

MORE THAN A HULL:  
RELIGIOUS RITUAL AND SACRED SPACE  
ON BOARD THE ANCIENT SHIP

A Thesis

by

CARRIE ELIZABETH ATKINS

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

December 2009

Major Subject: Anthropology

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## ABSTRACT

More Than a Hull: Religious Ritual and Sacred Space

on board the Ancient Ship. (December 2009)

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Greco-Roman religion in the ancient Mediterranean permeated aspects of everyday life, including seafaring. Besides cargo, ships transported mariners' religious beliefs from port to port, thus disseminating religious culture. Shipboard ritual, however, remains largely inferred from Latin and Greek texts, iconography, and isolated archaeological finds. Several accounts record that tutelary statues were carried on board to deliver a ship from peril. These accounts are supported by iconographic representations of deities on the hull and a relief scene which shows the use of altars and incense in shipboard ritual. Moreover, ritual objects, including altars, small statuary, incense burners, and lustral basins, have been found among shipwrecks, but prior archaeological research has been particularistic, singling out ritual objects in shipwrecks. Their presence, however, does not necessitate shipboard ritual since these items may have been cargo.

To distinguish between personal items and cargo on board ancient shipwrecks, I analyze such objects both objectively and subjectively: first focusing on an object to discern a *potential* purpose and then again within a spatial context to define its *actual* purpose.

Additionally, I develop religious and social space theories for shipboard analysis, identifying ritual at the bow and stern and concluding that the stern in particular served as an *axis mundi*, a central location for divine communication. Furthermore, because of this comprehensive approach, large ritual objects such as altars and lustral basins often can be identified primarily as cargo. Ultimately, applying social space theory to shipwrecks can redefine our interpretation of religious activity on board the ship, an intermediary in the dissemination of culture.

To my parents and my husband

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## CHAPTER I

### INTRODUCTION

For ancient Greeks and Romans, religion permeated numerous aspects of everyday life, including seafaring. The ship was woven into the fabric of religion, not only for the people who made their livelihood with it but also in general religious observances. When a ship sailed around the Mediterranean, it transported beliefs and customs in addition to cargo from port to port. The sailors' religions, traditions, and superstitions were unloaded alongside the physical cargo, thus providing an impetus for the dissemination of religion and culture. Thus, the ship itself served as an intermediary vehicle for the spread of religion.

Evidence for religious practices in a port can be seen in a variety of sources, from the layout of a city to the architecture of its public temples to the mosaics and frescoes found in houses. Examples of this religious activity can best be seen in several port cities such as Ostia and Piraeus. Founded before the third century B.C.E., the city of Ostia with its first-century AD harbor Portus was the major port city of Rome, ushering vital food and supplies into the expanding city.<sup>1</sup> Improvements at the end of the first century C.E. reflected changes in the religious environment as foreign deities began to appear in

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This thesis follows the style of the *American Journal of Archaeology*.

<sup>1</sup> For the seminal work on the history and social environment of Ostia see Meiggs 1973.

inscriptions, reliefs, statuary, and temples.<sup>2</sup> In addition to the prominent Italian gods of Vulcan, Castor and Pollux, Venus, Hercules, and the cult of the emperors, perhaps the most prominent foreign gods worshipped at Ostia and Portus were Magna Mater,<sup>3</sup> Liber Pater,<sup>4</sup> the Persian Mithras,<sup>5</sup> and the Egyptian Isis and Serapis.<sup>6</sup> Thus, the development of Ostia and Portus included the arrival of foreign deities into the religious fabric.

A similar trend is apparent at the Greek port of Piraeus. As foreigners settled around the city, the establishment of new deities began to reflect a mixing especially by the third century B.C.E. with the worship of the Mother goddess and the arrival of Isis and Serapis.<sup>7</sup> The introduction of these foreign cults in the city was supervised closely in the fifth and fourth centuries B.C.E., and documentation suggests an increase in their popularity in the Hellenistic era despite the economic decline.<sup>8</sup> With the influx of cult

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<sup>2</sup> At Portus and Ostia, at least eleven temples and small shrines have been discovered, including a large temple to Vulcan, Jupiter, and Castor and Pollux, a temple in the Forum to Ceres or Roma, four smaller temples to Venus, Fortuna, Ceres, and Spes, a large circular temple thought to be to Portunus, a small temple to Magna Mater, several shrines of Mithras, and a shrine of the emperors (Taylor 1985, 12).

<sup>3</sup> The sacred stone of Magna Mater arrived at Ostia in 204 B.C.E. and became one of the most important cults of the city with a temple in both Ostia and later in Portus (Taylor 1985, 57-66).

<sup>4</sup> Taylor 1985, 31.

<sup>5</sup> Taylor 1985, 82-92.

<sup>6</sup> Taylor 1985, 66-75.

<sup>7</sup> Garland 1987, 101-3.

<sup>8</sup> Garland 1987, 110-1.

practice and deities into the ports, it stands to reason that the port cities are indirect examples of the various religions transported by means of ancient ships.

Relatively little direct evidence, however, for shipboard ritual has been analyzed; rather, scholars have given preferential status to interpreting religious practices from Latin and Greek texts, iconographic representations, and isolated religious artifacts recovered from the sea. As it is often unclear whether these archaeological remains were carried as cargo or intended for ritual use on board, further research and a different approach is required to better interpret evidence for religious ritual on Greco-Roman ships, if we are to address the question of whether maritime rituals differed from terrestrial practices.

The main objective of this thesis is to apply current theories regarding the identification, construction, and function of religious space in terrestrial architecture and landscapes to the ancient ship. This thesis will explore not only shipboard religious practices but also evidence for the ancients' conceptualization and spatial organization of the ship.

The ship has been described as a cultural vehicle—a carrier of techniques, equipment, and knowledge.<sup>9</sup> As such, ritual artifacts from shipwrecks and the sacred space on board ships can be evaluated in light of prior research into religion and against theoretical perspectives from archaeology. This thesis builds upon broader understandings of religious space and particularistic knowledge of ritual objects found on board ancient Greek and Roman shipwrecks.

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<sup>9</sup> Murphy 1983, 70.

### Social and Ritual Space

Space is created by everyday actions and given meaning by human involvement, thereby illuminating other aspects of society and culture such as ideology and social structures.<sup>10</sup> Moreover, material objects and actions provide a reference framework for identifying the function and purpose of that certain space.<sup>11</sup> This conceptualization of an area has untapped potential in nautical archaeology for understanding the spatial layout of religious objects on the ancient ship. Although spatial relationships change if the shipwreck is disturbed, these processes sometimes can be identified and reconstructed to determine an object's original location. By understanding these spatial relationships, archaeologists can infer social areas on board, potentially identifying sacred space and religious activities.

The distinction between sacred space and secular space is a topic that has been addressed by Eliade in his work on the dichotomy between sacred and profane.<sup>12</sup> Sacred space gives an orientation to a landscape, setting up both physical and perceived boundaries which must be crossed and negotiated.<sup>13</sup> This view of sacred space is equally appropriate for a ship as it is a landscape upon which mariners interact and live. Thus, because sacred space orients the ship and delineates boundaries, ritual practices on the

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<sup>10</sup> Pearson and Richards 1994, 4-5.

<sup>11</sup> Werlen 1993, 3.

<sup>12</sup> Eliade 1959.

<sup>13</sup> Eliade 1959, 22; Pearson and Richards 1994, 9-14.

ship may be identified, providing a framework from which one can analyze religious artifacts from shipwrecks.

Space is central to analysis in nautical archaeology. As a primary focus, archaeologists work to reconstruct a ship based on wrecked remains. Many different ecological and cultural factors, collectively known as formation processes, determine the degree of deformation and dislocation of the items that were once carried on board the ship.<sup>14</sup> These objects are pieced together to determine their arrangement prior to the wrecking. Recreating a hull's exact dimensions is important because it allows archaeologists to determine sailing qualities and cargo capacity.<sup>15</sup>

Space on board the ancient ship is defined by these objects that may have filled the hull, thus necessitating a focus on the particularistic nature of artifacts. In the example of the seventh-century C.E. wreck at Yassiada, Turkey, physical space was reconstructed based on the artifacts' locations to show limitations, boundaries, and restrictions which dominated the ship's physical layout.<sup>16</sup> Additionally, the kitchen items and transport amphorae found in the Roman wreck at Plenmirio, Sicily, were thoroughly described and arranged to maximize the "space" of the hull.<sup>17</sup> Moreover, after reconstructing the

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<sup>14</sup> Crumlin-Pedersen and McGrail 2006, 53. Depositional and site formation processes have been well studied in terrestrial environments by Schiffer (1983) and adapted for maritime sites (see Muckelroy 1976, Stewart 1999, and O'Shea 2002).

<sup>15</sup> Steffy 1994, 8-20.

<sup>16</sup> Bass and van Doorninck 1982, 87-97.

<sup>17</sup> Gibbins 1991.

physical layout of the eleventh-century C.E. ship at Serçe Limani, Turkey, archaeologists identified distinct living areas in the bow, amidships, and stern; the stern was reserved for the highest class of crew and passengers since most personal possessions were found in this area.<sup>18</sup> Ultimately, some archaeologists have been able to reconstruct different regions of the ship and basic social patterns that accompany them.

Even though hermeneutics of ships begins with developing physical reconstructions of the hull and interpretation of archaeological remains, the ship itself was also a product of culture.<sup>19</sup> Described as an aspect of man's extrasomatic means of dealing with water, the ship bridges a gap between two antagonistic environs – land and sea.<sup>20</sup> Quite simply, the physical boundaries of a ship are the limits of livable space while at sea. Everything that occurs on board a ship is dictated by the amount of space allotted by the hull. These activities include eating and sleeping, as well as rituals and religious practices. Thus, nautical archaeologists accomplish more than just researching artifacts when they place those remains in the broader socio-cultural context of the ancient ship.<sup>21</sup>

Venturing out onto the sea, the ship becomes a transition point between land and sea—oriented space and chaotic space, respectively.<sup>22</sup> Following Eliade's dichotomy of

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<sup>18</sup> Bass et al. 2004, 265-8.

<sup>19</sup> Murphy 1983, 67, 70; Westerdahl 2008, 18.

<sup>20</sup> Westerdahl 2005, 3.

<sup>21</sup> Flatman 2003, 143.

<sup>22</sup> Westerdahl 2000, 12.



space, the sea can be viewed as homogeneous space and therefore chaotic.<sup>23</sup> As an object that breaks the homogeneity, a ship orients the sea's vast space and thus serves a sacred function; inside a ship, the chaos of the sea cannot exist. Consequently, the ship creates a cosmos out of chaos and the center of this space is then known as an *axis mundi*.<sup>24</sup> By understanding the placement of sacred objects on the ship and the ship's conceptualized sacred regions, the *axis mundi* is recognized, and spaces are defined. Spatial analysis is one method by which we can acquire a more accurate understanding of Greco-Roman religion on board the ship.

### Greco-Roman Religion

Much of the evidence for shipboard religion has been confined within the scope of traditional religion, only teasing out maritime aspects of the gods as one nuance of their character and power. Because ancient Greco-Roman gods had the power to interfere in the lives of mortals, people offered their respect and honor in worship, hoping the gods would treat them favorably by granting fertility, economic prosperity, good health, and safe travels, while keeping away evil and adversity.<sup>25</sup> Seafarers were especially vulnerable to divine influence as the gods were believed to control winds, storms, and seas; as such, the gods could aid sailors in safe and successful navigation or destroy the

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<sup>23</sup> Eliade 1959, 23.

<sup>24</sup> Eliade 1959, 37-8; Westerdahl 2000, 12.

<sup>25</sup> Mikalson 2005, 23.

ship and the sailors on it. Unlike other religious practices, however, maritime religion operated in two realms: on land and at sea.

### *Maritime Religion on Land*

When maritime religion has been studied, scholars have focused on terrestrial aspects, in particular, votive objects and temples dedicated to maritime deities. In general, deities were venerated through rituals of sacrifice, prayer, or dedication, depending on the deity and on the need of the devotee.<sup>26</sup> In a Greek context, regional worship centered on a sanctuary, identified as a holy place that usually contained a temple to house the god's cult statue and an altar where sacrifices were made to the god.<sup>27</sup> Positioned on promontories along the coastline, temples to maritime deities served as both houses for the gods of navigation and landmarks to sailors.<sup>28</sup> At sanctuaries, votive offerings were left in fulfillment of a promise made during prayer or were dedicated when deities delivered the sailors safely back to land. Votives could be as small as statuettes or as large as dedicated temples.<sup>29</sup>

One particular votive was the ship itself either in the form of small models or large monuments. Although the provenience of most ship models is unknown, inscriptions from several archaeological sites record that these ship models were votive gifts to the

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<sup>26</sup> Burkert 1985, 55.

<sup>27</sup> Ferguson 1989, 31.

<sup>28</sup> Scully 1962, 93; Morton 2001, 207.

<sup>29</sup> Apollod. 1.9.27; Hom. *Od.* 12.346; Paus. 2.32.2, 3.24.7.

gods.<sup>30</sup> Additionally, many ship models functioned as lamps and ritual containers for liquids. Lamps were particularly common in religious processions, especially those that took place at night as mentioned by Apuleius in the *Isidis navigium*.<sup>31</sup> Several examples of ship-shaped spouted vessels have been found in Archaic burials and more elaborate drinking vessels of the Classical and Hellenistic periods were made in the shape of a ship's prow.<sup>32</sup>

Full-sized ships and parts of ships were also dedicated to the gods. For example, warships were dedicated in both the seventh-century B.C.E. sanctuary to Hera and Poseidon on Samos and in the early third-century B.C.E. Monument of the Bulls on Delos.<sup>33</sup> Occasionally, parts of ships were used as votive offerings instead of the entire ship, ranging from part of a deck, to rudders, to anchors.<sup>34</sup> Based on available evidence from naval dedications and cult statuettes, the prow appears to have been the most common part of the ship used as a monumental votive. In the fourth-century B.C.E. bath building at Epidauros, a warship prow served as the base for a small statue that was dedicated to the gods after a naval victory.<sup>35</sup> After the battle of Actium in 31 BC, a series of bronze rams from the fleet of Anthony and Cleopatra were dedicated in a

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<sup>30</sup> Johnston 1985, 2; 126-7.

