any case, since the use of wall mosaic in the peristyle is no longer associated only with the nymphaeum, it cannot be used to determine a sacred function. The domestic nymphaeum must be identified using other criteria, such as location, size, and the iconography of its mosaics.

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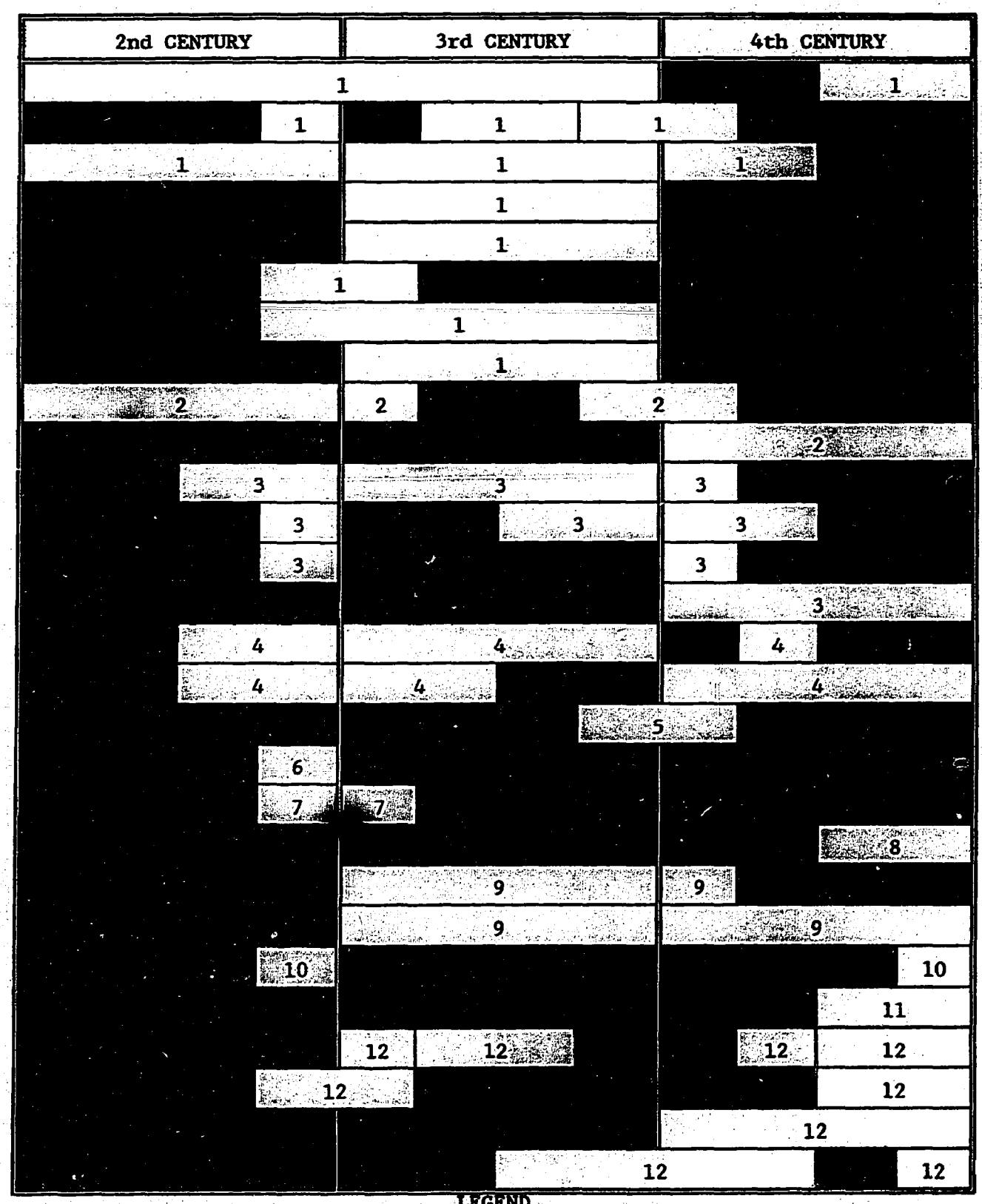
[48]Dunbabin, p.27, n.54; Ennaifer, p.25.

[49]Sear, whose work covers these centuries, gives no indication that wall mosaic is found in any context other than the nymphaeum in Italian houses.



LEGEND

1. FISH
2. FISHING SCENES
3. MARINE FANTASY
4. OCEANUS
5. NEPTUNE
6. VENUS
7. HUNTING SCENES
8. GAME ANIMALS
9. GARDEN MOTIFS
10. GARDEN SCENES
11. MAGICAL SYMBOLS
12. GEOMETRIC

CHART 1: NUMERICAL DISTRIBUTION OF MOSAICS BY SUBJECT

SUBJECT	NO.	CATALOGUE LISTINGS
FISH CATALOGUE	31	Bulla Regia 2b;4, Carthage 3b;4;6;11, Dougga 1a;1b;2a;5;6, El Djem 1a;4, Gamart 1, Mokenine 1, Oudna 1;3;4, Sbeitla 1, Sousse 3, Tebourba 1, Thuburbo Maius 1a;4a;9;12, Utica 2a;2d;5a;5b;10;12
FISHING	10	Bulla Regia 2a;8, Carthage 3a;12, El Djem 2, Thuburbo Maius 3;8a;11, Utica 2a;8
MARINE FANTASY	14	Acholla 1a;2, Carthage 1;9;13, Mactar 1a, Oudna 5, Sousse 2, Thuburbo Maius 1a;8a;9, Utica 2c;7;9
DEITIES	9	Acholla 2, Carthage 2, Mactar 1b, Nabeul 1a, Oudna 5, Sousse 2, Thuburbo Maius 3;8a, Utica 1
HUNTING	3	Carthage 3a, Sousse 3;5
GAME ANIMALS/STILL LIFES	5	Bulla Regia 3b, El Djem 4, Oudna 1, Sousse 10, Thuburbo Maius 4b
GARDEN SCENES	2	Mactar 1b, Utica 3
GARDEN MOTIFS	9	Acholla 1b;3, Carthage 1;3b, Oudna 4, Sousse 10, Thuburbo Maius 1b;8a, Utica 2a
MAGICAL SYMBOLS	4	Bulla Regia 2a, Mokenine 1, Sousse 10, Thuburbo Maius 8b,
GEOMETRIC	23	Althibouros 1a, Bulla Regia 2a;3a;3c;7;8;9b, Carthage 3c;5;8, Dougga 3b, El Djem 5, Nabeul 1a, Sousse 6, Thina 1, Thuburbo Maius 2;5;7a;7b;8b;10, Utica 3;4
UNPATTERNED	10	Bulla Regia 1, Chebba 1, Dougga 3a, Sousse 8;10, Utica 6a;6b;11;13a;14

Chapter 4. Architectural Context and Function

Architectural Context

The setting *par excellence* for the mosaic-lined basin is the peristyle garden. This is as true of the Roman-African as of the Italian house. As the largest open-air space in the urban villa, the peristyle was the prime location for greenery, and provided the inhabitants with an important psychological link to "nature." The feeling of awe provoked by contact with the natural world was an important part of Roman religion.[1] The Romans wished to find literal expression of this religiosity by planting gardens in the image of the sacro-idyllic landscape. The garden was not purely sacred (as in most areas of artistic expression the Roman consciousness tended to combine the sacred and the profane in a single package), but it always contained a sacred element. As Grimal says, "toujours, dans ces jardins et le paysage qu'ils representent, se produit une oscillation entre le paysage sacré et le paysage profane."[2] It is a distinguishing feature of Roman gardens that religion, daily life, and aesthetic considerations were there combined. The result was an area of the house where the distinction between religious and secular life was blurred.[3]

In both Italy and Africa the nymphaeum was most appropriately set in the garden of the peristyle, where it acted as a focus for the garden's sacred aspect.[4] The peristyle-garden performed several functions, such as providing a region for fresh air and greenery, space for work and movement, etc. Its religious function was always of great importance, however, and the nymphaeum in Pompeii is only one of several architectural features which emphasized this. In Africa the nymphaeum seems to have been the main or only religious component of the peristyle. The African peristyle does not appear to have been

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[1]Grimal, *Jardins romaines*, p.336.

[2]---, p.337.

[3]Grimal (p.338) calls the Roman garden "une zone indécise" between these two impulses.

[4]---, p.307. "...le 'nymphée' proprement dit n'est qu'un thème de paysage au centre de ce que nous avons appelé une 'cellule architecturale,' une véritable mise en scène sacrée aménagée dans une péristyle..."

fitted with the various small sacred structures, such as *lararia*, which provided architectural interest in the Italian peristyle.[5]

In the vast majority of Tunisian houses the nymphaeum is confined to the peristyle, however the catalogue contains ten entries which give another context for a nymphaeum. Seven of these basins were excavated at the turn of the century or earlier, and I am not prepared to say whether the terms used to describe their settings are accurate. In any case these seven basins are described variously as being found in "*atria*," "*impluvia*," "courtyards," and in one case, a "vestibule."[6] The oddest arrangement (Sousse 6) is that of a basin placed in the "east arm of a cruciform-shaped room,"[7] perhaps indicating that this basin is actually part of a bath. It is possible that all of the above terms actually refer to peristyles, as words like *atria*, courtyards, and peristyles were often used interchangeably (as is still often the case). As the original excavation reports are unavailable it is impossible to say one way or the other.

