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# Reconstructing the Mid-2 ${ }^{\text {nd }}$ Century CE Roman Bath Mosaic at Isthmia, Greece 


#### Abstract

Much of the joy and our extensive understanding of the ancient world is revealed through its mythology, sculpture, mosaics and architecture. We capture the story of the past and discover a sophisticated society, not unlike our own. The magnificent archaeological discoveries at Herculaneum and Pompeii, and throughout the Greco-Roman world, give pause. At Isthmia, the remains of a mid-2nd century CE Roman bath were discovered by Dr. Oscar Broneer in 1954, excavating for the University of Chicago. During the summer of 1995, one of the authors (William J. Batson Jr.) participated in the archaeological field work and assisted with the repair and reinstallation of the monochromatic mosaic as a student team member of The Ohio State University's Excavations at Isthmia. In this paper, we hope to provide a better understanding of the purpose and meaning of this public bath and of its patrons. Our paper is the result of a synthesis of innovative measuring technology, the analysis of archaeological evidence and architectural composition, as well as the research of architectural history and mythological iconography. It is hoped that our efforts will serve as a meaningful bridge between the existing academic discourse related to Roman baths and the expanding knowledge about the classical world.


Keywords: Roman bath, Isthmia, Haliphron atlanticus, mosaic, Nereid

## Isthmia and Corinth

The significance of the Isthmian Bath is one of socio-cultural activity and it is related to the prominence of the city of Isthmia. The importance of the city of Isthmia is one of geography (see Figure 1). The inland city-state of Corinth was a powerful, and the most predominant commercial, city in the Greek world and the hub of traffic that connected the Peloponnese with the rest of Greece ${ }^{1}$; Isthmia, along with Corinth at the opposite end of the isthmus, prospered. Part of this lucrative traffic involved the hauling of ships, over a paved slipway called the Diolkos, across the Isthmus of Corinth. The Diolkos minimized the time, as well as the cost, of travel by providing ships, cargos, and armies easy passage between the Gulf of Corinth and the Saronic Gulf without having to sail all around the Peloponnese (see Figure 1).

Figure 1. Map of the Peloponnese, Greece


Source: Digital map by co-author, W. J. Batson Jr.

[^0]Two additional important ports of the Peloponnese are Kenchreai, the south port of Corinth on the Saronic Gulf, and Lechaeum, the northeast port of Corinth on the Gulf of Corinth. Lechaeum was vital to the defense of Sparta with its two massive parallel walls connecting to Corinth that blocked entry to the strategic isthmus and to the citadel of Akrocorinthos. The great walls of Akrocorinthos were all but impregnable and it is here that one sees the strategic importance of the citadel and its panoramic views of the isthmus straddling the ancient overland trade route.

Isthmia held a vital position in ancient Greek cultural life, along with the cities of Olympia, Delphi and Nemea, as the host city of one of the PanHellenic Games. The bath complex at Isthmia would have been a desirable facility for the new Greco-Roman city, especially for the athletes and patrons of the Isthmian Games.

## Bathing Sequence \& Layout

From recent excavations of public baths, at Pompeii and throughout the Roman Empire, we can determine, with relative certainty, the sequence of bathing activities at the mid- $2^{\text {nd }}$ century CE Roman bath at Isthmia in relation to its architectural layout (see Figure 2). The sequence of movement through a Roman public bath would begin by entering the capsarium; then, one would change into bathing or exercising clothes, in the apodyterium, before entering the palestra, typically an open-air exercise room, used for an athletic warm up. At the Isthmian Bath, the palestra is the principal congregational space, and there may be evidence that it was covered. At the east and west ends of the palestra, there are pedestals which, likely, served as bases for statues. Fragments of colossal marble sculptures, including parts of fingers, toes, and curls of hair, were found on the floor of the palestra and elsewhere in the bath, and these may be associated with the pedestal statues ${ }^{2}$. Conjecturally, on the west pedestal was a statue of Neptune (Poseidon), the sea god to whom the temple within the temenos was dedicated. On the east side, there are clues to identify a female statue, perhaps that of Venus (Aphrodite), as depicted by the Nereid riding a Triton, and led by Palaemon, in the lower (south) mosaic panel (see Figure 3). Alternatively, the female statue could have been that of Leukothea, as indicated by the Nereid riding an Ichthyocentaur in the upper (north) mosaic panel.