<sup>31</sup> Apul. *Met.* 11.4, 10; Griffiths 1975, 32.

<sup>32</sup> Johnston 1985, 50, 76, 92.

<sup>33</sup> Kopcke 1967, 145; Wescoat 2005, 153-72.

<sup>34</sup> Callim. *Hymn* 3. 228; Hauvette-Besnault 1882, 340 No. 47.

<sup>35</sup> Johnston 1985, 93.

sanctuary built at Nikopolis.<sup>36</sup> Other prow models were connected specifically to the arrival of the cult such as the first-century B.C.E. Isola Tiberina prow sculpted on the island in the Tiber at Rome for Asklepios.<sup>37</sup>

Thus, Greeks and Romans commemorated naval achievements at sea by erecting monuments on land. Religious practices of the Greco-Roman mariner while at sea, however, have remained largely unstudied. The majority of religious study has focused on the Greco-Roman maritime deities who governed the sea and the sailors, without a careful consideration of the rituals themselves.<sup>38</sup> Instead, shipboard life has been treated as an extension of terrestrial practices, thereby presuming that rituals on the ship must have been the same as rituals on land. Instead, seagoing ships should be viewed as microcosms of maritime society, carrying everything that was needed to sustain a crew. The type of maritime culture that arose on the ship is derived from the “parent” culture from land, and was adapted to suit the needs of those people on the ship.<sup>39</sup> Although terrestrial religion is a basis for comparison, it should not be the de facto determination. This analysis turns to the ship itself to interpret the evidence for ancient religious ritual at sea.

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<sup>36</sup> Murray 1988, 28-35; 2003 475-8.

<sup>37</sup> Morrison and Coates 1996, 227; Piteros 2002, 581-96.

<sup>38</sup> Brody (1998) has offered a detailed study of Canaanite and Phoenician gods with maritime attributes and associated nautical rituals.

<sup>39</sup> Murphy 1983, 67.

*Religion on Board the Ship*

Until the development of archaeology under water, the understanding of religious practices on board the ship was derived only from secondary textual and iconographic evidence, interpreted alongside occasional ritual objects raised by divers, fishermen, and treasure hunters. It was unknown whether these representations from literature and iconography were realistic or propagandistic and intended to convey a sense of piety. The late third-century C.E. Torlonia relief may be an example of such propaganda rather than an actual religious ceremony, as it depicts two men and one woman standing around a portable altar on the aft deck cabin of a ship and holding an incense box and bowl for libations.<sup>40</sup> The relief is saturated with iconography depicting Roman ideals and values so it is questionable whether this scene depicts an actual, specific religious ritual on the ship while in the harbor, or if it is instead a generic, idealized series of conflated images meant to impart a pious sentiment. Interpreting symbols and iconography requires careful consideration to decipher their meaning for past cultures.<sup>41</sup> Although iconography is an important source of evidence, it must be analyzed alongside the primary evidence for ritual from excavated shipwrecks.

The use of documented finds from shipwrecks enables scholars to identify the placement of religious objects on the ancient ship at the time of its sinking. Previous study by Kápitan to interpret ritual objects from several Mediterranean shipwrecks included water

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<sup>40</sup> Wachsmuth 1967, 144-9.

<sup>41</sup> see Geertz 1966, 5-8; Sebeok 1994; Grant 2001, 238-41.

basins on pedestals (identified as *louteria*), altars, and animal horns as indicators of religious ritual on board the ancient ship.<sup>42</sup> Yet, it is questionable whether these objects were used in shipboard rituals or transported as cargo; the mere presence of religious objects on an ancient shipwreck does not necessitate shipboard ritual. Having acquired the requisite corpus of data gathered by Käptian and others, research must now move away from the particularistic practice of focusing on the objects. Instead, these ritual artifacts must be analyzed both objectively and subjectively, focusing first on details to attain a *potential* purpose and then again within a specific spatial context to ascertain their *actual* purpose. Consequently, an important aspect of this study rests on our ability to identify ritual objects on ancient ships.

#### Defining and Identifying Religious Objects

By itself, “religion” is a hypothetical abstract, a physiological construct assigned a definition to create an observable entity. Religion, however, is practiced and approached in many different ways, making it difficult to attain a universal definition.<sup>43</sup> In order to facilitate analytical study, religion is conceptualized “in terms of a pool of elements that more or less tend to occur together in the best exemplars of the category.”<sup>44</sup> This definition of religion is important if we are to minimize pre-conceived notions and identify those shared elements.

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<sup>42</sup> Käpitan 1979; 1989.

<sup>43</sup> Saler 2000, 30.

<sup>44</sup> Saler 2000, 225.

General definitions of religion range from psychological coping mechanisms to beliefs in supernatural events or beings.<sup>45</sup> Offering a universal definition, Geertz suggests that religion is a system of symbols that establishes certain moods or motivations to formulate an idea of general order or existence.<sup>46</sup> The systems or complexes of symbols are cultural patterns made from “tangible formulations of notions, abstractions from experience fixed in perceptible forms, concrete embodiments of ideas, attitudes, judgments, longings, or beliefs.”<sup>47</sup> In his view of religion as a system, Geertz avoids discussion of supernatural or other-worldly beings by focusing on cultural patterns or symbols. Consequently, Geertz’s definition seems too broad, identifying many practices as religious that may, in fact, not be. In an alternate definition, Spiro combines the use of symbols and supernatural beliefs to define religion as “an institution consisting of culturally patterned interactions with culturally postulated superhuman beings.”<sup>48</sup> Looking specifically at Greek religion, Burkert also surmises that religion is comprised primarily of ritual and myth, two components critical to analyzing ancient religion.<sup>49</sup>

The importance of defining religion is critical if we hope to be able to identify it within the archaeological record. Indeed, some archaeological remains are the physical

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<sup>45</sup> Saliba 1976, 150-1.

<sup>46</sup> Geertz 1966, 4.

<sup>47</sup> Geertz 1966, 5-8.

<sup>48</sup> Spiro 1966, 96.

<sup>49</sup> Burkert 1985, 8.

remnants of actions associated with religion as an otherwise psychological construct.<sup>50</sup>

In his discussion of the archaeology of cult, Renfrew proposes a list of 18 correlates as potential indicators of cult practice and, therefore, manifestations of religious beliefs.<sup>51</sup>

Renfrew's correlates include that:

- (1) ritual is likely to take place in a spot with special, natural associations,
- (2) [ritual] may take place in a special building set apart from sacred functions,
- (3) both conspicuous public displays, and hidden exclusive mysteries, whose practice will be reflected in the architecture,
- (4) prayer and special movements –gestures of adoration—and these may be reflected in the iconography of decorations or images,
- (5) various devices induce religious experience,
- (6) the structure and equipment used may employ a number of attention-focusing devices, reflected in the architecture and in the movable equipment,
- (7) the association with omnipotent power(s) [...] reflected in the use of a cult image of that power, or its aniconic representation,
- (8) the chosen place will have special facilities for the practice of ritual,
- (9) the sacrifice of animals or humans,
- (10) food and drink [...] possibly consumed as offerings, or burnt/poured away,
- (11) other materials [...] brought and offered,
- (12) special portable equipment,
- (13) the sacred area is likely to be rich in repeated symbols,
- (14) symbols [...] that] relate iconographic ally to the deities worshipped and to their associated myth,
- (15) symbolism [...] relate[ing] to that seen also in funerary ritual, and in other rites of passage,
- (16) concepts of cleanliness and pollution may be reflected in the facilities and maintenance of the sacred area,
- (17) great investment of wealth [...] reflected both in the equipment used and in the offerings made
- (18) great investment of wealth and resources may be reflected in the structure itself and its facilities.

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<sup>50</sup> Renfrew 1985, 12.

<sup>51</sup> Renfrew 1985, 19.



These correlates are fashioned after Spiro's definition of "culturally patterned interaction with culturally postulated superhuman beings" to include the actions of a human towards a transcendent being.<sup>52</sup> More specifically, the correlates are commonly reflected in the archaeological record as the remains of religious ritual.

It is important that ritual is not assumed to be a practice ancillary and subordinate to religion. Although practicing religion involves ritual, performing ritual does not occur exclusively with religion.<sup>53</sup> Kyriakidis reminds us that the Latin root for ritual is *ritus*, which has a secular meaning of 'habit' or 'custom', and he offers the example of a civil wedding ceremony as a ritual that is not a religious practice.<sup>54</sup> Consequently, like the word 'religion', we must be careful about how we define and propose to identify ritual in the archaeological record since the degree of specificity can influence our determination about which objects are associated with ritual.

The definition of ritual, like the definition of religion, has varied meanings and it is difficult to achieve a definition that is universally accepted. Bell has suggested that any definition must not be too specific because it presumes that ritual is a universal phenomenon with a coherent structure.<sup>55</sup> She argues that the field of ritual study can progress by looking at the essential elements of ritual rather than the whole and by

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<sup>52</sup> Renfrew 1985, 18; 2007, 113-5.

<sup>53</sup> Kyriakidis 2007b, 291; Renfrew 2007, 110.

<sup>54</sup> Kyriakidis 2007b, 291, 294.

<sup>55</sup> Bell 1992, 69-70; 2007, 279.

examining different perspectives.<sup>56</sup> Accordingly, Bell suggests that a ritual should be broadly defined as an “action for acting out, expressing or performing conceptual orientations.”<sup>57</sup> For Renfrew, ritual includes an ordered and repeated performance that is time-structured.<sup>58</sup> These definitions are reformed even further by Kyriakidis, who proposes that ritual “refers to set activities with a special (non-normal) intention-in-action, and which are specific to a group of people.”<sup>59</sup>

Pervasive in these definitions of ritual are notions of established and created activities. The term ritualization has been suggested as the way in which an activity is institutionalized, crystallized, or established so that these social actions are distinguished from other non-ritual actions.<sup>60</sup> Ritualization of an activity can be either a single, quick, deliberate invention or a drawn-out manifestation of a non-ritual activity.<sup>61</sup> Inherent in the idea of ritualization is the notion of a *culturally* encoded action producing a physical representation of a culture.<sup>62</sup> Thus, the practices or actions of ritual have a direct effect on the materials that are found in the archaeological record, facilitating the archaeologist’s identification of cultural ritual activities.

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<sup>56</sup> Bell 2007, 283.

<sup>57</sup> Bell 1992, 19.

<sup>58</sup> Renfrew 2007, 115-6.

<sup>59</sup> Kyriakidis 2007b, 294.

<sup>60</sup> Bell 1992, 74; Kyriakidis 2007b, 291.

<sup>61</sup> Kyriakidis 2007b, 291.

<sup>62</sup> Kyriakidis 2007a, 9.

The question remains, however, how to separate these non-normal, ritual activities. Bell proposes six characteristics that separate ritual activities from normal activities: formality, traditionalism, invariance, rule governance, sacral symbolism, and performance.<sup>63</sup> To this list, Kyriakidis supplies ‘frame of mind,’ which is more difficult to identify in the archaeological record but encompasses the intention of turning mundane activities into ritual.<sup>64</sup> *Formality* distinguishes those people who are performing rites from the rest, most commonly through dress, gestures, sayings or even ritual equipment such as more expensive and impressive accoutrements. *Repetition* requires looking at the archaeological record for depositional patterns, in particular focusing on temporal and spatial aspects. Identifying *invariance* focuses on the use of the same equipment, items, and area over regions and areas; *tradition* diachronically shows a continuation of these objects. *Rule governance* is found in the articulation of ritual space, control of power, and formalism in movement. Tracing *symbolism* is more difficult, as Kyriakidis notes it often leads to over-interpretation of the signifier and the signified, but combines many of the previous traits of cult to look at the tradition and repetition of the sign.<sup>65</sup> Similarly, the tenets of *performance* incorporate many of the other traits, especially repetition, formalism and rule governance, as archaeologists

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<sup>63</sup> Bell 1997, 138-64.

<sup>64</sup> Kyriakidis 2005, 30.

<sup>65</sup> Kyriakidis 2005, 46-8.

attempt to identify a set activity. Kyriakidis concludes that finding multiple traits at a site in a common area is evidence for one or more rituals taking place in the same area.<sup>66</sup>

For the purposes of this study, I adopt the view that ritual has both religious and non-religious definitions and follow Spiro's definition of religion as a group of "culturally patterned interactions with culturally postulated superhuman beings."<sup>67</sup> This allows for the combination of ritual features proposed by Renfrew, Bell, and Kyriakidis. By using these traits, one can determine which objects were used in terrestrial religious ritual and if their ritual use was transferred to objects found in shipwrecks.

### Methodology

As an attempt toward identifying shipboard ritual, terrestrial and maritime evidence must be gathered from three main sources: 1) Latin and Greek texts and iconography, 2) artifacts from shipwrecks, and 3) spatial analyses.

In order to present a solid foundation, the second chapter focuses on terrestrial aspects of Greco-Roman religion. This chapter aims to identify religious practices and ritual artifacts commonly found in the countryside and cities in order to set up a basis for

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<sup>66</sup> Kyriakidis 2005, 42. After proposing implementation of Bell's six characteristics (formalism, repetition, invariance, tradition, rule governance, performance, and symbolism) and his own additional one (frame of mind), Kyriakidis identifies these traits in his work on Minoan peak sanctuaries, ultimately showing the existence of ritual (Kyriakidis 2005, 78-95).

<sup>67</sup> Spiro 1966, 96.

identifying ritual objects from shipwrecks. Thus, by understanding terrestrial ritual objects, we can identify these objects within the wrecks.

In the third chapter, I analyze 32 shipwrecks from the beginning of the Archaic period (seventh century B.C.E.) until the beginning of Constantine's rule in 306 C.E. This chronological range documents the pagan deities and rituals as conveyed to the Greeks from the sea-savvy Phoenicians, but it concludes before these deities were replaced by the rise and legalization of Christianity. Although this seems to be a long period with much change in politics across multiple cultures, similar correlates for various objects appear in the archaeological data, permitting a diachronic analysis of these practices. In particular, the spatial location of ritual objects is considered in detail.