Three houses excavated more recently, on the other hand, do contain basins in open-air areas other than the peristyle. Interestingly, these three exhibit similar characteristics in the placement of their extra-peristyle basins. The houses in question (the House of the Peacock in El Djem, the House of the Nymphs in Nabeul, and the House of the Cascade in Utica) are part of a select group of the largest and most sumptuous townhouses in Africa Proconsularis.[8] The House of the Nymphs and the House of the Cascade both have two courtyards flanking the *triclinium*, in each case fitted with basins. The northwest courtyard in the House of the Nymphs contained an *impluvium*, which was refitted with a small basin, which was not mosaic-lined (Fig. 12). The northeast courtyard contains a similar basin, also without mosaic, though painted with a seashore scene. The House of the Cascade has the same flanking courtyards, but the basins in them were far more elaborate. Only the south basin has survived, but it is a real mosaic-lined nymphaeum complete with fountains.

In the House of the Peacock two basins were found in a courtyard on the side of the *triclinium* opposite the peristyle. Two

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[5]cf. Apuleius, Apol.55,8, where the lararium is in the library (*bibliotheca*), not the peristyle.

[6]Carthage 3, 8, Dougga 4, Oudna 1, 3, Sousse 6, Tebourba 1.

[7]*Inv.Tun.*, no.150.

[8]Other houses of equal or greater size are: the House of the Asclepeia in Althibouros, the House of Neptune in Acholla, the House of the Laberii in Oudna, and the House of the Fishers in Bulla Regia.

corridors on either side of the *triclinium* linked the smaller courtyard to the peristyle. The basin on the west side of the courtyard faced a second, smaller *triclinium*. All three houses were fitted with a semicircular basin in the peristyle itself, facing the main *triclinium*. Thus we see that the extra-peristyle basins are all connected to the *triclinium* in some way, as are the basins in the peristyle. They may be elaborations on the normal nymphaeum placement, as part of the ostentation of these particularly magnificent houses.

The association of the nymphaeum with the *triclinium* appears to be of great importance. In every house with *nymphaea* for which a floor plan exists, a *nymphaeum* was placed directly in front of the main entrance to the *triclinium*, so that it was visible from the dining couches. This arrangement differs from the Pompeian examples, although a few points of agreement may be found. The Pompeian nymphaeum did not face the *triclinium*, rather it was placed against the back wall of the garden, in a position that made it visible from the street entrance.[9] It was often, however, associated with the "summer *triclinium*," a small, permanent structure, used for dining *al fresco*.[10] The nymphaeum quite often forms the back wall of the summer *triclinium*, or is placed on an axial viewpoint. The summer *triclinium* evolved out of public open-air dining rooms devoted to funeral feasts in honour of dead heroes, and as such originally had a sacred character. Grimal believes that even in private houses the summer *triclinium* still retained a certain symbolic significance related to its original funeral associations, although this survival was not necessarily conscious.[11] It may be that a similar attitude prevailed in Africa and that dining was still considered a semi-sacred act. In the absence of summer *triclinia* this religious feeling was focused on the main *triclinium*. Whether the link between the nymphaeum and the *triclinium* still carried conscious symbolic undertones in late Roman Africa, or whether this had simply become a traditional arrangement is open to question.

One house in Pompeii, the House of Loreius Tiburtinus, has an arrangement of the main *triclinium* and a fountain-apse which is identical to that found in Africa, although the fountain-apse in question is not a nymphaeum (a nymphaeum and summer

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[9]Jashemski, *Gardens of Pompeii*, p.41.
[10]Adam, p.248.
[11]Grimal, p.262, and pp.394/5.

biclinium group is found at the end of the terrace). In this house the fountain-apse (which has already been compared to the fountain-basin in the House of the Fishers in Bulla Regia) faces the main entrance to the *triclinium* across a narrow terrace. I would not suggest that this single example could have had any influence in North Africa, but it does show that such an arrangement was not unknown before the second century. The African tendency to place the nymphaeum in front of the *triclinium* seems to be an adaptation which combines the symbolic and the secular, a trait which is also apparent when aspects other than location are considered.

African peristyles often contain two or more nymphaea. I have determined that in the majority of cases the additional basins are placed according to three different patterns. In the first pattern (Fig. 13), two or three nymphaea are placed together, all facing the same direction, in effect creating a single, large, double- or triple-apsed nymphaeum facing the *triclinium* (Acholla 1, Bulla Regia 9). The second pattern is also the result of a desire for symmetry, but in this case a second basin is placed at the opposite side of the peristyle, facing in the other direction. Depending on the degree to which the symmetrical basin placement was incorporated into the original design of the house, the second basin may face a second *triclinium* (Althibouros 1b), another room (El Djem 1b), or simply a blank wall (Althibouros 2).[12] The third pattern (Fig. 14) is a nonsymmetrical arrangement, in which a second nymphaeum is placed so as to face a second important room, wherever it might happen to be (Thuburbo Maius 1b; El Djem 6b). In one case the desire that a second nymphaeum face another large room resulted in its being located outside the peristyle (Thuburbo Maius 8a). We thus see that two different impulses were at work when the determination where extra nymphaea should be placed was made: the desire for simple geometric symmetry, or for an association with additional rooms. These two criteria come together most effectively in the House of the Asclepieia in Althibouros, where the symmetrical location of the two *triclinia* permitted the placing of the nymphaea on axis (Fig. 15).

There remain six houses whose extra nymphaea cannot be fitted into any of the above patterns. The Venus basin in the House of Venus in Mactar is set against the back wall at the end of

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[12]In the other instance, House of the Protomes, Thuburbo Maius, the area in front of the second basin is unexcavated.

one of the aisles of the peristyle (the other semicircular basin is in a normal position facing the *triclinium*). As the peristyle wall cuts through the basin at an angle, and as the basin itself is on axis not with the peristyle but with the rest of the northwest side of the building, its unusual location may be due to its being part of a construction phase predating the present peristyle.

The peristyle of the House of the Palms in Thuburbo Maius was too tiny to allow the basin its normal location, as it would have filled the entire inner area of the courtyard (Fig. 16). Instead it was placed in the aisle (which it blocks completely) and faces the *triclinium* across the center of the peristyle. It is interesting that this particular configuration, in which the nymphaeum is placed against the wall, mimics the Pompeian nymphaeum more closely than any other, and it may be wondered if this was an intentional arrangement rather than one dictated by necessity. The basin in the House of the Figured Basin in Utica was also placed against the back wall of the aisle, facing the central area of the peristyle rather than towards the aisle from the centre, as is usual. In this case, the peristyle is of normal shape and size, so the reason for this arrangement cannot be ascertained.

The basin on the main floor of the House of the Fishers in Bulla Regia, although in a standard position along the line of the colonnade, unaccountably faces a blank wall, and there is no basin on the opposite side to justify such a position.

The Edifice of the Three Basins in Thuburbo Maius exhibits an unusual placement of its two extra basins. The peristyle in this case is "incomplete," having only two colonnaded aisles instead of four. The first basin faces a *triclinium* in the accustomed fashion; a second basin blocks the northwest aisle at its end, preventing access to whatever lay beyond. The third basin is north of the second, facing the entrance to an unknown room to the northwest. All three basins protrude onto a large, nine-sided courtyard, which is a rather unusual shape for a peristyle garden. I suspect that this area has never been excavated properly, and that the basins may belong to different houses or phases.

As a final note, a house in Pupput (the House of the Viridarium), for which I have only seen a floor plan, and which is apparently unpublished, appears to have no fewer than eight basins or substitute basins in its peristyle, at least five of which were mosaiced. If this is indeed the case this must be the most unusual multiplication of nymphaea in a Tunisian house.

Function

Although I have focused much of my attention on the nymphaeum, it is obvious that not every basin found in a Tunisian peristyle can be called such. It would be useful to discover those features which may assist in identifying a basin's function, whether religious, decorative, or utilitarian. When compiling the catalogue every effort was made to exclude *impluvia* and *piscinae*, as being too large to properly be called "basins."[13] What remains once large structures are omitted can be divided by function into the three general groups noted above. The uses to which these three types of basins were put may be summarized as follows: the utilitarian basin provided water for the physical needs of the household; the decorative fountain/basin gave pleasure visually and aurally by the play of water; the nymphaeum satisfied the same aesthetic need, with an additional spiritual/religious element.