[^1]Figure 2. Mid-2 ${ }^{\text {nd }}$ Century Roman Bath Plan at Isthmia, Greece


Source: Digital AutoCAD drawing by co-author, W. J. Batson Jr.
Figure 3. Palaemon Riding a Dolphin


Source: Photograph by Author, W. J. Batson Jr.
After exercise, the bathers would rub oil on their skin in the destrictarium, to remove the dirt, grime and perspiration by scraping it from their skin with a curved piece of metal, called a strigil (see Figure 4), since no soap existed at the time. This practice is demonstrated by the Roman marble copy of the original bronze sculpture, the Apoxyomenos ( 330 BCE ), by the Greek sculptor, Lysippus (see Figure 5).

Figure 4. Strigils


Source: Photograph by co-author Sheba Akhtar, Istanbul Archaeological Museums
Figure 5. Apoxyomenos by Lysippus


Source: Free.khanacademy.org/.

The Roman bathing ritual was carefully designed to gradually expose the human body to increasingly higher temperatures, to deeply, yet safely, cleanse it through the process of perspiration. Hence, after scraping dirt and grime from their skin, the bathers would enter a transitory warm room, the tepidarium, where their body would adjust to a higher temperature. They would, then, proceed to the hot room, the caldarium containing the labrum. Next, the bathers would move to the caldarius, the hot room containing the loutron. The final stage of the bathing sequence would lead to the warmest space, the laconicum, the steam room with an adjoining sudatorium, or sauna. Here, the bathers would sweat profusely, opening the pores of their skin to complete the cleansing process.

Once the bathers had achieved complete cleansing, it was important to close their skin pores, and to reacclimate to the outdoor temperature. It was, therefore, necessary to reverse the process of warming the body, by gradual cooling, as one proceeded towards the cooler spaces of the bath. Hence, on the way out, the bathers would enter a second tepidarium, a transitional space to the frigidarium, the cold room, with two adjoining piscinas. After bathing was completed, the visitors would stop in the unctuarium, either to perfume themselves before leaving the bath, or to opt for a massage, and then socialize in the large Nereid Mosaic Hall, the palestra.

The Greek satirical writer, Lucian (ca. 120-200 CE), gives a detailed eyewitness account of a Roman bath layout, which is similar to that of the Older Stabian Bath. According to Lucian, the entranceway was lofty and the adjoining waiting area was for the services of slaves and attendants; to the left of this hall were well-lit rooms for relaxation. There were locker rooms and, between them, a brightly lit hall which contained three natatios, cold-water swimming pools. After leaving this room, the visitors would enter a large, slightly warm room, rather than suddenly encounter the higher temperature of the tepidarium.

Beyond this room was a very brightly lit room, suitably arranged for oil massages. Near this room was another large room, the most beautiful of all the rooms, designed for social interaction, whose floor was decorated with a monochromatic mosaic illustrating a popular Greek myth that included dolphins, cupids, nereids, tritons, ichthyocentaurs and other sea creatures. Next, the bathers would enter a passageway, heated with hot air, which led to another beautiful room containing three hot tubs. Once bathed, they did not need to go back again through the same rooms, as there were multiple openings throughout; instead, they could proceed immediately, through a small, slightly warm room, to the cold room, the frigidarium.

Lucian additionally states that the height of each room was proportional to its width and length. The caldarium of a Roman bath, requiring the greatest amount of heat, was situated in the south-east to west side of the structure while the frigidarium, the cold room of the bath, was in the north part of the building (Lucian, The Baths, 5-8). The Isthmian Bath follows this layout, with the heated rooms to the south and the frigidarium to the north-west. In several baths of this era, the frigidarium is designed to be situated adjacent to, or outside, the movement sequence before entering the caldarium. In Greece and in Italy, where winter temperatures are often near freezing, the frigidarium may have been

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avoided by the women, as they generally preferred warmer temperatures. ${ }^{3}$ This can be seen in the baths at Pompeii (see Figure 6) and Herculaneum.