The fourth chapter addresses iconography and literature that specifically refers to shipboard religious ritual.<sup>68</sup> Again, as in the third chapter, the spatial context of these rituals is scrutinized. By investigating textual evidence from various authors and noting both the location and purpose of the objects described, I hope to demonstrate how religious ritual was conducted while at sea in Greco-Roman times.

Finally, the last chapter compares the occurrence of religious objects from terrestrial and maritime contexts as presented in the second and third chapters, analyzes the religious

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<sup>68</sup> The ancient passages cited within are those with a maritime theme. In no means is this representative of the frequency of references to the sea and seafaring.

rituals as evidenced by from shipwrecks, literature, and iconography in the third and fourth chapters, and brings together the spatial evidence from the third and fourth chapters. This fifth chapter leads to a more detailed study of spatial analysis and religious space, drawing on prior studies from terrestrial contexts of houses and sanctuaries. In this way, I hope to demonstrate the ancient conceptualization of the ship as a religious object and the pertinent role of ritual on board the ancient ship.

## CHAPTER II

## IDENTIFYING GREEK AND ROMAN RELIGION

κὰδ δύναμιν δ' ἔρδειν ἰέρ' ἀθανάτοισι θεοῖσιν  
 ἀγνῶς καὶ καθαρῶς, ἐπὶ δ' ἀγλαὰ μηρία καίειν:  
 ἄλλοτε δὲ σπονδῆσι θύεσσί τε ἰλάσκεσθαι,  
 ἤμην ὅτ' εὐνάζη καὶ ὅτ' ἄν φάος ἱερὸν ἔλθῃ,  
 ὥς κέ τοι ἴλαον κραδίην καὶ θυμὸν ἔχωσιν<sup>69</sup>

And, as far as you are able make sacrifices to the deathless gods  
 purely and cleanly, and also to set upon fire splendid thigh bones:  
 and at another time to appease them with libations and incense,  
 both when you go to sleep and when the holy light has come,  
 so that they may extend to you a gracious heart and mind...

In this passage, Hesiod offers a concise overview of Greek religion involving rituals and the gods. Based on these attributes, we can identify Greco-Roman religion according to the definition proposed in Chapter One: “an institution consisting of culturally patterned interactions with culturally postulated superhuman beings.”<sup>70</sup> In the religion of ancient Greeks and Romans, the culturally patterned interactions included the rituals so succinctly summarized by Hesiod: purification, sacrifice, libation, and incense burning. These rituals were conducted for the culturally postulated superhuman beings—the ἀθανάτοισι θεοῖσιν (deathless gods)—in order to receive favor and prosperity from them, creating obligation according to rules of reciprocity.

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<sup>69</sup> Hes. *Op.* 336-40. All translations and emphases are mine unless otherwise noted.

<sup>70</sup> *Supra* p. 13.

Like most religions, Greco-Roman religion involved many nuances. Religious practices differed based on the setting and reason, from large civic festivals to daily household rites in both Greek and Roman times. Consequently, the objects employed in rituals varied from instruments in large and ornate civic ceremonies to simple items for daily libation, sacrifice, and prayer. This chapter describes Greco-Roman religious ritual as it pertains to the terrestrial setting, discussing the differences between public and private religion, the rituals of purification, prayer, sacrifice, libation, and incense burning, and the objects used in these practices.

### Background

Religion is conservative; changes occur slowly over time and space which permits the use of literary sources from adjacent periods and regions.<sup>71</sup> As such, many of the religious tenets of Greece were incorporated into those of Rome, particularly between the mid-third century B.C.E. until the mid-second century B.C.E., after the Punic Wars.<sup>72</sup> In fact, archaeological evidence suggests that Roman religion did not exist in a pure, native strand but rather “was an amalgam of different traditions from at least as far back as we can go.”<sup>73</sup> For example, a sixth-century B.C.E. dedication at Lavinium to the Roman gods Castor and Pollux uses the Greek title of Dioskouroi, suggesting a Greek

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<sup>71</sup> Beard et al. 1998, 17.

<sup>72</sup> Beard et al. 1998, 73; Rüpke 2007, 57.

<sup>73</sup> Beard et al. 1998, 12.



influence.<sup>74</sup> Generally, the Roman pantheon was similar to the Greek but with subtle differences: Roman gods exhibited a more variable personality with no clear hierarchy, and Roman myths related to specific places and monuments rather than the broader landscape depicted in Greek myths.<sup>75</sup>

Although individuality in ancient religion is discernible through votive offerings, religious practices for the Greeks and Romans occurred mostly in groups that were either public (civic) or private (familial).<sup>76</sup> Religious worship included aspects of public and private cult as shown in the record of Socrates' trial in which his defenders noted that he was frequently seen sacrificing both at home and at the public altars of the state.<sup>77</sup>

Likewise, Roman religion was not necessarily intended to provide individual salvation, as in Judeo-Christian religion, but served to promote the civil order of the state, acting as an "alternative and response to chaos."<sup>78</sup> The gods protected the community and punished improper civic behavior. Accordingly, these types were described in Roman religion as *sacra publica* and *sacra privata*. The *sacra publica* concerned the state and were mediated by officials and priests, whereas the *sacra privata* were devoted to familial gods and mediated by the *pater familias*. Within these respective tiers of public and private religion, there are shared behaviors of sacrifice, daily ritual, purification,

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<sup>74</sup> Weinstock 1960, 112-4; Holloway 1994, 130-4.

<sup>75</sup> Beard et al. 1998, 173; Rüpke 2007, 16.

<sup>76</sup> Rüpke 2007, 14.

<sup>77</sup> Xen. *Mem.* 1.1.2.

<sup>78</sup> Galinsky 2007, 74.

incense burning, and prayer. This chapter is devoted to identifying rituals that occurred in both public and private religion.

### Temples and Sacrifice

Location is an important component of religious ritual since a sacred space has the power to transform a mundane activity into a religious activity. For proper veneration to occur, the ancient gods required a sacred space in a human realm that was made pure and kept pure.<sup>79</sup> This space could be naturally sacred due to geographical features or ritually sacred as established by humans. Naturally sacred locations included mountains, caves, rocks, trees, or springs and transitional areas where temples were erected such as headlands protecting the entrance to a harbor, at junctions where a river flowed into the sea, or at narrow passes and peaks on a mountain.<sup>80</sup> However, ritual space was also created by humans, by the act of *temenos* or cutting of the sacred space from the non-sacred surroundings to consecrate land for the divine.<sup>81</sup> Ritual space was created when a new community was established, a new ritual was introduced, or a normally secular space was needed temporarily for sacred ritual.<sup>82</sup>

As a way to isolate sacred space (Gr. ἱερόν, La. *templum*) for the gods, buildings for rituals and cult management were established, and collectively known as a sanctuary. A

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<sup>79</sup> Cole 2004, 35.

<sup>80</sup> Zaidman and Pantel 1992, 55; Cole 2004, 184-5.

<sup>81</sup> Zaidman and Pantel 1992, 55; Rüpke 2007, 95.

<sup>82</sup> Cole 2004, 39.

sanctuary included an altar (Gr. βωμός, La. *ara*) for sacrifices and a temple (Gr. ναός, La. *aedes sacra*), which housed the statues of the deity or deities.<sup>83</sup> Public sacrifices were conducted on these altars in front of the temples and took place only occasionally since Greek temples usually were typically open on special days rather than for daily services.<sup>84</sup> Instead, daily sacrifice was performed within the home.

Sacrifice was a central part of religion that involved consecrating a meat offering to the gods by burning a portion of the food on an altar to return to them what is theirs.<sup>85</sup> In particular, the thigh bones (Gr. μηρία) or vital organs (La. *exta*) were reserved for the gods.<sup>86</sup> Consequently, the altar was a very important part of the sanctuary, required to offer the gods burnt sacrifices, thereby acting as a locus of communication between divine and mortal.<sup>87</sup>

Evidence for altars is found largely in representations on vase paintings and reliefs, literary accounts of sacrifice, and archaeological remains. Altars varied in their size, function, and style. Inherent in creating a typology of altars is recognizing that the type

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<sup>83</sup> Zaidman and Pantel 1992, 55, 57; Egelhaaf-Gaiser 2007, 206-7.

<sup>84</sup> Scheid 2007, 263; Rüpke 2007, 95. Although temples were generally open only for civic sacrifices and festivals, one inscription (LSS 25) from the third century B.C.E. records the regulation of daily service at the sanctuary to Asclepius at Epidaurus, referencing altars, libations, incense burning, and sacrifice (Lupu 2005, 74). This single inscription suggests that daily service at a sanctuary was indeed rare and perhaps was conducted in exceptional circumstances.

<sup>85</sup> Zaidman and Pantel 1992, 32; Osborne 2007, 247.

<sup>86</sup> Zaidman and Pantel 1992, 36; Scheid 2007, 266-70.

<sup>87</sup> Ferguson 1989, 33.

of offering and place of worship dictated the form. For example, a large altar at a public cult center was not appropriate for private familial worship in the home. A survey of Greek evidence separates altars into seven distinct categories based upon their function and style: hearth, ceremonial, monolithic, stepped monumental, colossal, well altars or sacrificial pits, and *arulae* or small altars.<sup>88</sup> For the Romans, in addition to the main altar, a small portable altar (La. *foculus*) was used in the preliminary stages of sacrifice for blood-free offerings such as food and incense; an altar could be improvised from turf when needed.<sup>89</sup>

Altars differed in size from the large ceremonial, stepped monumental, and colossal altar types usually found in sanctuaries to the *arulae* and small monolithic altars.<sup>90</sup>

Monolithic altars of the Classical, Hellenistic, and Roman periods were often small and cubical with a projecting molding at the top and bottom; although dimensions of up to a meter were not uncommon, many monolithic altars were smaller and had slender proportions, especially in Hellenistic and Roman times. The majority of monolithic altars had dimensions of 0.34-0.64 m in height and a minimum upper surface length of 0.20 m.<sup>91</sup> Some monolithic altars were small and are considered portable, yet they had

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<sup>88</sup> Ferguson 1989, 34 succinctly summarizes the detailed study of Greek altar typology created by Yavis (1949).

<sup>89</sup> Serv. on Verg. *Aen* 3.134; Rüpke 2007, 141. Rüpke 2007, 141 cites several ancient authors who refer to turf-sod altars, including Verg. *Aen* 12.118; Hor. *Carm.* 3.8.4; Ov. *Fast* 2.645.

<sup>90</sup> See Yavis 1949, 177-99 for detailed descriptions of enormous altars that were classified in these categories.

<sup>91</sup> Yavis 1949, 154.

to be large enough to support a sacrificial fire. The ability to support a fire separates them from the category of *arulae*.<sup>92</sup> Just as monolithic altars were intended specifically for burnt offerings, the small *arulae*, with surfaces about 0.10 m to 0.20 m in length and width, were intended to receive a few hot coals for burning incense and perfume or to hold token offerings and libations.<sup>93</sup> Most *arulae* were made from stone or terracotta and are considered portable due to their small size; examples have been found in Magna Graecia, Thera, and Olynthus in temples, cemeteries, and shrines in homes.<sup>94</sup>

Our knowledge of sacrifice and associated rituals is derived from many sculptural reliefs that depict a simple sacrificial scene occurring around a monolithic altar.<sup>95</sup> In addition to the main sacrifice, other aspects of the ritual are also shown such as the pre-sacrificial ritual of purification using a *chernips* (χέρνιψ), a container used for holding water for washing hands and sprinkling.<sup>96</sup> Commonly, a man in a toga is shown leading the sacrifice, accompanied by flute players who provided ritual hymns or served to drown out other noises.<sup>97</sup> Often, bloodless sacrifices were performed in place of the animal sacrifice; the simplest of these bloodless gifts were libations of wine and oil and

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<sup>92</sup> Yavis 1949, 141, 154.

<sup>93</sup> Yavis 1949, 171.

<sup>94</sup> Yavis 1949, 172; Ferguson 1989, 34.

<sup>95</sup> Moede 2007, 165.

<sup>96</sup> Van Straten 1995, 33-4 lists Athenian inventories and references to texts to support the identification and use of this vessel.

<sup>97</sup> Moede 2007, 165; Rüpke 2007, 95.

offerings of breads, cakes, or spices.<sup>98</sup> Libations poured from *philae* or *paterae* were such a regular accessory to sacrifice that they were only mentioned in Greek laws when they were not ordinary, such as a libation of honey instead of wine.<sup>99</sup>

After the introductory ritual, the animal was sacrificed by cutting the throat, and the entrails were examined to confirm that the animal was healthy and that the gods accepted the sacrifice.<sup>100</sup> For large public sacrifices, cattle were a more expensive choice but also yielded more meat for the attendants. Smaller animals, like pigs, sheep, and poultry, were more common victims for private sacrifices.<sup>101</sup> The animal species, however, also depended on the cult, the venue of worship, and the deities.<sup>102</sup>

### Domestic, Daily, and Familial Religion

Daily religious ritual occurred not in the temple but within the domestic setting. The *pater familias* was in charge of maintaining the traditional rites for the family including those rituals connected with different stages of life – adolescence, adulthood, marriage, and death – but also the regular worship of familial gods.<sup>103</sup> For example, the passing of a young boy into adulthood involved the donning of a *toga virilis* and offering his

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<sup>98</sup> Zaidman and Pantel 1992, 37-9; Moede 2007, 165.

<sup>99</sup> Zaidman and Pantel 1992, 40; Lupu 2005, 73.

<sup>100</sup> Scheid 2007, 265.

<sup>101</sup> Rüpke 2007, 152.

<sup>102</sup> Burkert 1985, 55; Lupu 2005, 58.

<sup>103</sup> Beard et al. 1998, 49.

childhood *bullā* (amulet), which was worn around the neck for protection, to the domestic deities of the house.<sup>104</sup> The domestic deities, known as the Lares and Penates, guarded the family and the home, receiving in return libations at meal-times.<sup>105</sup> The Lares were twin guardians of Rome, whereas the Penates were known as sacred objects carried by Aeneas from Troy.<sup>106</sup> Together, these gods embodied the relationship between public and private cult with their origin and familial importance.