Decorative basins which carried no sacred connotations are sometimes found in the Tunisian peristyle, although less frequently than is the case in Italy. The purpose of this type of fountain was to enhance the environment of the garden aesthetically. It is my impression that small basins described as "oval," "octagonal," or "circular," are likely not nymphaea, but rather fall into this group, as all examples of nymphaea still *in situ* are semicircular or square-sided. As with decorative basins in Italy, it was the spray of water from fountains, rather than quiet standing water in basins, which was most desired, so this type was usually fitted with water-jets or marble fountains (see for example Althibouros 1c). Mosaic was not an essential decoration for the decorative fountain, although not unknown. Plain white mosaic is fairly common (Chebba 1, Sousse 8), and marine scenes are also found (Oudna 1, Tebourba 1). Besides their shape, decorative basins may be distinguished by their location, which is normally in the center of the peristyle rather than along the line of the colonnade (Althibouros 1c is an exception to this). It is more difficult to distinguish between a nymphaeum and a decorative basin in Africa than in Italy, where the two types were completely different. Perhaps the best method is that of

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[13]Some of the entries culled from early inventories lack dimensions, and thus may be too large. For the sake of completeness it was decided to err on the side of caution, and include them in the catalogue.

exclusion: if a basin does not possess the characteristics of a nymphaeum it likely functioned only as a decorative garden element.

The second type of basin is easily identifiable as having a purely utilitarian function, because of its coarseness of design. No effort was made to enhance its appearance. The utilitarian basin is equally as rare as the decorative basin in the Tunisian peristyle, which seems rather surprising. Its apparent scarcity may be due to less-than-thorough excavation reports, and it has perhaps been overlooked or destroyed by excavators because of its plain, unsophisticated nature. The appearance of these basins has already been described (see Chapter 1), but a quick summary is in order here. They are small, irregularly-shaped, roughly constructed, and surfaced either with *opus signinum* or *opus figlinum*. They are usually, though not always, set against the back wall of the peristyle, and they tend to have large holes for water intake and drainage.

The largest group of basins is that of the nymphaeum, which although naturally decorative, and intended to evoke a pleasurable aesthetic response, primarily fulfilled a religious function. The nymphaeum is ubiquitous in Tunisia, and by its multiple occurrences in the peristyle seemingly preferred by the African houseowner to any other kind of basin. Does this mean that the Roman-African was more religious than his fellow Pompeian, or simply that by the second century in this region the decorative aspect of the nymphaeum was at least equally as important as its religious aspect, so that it was seen not only as a religious focus but as an indispensable part of the decorating scheme of any properly designed Roman-African house? I favour the latter interpretation, since the African nymphaeum displays certain secularising tendencies not seen in the Pompeian nymphaeum, one of which is its proliferation in some houses in what is obviously a decorative manner. The nymphaeum is not found only in the largest houses. Every size of house was fitted with a nymphaeum, the only apparent requirement being the presence of a peristyle, no matter how tiny.

Before identifying the essential characteristics of the African domestic nymphaeum I must first justify the use of this term to define this particular group of basins. The word "nymphaeum" has been erroneously used in modern times to denote any sort of large fountain, but in the ancient sources the nymphaeum always denoted a sacred place. Grimal is emphatic that the word had no other useage.

> Le mot de nymphaeum, mot grec et senti comme tel, ne peut s'appliquer qu'à des édifices sacrés, des sanctuaires des Nymphes, réel ou fictifs.[14]

The nymphaeum in literature is the nymphs' grotto itself, in architecture it is a structure designed to imitate the natural grotto. Both public and private nymphaea were located in the garden, which in the case of the urban house meant the peristyle.[15] The domestic nymphaeum's roots lie in the Eastern Empire, but it found favour throughout the Roman world, and although few now survive elsewhere than in North Africa, due to their generally poor construction, it had a long life (to as late as the sixth century in Rome and Ephesus, according to Neuerburg).[16] It would not then be unreasonable to expect to find some sort of nymphaeum in a Tunisian peristyle. To be sure, the African type, in all its modesty of design, looks even less like a natural grotto than its Pompeian counterpart, but this does not mean that it was not intended to represent one. As Darmon says of the example in the House of the Nymphs at Nabeul, "the nymphs' grotto is here reduced to its most simple expression: a basin of modest dimensions, of which only the semicircular shape recalls the caves of Homer's archetypal grotto" (my translation).[17] Pauline Voute has come to a similar conclusion, albeit from an Italian point-of-view, in her discussion of an unusual (for Italy) nymphaeum in Nola. This particular basin bears so many resemblances to the African type (especially to Utica 2a) that it seems probable that either the designer or the patron had African connections. Unaware of the existence of this type of structure in Africa, Voute describes the Nola basin as a "very simplified version" of the Pompeian nymphaeum.[18] She is aware of at least some of the North African influence on this basin, to which she attributes the style and polychromy of its mosaic. Indeed, she believes the

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[14]Grimal, *Jardins romaines*, p.307. Aupert (p.119) makes the same argument for this restricted meaning of the word in the ancient sources, which he describes as always evoking an "atmosphere de respect" when speaking of nymphaea. Adam (p.259) and Aicher both associate the ancient nymphaeum with a ritual or sacred function. P. Aicher, "Terminal Display Fountains (*Mostre*) and the Aqueducts of Ancient Rome," *Phoenix* 47 no.4, 1993, pp.341-350.

[15]Neuerburg, p.61.

[16]Neuerburg, p.63. Neuerburg does not include African examples in his study.

[17]Darmon, p.148.

[18]Voute, p.643.

mosaic is so African in appearance as to speculate that this basin may be an "exemple isolé et d'avant-garde des apports africains en Campanie, dont le rôle décisif n'a été reconnu qu'au Ve s."[19]

Simplified as the African nymphaeum may be, it still manages to incorporate most of the essential qualities of a proper nymphaeum. The two most important requirements, that it have an apsidal or niche shape, and mosaic decoration, are amply fulfilled. (The few square-sided examples were probably a later decorative variation, as they are not found in isolation but always in the company of semicircular basins.) The presence of mosaic on a peristyle basin in Africa does not automatically denote it as a nymphaeum, but the iconography of the mosaics is almost entirely appropriate for and consistent with the traditional mythology of the nymphs' grotto. Three other common elements of the Roman domestic nymphaeum may also be seen, although perhaps less emphatically. It is highly probable that fountain-statues were placed in or on the basins. The *euripus*, or water channel, a feature of some Italian nymphaea, is known in one case. Finally, the combination of nymphaea with garden *triclinia* appears to have been retained, although slightly adapted. Indeed the only important feature of the Pompeian domestic nymphaeum which is absent in the African type is the vertical facade, along with the waterfall which such verticality allowed. This particular element is so visually arresting that it is surely its disappearance in the African nymphaeum which has prevented its other similarities from being recognized by anyone other than Darmon. It was Darmon's analysis of the basin inscription, *nymfarum domus*, which provided the first indication that these seemingly unassuming structures may have had a rather exalted function.[20] This inscription is taken from the passage in Vergil (Aeneid 1,168) when Aeneas first sets foot on the shores of North Africa. Set into the cliff above is the nymphs' grotto:

> ... antrum
> Intus aquae dulces vivoque sedilia saxo,
> Nymfarum domus.

Here we have a basin which fulfills the requirements for a Roman nymphaeum, and which contains an inscription which specifically names it as such. One can only conclude, as Darmon does,[21] that all other basins of the same type must also be nymphaea, even

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[19]---, pp.671-3.
[20]Darmon, p.146-8.
[21]---, p.149.

though the African type is lacking somewhat in the grandeur of its Italian counterpart.

This brings us to the problem of basins and substitute basins. Can both justifiably be called nymphaea? It is obvious that the ability to retain water (i.e. the basin) is not a requirement for nymphaea outside of Africa. When the Italian range of designs is considered it becomes apparent that basins which hold water are a refinement of the essential nymphaeum, or perhaps one could say they are a decorative addition to the basic requirements of the design. The indispensable elements (the apsidal shape and the presence of running water) may be fulfilled with or without a retaining wall. I would suggest therefore that any semicircular structures found in the right location, with mosaics containing appropriate imagery may safely be called nymphaea. This is an important point, because there may be many nymphaeum mosaics no longer *in situ* which were not included in my catalogue, because their inventory descriptions did not include the words "basin" or "fountain." In reality, substitute basins probably did contain fountains, but this is not obvious when only the semicircular mosaic decoration has been preserved out of context.

Indeed, the whole issue of what is a nymphaeum and what is not warrants further study. It may be that there are more than two types of African nymphaeum. A careful investigation of the relationship between the nymphaeum and the *triclinium* might provide further illumination, as I have noticed other combinations of apses and *triclinia* which seem to evoke the nymphaeum. For example, the House of the Fishing Scene in Althibouros does not possess a peristyle nymphaeum, however, the entrance to its small *biclinium* is actually a double-apsed room paved with a marine scene.[22] The two apses are each decorated with an enormous bust of Oceanus, of the same type as found on nymphaea. Ennaifer makes no mention of these apses having contained fountains, but the way in which this arrangement echoes the nymphaeum may in future justify an expansion of the number of sub-groups. The enormous House of the Laberii at Oudna also possesses two apses paved with marine scenes on either side of the *triclinium*. This, too, may indicate a wider range of variation for nymphaea than the two types (basin and substitute basin) discussed here.

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[22]M. Ennaifer, *La Cité d'Althibouros et l'Edifice des Asclepieia*, Tunis, 1976, Pl.33.