Figure 6. Frigidarium, Tepidarium, and Caldarium Bath Section at Pompeii


Source: Digital AutoCAD drawing by co-author W. J. Batson Jr.
Since public bathing was an essential aspect of Roman urban life, public baths were a necessary component of city architecture throughout the Roman Empire. Much like our own health spas and gyms, the baths were primarily hygienic facilities, supplemented with exercise, relaxation and socializing spaces for the citizens. ${ }^{4}$ While the size and complexity of these baths varied greatly, the sequence of spaces remained, essentially, the same.

## Roman Precedent

The earliest Western writing about architecture to have survived is the first century BCE treatise, The Ten Books on Architecture, by the Roman architect, engineer and surveyor, Vitruvius, dating from the time of Augustus Caesar (r. 27 BCE-14 CE). In his seminal work, Vitruvius stipulates, in great detail, the ideal design for a Roman public bath (Book V, Chapter X). Therefore, baths, throughout Rome's vast territories, were found to be designed, in principle, according to the architectural recommendations of Vitruvius, regarding the architectural arrangement, proportions of the spaces in terms of their length, width and height, as well as the specific materials and techniques of construction. Hence, all the baths that were studied have a similar progression of movement and spaces.

For the process of reconstructing the Isthmian Bath layout and movement sequence, it was necessary to find similar Roman baths from similar time periods. Precedents were found throughout the Roman Empire, e.g., the Forum and the

[^2]Stabian Baths at Pompeii, the Forum and the Suburban Baths at Herculaneum, the Hunting Baths at Leptis Magna, Libya, as well as baths in Syria, Turkey and Portugal. Starting at the entry and changing rooms, the elaborate sequence of bathing activities concluded with a visit to the plunge pools and, finally, anointing with oil and a massage. The architectural layout of all these baths includes an exercise yard, the palestra, as a clear example of Greek influence. ${ }^{5}$ At the Isthmian Bath location, a pre-existing pool, pre-dating the Roman conquest, was also discovered; the pool is approximately one meter in depth and covered with a type of waterproof cement.

According to Lucian, the plan of the Forum Baths at Pompeii was similar to that of the Older Stabian Baths. The Forum Baths were built during the first century BCE and were equipped with all the bathing facilities to which a Roman citizen would have been accustomed. This was the only fully functioning bathing complex in use at the time of the eruption of Mount Vesuvius in 79 CE and, therefore, may have accommodated larger numbers of male and female patrons.

In his treatise, Vitruvius also specifies that the roofs of the bath should be vaulted (pg. 158, Book V, Chapter X); one can, therefore, safely assume that the Isthmian Bath had a barrel-vaulted roof structure. In this regard, the Hunting Baths and the Stabian Baths were the most useful precedents to study, to determine the barrel vaulting. An analysis of the Forum Baths and the Stabian Baths also helped to answer the question about whether the Isthmian Bath provided separate facilities for men and women. The planning of the Forum Baths was based, in part, on the layout of the Stabian Baths; both structures were divided into two separate, unconnected, sections, one for men, the other for women, with a single praefurnium, or furnace room, constructed in between, providing the hot water and steam for both. ${ }^{6}$ The absence of a similar layout at Isthmia suggests, however, that the Isthmian Bath was designed for men only, or as a single bath for both sexes with the women using the facility during the morning and early afternoon hours, when it was warmer. The men must have frequented the bath during the rest of the day and evening, when it was cooler, as was the custom for Roman baths constructed in this manner. ${ }^{7}$

## The Reconstruction

For this reconstruction, the process began with researching and studying existing Roman baths that were similar to one another in terms of architectural design and construction, in light of Vitruvius' treatise, The Ten Books on Architecture. The precedents that were selected for study included the Hunting Baths at Leptis Magna and the Stabian Baths at Pompeii. The former complex was

[^3]extremely useful as a precedent since it is in a remarkable state of preservation, with its concrete vaulting intact. The latter precedent was studied for the similarity of its plan to that of the Isthmian Bath as well as for its vaulting. The precedent study was followed by a careful analysis and, finally, by the compilation of architectural drawings of the structure.