Distinct differences exist between public and private cult. According to the definition of public and private cult by Festus, public religion takes place in the name of the citizens and is financed from public funds.<sup>107</sup> Conversely, private religion occurred without state priests in the name of individuals, families, and clans. In public religion, the number of gods was fixed and approved by the government; in private religion, any god could be worshipped.<sup>108</sup> While the Lares were more specific to the family, the Penates were major gods such as Jupiter, Minerva, Fortuna, Venus, and Bacchus.<sup>109</sup> Originally only

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<sup>104</sup> Marchi 1896, 175-8; Belayche 2007, 279.

<sup>105</sup> Tib. 1.3.34; Juv. 12.87f; Orr 1978, 1557-91.

<sup>106</sup> Smith 2007, 38. In past studies, as far back as Varro, there has been some confusion between the Great Gods of Samothrace, the Dioscouri, and the Penates. The Dioscouri were thought to be the Penates hidden in a *dolium* for transport and in some cases have been identified with amphoras. Dubourdieu (1989, 290-91) explains a prior theory about analysis of a coin with the identification of two amphoras on the stern of a ship as representing the Dioscouri. Perhaps the amphoras were a connection to sailors.

<sup>107</sup> Festus *De significatione verborum* 245.

<sup>108</sup> Bakker 1994, 2.

<sup>109</sup> Dubourdieu 1989, 76; Bakker 1994, 40. Roughly 27 different gods were represented in the shrines at Pompeii including Fortuna (12 examples), Vesta (10), Bacchus (8), Jupiter (7), Amor (7), Hercules (6), Mercury (6), Venus Pompeiana (6), Sarnus (4), Isis-Fortuna (3), Minerva (3), Vulcan (3), Luna (2), Pan (1), and a variety of Egyptian and other imported gods (Dubourdieu 1989, 79).

one Lar was depicted but in the imperial period two became common, as shown at Pompeii and Herculaneum where images of dancing youths wear a tunic and hold a *rhyton*, *patera*, or *situla*.<sup>110</sup>

The Lares and Penates are known from statues or painted icons in small wall niches or *aediculae*.<sup>111</sup> Specifically for private worship, this area was known as a *sacrarium* and could be as simple as a mural or a small altar (*lararium*). More commonly the sacred area was a square niche, but it could have an elaborate temple façade shown as a triangular pediment supported by columns, either painted, stuccoed, or of marble.<sup>112</sup> In this case, it became an *aedicula*, a miniature temple with columns, tables, and sometimes a door on top of the podium.<sup>113</sup>

The Lares and Penates, however, are not represented in the majority of the *lararia*. A survey of 505 *lararia* by Boyce found that deities were represented in only 87 cases.<sup>114</sup> However, if the gods are represented in painted panels, they are generally 20-30 cm in height, whereas the statuettes are about 10 cm tall.<sup>115</sup> Statuettes were made of terracotta

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<sup>110</sup> Bakker 1994, 9.

<sup>111</sup> Dubourdieu 1989, 75; Bakker 1994, 9; Kaufmann-Heinimann 2007, 198-200.

<sup>112</sup> Dubourdieu 1989, 71-2.

<sup>113</sup> Marchi 1896, 83-93. Wooden *aediculae* have also been found at Herculaneum (Bakker 1994, 9).

<sup>114</sup> Dubourdieu (1989, 78) summarized the work by Boyce and also noted that several small statuettes were found outside of *lararia*. If these additional statuettes are included in the tally, deities were represented in a total of 116 out of 505 *lararia*.

<sup>115</sup> Dubourdieu 1989, 77.



and also marble, bronze, and silver suggesting they were works of art as well as moveable talismans.<sup>116</sup> Evidence of small holes in the floor of a shrine suggests that the statuettes were firmly fixed in place inside the *lararium*.<sup>117</sup>

In addition to statuettes, other ritual items such as incense burners, coins, and lamps have also been found in houses and *lararia*.<sup>118</sup> For example, in the Casa del Moralista in Pompeii, an incense burner was found with a statuette of Isis.<sup>119</sup> Pompeian houses generally contained a large amount of more permanent religious iconography from the depiction of myth in wall paintings and mosaics to religious sculpture in the gardens.<sup>120</sup> The private Roman house offered a landscape for daily rituals and invoked religious elements in its decoration.

### Purification

The gods required a pure, sacred area safe from defilement as a location for their sanctuary. This issue of purification becomes especially important as mortals approach the gods and their sacred space. The closer a person comes to sacred objects, the greater the need for purity.<sup>121</sup> In order to offer a clear demarcation of sacred and non-sacred

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<sup>116</sup> Dubourdieu 1989, 77; Kaufmann-Heinimann 2007, 200.

<sup>117</sup> Marchi 1896, 104-6; Dubourdieu 1989, 73.

<sup>118</sup> Marchi 1896, 127.

<sup>119</sup> Bakker 1994, 10-1.

<sup>120</sup> Kaufmann-Heinimann 2007, 188-92.

<sup>121</sup> Parker 1983, 91.

land, boundary markers were set up around sanctuaries.<sup>122</sup> When approaching the gods and entering sacred land, a person had to perform certain actions such as sprinkling water, avoiding certain foods like beans, and avoiding sexual intercourse, birth, and death.<sup>123</sup> Other items, such as weapons, hats, brooches, brass, gold, and anything around the body except clothes and footwear, were sources of pollution and were not allowed to enter the sanctuary.<sup>124</sup>

Religious purification could also occur in places other than sanctuaries – wherever religious ritual was taking place. While small-scale purification was necessary to cleanse the household for daily worship, larger civic ceremonies were marked by purification or cleansing throughout the month.<sup>125</sup> In one example of purification outside of temples and houses, an inscription records the necessary purification of shipyards among the places for cleansing.<sup>126</sup> It was generally thought that injustices could be caused by pollution resulting from crime. For example, the Greek fleet was wrecked because of the rape of Cassandra by Ajax.<sup>127</sup> In order to remove pollution, purification by water and incense were two most common methods.

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<sup>122</sup> Cole 2004, 23; Lupu 2005, 21.

<sup>123</sup> Cole 2004, 36; Lupu 2005, 17; LSS 108. Parker (1983) provides a detailed analysis for pollution related to sexual activity (74-103), birth (48-66), and death (32-48).

<sup>124</sup> Lupu 2005, 14-6; LSCG 136.

<sup>125</sup> Parker 1983, 24-9.

<sup>126</sup> LSS 144.

<sup>127</sup> Hom. *Od.* 3.134-5; 4.499-511.

*Purification by Water*

The use of water for purification is well documented in literature. As described by Hesiod, a suppliant must wash his hands and should not eat or wash from an unconsecrated cauldron.<sup>128</sup> In Homer, prior to sacrifice, participants washed their hands in a lustral bowl or sprinkled themselves and changed their dirty clothes.<sup>129</sup> Moreover, water was used in a variety of purification rituals including birth,<sup>130</sup> funerary rites – especially for heroes,<sup>131</sup> marriage,<sup>132</sup> and even bathing of statues.<sup>133</sup> Some water was especially suited for purification such as running water from springs and the sea.<sup>134</sup> Pure lustral water drawn from a flowing source, sometimes even from multiple sacred springs, had the symbolic power to renew because it was continuously running but also the physical advantage of being clean or not stagnant.<sup>135</sup> Likewise, water from the sea was used for its cleansing powers in situations requiring deep purification.<sup>136</sup>

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<sup>128</sup> Hes. *Op.* 724-6, 731-41, 748-9.

<sup>129</sup> Parker 1983, 20.

<sup>130</sup> Ginouvès 1962, 235-48.

<sup>131</sup> Ginouvès 1962, 239-64.

<sup>132</sup> Ginouvès 1962, 265-82.

<sup>133</sup> Ginouvès 1962, 283-98.

<sup>134</sup> Ginouvès 1962, 406.

<sup>135</sup> Ginouvès 1962, 406; Cole 1988, 161. See also Aesch. *Eum.* 452; Eur. *El.* 794; Ov. *Fast.* 2.35.

<sup>136</sup> Ginouvès 1962, 406. In his comprehensive study of pollution, Parker (1983, 227) lists many sources for the sea as a cleansing power.

In addition to literary accounts of ritual uses of water, archaeological remains provide evidence of the containers that held the water. At the end of the seventh century B.C.E., lustral basins for water purification were a common fixture at the entrance to sanctuaries and even around the agora in Athens.<sup>137</sup> By the sixth century B.C.E., the placement of these basins at entrances was widespread, marking the transition between secular and sacred land and activities.<sup>138</sup> In order to cross that boundary, the right hand or a branch was dipped in the water and sprinkled around.<sup>139</sup> A number of different terms have been applied to these basins which held water for purification, the two most common being *perirrhanteria* (περιρραντήρια) and *louteria* (λουτήρια).<sup>140</sup>

The term *perirrhanterion* describes a basin on a pedestal which was often found at the entrance to the sanctuary.<sup>141</sup> The meaning of the word is an “object for spraying around” thereby denoting its function as a container from which one could sprinkle water.<sup>142</sup>

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<sup>137</sup> Cole 2004, 43; Parker 1983, 19.

<sup>138</sup> Cole 1988, 162; 2004, 46.

<sup>139</sup> Ginouvès 1962, 299; Cole 2004, 46.

<sup>140</sup> A recent study by Pimpl (1997) provides a detailed analysis of these basin types along with a catalog of known examples. Three additional terms for lustral basins are *chernips* or *cherniba* (χέρνιβα), *haigisteria* (αίγιστήρια), and *aporrhanteria* (ἀπορραντέρια) but few records exist for the latter two types (Pimpl 1997, 6-7).

<sup>141</sup> Ginouvès 1962, 299-300.

<sup>142</sup> Pimpl 1997, 5-6.

Their frequency in temples has generated some skepticism about a single specialized purpose as cult equipment. Rather, their frequency and variety suggests that some of the *perirrhanteria* may have been dedicated as votive objects.<sup>143</sup> Early examples of this object from the seventh and sixth centuries B.C.E. are quite distinct, with the stand as a central column surrounded by *korai* (women) and lions holding up the basin.<sup>144</sup> However, towards the late sixth and early fifth centuries B.C.E., the peripheral supports were replaced by a single shaft – a form that resembles a modern birdbath.<sup>145</sup> Without these distinct figured columns, *perirrhanteria* are only distinguishable from other forms of lustral basin by their ritual context.<sup>146</sup>

The second form of basin on a stand has a secular function and is known as a *louterion*, exhibiting a form similar to the later sixth- and fifth-centuries B.C.E. *perirrhanterion*. The term *louterion* was given to a large container made from stone, metal, or terracotta, which generally had a stand supporting an open basin with handles and a spout for pouring liquids.<sup>147</sup> Although used occasionally as a surface for food preparations, *louteria* primarily held water for everyday bathing and washing as shown on vase

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<sup>143</sup> Blinkenberg 1898; Amyx 1958, 226; Pimpl 1997, 4.

<sup>144</sup> Ginouvès 1962, 88-89; Ducat 1964; Fullerton 1986.

<sup>145</sup> Fullerton 1986.

<sup>146</sup> Amyx 1958, 225.

<sup>147</sup> Callipolitis-Feytmans 1965, 1. Although *louteria* could be made from stone and metal, most of the objects in a survey of examples stored at the Archaia Korinthos Museum were of terracotta (Iozzo 1987).

paintings where a woman or an athlete is standing near or bathing in a *louterion*.<sup>148</sup>

Bathing accoutrements, such as a sponge, *aryballos*, and *strigil*, reinforce a bathing context.<sup>149</sup> Several *louteria* (La: *labra*) have been found in Caricalla's public baths and four others were displayed as decorations in the gardens of the House of the Vettii at Pompeii.<sup>150</sup>

Although the form of *louteria* changed through time, this change occurred mainly in the height and dimensions of the pedestal while the basin underwent only subtle shifts in form.<sup>151</sup> Prototypes are often identified as spouted bowls, or simply basins.<sup>152</sup> The standard of the seventh century B.C.E. was a deep thick basin set on a high stand with a base, but by the fourth century, the basins were made lighter and ornamented with banded decorations and fluted stands.<sup>153</sup>

Both *perirrhanteria* and *louteria* were made with the basin permanently attached to the stand as a unitary form, but there also existed composite versions with a separate stand and basin.<sup>154</sup> For these detachable basins, a mortise in the stand often corresponded to a

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<sup>148</sup> Amyx 1958, 222-3; Ginouvès 1962, 96-8.

<sup>149</sup> Amyx 1958, 223.

<sup>150</sup> Ambrogi 2005, 49, 53.

<sup>151</sup> Callipolitis-Feytmans 1965, 4.

<sup>152</sup> Brann 1961.

<sup>153</sup> Iozzo 1987.

<sup>154</sup> Pimpl 1997, 6-7.

lead-reinforced tenon in the basin and, in a few rare cases, the stand and basins lacked even this basic construction.<sup>155</sup> The material for the stand and basin might be different, such as the marble stand with a bronze basin described by Pausanias (9.26.9). Unitary terracotta *perirrhanteria* were made as early as the inception of the type in the seventh century B.C.E., suggesting that there is not a clear evolution between the forms; the pieces were not made separately and later morphed into one piece. Perhaps the stand and basin were made separately for ease in production and making mass production possible, or simply as an alternate to the unitary form.<sup>156</sup>

Despite applications in both sacred and profane contexts, it appears that a form of these basins was used in religious contexts to provide sacred water for purification rituals prior to entering a sacred area. However, their role as a ritual object is often difficult to distinguish from mundane use when provenience is unknown especially for the later fifth and sixth century B.C.E. after the *korai* are absent from the stand. Nonetheless, from examples found in sanctuaries it appears that the ritual of using the lustral basins to hold water for sprinkling and cleansing was a key component in purification requisite for entering the sacred area and prior to sacrifice.

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<sup>155</sup> Amyx 1958, 228; Pimpl 1997, 27.

<sup>156</sup> Amyx 1958, 226.