The relationship between the architecture of the domestic nymphaeum, the water which flowed in it, and the cult they served requires further clarification. The cult of the nymphs' grotto was first and foremost a water cult, a celebration of the abundance of water in the natural environment. The cult applied equally to fresh water from springs, as the source of life, and to salt water from the sea, as the source of food.[23] The nymphaeum itself could evoke either kind of water. The earlier Pompeian version stressed the spring with waterfalls and appropriate imagery of verdant nature; the Tunisian nymphaeum emphasized the sea with its horizontality and the predominance of marine mosaics. But neither type necessarily nor even probably had either spring water or sea water flowing through them. The ideal of the nymphs' grotto and its expression in the home were quite different. In practise it was not necessary to have either kind of water present.[24] All that was really needed was water, and the most readily available kind was sufficient, as long as it was as clean as possible.

The "grotto" was no more natural in appearance than the water in it was pure spring or sea water. The entire structure was intended as a representation of the ideal rather than an effort at versimilitude, but this in no way diminished the efficacy of the cult. The essentially "artificial" nature of both the architecture and the water supply was the norm for nymphaea, both public and private, in Italy and in Tunisia. Aupert's assessment of the public nymphaeum at Lambese in Tunisia applies equally well to the domestic variety:

> ...elle atteste la pratique d'un culte effectif et dans un lieu qui n'est plus la source originelle et naturelle, mais un edifice entièrement architecturé, en plein ville et au débouché d'un conduit artificiel.[25]

It is concluded that the domestic nymphaeum, in Italy and in Tunisia, was a completely "unnatural" architectural structure which was intended to imitate a natural grotto, and furthermore, that certain standard, easily recognizable elements in construction and decoration served to evoke the nymphs' grotto satisfactorily

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[23]In theory it could be said that waterfalls and fountains were representations of spring water, and basins of sea water.

[24]For example, Aicher (p.341) has shown that a connection between public nymphaea and spring water brought into Rome by aqueduct was rare; normally nymphaea were not provided with pure spring water.

[25]Aupert, p.120.

for the requirements of the cult. The nymphaeum in Tunisia has a few unusual characteristics, however, which seem to indicate that a merging of function with decorative basins has occurred. My interpretation of the reason for these additional traits may be overly facile, but the fact that the Tunisian nymphaeum combines the qualities of the Pompeian nymphaeum and decorative fountain in one structure is easily shown. The Pompeian nymphaeum, as already noted, was a vertical apsidal structure, set against a wall, and decorated with mosaic. A basin was often placed beneath it to catch water, but the basin itself was not semicircular, but rather rectangular or circular, and bears no resemblance to the type of basin found in the Tunisian nymphaeum.[26] The decorative basin in Pompeii, on the other hand, despite its being covered with marble plaques instead of mosaic, and although it is only found in the center of the peristyle, is similar to the Tunisian nymphaeum in its construction. It is free-standing, and placed at ground-level. In addition, there are a few semicircular examples in this group (House of the Citharist, House of the Vibii; House of the Black Walls).[27]

The African nymphaeum may be seen as a structure which merges the characteristics of the two Pompeian types, in shape, location, and function. The lack of verticality and the correlative loss of a natural-grotto effect increases the visual relationship to similar low-level semicircular shapes found among Pompeian decorative fountains. In addition the association of the African nymphaeum with the main *triclinium* resembles the placement of decorative fountains more than nymphaea in Italy. The reason for this merging is likely that the nymphaeum became the main type of fountain/basin in Tunisia, and in the relative absence of purely decorative fountains was made to carry both functions. In many houses the semicircular nymphaeum is the only fountain in the peristyle, and thus must have been the main source of both a sensual pleasure in water and a sense of religious well-being, while in other houses its multiplication was surely intended to increase its function as a decorative element, since extra nymphaea are redundant for sacred purposes.

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[26]see Jashemski, *Gardens of Pompeii*, pp.41-43.

[27]---, p.21 no.28, p.34. The other type of decorative fountain, elevated and built of solid marble, is not relevant except in its normally being placed along the [illegible] of the colonnade, the standard position of the Tunisian nymphae[illegible]

The African nymphaeum thus seems to have had a rather pronounced secular aspect. Three possibilities suggest themselves for how this may have occurred. Perhaps this was a development in the Roman world at large, during the late first or early second centuries, after the Pompeian examples and before the African nymphaeum's first appearance. It is also possible that this type was adopted wholesale from another region, perhaps from the East (where marine iconography was normal for nymphaea, as in Tunisia). Finally, the merging of sacred and decorative qualities may have been a uniquely African interpretation of the proper function for a nymphaeum.

The final problem that must be addressed is that of the early demise of the domestic nymphaeum in Africa Proconsularis. If the decline of the mythological significance of classical motifs did not occur in Africa until the sixth century, as Dunbabin states,[28] why did the African nymphaeum cease to exist two hundred years earlier? In other parts of the Roman world the domestic nymphaeum survived as late as the sixth century,[29] but I am aware of no examples in Tunisia which are presently dated after the end of the fourth. Perhaps its discontinuance is a reflection of the political disruptions in the region in the fifth and sixth centuries, when Africa Proconsularis was conquered first by the Byzantines and later by the Vandals. The architectural styles favoured by the wealthy African landowners were probably abandoned as new rulers with new tastes took over the region, or less dramatically, the instability of the times perhaps provided little incentive for the construction of new houses.

Whatever the reason, we are left with no evidence of the domestic nymphaeum in Tunisia after the end of the fourth century, with one exception: the poem of the Vandal Luxorius, written two hundred years later, in praise of the construction of a "*nympha*" for watering horses. There is no longer the slightest hint that the word carries any sacred connotations, and it would appear that this beautiful structure, decorated with mosaic, and fitted with a fountain, was built solely to perform a utilitarian function. Whether Luxorius' *nympha* existed in the real world of sixth century Carthage or not, or whether he was only following a literary convention for descriptions of this sort (as discussed in Chapter 1), it is obvious that by Luxorius' time the African

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[28]Dunbabin, p.45.
[29]Neuerburg, p.63.

domestic nymphaeum's original function, as the shrine for the cult of the nymphs' grotto in the Roman home, had been forgotten.

Appendix 1

CATALOGUE OF BASINS

ACHOLLA

1. House of Neptune
   (a) Large semicircular substitute basin in peristyle. 3.41 m wide, 2.56 m deep. Mosaic on walls: nereids on sea-monsters; on floor: fish. 3rd quarter of 2nd c.
   Dunbabin, p.248; Gozlan, *Mon. Piot.* 59, 1974, pp94-135; Gozlan, *Karthago* 16, 1972, pp.41-99; Thébert, *History of Private Life*, p.352, fig. 15; Rébuffat, *MEFRA* 86, p.454, no.1.
   Bardo Museum, Acholla Room #33.
   (b) 2 semicircular substitute basins flanking (a). Holes on floor (leading to cisterns? for fountains?). Mosaic: flowers.
   location unknown.
   (c) irregular-shaped utilitarian basin in peristyle. No mosaics.
   in situ

2. House of the Lobster
   Fountain substitute basin. Mosaic floor: head of Ocean, surrounded by fish, sea-monsters, eros in boat. mid-late 2nd c.
   Mus.Bardo, p.124, Inv.3587; Dunbabin, p.248; Picard, *CRAI* 1947, pp.557-562; Picard, *BCTH* 1954, pl.115.
   Bardo Museum, Acholla Room #33.

3. House of Asinius Rufinus
   Semicircular substitute basin in peristyle, facing triclinium. Mosaic: flowers growing from a marble crater.
   Rébuffat, *MEFRA* 86, p.454, no.2; Gozlan, *Karthago* 16, pp.41-100, fig. 19; Picard, *Karthago* 4 1953, p.121-132; Gozlan, "Les mosaiques de la maison d'Asinius Rufinus à Acholla," *Fifth International Colloquium on Ancient Mosaics*, Ann Arbor, Michigan, 1994, fig.3, p.163.
   Location unknown.

ALTHIBOUROS

1. House of the Asclepieia
   (a) Semicircular basin on NW side of peristyle, facing a triclinium. 2.35 m wide, 1.09 m deep (exterior rectangle 2.35 m x 3.10 m). Semicircular wall contains five small niches (3 chevrons, 2 arches). 2 holes in wall, both near floor - 1 containing lead pipe under 2nd niche from the right, 1 left of center. Very shallow stone chancel - 0.20 m high. Mosaic floor: polychrome geometric. Ribbons around oval medallions containing crosses and lotuses. Density: 87 tess/dm^2. Very deteriorated.
   (b) Semicircular basin on SW side of peristyle, facing another triclinium. Same dimensions and niche arrangement. No holes mentioned, but has a channel across the floor and across the peristyle aisle. Chancel the same, but 0.18 m high. Mosaic floor, no description.
   (c) Low marble basin in the shape of a daisy with 49 petals, facing the "Asclepieia" room on NE side of peristyle. Square area around it enclosed by a chancel. Originally the area contained a water-jet, which predated the marble basin and semicircular basins.

   Ennaifer, *Cité d'Althibouros*, pp.77-78, pl.60-62. Thébert, *Private Life*, p.355, fig.17.

2. House of the Muses
   Two semicircular basins set against a large piscina in peristyle. Larger basin faces triclinium. Traces of marble facing on smaller basin. Both are closed with a stone chancel. No mosaic.
   Ennaifer, *Cité d'Althibouros*, p.65; Rébuffat, *MEFRA* 81, p.679, no.2; Merlin, "Forum et maisons d'Althibouros," *Notes et Documents* 6 1913, pp.39-45, pl.5.
   in situ.