The remains of the Roman bath at Isthmia clearly demonstrate the use of the hypocaust system (see Figure 7) for providing the necessary heat to the caldarius, caldarium, laconicum, sudatorium and tepidarium. As outlined in detail by Vitruvius, these rooms were heated by a hypocaust system: the elevated floors, called suspensurae, were supported by a grid of short brick columns (pilae) that enabled the hot air from the furnace to circulate underneath. However, the columns of the hypocaust system of the Isthmian Bath consist of stacked clay discs and squares.

Figure 7. Hypocaust at Isthmian Bath


Source: Photograph by co-author W. J. Batson Jr.

## Iconography of the Mosaic

Owing to the inherent significance of water to the function of the Roman bath, throughout the ancient world they incorporated marine imagery, both factual and mythical. In this regard, the Isthmian Bath is much the same, as demonstrated by its monochromatic floor mosaics, the most elaborate of which adorns the floor of its principal gathering space, the palestra (see Figure 8).

Figure 8. Monochromatic Mosaic of Mid- $2^{\text {nd }}$ Century CE Roman Bath at Isthmia, Greece


Source: Digital AutoCAD drawing by co-author, W. J. Batson Jr.
The mosaic composition consists of a large rectangle, neatly centered within the rectangular space of the palestra; the rectangle is divided into an orthogonal grid, six square modules long and two square modules wide. The two central squares, in both rows along the length, together form a rectangular mosaic panel that contains a marine-themed representation from Greco-Roman mythology, to be viewed facing north. The squares that flank the two central rectangular panels are decorated with geometrically arranged ornamental motifs.

The upper (north) mosaic panel depicts two principal characters, an Ichthyocentaur and a Nereid. An Ichthyocentaur is a composite mythical creature, with a human head and torso, the front legs of a horse, and the body and tail of a fish; in the case of this Ichthyocentaur, two lobster-like claws protrude from his head. In Greek and Roman mythology, the fifty Nereids are sea nymphs, the daughters of the sea god, Nereus, and the Oceanid nymph, Doris. They are playful companions of Neptune, the Roman sea god, and are deeply associated with the element of water. They were worshipped, in antiquity, as divinities of the sea and were believed to be helpful to sailors in perilous storms. The Ichthyocentaur carries a farmer's staff, a shawl and a small dolphin. The Nereid on his back is, perhaps, Amphitrite (or Leukothea); she gracefully holds a long scarf that arches over her head. The pair is accompanied by two dolphins, a small fish and a sea serpent.

The lower (south) mosaic panel portrays a rare representation of a winged Triton, also with two lobster-like claws protruding from his head. Triton, in Roman mythology, is the son of Neptune, and is a sea god in his own right; he, too, is a composite creature, with the head and torso of a man, and the body and tail of a fish. As the Ichthyocentaur in the upper mosaic panel, the winged Triton in the lower panel carries a Nereid, almost identical to the one in the upper panel, on his back. The major characters in this panel are accompanied by a Cupid figure who rides on the back of a dolphin (see Figure 9). It is notable that there is
evidence, from the Temple of Poseidon at Isthmia, of statues of Palaemon, Leukothea and Poseidon ${ }^{8}$.

Below the larger figures is a scattered group of minor sea creatures, the most intriguing of which is an octopus that appears to have only seven arms (see Figure 10). A similar seven-armed octopus has also been represented on a Minoan amphora (1450-1400 BCE), discovered at Knossos, Crete (see Figure 11). The Haliphron atlanticus, one of the largest known species of octopus, has eight arms. In the male octopus, the hectocotylus, the modified arm used for egg fertilization, is, however, coiled in a sac beneath the right eye in such a manner as to be easily overlooked, thereby giving the octopus the appearance of having seven arms. In recent times, the Haliphron atlanticus species was first identified near New Zealand, in 2002, by marine scientists. As stated earlier, there is evidence of the representation of a seven-armed octopus in antiquity, between the second millennium BCE, as represented on the Minoan amphora, and the second century CE, as depicted in the palestra mosaic of the Isthmian Bath. In ancient Mediterranean culture, the octopus was revered for its intelligence, creativity and flexibility; it was, therefore, represented frequently in water-related structures, such as Roman baths. However, the representation of a seven-armed octopus at the Isthmian Bath is, indeed, an exceptional discovery.