### *Incense Burning*

The burning of aromatics like incense and sulfur were an additional means of cleansing.<sup>157</sup> Burning incense was also considered a type of sacrifice, offering sweet smelling substances to the gods in order to open the medium of communication between gods and men.<sup>158</sup> Burning spice freed the area from pollutants, attracted the attention of the gods, and masked the smell of burning meat and fat during the sacrifice.<sup>159</sup>

A semantic analysis of *\*thu* (*thuo*, *thusia*, *thuos*), shows that the word *thuos* referred to a “substance burned in order to obtain fragrant smoke” and the verb *θυμιάω* used in Homer as a “bid to the gods through combustion.”<sup>160</sup> Archaeological evidence supports the burning of incense in both mundane and religious settings; objects found in the archaeological record are best separated into two categories related to 1) pre-ritual production, storage, and transportation of the incense and 2) the actual burning of the incense.<sup>161</sup>

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<sup>157</sup> Parker 1983, 227; Bibee 2008, 48-59.

<sup>158</sup> Parker 1983, 228; Detienne 1977, 6-17.

<sup>159</sup> Detienne 1977, 38. Before the Greeks had incense and spices, sacrifice would include the burning of pungent shrubs to achieve the same effect (Theophr. *Hist.pl.* frag 2; Plin. *HN* 13.2).

<sup>160</sup> Detienne 1977, 38; Zaccagnino 1997, 102.

<sup>161</sup> Invernizzi 1997, 124-5.



During the early seventh century B.C.E. incense was introduced into Greece as a result of trade with Phoenician merchants from Arabia.<sup>162</sup> Incense burners have been found at the sanctuary of Aetos, Greece, dating from the first quarter of the seventh century B.C.E., and the first depictions of incense burners appeared in Greece around the mid-sixth century B.C.E.<sup>163</sup> On the eve of the Sicilian expedition from Piraeus in 415/4 B.C.E., the entire population accompanied the soldiers to the port and burned incense, suggesting that by the late fifth century B.C.E. many people had access to incense.<sup>164</sup>

In a discussion of the history of incense and incense burners in the Greek world, Zaccagnino notes that the term *thymiaterion*, derived from the Homeric word *thuos*, was used to describe incense burners after the fifth century B.C.E. *Thymiateria* appear frequently among temple inventories and were often included at ceremonies honoring the gods, especially to Apollo and Aphrodite.<sup>165</sup> Although some of the vessels used to burn incense were clearly built specifically as *thymiateria*,<sup>166</sup> others are common objects with multiple purposes, like cooking braziers; thus it is difficult to ascertain whether these common items were used exclusively to burn incense.<sup>167</sup> Specific types of *thymiateria* ranged from small simple cup-shaped examples to tall ornate versions but all

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<sup>162</sup> Zaccagnino 1997, 102.

<sup>163</sup> Zaccagnino 1997, 103-4.

<sup>164</sup> Zaccagnino 1997, 104-5.

<sup>165</sup> Zaccagnino 1997, 107-9.

<sup>166</sup> Invernizzi 1997, 124-33, 140-1.

<sup>167</sup> Invernizzi 1997, 133-9, 142-3.

generally included a receptacle for the coals.<sup>168</sup> The typological development of burners indicates that later versions had an increased number of holes in the receptacle to increase airflow, making burning more efficient.<sup>169</sup>

The use of incense in religious ritual to remove odors by all social strata for state ritual, private ritual, and daily life was also widespread in Rome.<sup>170</sup> The importance of incense was noted by Cato (*Agr.* 134.1) and Horace (*Carm.* 3.23) who both wrote that offering incense to deities or the Lares will bring prosperity. Equally important was the offering of incense to the imperial cult as suggested by Suetonius who recounts how the passengers of a ship from Alexandria offered incense to Augustus while at Puteoli.<sup>171</sup>

Contrary to the belief that incense was only imported by the wealthy, it has been argued recently that only a few grains were necessary, thus allowing it to be purchased for relatively little expense.<sup>172</sup> The import of incense was well recorded in Pompeii's perfume industry,<sup>173</sup> and an inscription from Kos, dating to the second century B.C.E. states that tax collectors of sales on incense, vegetables, and salted fish were obligated to

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<sup>168</sup> Zaccagnino 1998, 67-84.

<sup>169</sup> Rotroff 1997, 210-2.

<sup>170</sup> Salmeri 1997, 534-5.

<sup>171</sup> Suet. *Aug.* 98.2.

<sup>172</sup> Salmeri 1997, 536-7.

<sup>173</sup> Mattingly 1990, 71-90.

sacrifice to the gods.<sup>174</sup> These examples suggest that incense vendors were not limited in number, but rather that there was a prominent importation and sale of incense, corroborating the view that incense was a common item and used notably in ritual.<sup>175</sup>

### Votives, Vows, and Prayers

Prayers, vows, and votive offerings were ubiquitous features of ancient Greek and Roman religious rituals. Although prayers and vows are attested only in inscriptions and written dedications, votives are often preserved in the archaeological record, and the presence of votives at a site is often considered a key indicator that ritual has occurred.<sup>176</sup>

Unlike votive offerings, prayers are nearly impossible to identify in archaeological record but they were a crucial component of ritual, either alone or as accompaniments to other rituals like sacrifices and libations.<sup>177</sup> Pliny (*HN* 28.10) asserts that without prayer, sacrifice is useless, since prayer inaugurated sacrifice.<sup>178</sup> Additionally, Thucydides (6.32) records that before departing for war in 415 B.C.E., Athenian soldiers recited

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<sup>174</sup> Syll.<sup>3</sup> 1000, 1.15; see Vreeken 1953, 7-9, 63-5 and Salmeri 1997, 533.

<sup>175</sup> Salmeri 1997, 532-3.

<sup>176</sup> Renfrew 1985, 11-26.

<sup>177</sup> Hahn 2007, 235. I avoid the word “supplication” because of the implications as discussed by Naiden 2006. In his analysis of supplication, Naiden distinguishes between prayer, which is addressed to the gods, and supplication, which is directed towards another person (2006, 7). Gestures between the two could be very similar with arms outstretched and, like prayers, could be met either by rejection or acceptance (Naiden 2006, 43, 283).

<sup>178</sup> Zaidman and Pantel 1992, 41.

customary prayers and poured libations. Rarely occurring in isolation, prayers accompanied a gift to arouse the attention of the gods, usually with heavy scent of incense or sacrifice.<sup>179</sup>

Gifts left for the gods at temples and sanctuaries included offerings, dedications, and votives. An offering is the act of giving an ephemeral object, like cakes or incense, whereas a dedication is an object with some permanence to it, and a votive provides a connection between an object and prior vow.<sup>180</sup> Many inscriptions record the causes and contents of vows and dedications which are useful in learning about gods, the votives, and rituals in general.<sup>181</sup> A subgroup of these inscriptions are curse tablets (*defixiones*), or inscribed pieces of lead rolled up like scrolls or packets either with a malicious intent or to help the dead embrace their fate,<sup>182</sup> and votive pictures known as *tabulae pictae* or *pinakes* which were usually made from terracotta and wood.<sup>183</sup> Cicero noted the skepticism from a Greek atheist Daigoras while on Samothrace: Daigoras' friend commented on the many votive *tabulae* left by sailors to the Dioscouri in fulfillment of their vows when they safely reached harbor and Diagoras replied that there were no

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<sup>179</sup> Rüpke 2007, 141.

<sup>180</sup> Osborne 2004, 5.

<sup>181</sup> Haensch 2007, 180-4.

<sup>182</sup> Ogden 1999, 15-25; Haensch 2007, 185; Osborne 2007, 260; see also Gager 1992 for an overview.

<sup>183</sup> Van Straten 1995, 57; Rüpke 2007, 164.

records of failed vows.<sup>184</sup> The many votives excavated from remaining temples and sanctuaries attest to the frequency with which the ancients sought divine guidance.

Votives establish a relationship between the devotee and the deity with the benefit of extending its use beyond a single exchange, especially when writing or inscription was involved.<sup>185</sup> For example, when a young boy matured he presented his *bullā*, or protective amulet, to the Lares by hanging it in the household shrine, signifying a lasting and reciprocal relationship between the Lares and the young man.<sup>186</sup> At Ponde di Nona, a roadside spring about 15 km east of Rome dedicated to the Greek god of healing Asclepius in 250-150 B.C.E., recovered votives depict an array of models of body parts including feet, arms and legs, hands, eyes, and male genitalia; perhaps these were gifts left to the god in fulfillment or request of healing.<sup>187</sup> Anatomical votives were a frequent occurrence in both Greek and Roman settings. In particular, heads and busts are commonly found in pits within the temenos into which votives were deposited when the temples became overcrowded.<sup>188</sup>

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<sup>184</sup> Cic. *Nat. D.* 3.93.

<sup>185</sup> Rüpke 2007, 157.

<sup>186</sup> Marchi 1896, 175-78; Belayche 2007, 279; Rüpke 2007, 160.

<sup>187</sup> Rüpke 2007, 161. see also Beard et al. 1998, 12-3. Similar objects were common to many sanctuaries of Asclepius including those at Epidauros, Kos, and Corinth. Separately, the eye and phallus also had an apotropaic component, used to invoke protective powers or bring prosperity and fertility (Dubourdieu 1989, 458-60).

<sup>188</sup> Rüpke 2007, 154.

Votives were so common that their production became an important industry for a city.<sup>189</sup> Many of these heads and figurines were made in molds so that they could be mass produced.<sup>190</sup> Mold-made votives are easily identified, tracing the itinerant craftsmen from sanctuary to sanctuary, thus suggesting that the demand for votive objects created a market for their manufacture.<sup>191</sup>

Votive figurines also included sacrificial animals, miniature representations of gods, and even large cult statues. As an economic alternative, terracotta animal statuettes, such as boars and roosters, were considered a substitute for the more expensive meat offerings of sacrifices.<sup>192</sup> Similarly, small images and figurines of the gods, such as the images of Penates within the *lararia* of Rome, could be carried to ensure protection. Other small figurines such as herms were commonly found at doorways of private houses and in sanctuaries to provide protection.<sup>193</sup> Within the sanctuaries, cult statues were the focal point for prayer, usually set up in a temple on a raised base near the rear of the *cella* and facing toward the front door and altar; examples of these statues could be small or quite

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<sup>189</sup> See Ghinatti 1983.

<sup>190</sup> Rüpke 2007, 155.

<sup>191</sup> Rüpke 2007, 155.

<sup>192</sup> Van Straten 1995, 54.

<sup>193</sup> Thuc. 6.27; Goldman 1942.

large.<sup>194</sup> In addition to receiving prayer and votive gifts, the cult statue also was the object of other rituals like cleansings, processions, and festivals.<sup>195</sup>

### Summary and Conclusion

Consequently, prayer, vows, and votives were a prevalent and necessary aspect of ancient religious ritual as clear indications of piety and evocation of the gods. Greco-Roman ritual offered an “opportunity for the exchange of messages – prayers from men to gods, warnings and messages of acceptance from gods to men.”<sup>196</sup> Ritual objects were used in both private and public ritual and are well represented in the archaeological record. These objects include portable altars, vessels for libation, lustral basins known as *louteria* and *perirrhantaria*, incense burners or *thymiateria*, and statuettes or figurines. Moreover, ritual was a vital part of the economic community as merchants and craftsmen participated in the markets and trade of votives. Consequently, many of these objects might be expected to be in shipwrecks, either for personal use in on-board ritual or as part of the cargo, which is the subject of the next chapter.

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<sup>194</sup> Romano 1988, 128.

<sup>195</sup> Romano 1988, 127-9. Among these festivals include the Tonaia in which the *xoanon* of Hera was carried to the sea and purified to commemorate the unsuccessful attempt by the Carian pirates to steal the statue (Ath. 15.672). The cult image of Aphrodite was carried to the sea where it was bathed and adorned with flowers in a festival for Aphrodite at Paphos on Cyprus (Ath. 84c; Strabo 14.683; Ov. *Met.* 10.270; Ov. *Fast.* 4.133).

<sup>196</sup> Beard et al. 1998, 37.

### CHAPTER III

#### RELIGIOUS OBJECTS IN SHIPWRECKS

An ancient merchantman, consisting of the ship itself, its fittings, and crew, carried both cargo and personal items. The demise of a ship at sea means that everything on board either sinks with it, is salvaged, or is dispersed among the waves. This moment of sinking provides a snapshot of what was on a vessel, whether as part of the cargo or as objects necessary for life at sea. Therefore, at first glance, if religious objects were on board the ship, then they should be among the ship's remains, barring removal by means of site formation processes. The presence and placement of these objects in shipwrecks provide a corpus of material from which to study provenience on board the ship. In particular, an analysis of the archaeological remains of ancient Mediterranean shipwrecks points to the presence of ritual objects on board. Furthermore, the proveniences of these objects suggest a symbolic dichotomy between objects in the bow and the stern regions.

#### The Artifacts

In this study, I have chosen to analyze specific, specialized religious objects to determine the occurrence of ritual on board the ship. The corpus consists of a total of 32 shipwrecks with 71 associated religious objects.<sup>197</sup> The earliest shipwreck dates to the

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<sup>197</sup> See Appendix 1 for a database of the wrecks and cargos.



eighth century B.C.E., a deep-water wreck found off the coast of Israel,<sup>198</sup> and the latest shipwreck dates to the mid third century C.E., a Roman wreck off of Sicily. I offer an analysis of (a) those artifacts with a known religious function in terrestrial settings and (b) other objects that have been specifically designed for the protection of the ship. I have divided the religious objects from these shipwrecks into four categories according to their function: 1) purification and libation, 2) sacrifice and incense burning, 3) prayer and figurines, and 4) hull addenda.

### *Purification and Libation*

In a terrestrial setting, libations marked transitions through time such as the arrivals and departures of the day, travels, and army campaigns. As ships entered and left port, it seems likely that libations would have been performed in order to ensure cleanliness and purity. Writing in the 12<sup>th</sup> century C.E. about his research on the Greeks, Tzetzes recorded that it was customary when beginning a voyage to pour into the sea the water used in ceremonial washing.<sup>199</sup> Perhaps the containers used to hold this ritual water were simple basins or, as Kapitän has suggested, the large lustral basins referred to as *louteria* or *perirrhantaria*.<sup>200</sup> Indeed, there are 18 lustral basins and libation objects from 13 wrecks dated between the fifth century B.C.E. and the second century C.E.