BULLA REGIA

1. near House of the Hunt
   Small fountain. Mosaic "drum" - plain white.
   Sear, p.155, no.190.

2. House of the Fishers
   (a) Semicircular fountain basin in subterranean peristyle facing apse triclinium. Wall has alternating niches - four rectangular and three semicircular. Six water jets issued from six small holes set into the rim. Drain at center of semicircular wall attached to channel passing across central court to opposite arcade. Floor mosaic: polychrome cubes, shown in perspective, and a sheaf of millet. Mosaic on top of wall surround: fishing scene (only one figure remains).
   (b) Small rectangular basin in main-floor peristyle, facing a wall. Two semicircular niches in back wall, rectangular niche in each side wall. Overflow hole connecting with large impluvium. Mosaic: fish in water, damaged.

   Sear, p.155, no.192; Thébert, *Cahiers de Tunisie* 19, pp.11-17, fig.1, 2; Rébuffat, *MEFRA* 86, p.455, no.1.
   in situ

3. North House/House No. 1
   (a) Semicircular basin in peristyle. 0.81 m wide, 1.88 m deep. Mosaic on floor: scroll pattern.
   (b) Fragment of mosaic in semicircular niche, "perhaps the base of a basin." Room in northeast angle of *insula*. Small heron on a branch, possibly also a human figure.
   (c) Small semicircular basin. .57 m wide, .66 m deep. Open-air subterranean location. Peristyle? Mosaic: zigzag. 2nd half of 4th century.

   Beschaouch et al., *Les Ruines de Bulla Regia,* p.52, fig. 42.

4. House No. 2
   Small, elongated semicircular basin. .88 m wide, .70 - .84 m deep. Mosaic floor: marine fauna and waves on white background. Very fine: 200 tess/dm^2. 3rd century.
   Hanoune, *Recherches Archéologiques Franco-Tunisiennes à Bulla Regia IV, Les Mosaïques I* , p.33.

5. NE of House No. 7
   Semicircular basin. Concrete. No mosaic.
   Ruines de Bulla Regia, p.42, fig. 30.

6. House of the Peacock
   Basin. No description. Mosaic decoration disappeared.
   Bulla Regia IV, p.81.

7. House of the Treasure
   Large semicircular basin, possibly in peristyle. 3 m deep. Set into floor. Drain channel from corridor floor into basin. Mosaic floor: geometric border, rest destroyed.
   Bulla Regia IV, p.94; *Ruines de Bulla Regia*, pp.37-8, fig. 25.

8. 60 m E of House 585
   Semicircular basin facing triclinium in basement peristyle. Niched along straight side. Mosaic on floor: geometric hexagons, fish and net fishing on the margins.
   Inv.Tun.Suppl., no. 585.

9. House of the Hunt
   (a) Square basin in main peristyle, facing main reception room. No further information.
   Ruines de Bulla Regia, p.55, fig.44.
   (b) Two semicircular substitute basins in subterranean peristyle, both facing triclinium. North basin destroyed. South basin mosaic on floor: geometric.
   Ruines de Bulla Regia, p.57, fig.46.
   in situ

10. House of the New Hunt
   (a) Semicircular basin in peristyle, facing triclinium. 5 niches in semicircular wall. Inscription between the two flanking columns in front of basin: ENCEATTΩTACEΛΠΙΔACHXH. No information on mosaics.
   Ruines de Bulla Regia, p.64, fig.44.
   (b) Fountain decorated with paintings on subterranean level, facing central room. No further information.
   Ruines de Bulla Regia, p.64.

CARTHAGE

1. House of Ariadne, Byrsa
   Fountain basin. Mosaic: eros and fish; in front, semis of fruit, flowers, and birds, two pairs of erotes with wreaths; inscription *utere felix*. Early 4th century.
   Dunbabin, p. 251; Lantier, *BAC* 1943-5, pp.40-46, pls. II-III.

2. unknown, Dermech
Semicircular fountain basin. 1.75 m wide, 2.11 m deep. Mosaic: huge head of Ocean, jets of water pouring from mouth around a circular water intake now blocked up with white tesserae. Forehead and top of head restored. 3rd century?
Dunbabin, p. 251; *B.M.Catalogue*, no.15, p.74, pl. 28 (gift to Museum in 1844); *Inv.Tun.* no.704.
British Museum.

3. House of the Aviary, Odeon Hill
   (a) Fountain basin in atrium fed from upper garden terraces by a zigzag canal. "muni d'une fontaine" (Gauckler). Mosaic on canal walls: hunting and fishing scenes in landscape with waterbirds, flowers, fields, trees. beginning of 3rd century (Dunbabin), 2nd century (Yacoub). No mention of mosaic in basin itself.
   Dunbabin, p.253; *Mus.Alaoui, Suppl.* A, no.190; *Mus.Bardo*, p.99/100; *Inv.Tun.*, no. 648; Stern, *Etudes d'Archéologie Classique* 2, 1959, p.117, pl.32.
   best pieces in Bardo Museum.
   (b) Fountain basin in courtyard southeast of peristyle. Walls have six alternating semicircular and rectangular niches. Fountain on floor of basin. Mosaic: tableaus of fish or of flowers and garlands in the niches.
   Inv.Tun., no.647; *Mus.Alaoui, Suppl.* A, no.189, p.7.
   all 6 tableaus at the Bardo Museum, the rest of the mosaic destroyed.
   (c) circular "fishpond" basin, 20 m northeast. Walls fitted with a series of terracotta jars, laid horizontally and open to the water- probably for fish. Mosaic floor: geometric pattern, almost destroyed.
   Inv.Tun., no.650.
   in situ 1910.

4. Odeon Hill, west of Street 11, south of Street III (house destroyed)
Semicircular basin in peristyle facing "oecus". Either floor (Gauckler) or wall (Merlin & Lantier) mosaic: fish and waves. Very damaged.
Mus.Alaoui, Suppl. A, no.194; *Inv.Tun.* , no.628.
Bardo Museum

5. Odeon Hill, house between Streets 11 and 12, on flank of hill.
Basin with water jet. Mosaic: geometric fragment at centre of basin.
Inv.Tun., no.635.
in situ 1910.

6. House of the Hidden Room, Dermech
Octagonal basin with fountain in peristyle. Mosaic: fish. Lead pipe feeding the water jet still in place.
Inv.Tun., no.673; *Mus.Alaoui, Suppl. A*, no.178.
Bardo Museum

7. Dermech, house 50 m NE of Dermech Basilica, above a big cistern - probably House of Dionysos
Large semicircular fountain basin in peristyle. No mosaics.
Inv.Tun., no.697.
in situ.

8. Dermech, 100 m SW of Bordj-Djedid cisterns, "Byzantine monastery"
Basins in an open-air atrium. Mosaic: geometric. Damaged.
Inv.Tun., no.712.
in situ 1910.

9. House of the Racehorses, Hill of Juno
Semicircular basin in peristyle. Mosaic: fish, erotes. Mosaic inscription: NAVIGIUS CARANAC (or NACCARA).
Rébuffat, *MEFRA* 81, p.680 no.3; Dunbabin, p.252.
Carthage Museum.

10. in a garden at "Douar-ech-Chott"
"basin against which was affixed many fragments of statues, bas-reliefs, and mosaics."
Delattre, *Mus. Lathol. XV*, 1883, p.155; *Inv.Tun.*, no.803.

11. North of Punic Cothon (??)
Small rectangular basin bordered with steps. Wall mosaic: fish.
Destroyed.
Carton, *Révue Tunisienne*, 1911, p.449, n.4; *Inv.Tun.Suppl.*, no.605.

12. Villa Scorpianus
Semicircular basin or substitute-basin. Mosaic: fish-filled sea, fishermen.
Inv.Tun., no.819.
Carthage Museum.

13. unknown provenance
Large polygonal basin. Mosaic: nereids, erotes, dolphins, sea monsters in centre; landscape with buildings along edges. First half 4th century.
Dunbabin, p.254, pls. 126, 127; *Mus.Bardo*, p.83, no.2772; Lavin, *Dumbarton Oaks Papers* 17, 1963, fig. 36.
Bardo Museum.

CHEBBA

1. villa with baths, 12 km south of El Alia, on a cliff
Oval basin. Mosaic: plain white.
Inv.Tun., no.86.6.
Location unknown - "removed" in 1902.

DOUGGA

1. House of Dionysos and Ulysses
(a) Tiny semicircular basin. .120 m wide, .64 m deep. Mosaic: fish on a white ground, framed by fret ornament. Mid-3rd century.
Poinssot, *Les Ruines de Dougga*, p.46, no.14.
Bardo Museum, Room 27, no.2885.
(b) 2 semicircular basins inset in a central rectangular basin. Mosaic: fish.