[^4]Figure 9. Enlarged Mosaic of Ichthyocentaur and Triton


Source: Digital 3D Max drawing by co-author, W. J. Batson Jr.
Figure 10. Seven-Armed Octopus at Isthmian Bath


Source: Photograph by Author, W. J. Batson Jr.

## Synopsis of Terms

Amphitrite - In Greek mythology, goddess of the sea, wife of the god Poseidon, and one of the fifty daughters (the Nereids) of Nereus and Doris
Apodyterium - Vestibule and changing room
Caldarium - Hot chamber, heated by the hypocaust, with Labrum
Caldarius - Hot chamber, heated by the hypocaust, with Loutron
Capsarius - Main entrance
Destrictarium - The room where bathers rubbed the body down after exercise
Frigidarium - Cool or cold room in a Roman bath
Hypocaust - Method of construction used for heating the warm rooms of Roman baths by raising the floor on a grid of low brick or clay pillars, called pilae
Ichthyocentaur - In Greek mythology, a sea creature that has the upper body of a man, the lower foreparts of a horse and the tail of a fish
Labrum - Bathing vessel for wash, splash or for cold water rinse (Vitruvius, Chapter 11)
Laconicum - Steam room in a Roman bath
Loutron - Plunge pool
Natatio - Open air swimmng pool
Nereids - In Greek mythology, sea nymphs, specifically one of the fifty daughters of Nereus and Doris, who dwelt in the sea, often accompanying Poseidon
Palestra - Typically an open-air exercise room used to provide an athletic warm up
Palaemon - In Greek mythology, sea-god protector of sailors and fishermen, who was depicted as a boy riding dolphin-back
Pilae - Series of under-the-floor, round or square, columns that allowed hot air to circulate beneath the floor of the hot rooms of a Roman bath
Piscina - Large basin or pool where bathers could plunge
Praefurnium - Furnace or boiler room
Strigil - Metal device used to scrape sweat and dead skin from the body
Sudatorium - Sauna or sweating room with steam heat
Suspensurae - The above-ground floor, supported by pilae, so that it could be heated from below
Temenos - Sacred precinct
Tepidarium - Warm chamber heated by the hypocaust
Tessera - A small cubic tile in a mosaic. Plural: tesserae
Triton - In Greek mythology, merman son of Poseidon and Amphitrite, usually represented as half-man, half-fish (similar to the Persian god, Dagon). Tritons, sometimes represented with a pair of horse's legs instead of fins, are known as Ichthyocentaurs or Centaur-Tritons ${ }^{9}$
Unctuarium - Room for anointing with oil and/or perfume after bathing

[^5]
## Conclusion

To connect with those of our ageless past is a fundamental human need. With the ever-increasing sophistication of measuring techniques and the ongoing enhancements of representational technology, ancient ruins can be studied with ever greater precision, and the human desire to understand, and to interact with, antiquity becomes ever more achievable.

Like technology, our knowledge of the past is constantly expanding, and evolving, with new archaeological discoveries as well as with new interpretations of existing information. Contrary to this state of mutability is, however, the unchanging world of myth. Classical myths, both Greek and Roman, are as relevant today as they were millennia ago, because they embody profound, timeless cosmogonical truths that offer insight into our own, contemporary narratives.

The study of the mid- $2^{\text {nd }}$ century CE Roman bath at Isthmia, paradoxically, brings the ever-changing field of technology in the service of a deeper understanding, and appreciation, of the eternal significance of Classical mythology. In this regard, the study of the Isthmian Bath is an ongoing endeavor in which our findings will benefit from scholarly critique.

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