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<sup>198</sup> Even though this eighth-century B.C.E. wreck is likely Phoenician in origin, it is a deep-water wreck that offers the possibility of a preserved provenience for ritual objects, since it is too deep for looting.

<sup>199</sup> *Tzet.* 1.134.

<sup>200</sup> Kapitän 1979, 114. Although the term *louterion* specifically describes a water basin on a stand used in profane or mundane practices like bathing, and the term *perirrhantaria* specifically is for a water basin used in ritual uses, in this chapter water basins with stands are referred to as *louteria* simply for ease of discussion. The nuance between ritual and mundane is not distinguished in this chapter until the analysis.

Table 1. *Louteria* and *perirrhantaria* attributes. If both the stand and basin were found, then the preserved category is "all". The number of pieces denote whether these were unitary (1) or composite (2 & 3).

| Wreck           | Date           | Preserved           | Basin Dia. | Stand H. | Material   | Pieces | Basin Decoration              | Stand Decoration                                      |
|-----------------|----------------|---------------------|------------|----------|------------|--------|-------------------------------|---|
| Capo d'Ali      | 400 B.C.E.     | all                 | 60.5 cm    | 46 cm    | terracotta | 1      | overhang                      | smooth stand, round base/bottom                       |
| Stentinello -1  | 300-280 B.C.E. | basin frag.         | 80 cm      |          | terracotta | 1      | horizontally grooved overhang |   |
| Stentinello -2  | 300-280 B.C.E. | basin frag.         | 68 cm      |          | terracotta | 1      | horizontally grooved overhang |   |
| Capo Graziano F | 300-250 B.C.E. | stand               |            | 65.5 cm  | terracotta | 2      |                               | fluted shaft w/ a round base on a square plinth       |
| Losinj          | 300-250 B.C.E. | stand & basin frag. |            | 57 cm    | terracotta | 1      |                               | circular grooves                                      |
| Kyrenia         | 290 B.C.E.     | all                 | 80 cm      | 55 cm    | marble     | 3      |                               | fluted shaft, round base on a square plinth, separate |
| Cabrera B       | 250-225 B.C.E. | basin & stand frag. | 80 cm      | 32+ cm   | terracotta | 1      | horizontally grooved overhang |   |
| Lastovo B       | 150 B.C.E.     | all                 | 70 cm      | 60 cm    | terracotta | 1      | running spirals on overhang   |   |
| Spargi          | 120-110 B.C.E. | stand & basin       | 50 cm      | 26+ cm   | marble     | 2      |                               | fluted shaft w/ a round base                          |
| Kizilburun - 1  | 100-1 B.C.E.   | all                 | 138 cm     |          | marble     | 2      | unfinished                    |   |
| Kizilburun - 2  | 100-1 B.C.E.   | all                 | 123 cm     | 62 cm    | marble     | 2      | unfinished                    | smooth  |
| Palagruza A     | 100-200 C.E.   | all                 | 57 cm      | 70 cm    | terracotta | 1      | horizontally grooved overhang | shaft with circular grooves                           |
| Ognina D -1     | 175-200 C.E.   | basin fragment      | 65 cm      |          | terracotta | 1      |                               |   |
| Ognina D -2     | 175-200 C.E.   | basin & stand frag. | 80 cm      |          | terracotta | 1      |                               |   |

Fourteen *louteria*, or fragments thereof, have been found on 11 different shipwrecks dating from the fifth century B.C.E. until the first century B.C.E (see figs. 1 and 2).<sup>201</sup> Nearly half of these objects are complete *louteria* consisting of a basin and a stand, while the others are either stands, basins, or fragments. There appear to be two size groups among the basins: large 123-137 cm basins from the first-century B.C.E. Roman wreck at Kızılburun<sup>202</sup> and smaller basins from the other 10 wrecks. The other wrecks have a mean basin size of 50-80 cm, nearly half the size of the Kızılburun basins (Table 1). Furthermore, these large basins at Kızılburun were unfinished, explicitly defining them as cargo and not part of ritual on board the ship. Instead, the basins were likely being transported with the cargo of eight, seven-ton marble column drums and a capital to Claros for use in the temple.<sup>203</sup>

Apart from size, the fabric type of *louteria* appears to be largely terracotta. The majority of *louteria* are terracotta (10 examples), and while the remaining four pieces are marble, two of these were found in the marble cargo of the first-century B.C.E. Kızılburun wreck. However, a temporal pattern in the occurrence of terracotta and marble *louteria* does not exist, nor is there a significant pattern in chronology or fabric for unitary or composite *louteria*. Most of the composite *louteria* with detached basins have mortises

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<sup>201</sup> At least 21 *louteria* have been raised from the sea. However, only 14 of these were located on or near a shipwreck. An even fewer number of these were excavated with the wreck, rather than looted or taken from the site.

<sup>202</sup> Carlson 2006, 2.

<sup>203</sup> Carlson and Atkins 2008.

on the stand corresponding to a tenon on the basin, except for the stand from the Kyrenia wreck (early third century B.C.E.).

Likewise, decoration does not significantly differ between the terracotta and marble *louteria* based on fabric or period. All of the basins have an overhanging rim regardless of whether they are of marble or terracotta; most have horizontal grooves on the overhang, except for the *louterion* from Capo d'Ali (fig. 1c), which has a smooth lip, and that from Lastovo B, which has a set of horizontal running spirals.<sup>204</sup> Of the six preserved stands, three have fluted shafts with a round base and a square plinth, very similar to Ionic column bases. The first example is the terracotta stand from Capo Graziano F (fig. 1f) that was made with the plinth and shaft as one piece.<sup>205</sup> Examples from the wrecks at Kyrenia (fig. 2a) and Spargi (fig. 2b-c) are made from marble and have a detachable basin. While the stand at Spargi is carved from one piece of marble, the stand from Kyrenia was made from two separate pieces – the shaft and the square plinth.<sup>206</sup> The remaining three examples either have horizontal grooves in the case of Lošinj<sup>207</sup> (fig. 1e) and Palagruža A, or a smooth shaft such as the one from Capo d'Ali. With few patterns emerging, it is impossible to offer a definite conclusion about the purpose of these solitary *louteria* on board the ship. Over the span of 400 years, it

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<sup>204</sup> Since the Kızılburun pedestals and basins were part of the marble cargo of the ship, and were clearly not intended for shipboard ritual, they will be omitted from this analysis and the spatial analysis.

<sup>205</sup> Cavalier 1985, 90.

<sup>206</sup> Perhaps the *louterion* from Kyrenia was made in three separate pieces for easier dismantling and storage on board.

<sup>207</sup> Kapitän 1979, 104-5.

appears that these basins were occasionally transported on board the ship possibly as cargo or for ritual shipboard use.

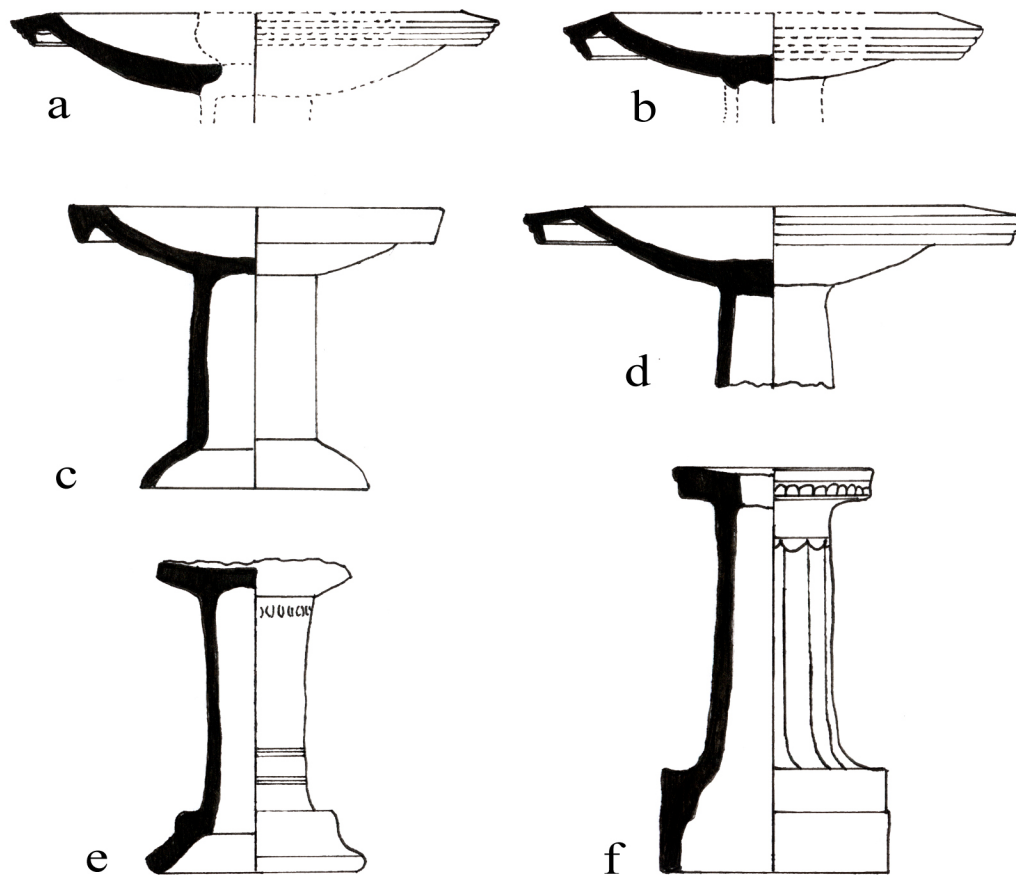


Fig. 1. *Louteria* or *perirhanteria*. *a*, Stentinello, western area, p. Dia. 68 cm (after Kapitän 1979, fig. 7A); *b*, Stentinello, eastern area, p. Dia. 80 cm (after Kapitän 1979, fig. 7B); *c*, Capo d'Ali, H. 46 cm, Dia. 60.5 cm (after Kapitän 1979, fig. 3A); *d*, Cabrera B, Dia. 80 cm, p. H. 32 cm (after Cerdà 1978, fig. 19); *e*, Lošinj, p. H. 57 cm (after Kapitän 1979, fig. 11); *f*, Capo Graziano F, p. H. 65.5 cm (after Kapitän 1979, fig. 17).

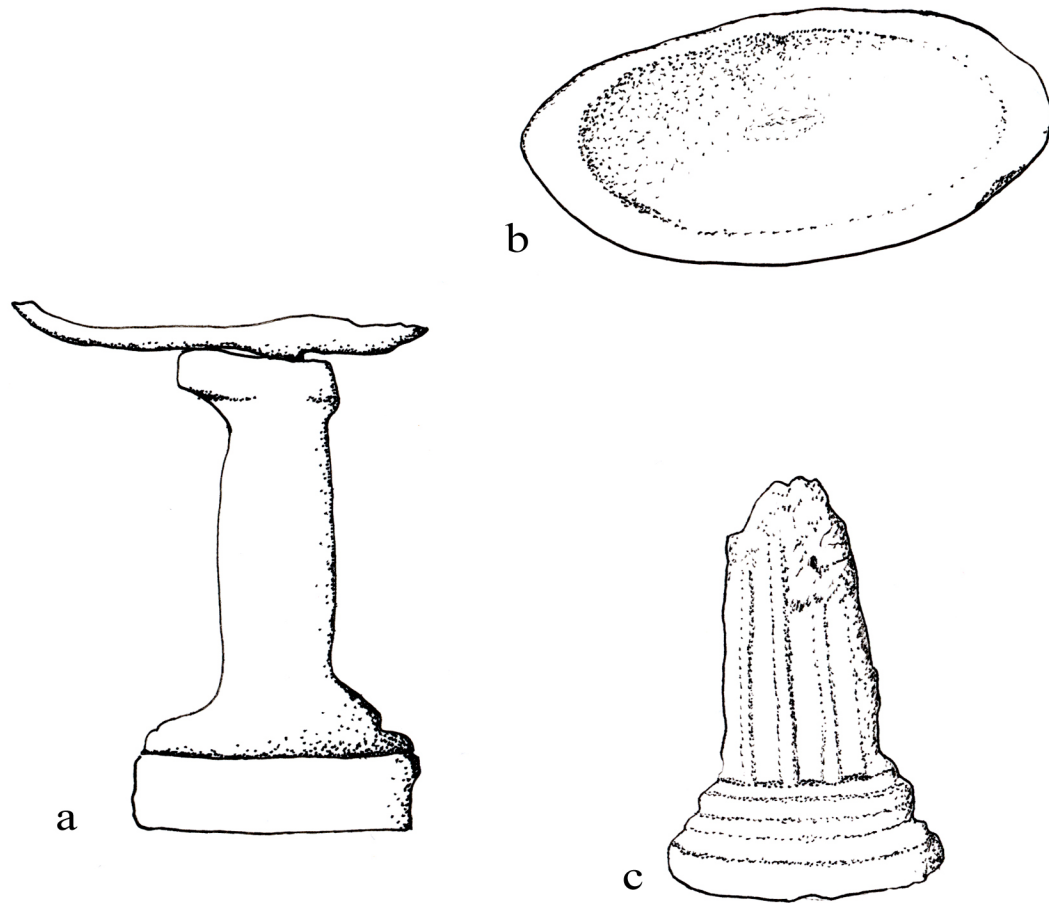


Fig. 2. *Louteria* or *perirrhanteria*, additional figures. a, Kyrenia, p. H. 55 cm, p. Dia. 80 cm (after Kapitän 1979, fig. 25); b, Basin from Spargi, p. Dia. 50 cm (after Lamboglia 1964, fig. 5); c, Pedestal from Spargi, p. H. 26 cm (after Kapitän 1979, fig. 26).