2. House of the Trifolium (may be the same as no.5)
(a) 2 semicircular basins on the two short sides of the peristyle. One now completely destroyed, facing wall. One facing large reception room. Mosaic: fish, now destroyed.
(b) Small semicircular basin, inside entrance at left. Constructed of large cut stones. No mosaic remaining.
Rébuffat, *MEFRA* 81, p.682 no.1; Poinssot, *Dougga*, p.54, no.18; Lézine, *Architecture Romaine d'Afrique*, p.107.
in situ

3. House between Capitol temple and Dar-el-Acheb.
   (a) Semicircular fountain basin in northwest angle of peristyle, facing main room. Added in late period. 2.4 m. wide. Mosaic: unpatterned tesserae in white, red and yellow. Damaged.
   Inv.Tun., no.544; *Inv.Tun.Suppl.*, no.544.
   in situ
   (b) Semicircular fountain basin in the middle of the south face of the peristyle, facing entrance. 2.2 m wide, 1.6 m deep. Mosaic: geometric in red, green, and white.
   Inv.Tun.Suppl., no.544.
   in situ

4. House in same area
   (a) Rectangular fountain basin. Fed by a cistern. No mosaics.
   Inv.Tun., no.551.
   in situ 1910.
   (b) Octagonal basin in centre of impluvium. Mosaic: geometric border.
   Inv.Tun., no.552.
   in situ 1910.

5. House north of Libyco-punic mausoleum
   Semicircular basin facing "oecus" in peristyle. 1.10 m wide, 2.4 m deep. Mosaic floor: fish, shellfish, seabirds, border of coloured bands. 1st or 2nd century.
   Inv.Tun.Suppl., no.559.

6. House north of Septimius Severus arch, on hill slope.
   Tiny semicircular basin facing "oecus." .4 m wide, .85 m deep. Mosaic floor: fish.
   Inv.Tun.Suppl., no.560.

7. House of the Two Fountains
   Two "abside-fontaines" in peristyle. No further description.
   Rébuffat, *MEFRA* 81, p.683 no.2; Lantier, *A.A.* 1931, fig.20.

EL DJEM (Thysdrus)

1. House of the Peacock
   (a) Semicircular substitute basin ("fontaine" - Foucher) in peristyle, facing main room. Drainage hole to tiny central garden. Rectangular hole in centre of floor. Mosaic: marine scene. Mostly destroyed.

(b) Two semicircular substitute basins, in smaller north courtyard. Inset into a small piscina or "fontaine". West one faces small triclinium, and has a hole in center of floor. East one may have had a retaining wall. Both have holes connecting with central piscina. No mosaics.
Foucher, *Thysdrus 61*, pp.2-14, Pl.II,d; Rébuffat *MEFRA* 81, p.684 no.5; Gozlan, *Karthago* 16, p.87.

2. Domus Sollertiana
"Fontaine" substitute basin in peristyle, facing triclinium. Hole in center of floor. Mosaic: fragment of a marine scene (fish, five fishermen in a boat).
Foucher, *Thysdrus 61*, pp.15-26; Rébuffat, *MEFRA* 81, p.684 no.6; Gozlan, *Karthago* 16, p.87.

3. House 250 m northeast of amphitheater
Rectangular basin in small peristyle. No mosaics.
Inv.Tun.Suppl., no.73.

4. House next to Rhouma-Cheib
Semicircular "piscina". Mosaic on floor: plain white; on walls: fish, flamingos.
Inv.Tun.Suppl., no.71a; Sear, p. 157; Merlin, *Bull.arch.Com.* 1911, p.159.
Specimen at the Bardo Museum.

5. House of Ali Slama Bouslah
Two substitute basins, one with hole in floor. Mosaic - polychrome geometric (pelts).
Gozlan, *Karthago* 16, pp.87-88; Foucher, *Thysdrus* 60, p.19, pl.2.

6. House of the Dolphins
(a) Semicircular substitute basin north side of peristyle, facing main room. Large hole in center of floor. Drain center of wall into central garden. No mosaics in situ.
(b) Rectangular substitute basin on west side of peristyle, facing the entrance to a smaller courtyard. Drain center of wall into garden. No mosaics.

GAMART

1. House on railway line between Sidi Bou Said and La Marsa.
   Fountain basin. Mosaic: fish in a square frame.
   Inv.Tun., no.780; *Mus.Alaoui Suppl.A*, no.202.
   Bardo Museum.

HENCHIR-BENIANA (Enfida Region)

1. House on right bank of Oued-Fradj-Gaia
   Fragments of basins. No further descriptions.
   Inv.Tun., no.232; *Bull. de Sousse* 1903, p.83.

LEMTA (Leptis Minus)

1. House on the coast north of ruins, beyond ravine
   "vaste construction entourée de marbres, mosaiques, bassins, etc".
   No further description.
   Inv.Tun., no.100; Carton, *Bull.de Sousse* 1905, p.29 n.10.

MACTAR

1. House of Venus
   (a) Semicircular basin attached to northeast side of large rectangular basin, in peristyle. No apparent communication with the larger basin. 2.5 m wide, 1.08 m deep. Very thin waterproofing mortar under mosaic. Mosaic on floor: marine scene (traces of a ship, fish, eros on dolphin). Density: 160-180 tess/dm^2.
   in situ
   (b) Semicircular fountain basin set into a quadrilateral frame, 2.7m x 3.2-3.6 m. Placed at the north end of the west aisle of the peristyle, but on a different orientation. Mosaic on floor: Venus in a garden, flanked by two erotes holding baskets. late 2nd century.
   in situ

   Bourgeois, "Les bassins de la Maison de Venus," *Recherches archéologiques franco-tunisiennes à Mactar* I, 1, pp.211-222; Thébert, *Private Life*, p.402, fig.46; Rébuffat, *MEFRA* 86, p.457, no.2.

MOKENINE (Sahel region)

1. House 1500 m from modern village, on the Ksar-Hellal road. Semicircular basin, touching wall on southwest side. Mosaic: 30 cm medallion of Medusa, fish and volutes in the corners.
   Inv.Tun., no.78.
   in situ 1910.

NABEUL (Neapolis)

1. House of the Nymphs
   (a) Fountain basin in peristyle facing triclinium. 3.6 m wide, 1.2 m deep. Mosaic on floor: polychrome zigzag; on walls: head of Océan, surrounded by fish, inscription: NYMFARUM DOMUS. Density variable: maximum 300 tess/dm^2. 2nd quarter 4th c. Darmon, *Africa* 2 pp271-83; Darmon, *Nymfarum Domus*, pp.20, 84-90, pl.42-45, 80, 81; Dunbabin, p.265; Rébuffat, *MEFRA* 81, p.681 no.1.
   in situ
   (b) Smaller basin set into older impluvium in northeast atrium. Mosaic - area of impluvium outside small basin only. Black dotted lines on white ground.
   Darmon, *Nymf.Domus*, p.40; pl.3.1, 4.
   in situ.

OUDNA (Uthina)

1. House in SE quarter, in ravine upstream from bridge.
   Fountain in center of vestibule. Mosaic on floors and walls: fish, water-snakes, ducks.
   Inv.Tun., no.443; Sear, p.160; Gauckler, *Mon.Piot* 3, p.183 n.3.
   in situ 1910.

2. House 100 m N of House of the Laberii
   Fountain in northeast corner of peristyle. No further description.
   Inv.Tun., no.402.
   in situ 1910. Surrounding mosaic in Bardo - *Mus.Alaoui Suppl.*. A, p.24, n.110.

3. House close to amphitheatre
   "colonnaded atrium". Fountain basin. Mosaic: fish.
   Inv.Tun., no.438.
   in situ 1910.

4. Insula northwest of the Acroplis.
   Three basins. Mosaic: fish, with bird medallions. No further description.
   Inv.Tun., no.441.
   in situ 1910.

5. House unknown
   Semicircular basin. Wall mosaic: three fragments preserved. Neptune driving two hippocamps; nereid on seamonster; eros standing on a dolphin. All heavily restored.
   Stern, *A.A.* 15 1980, pp.290-91, fig.10, 11.
   Musée d'Alger, Inv.3 no.387.

SBEITLA (Sufetula)

1. House of the Vitalis Basilica
   Quatrefoil basin, originally in a house predating the basilica. Unknown context but free-standing. Center a fountain, removed and covered with mosaic in antiquity. Mosaic: central white square surrounded by fish. Late 3rd, early 4th c.
   Duval, *Sbeitla*, pp.153-162, fig.158; Rébuffat, *MEFRA* 86, p.458, no.5.
   in situ.

2. House on left bank of Oued-Sbeitla
   Small rectangular structures, paved with mosaic. Possibly basins.
   Inv.Tun., no.335. Hegly, *Enquéte sur les Installations Hydrauliques romaines en Tunisie*, II, p.179.

SOUSSE (Hadrumetum)

1. House on Roman Carthage-Hadrumetum road, north of Oued-Blibane.
   Basin - mosaic walls. No further description.
   Foucher, *Inv.Sousse* 57.009; *Inv.Tun.*, no.224; Sear, p.162; Carton, *Bull.Sousse* 1904, 56.
   in situ 1910.

2. Unknown
Semicircular fountain basin, walls damaged. Lead pipe in center of straight wall, 2 cm. from floor. Empty rectangle (8 cm x 6 cm) immediately below on floor. Mosaic on floor: head of Ocean, water pouring from mouth, surrounded by marine animals; on curved wall: three boats, seated figure; on straight wall: fish, three dolphins. Density: 294 tess/dm^2. Mid - late 2nd c.
Inv.Sousse 57.041, pl.8 a, C4 on plan; *B.A.C.* 1938-40 p.184 pl.1; Dunbabin, p.269, pl.A; Sear, p.161.
Sousse Museum, Inv.30.

3. Unknown
Fountain basin. Mosaic on floor: fish; on walls: amphitheatre beasts (antelope, panther, lion, etc.) in landscape setting. End 2nd c.
Inv.Sousse 57.049, pl. 10 c, 11; Dunbabin, p.269; Sear, p.161; Foucher, *Mus.Sousse*, pp.7/8.
Sousse Museum.

4. House of Vergil
"abside-fontaine" in peristyle. No futher description.
Rébuffat, *MEFRA* 81, p.681 no.2; Picard, "La datation des mosaiques de la maison de Virgile à Sousse," *Cong.Int.Arch.Class.*, Rome, 1961, p.243.

5. Unknown building, garden of St. Joseph de l'Apparition school, bordered by Bechir-Sfax road.
Semicircular basin, now destroyed. Mosaic: fragments of nilotic scene, with pygmies in pointed hats carrying shields and lances.
Inv.Sousse 57.055, D4 on map; *B.A.C.* 1928-29, p.46.

6. House beyond the Roman necropolis of Bou-Hassina.
Rectangular basin in center of east arm of cruciform-shaped room. 1.6 m x 2.4 m. Embedded 30 cm in floor. Two holes for water intake and outflow. Mosaic: fine geometric.
Inv.Sousse 57.080, Map A5, pl. 17a; *Inv.Tun.*, no.150.
Musée du 4e Tirailleurs, Sousse.

7. House in south region, inside east border of Sebkha-Soussa
Circular basin, attached to a cistern. Mosaic: plain white.
Inv.Tun., no.227; *Inv.Sousse* 57.263; *S.A.S.* 1907, p.167.
in situ 1910.

8. Building east of road from Fraia, on hill near Arab cemetery.
   (a) "important mosaics - basins, rectangular and circular". No further descriptions.
   (b) Basin. Mosaic: one superimposed on a first. No further description.
   Inv.Tun., no.219.
   in situ 1910.

9. Building on a hill, west side of Roman road from Carthage to Hadrumetum. North of the Oued-Blibane.
   Rectangular basin. 1.6 m x 1.75 m. Plain white mosaic on walls.
   Inv.Tun., no.223.

10. House of the Arsenal
    Semicircular substitute basin in peristyle, facing triclinium. Mosaic: still-life motifs of game birds and a gazelle, interspersed with fruits and flowers. Bordered by a sheaf of millet.
    Inv.Sousse no.57.097; Dunbabin, pl.47, fig.117.
    Sousse Museum

TEBOURBA (Thuburbo Minus)

1. House near Roman wells, southwest of modern village
   Square basin in center of impluvium. 2.10 m square. Mosaic: fish on white ground.
   Inv.Tun., no.587.
   in situ 1910.

THINA (Thaenae)

1. Unknown
   Semicircular basin. Mosaic: polychrome zigzag.
   Darmon, *Nymf.Domus*, p.91; Fendri, *Thina*, fig.24.
   Location unknown.

THUBURBO MAIUS

1. House of Nicentius
   (a) Semicircular basin in middle of north portico of peristyle, facing the "winter oecus". 1.7 m wide, 0.8 m deep, 0.39 m high. Mosaic on floor: fish; on walls: erotes swimming, rowing. Early 4th c.
   (b) Semicircular basin in southeast angle of peristyle, facing Room XI. 1.3 m wide, 0.85 m deep. Floor mosaic: floral, now destroyed. Wall reveted with marble and limestone. Late 2nd-early 4th c.

   CMT Vol.2, Fasc.1, no.36, 37; *Inv.Tun.Suppl.*, no.347d; *Mus.Alaoui, 2e Suppl.* , A.371; Merlin, *BCTH* 1914, pl.183; *Mus.Bardo*, p.34.
   Mosaic - Bardo Museum
   Basins - in situ

2. House of the Palms
   Semicircular basin in tiny peristyle. 2.2 m wide, 1.38 m deep. Set in northwest aisle with semicircular wall touching back wall, facing the main room on opposite side. The basin was built later than the peristyle. Lead pipe in wall (location unknown). Floor mosaic: polychrome zigzag. Early 3rd century.
   CMT Vol.2, Fasc.1, no.101; Poinssot and Lantier, *BCTH* 1925, p.256.
   in situ

3. House of Neptune
   Semicircular fountain basin, in center of south colonnade of peristyle, facing the main room. 3.28 m wide, 2.10 m deep. Marble chancel 0.2 m high. Walls cladded with marble plaques. Mosaic: original replaced with Neptune in chariot drawn by hippocamps, with boats and fishermen. Density: 404 tess/dm^2 (ground), 350 tess/dm^2 (figures). Damaged - five fragments. Late 3rd - early 4thc.
   CMT Vol.2, Fasc.1, no.130; Dunbabin, p.65 n.5; Poinssot and Lantier, *B.A.C.* 1922, pl. 173-176.
   Mosaic - Bardo Museum
   Basin - in situ

4. House of the Protomes
Two semicircular basins attached to either end of rectangular piscina, in peristyle.
(a) 2.4 m wide, 1.35 m deep. Faces main room. Mosaic fragments remain for wall only, though floor was also mosaiced. Marine scene. Density: 145 tess/dm^2. Exterior of wall originally also decorated with mosaic.
(b) 2.4 m wide, 1.3 m deep. Floor mosaic: fragments of game birds and hares. Density 140 tess/dm^2. 2nd half 4th c.
CMT Vol.2, Fasc.3, no.270, 271.
Location of mosaics unknown (*Mus.Alaoui* No.166?)
Basin - in situ

5. House of the Charioteer
Semicircular basin, built against outside wall of Winter Baths. Probably belonging to another unexcavated house. 1.4 m wide, 0.85 m deep. Exterior wall is rectangular, interior wall is semicircular. Mosaic: polychrome geometric (cubes in perspective). Density: 189 tess/dm^2. Mid 3rd c.
CMT Vol.2, Fasc.2, no.223.
in situ.

6. House near the Presses
Semicircular basin in peristyle, facing main room. Now completely destroyed. "Les éléments de son decor sont peut-être actuellement désposés au Musée National du Bardo".
CMT Vol.2, Fasc.3, p.123.

7. Edifice of the Three Basins
(a) Semicircular substitute basin in "incomplete" peristyle, at north end of west aisle, jutting into garden. 1.65 m wide, 1.3 m deep. Walls surfaced with opus signinum. Mosaic floor: polychrome zigzag. Density: 112 tess/dm^2. Damaged.
(b) Semicircular substitute basin in center of south colonnade, facing main room. 2.05 m wide, 1.3 m deep. Mosaic floor: polychrome zigzag.
End 2nd - early 3rd c.
CMT Vol.2, Fasc.2, no. 235, 236.
(c) Semicircular basin in (later) south wall of corridor (Room 8), jutting into garden. Now destroyed.
in situ

8. House of Bacchus and Ariadne
   (a) Semicircular basin. Polychrome mosaic on floor: head of Ocean; on walls: fishers, seamonsters ridden by nereids, tritons, erotes; on rim: birds in cages, fruit baskets. "Smoothed by restorers" (Sear). 4th c.
   Dunbabin, p.274; Sear, p.165, pl. 67, *Mus.Bardo*, p.95.
   Bardo Museum, loc.no.1399.
   (b) Large semicircular basin in peristyle, facing Bacchus and Ariadne room. 1.9 m wide, 1.29 m deep, 0.56 m high, cut by a later wall. Traces of a chancel of green limestone plaques. Drain hole at bottom of semicircular wall. Mosaic on floor: polychrome zigzag; on wall: alternating panels of millet and geometric patterns (imitation marble). 2nd half of 4th c.
   CMT Vol.2, Fasc.4, pp.132, 142, 145-8.
   in situ

9. Unknown
   Fountain basin. Mosaic on floor: fish; on walls: erotes and boats. 3rd c.
   Sear, p.165.
   Bardo Museum, loc.no. A371.

10. House 13
    Semicircular basin in peristyle, facing large room (VI). 2.05 m wide, 1.4 m deep. Water intake hole at top of wall. Mosaic floor: polychrome zigzag. 4th c.
    CMT Vol.2, Fasc.4, pp.47-50.
    in situ

11. unknown provenance
    Semicircular mosaic, probably from a basin. 1.77 m wide, 1.12 m deep. Mosaic floor: seashore landscape with quay and buildings; two ships with sails; center of composition a net filled with fish. Density: 167 tess/dm^2.
    CMT Vol.2, Fasc.4, pp.302-306; *Mus.Bardo*, pp.121-2.
    Bardo Museum, Inv.3581.

12. unknown provenance
    Semicircular mosaic, probably from a basin. 1.46 m wide, 1.05 m deep. Density: 180 tess/dm^2. Mosaic: fish.
    CMT Vol.2, Fasc.4, pp.306-309; *Mus.Bardo*, p.85.
    Bardo Museum, Inv.3633.