Finally, five objects from wrecks are not the large lustral basins but still may have a connection to ritual use. The earliest object, a small terracotta dish with a basin diameter of slightly more than 33 cm and a stand of about 13 cm high, was found on the late third-century B.C.E. Cabrera B wreck off the coast of Spain (fig. 3a).<sup>208</sup> A hole in the center of the basin suggests that it was possibly used as a vessel for libations which drained the liquid from the center. The next two objects were found on the first-century B.C.E. Kızılburun wreck. The first is a marble dish with a diameter of 37 cm that is unfinished, still retaining marble in the center. Like the unfinished large marble *louteria* from Kızılburun, this smaller basin was presumably part of the cargo. The second libation object from this wreck, however, is smaller with a diameter of 20 cm, and appears to be finished. Although only half of the object remains, it is a shallow dish with projecting rectangular bosses on the rim. A very similar marble basin about 19 cm in diameter was found on the Camarina B wreck, located off the coast of Italy (fig. 3c). A complete artifact, this finished marble dish has a fake spout for pouring.<sup>209</sup> A silver dish with a deep bowl and two rim handles was also found on the Camarina B wreck, and perhaps it was an ornate bowl used in libations (fig. 3b).

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<sup>208</sup> Cerdà 1978, 89.

<sup>209</sup> Di Stefano 1992, 196.

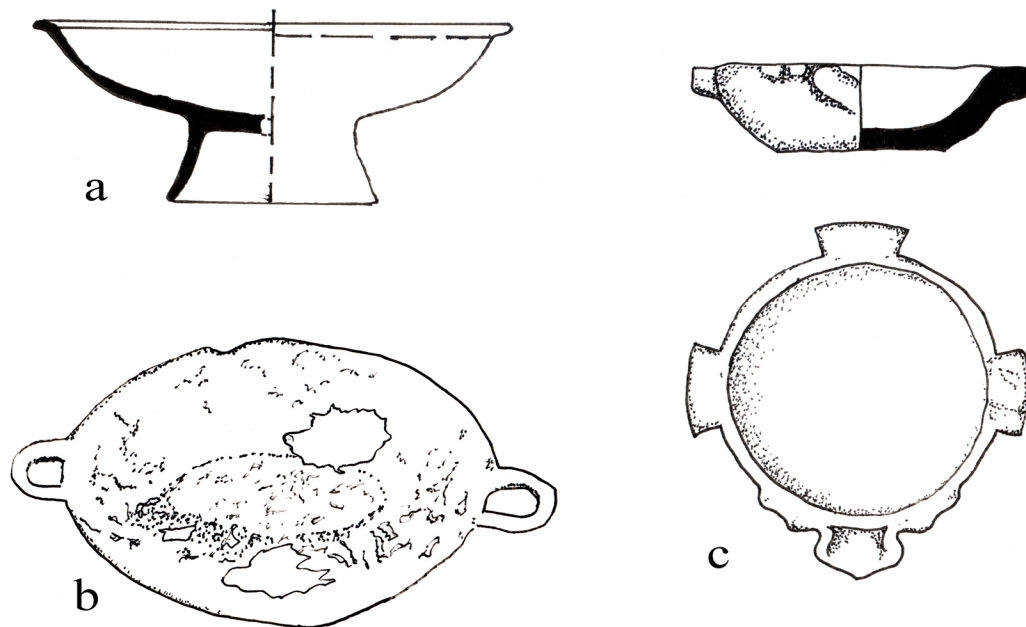


Fig. 3. Libation materials. *a*, Cabrera B, p. H. 12.6 cm, p. Dia. 33.4 cm (after Cerdà 1978, fig. 18); *b*, Camarina B, (after Di Stefano 1992, fig. 26); *c*, Camarina B, p. Dia. 18.5 cm (after Di Stefano 1992, fig. 24).



### *Sacrifice and Incense Burning*

In the *Aeneid*, Aeneas scatters sacrificial entrails into the sea as his ship leaves port, suggesting that sacrifice on board the ship was possible.<sup>210</sup> Objects which may have a role in these rituals include altars, incense burners, tripods, and *candelabra*. At least 18 objects have been found among ten wrecks dating from the eighth century B.C.E. until the second century C.E.

Only five altars have been found in direct association with known shipwrecks, of which four are associated with one wreck.<sup>211</sup> The ship which wrecked near Gela, Italy, between 500-480 B.C.E. was carrying four rectangular, terracotta altars roughly 8 cm high by 35 cm long by 9 cm wide (fig. 4a).<sup>212</sup> Decorated with palmettes, lotus flowers, and volutes, these small altars are similar to small votive altars found in Corinth and at Perachora.<sup>213</sup> The fifth altar was found on the wreck at Spargi and was likely formed from three pieces: two marble supports that were 60 cm high and 15 cm wide and

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<sup>210</sup> Verg. *Aen.* 5.372-8.

<sup>211</sup> Although two additional altars have been found in the Bay of Terrasini, which date to the fourth century B.C.E., they are loosely associated with widely scattered third-century B.C.E. wrecks. Since it is uncertain whether these altars were associated with the same wreck or different wrecks, they are not included in the discussion. These small altars, 15.5 cm high by 24 cm long, by 14 cm wide, were terracotta and both had a scene of Herakles strangling a lion (Giustolisi 1975, 37).

<sup>212</sup> Panvini 2001, 60.

<sup>213</sup> A similar motif around the cornice was found on a small votive altar at Corinth but the altars from Gela lack the elaborate figures in the center (Swindler 1932, 515 and Broneer 1947, 214-23).

worked on three of the four sides, and the altar slab that might have been at least 50 cm wide (fig. 4b).<sup>214</sup>

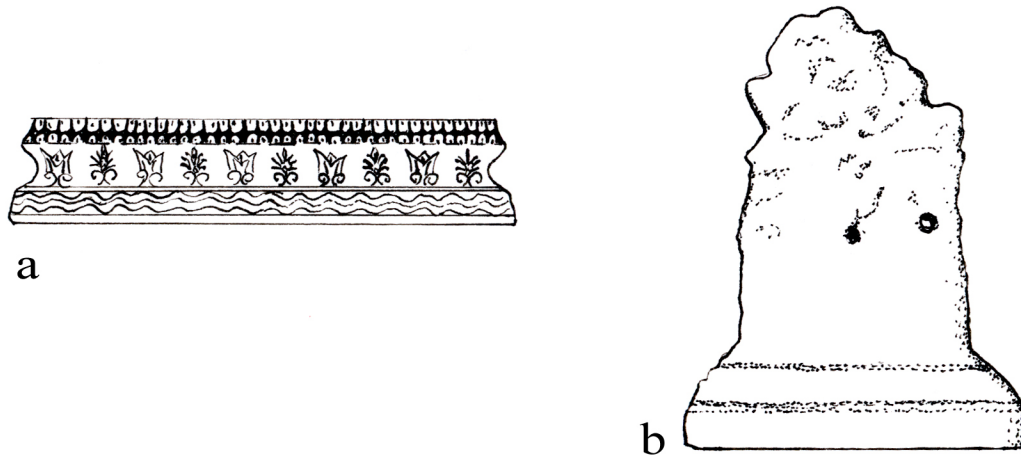


Fig. 4. Altars. a, Gela, L. 35 cm, H. 8 cm (after Panvini 2001, fig. 91-94);  
b, Spargi, p. W. 50 cm (after Kapitän 1979, fig. 27).

<sup>214</sup> Lamboglia 1964a, 261; Kapitän 1989, 149. However, Beltrame (2000, 155) suggests that these pieces were not part of an altar but rather a table that was part of a shipment of furniture.

In addition to altars, incense burners, or *thymiateria*, have been found in shipwrecks. At least six *thymiateria* were found on three of the wrecks, and these seemed to be concentrated on the earlier wrecks ranging in date from the eighth century B.C.E. to the second century B.C.E. The earliest burner was brought up from the deep-water, eighth-century B.C.E. wreck off of Israel known as the *Elissa* (fig. 5a). It was a small cup-shaped *thymiaterion* with a stand 10 cm in height and a basin 15 cm in diameter.<sup>215</sup> Incense burners also could have elaborate decoration as shown by a *thymiaterion* from the seventh- or sixth-century B.C.E. wreck known as Cádiz F off Spain (fig. 5c). This burner was formed from a triangular ceramic vase with a tripod or some support that terminated in lion's feet.<sup>216</sup> Aeration holes in the center of the object suggest that it was used for burning incense. Finally, incense burners from a Punic wreck at Pisa provide evidence for elaborate shapes as shown by the four small *thymiateria* formed in the shape of female busts but missing the receptacle for coals (fig. 5b).<sup>217</sup>

Additionally, some incense burners had a receptacle and support that were separate. Such is the case with the tripod bases in the early fifth-century B.C.E. wreck at Gela<sup>218</sup> (fig. 5d) and the third-century C.E. wreck at Grado (fig. 5e).<sup>219</sup> Although separated by at least seven centuries, these tripods are nearly identical bronze cylinders with lion's feet

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<sup>215</sup> Ballard et al. 2002, 163.

<sup>216</sup> Blanco 1970, 53.

<sup>217</sup> Bottini 2000, 210.

<sup>218</sup> Panvini 2001, 61.

<sup>219</sup> Lopreato 1994, 33.

as supports. Similar to the feet on the incense burner from Cádiz F, perhaps these tripods also held receptacles for burning incense.

The last objects potentially connected to on board sacrificial ritual are *candelabra*. Four wrecks have a single bronze *candelabrum* associated with them. The earliest is found on the fourth-century B.C.E. wreck at El Sec, from which the only remains are a 107.5 cm long tapered rod, shaped like a temple's column with 15 flutes (fig. 6a).<sup>220</sup> A similar fluted bronze rod, about 175 cm long, was found on the late second-century B.C.E. wreck at Spargi (fig. 6c).<sup>221</sup> Another bronze rod with a length of 78.4 cm was found on the edge of the late first-century C.E. Palagruža B wreck (fig. 6b).<sup>222</sup> Finally, the bronze base of a *candelabrum* was found on the second-century C.E. Camarina B shipwreck.<sup>223</sup> Overall, similarities between these *candelabra* rods suggest that these objects may have been occasional occurrences aboard ships, and that the use of bronze, in particular, hints at a use for more than just everyday lighting or perhaps simply the need for a sturdy material rather than fragile terracotta.

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<sup>220</sup> Arribas 1987, 543.

<sup>221</sup> Lamboglia 1964a, 262.

<sup>222</sup> Radić 2002, 174.

<sup>223</sup> Di Stefano 1992, 196.

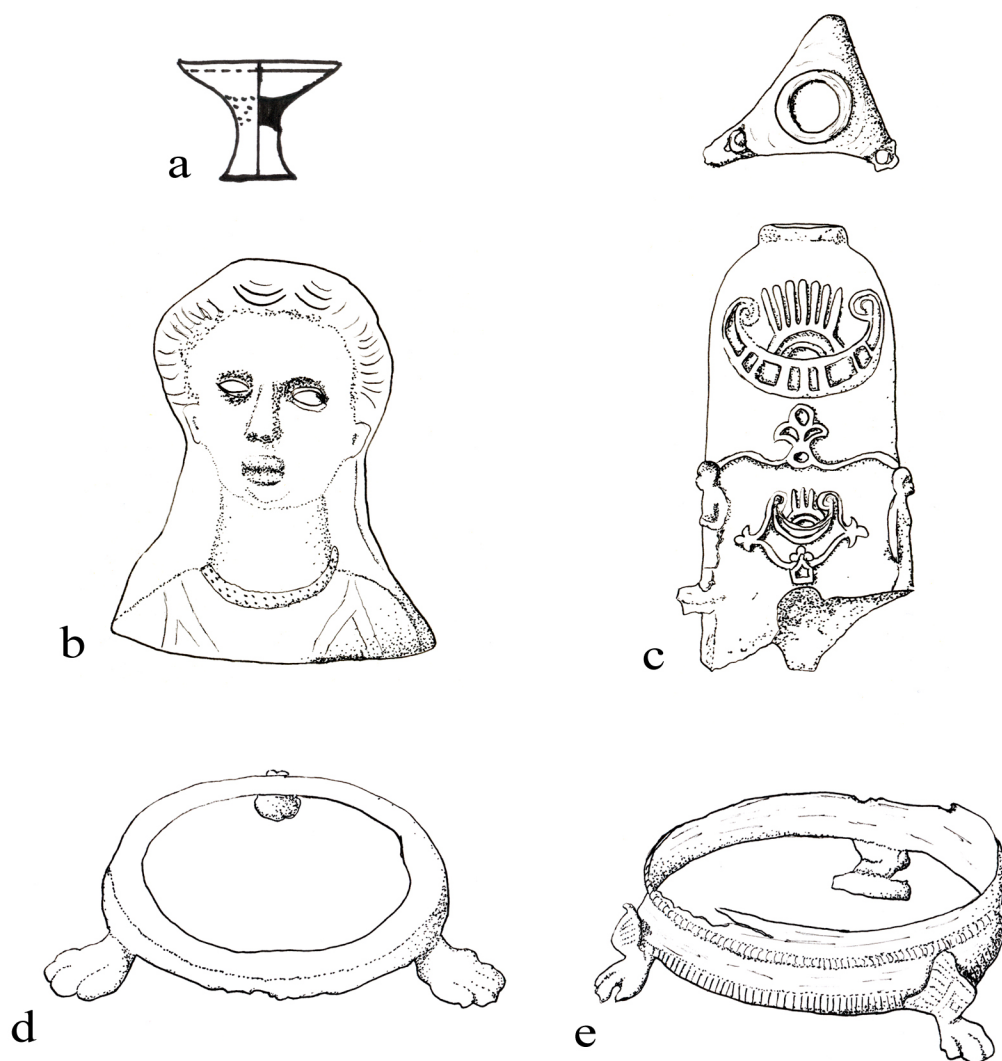


Fig. 5. *Thymiateria* (a-c) and tripods (d-e). a, Elissa (after Ballard et al. 2002, fig. 9.2); b, Pisa (after Bottini 2000, fig. 1-3); c, Cadiz F, p. H. 65 cm, p. Dia. 11.7 cm (after Blanco 1970, fig. 1); d, Gela (after Panvini 2001, fig. 42); e, Grado (after Lopreato 1994, fig. 1).