UTICA

1. House of the Protomes
   Semicircular fountain. 2.05 m wide, 1.09 m deep. Mosaic: Ocean head surrounded by fish. Small gray rectangular stone set into floor top center of floor, "probably placed in antiquity" (*CMT*).
   early-mid 3rd c.
   CMT Vol.1, Fasc.3, pl. 16, no.274; *Mus.Bardo*, p.93; *Inv.Tun.Suppl.*, no.929; Dunbabin, p.276.
   Bardo Museum, inv.3646, floor of Room 27.

2. House of the Cascade (Insula I)
   (a) Rectangular fountain basin and attached inclined panel holding a fountain. Placed in small room south side of triclinium, open to triclinium. Basin: 1.92 m x 1.24 m (Sear 1.85 m x 1.10 m). Walls: marble plaques. Mosaic floor: two fishermen in boat, large net filled with fish. Inclined panel: 1.10 m x 1.02 m. In the center the remains of the square foundation of the fountain. Surrounded by mosaic of fish and zigzag lines evoking water. Walls: marble plaques. Mosaic on low back wall: two opposed peacocks with roses. The excavator, Picard, believed the basin and panel were constructed at the same time. Alexander and Sear date the basin to the 2nd c., the panel to the late 4th or early 5th c. Dunbabin dates ensemble to the 2nd - 3rd c.
   CMT Vol.1, Fasc.1, p.128, pl. 8, 9, 25, 60, 63; Picard, *Karthago* V, pp.147-154; Lézine, *Carthage-Utique*, p.123; Dunbabin, p.276, pl.17; Sear, p.166, pl. 68.2; Rébuffat, *MEFRA* 81, p.685 no.2.
   in situ
   (b) Rectangular basin in small room north side of triclinium, also open to triclinium. Mosaics destroyed.
   (c) Semicircular basin in peristyle. 1.79 m wide, 1.16 m deep. Bottom half of walls covered with marble plaques. Overflow hole connecting with central piscina - small round hole with larger square hole just above level of marble cladding. Drain hole bottom right side. Mosaic on upper half of wall: now gone; on floor: eros fishing.
   CMT Vol.1, Fasc.1, no.51, pl.23, 63.51; Dunbabin, p.276.

(d) Small rectangular basin in Room 2. 1.79 m x 0.72 m. Walls covered with marble plaques. Two small marble pillars which supported a melon-fluted marble basin are inserted in floor. Drain bottom of wall. Mosaic floor: marine scene. Late 2nd - early 3rd c.
CMT Vol.1, Fasc.1, no.43, pl.16, 17, 63.43; Dunbabin, p.276; Cintas, *Karthago* 2, p.83, fig.38; Picard, *Karthago* 5, p.167, pl.2; Lézine, *Carthage-Utique*, p.53.
Mosaic location unknown.
Basin in situ.

(e) Irregular-shaped basin in Room 30a. Approx. 0.74 x 1.24 m. Rudimentary channel in floor. Floor surfaced with *opus figlinum*.
CMT Vol.1, Fasc.1, no.54, p.23.
in situ

3. House of the Figured Basin
Semicircular basin against wall giving onto south corridor of peristyle. 1.39 m wide, 0.97 m deep. Raised above ground-level. Wide bench-like front wall covered with marble slab. No drains or intakes. Lower part of wall (140 cm) covered in marble plaques. Mosaic on floor: polychrome zigzag; on wall: three figures (two female, one male) in a garden, damaged. End of 4th c.
CMT Vol.1, Fasc.1, no.145, pl.58, 59; Sear, pp.165/6.
in situ

4. House of the Treasure
Semicircular basin in peristyle, partly destroyed by enlargement of adjacent wall. 2.86 m. wide, 1.26 m deep. Mosaic: polychrome ribbons and lotus flowers. 3rd - 4th c.
CMT Vol.1, Fasc.1, no.8, pl.2, 62; Lézine, *Carthage-Utique*, p.112; Rébuffat, *MEFRA* 81, p.685 no.1.
in situ

5. House H (House of the Two Fountains)
Two semicircular basins in peristyle.
(a) In Court 22, facing triclinium. 2.9 m wide, 1.76 m deep. Walls covered with marble plaques. Low front wall of stone plaques with one marble pillar in center. Mosaic floor: fragments of marine scene. Late 2nd - 3rd c.

(b) In Court 20. 3.3 m wide. Almost completely destroyed. Walls covered with marble plaques. Mosaic floor: fragments of marine scene. 3rd c.

CMT Vol.1, Fasc.1, no.135, 136, pl.52; Rébuffat, *MEFRA* 81, p.685 no.5; Lézine, *Carthage-Utique*, pp.127-28.
in situ

6. House of the Grand *Oecus*
   (a) Semicircular basin in peristyle. 3.78 m wide, 1.98 m deep. Mosaic: plain white in parallel lines.
   (b) Two semicircular basins inset into east and west sides of large piscina in center of same peristyle. 2.8 m wide, 0.76 m deep. Drainage holes bottom of walls into piscina. One has a square intake hole set into the rim of the front wall. One has mosaic floor: plain white.

   CMT Vol.1, Fasc.2, no.168a,b, pl.13.

7. House B
   Semicircular basin. 2 m x 3 m. Mosaic: two boats each holding two erotes, fishing with nets. Now destroyed.
   Inv.Tun.Suppl., no.929e; *CMT Vol.1, Fasc.3*, no.264.

8. Unknown
   Semicircular basin. 1.39 m wide, 0.77 m deep. Hole on floor, now stopped up. Mosaic floor: two men fishing.
   B.M. Catalogue, no.44; *Inv.Tun.*, no.905; Morgan, *Romano-British Pavements*, pp.248, 275.
   British Museum

9. Unknown
   Semicircular basin. 2.28 m wide, 1.15 m deep. Mosaic floor: eight erotes playing with dolphins in marine scene. Density: 170 tess/dm^2. Mid-late 3rd c.
   CMT Vol.1, Fasc.3, no.288, pl.22, 23,40; *Cat.Louvre*, no.16 (Ma 1803); *Inv.Tun.*, no.910 (attribution to Sousse).
   Louvre Museum

10. Unknown
Tiny semicircular basin. 0.8 m wide, 0.6 m deep. Mosaic floor: marine scene. Damaged - seven fish remaining. Density: 150 tess/dm^2. Late 4th c.
CMT Vol.1, Fasc.3, no.291, pl.24; *Cat.Louvre,* no. 17 (Ma 1804); *Inv.Tun.*, no.911; *Mus.Afr.Louvre,* no.101.
Louvre Museum

11. Unknown
Semicircular basin. 1.7 m wide, 1.1 m deep. Mosaic on floor: polychrome irregular?; on wall: finer, plain white.
CMT Vol.1, Fasc.2, no.239, pl.46.

12. West House
Semicircular basin in peristyle, in west apse. 2.1 m wide, 1.75 m deep. Partially destroyed by a later cistern hole. Large c[illegible] basin encroaches on its east side. Mosaic: destroyed, bu[illegible] marine scene. Late 1st - 2nd c.
CMT Vol.1, Fasc.2, no.172, pl.25, 26.
in situ

13. Insula I
(a) Semicircular basin built around large flagstone. 1.69 m wide, 1.39 m deep. Constructed of courses of tiles. Mosaic: plain beige and white.
(b) Lot 9, Room 6. Basin paved with opus figlinum. Shape unknown.
(c) Lot 9, Room 1. Rectangular basin attached to north wall, paved with opus figlinum. [illegible] m x 0.98 m. 2nd c.
(d) Lot 4, Room 11. [illegible] foundation fragment, paved with opus figlinum. 1.55 m [illegible]. Late 1st - early 2nd c.
CMT Vol.1, Fasc.1, nos.[illegible] 62, pl.1, 3, 27.
in situ

14. isolated on Promontory
(a) Basin fragment paved with opus figlinum.
(b) Basin fragment. Mosaic: plain white.
CMT Vol.1, Fasc.2, nos.219, 226, pl.40.
in situ

Due to copyright restrictions, pages 87-97 have been removed. The information removed was:

Fig. 1	Garden Painting, House of the Ephebe, Pompeii
Fig. 2	Fountain, House of the Great Fountain, Pompeii
Fig. 3	Basin, House of the Cascade, Utica
Fig. 4	Plan, peristyle of House of the Fishers, Bulla Regia
Fig. 5	Basin, House of the Grand *Oecus*, Utica
Fig. 6	Fountain-Basin, House of the Cascade, Utica
Fig. 7	Basin mosaic, Neptune, House of Neptune, Thuburbo Maius
Fig. 8	Basin mosaic, Oceanus, Sousse Museum
Fig. 9	Basin mosaic, game animals, House of the Protomes, Thuburbo Maius
Fig. 10	Basin mosaic, Venus, House of Venus, Mactar
Fig. 11	Basin mosaic, geometric designs and millet sheaves, House of Bacchus and Ariadne, Thuburbo Maius
Fig. 12	Plan, House of the Nymphs, Nabeul
Fig. 13	Plan, House of Neptune, Acholla
Fig. 14	Plan, House of Nicentius, Thuburbo Maius
Fig. 15	Plan, House of the Asclepieia, Althibouros
Fig. 16	Plan, House of the Palms, Thuburbo Maius

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