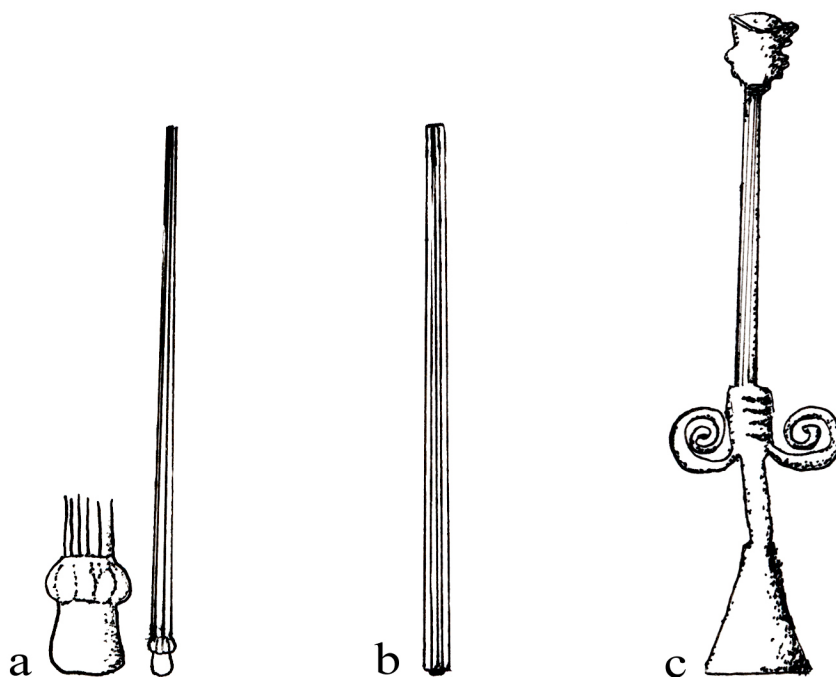


Fig. 6. *Candelabra*. *a*, El Sec, H. 107.5 cm (after Arribas 1987, fig. 6.1); *b*, Palagru $\square$ a B, H. 78.4 cm (after Radic 2002, fig. 4); *c*, Spargi, H. 175 cm (after Lamboglia 1964, fig. 3).

### *Prayer and Figurines*

Although prayer accompanied rituals in libations and sacrifices, it also was uttered separately in order to beseech the gods for deliverance from peril. Even though direct remnants of prayer performances are difficult to study from the archaeological record, associated objects do exist, such as figurines or the physical representations of the deities that were the focus of prayer.<sup>224</sup> Athenaeus records that in the midst of a bad storm on a trip from Cyprus to Naukratis, the sailors prayed to a statuette of Cyprian Aphrodite and she saved the ship and the seamen from the storm.<sup>225</sup> Consequently, figurines may be the best physical representation of the tutelary deity of the ship and are certainly the most common religious object found in wrecks. Statuettes or figurines have been found in 15 wrecks and several of those wrecks had multiple representations making a total of 27 statuettes, figurines, or fragments thereof.<sup>226</sup> These figurines can be further broken down into the following categories: males, females, animals, and unidentifiable fragments.

Male figurines comprise the greatest number of examples with 10 figures from nine wrecks. The earliest figurine, which was found on the Cadiz F wreck, was a male

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<sup>224</sup> Although not included in this study, Dr. Pulak (pers comm.) has suggested that the presence of musical instruments in shipwrecks may also be indicative of prayer.

<sup>225</sup> Ath. 15.675. Athenaeus also records that the statue was *σπιθαμιαῖον*, the size between the little finger and the thumb, roughly 7-8 inches high.

<sup>226</sup> A critical factor to consider is the importance of size for the figurines and statuettes found among wrecks. Many pieces of statuary, such as those discovered on the wreck at Mahdia (see Hellenkemper Salies et al. 1994), have been left off this list, working on the assumption that statues were cargo and not carried as tutelary deities.

terracotta head, possibly Egyptian (fig. 7a). At 17 cm high and 17.5 cm wide it was made hollow with holes on top perhaps for suspension.<sup>227</sup> On the late second-century B.C.E. Camarina A wreck, another representation of a head was found, this time a bronze representation of a male youth (fig. 7b). The excavator suggests that it was the head of a herm set on a wire that perhaps connected it laterally with another head as part of a finial for the hull's railing.<sup>228</sup> Known as a divine protector of travelers, a herm was a post with an adult male head and an erect phallus. A complete small terracotta herm 18.7 cm tall was found on the first-century B.C.E. marble wreck at Kızılburun (fig. 7c).<sup>229</sup>

Phallic imagery was not limited to the herm figurines, however; it was also a common attribute of Priapus, a protector of sailors and navigation. Perhaps, he is one of the male wooden figurines found among the remains of the Planier A wreck in the early first quarter of the first century C.E. (fig. 7d). Two male figurines, an adult and a youth, were found on this wreck, both about 35 cm in height and carved from wood with the back unworked. This pattern suggests that they were meant to be viewed only from the front.<sup>230</sup> The adult male is a realistic carving with his right arm folded over his abdomen and a thumb going into his toga, the youth is wearing a short tunic that rises up in the

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<sup>227</sup> Ramirez Delgado and Mateos lonso 1985, 79.

<sup>228</sup> Di Stefano 1991, 130.

<sup>229</sup> Carlson 2007a, 4.

<sup>230</sup> L'Hour 1984, 65, 71.



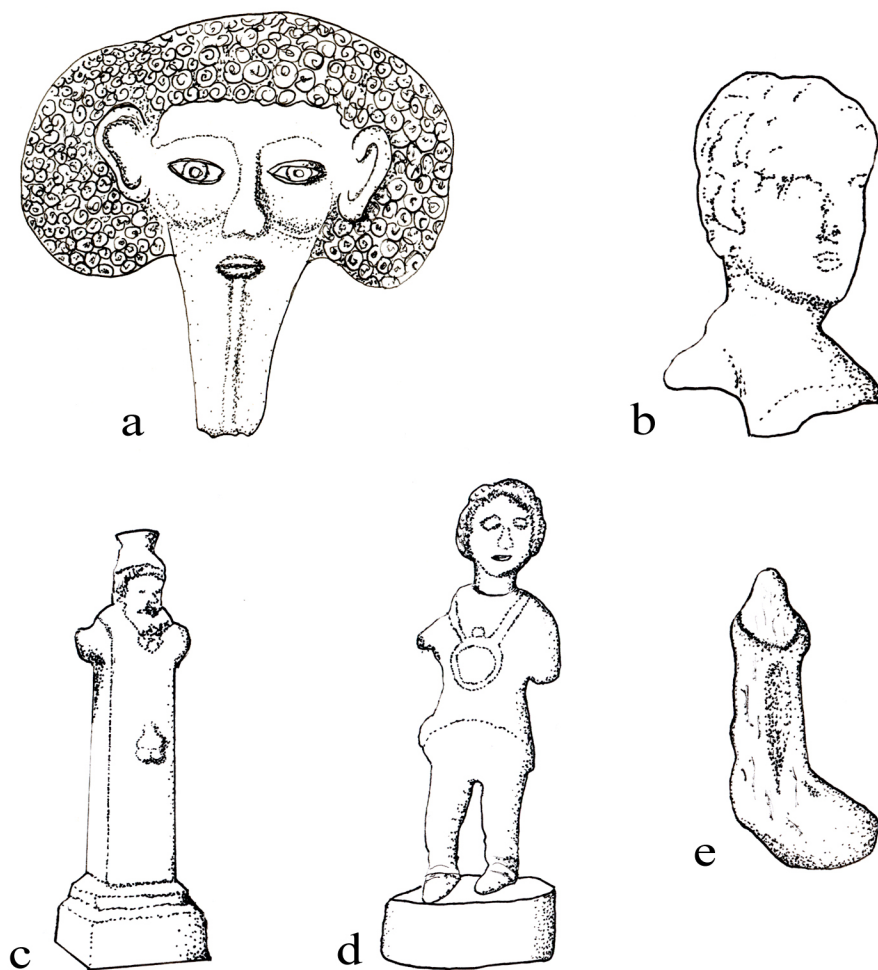


Fig. 7. Male figurines. *a*, Cadiz F, p. H. 17 cm, W. 17.5 cm (after Ramirez and Mateos 1985, fig. 2A); *b*, Camarina A (after Di Stefano 1991, fig. 5); *c*, Kızılburun, H. 18.7 cm (after Carlson 2007, fig. 2); *d*, Planier A, H. 41 cm, W. 13.5 cm (after L'Hour 1984, fig. 13); *e*, Pisa E, H. 14.9 cm, W. 11.1 cm (after Neilson 2002, fig. 1).

front where a cavity was left for a detachable phallus, a common trait of Priapus.<sup>231</sup> In fact, a detached, life-size terracotta phallus has been found on the Pisa E wreck from the first century C.E. (fig. 7e).<sup>232</sup> The base is flat suggesting that the phallus would have been attached to another object on board the ship.<sup>233</sup>

In addition to phallic imagery of the herm, a bronze satyr – a creature known for uncontrolled erections and associated with Dionysus – was found in the early third-century C.E. wreck known as Ognina A. With only the bust of a satyr remaining, it had a square socket in the back to attach it to something.<sup>234</sup> Additionally, there was a reported finding of a small bronze Dionysus (Bacchus) statuette on the Spargi wreck, but it was robbed by looters and reported in an anonymous letter to the excavator.<sup>235</sup> The final two statuettes are also representations of gods from the Olympic pantheon: Zeus (Jupiter) and Poseidon (Neptune). A bronze figurine of Jupiter was found among the earlier wreck of Cavallo A, dating between 40-60 C.E. (fig. 8a).<sup>236</sup> Finally, a bronze figurine of Neptune was found among the mid second-century C.E. wreck at Grado (fig. 8b).<sup>237</sup>

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<sup>231</sup> L'Hour 1984, 71-3.

<sup>232</sup> Neilson 2002, 248.

<sup>233</sup> Neilson 2002, 250.

<sup>234</sup> Gargallo 1972, 444.

<sup>235</sup> Lamboglia 1964a, 266.

<sup>236</sup> Corsi-Sciallano and Liou 1985, 129.

<sup>237</sup> Tortorici 1994, 50.

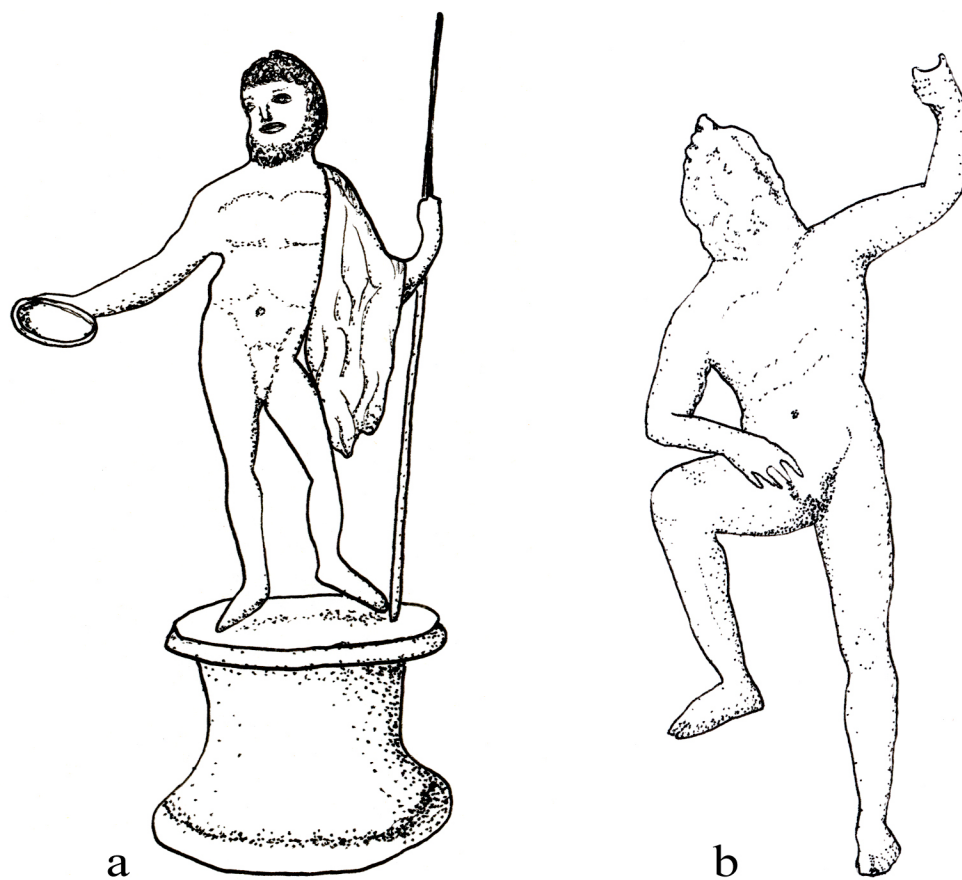


Fig. 8. Male statuettes. *a*, Cavallo A, H. 12 cm, W. 4.1 cm (after Corsi-Sciallano and Liou 1985, fig. 102); *b*, Grado (after Tortorici 1994, fig. 9).

Female figurines are not as prevalent among wrecks as male figurines, with only four representations discovered. Along with the male head discovered on the seventh-century B.C.E. Cadiz F wreck, there was a small female terracotta statue, standing with her feet together; her right arm was bent and her raised fist was clasped as if to hold an object, possibly a spear (fig. 9a).<sup>238</sup> The stance and attributes of this 23 cm-tall statuette suggest it most likely represented the Phoenician goddess Astarte, who offered protection to seafarers. Another female statue was looted from the fourth-century B.C.E. wreck at El Sec, with the only evidence being an anonymous photograph (fig. 9b). The 50-60 cm high marble female wears a long peplos and a covering over her head while she holds a child on her right shoulder, evocative of the goddess Eilithyia Hera – protector of childbirths and women.<sup>239</sup> A much smaller, mold-made terracotta female statuette was found in the first-century B.C.E. wreck at Kızılburun. Badly worn, this female was only 10 cm in height and appeared to have one arm wrapped across her body.<sup>240</sup> The final representation of a female was a small, blue-glass bust of an unidentified female from the early third-century C.E. Ognina A wreck and it too was looted by sport divers.<sup>241</sup>

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<sup>238</sup> Blanco 1970, 58-9.

<sup>239</sup> Arribas 1987, 597-8.

<sup>240</sup> Carlson, *pers. comm.*

<sup>241</sup> Kapitän 1973a, 230.

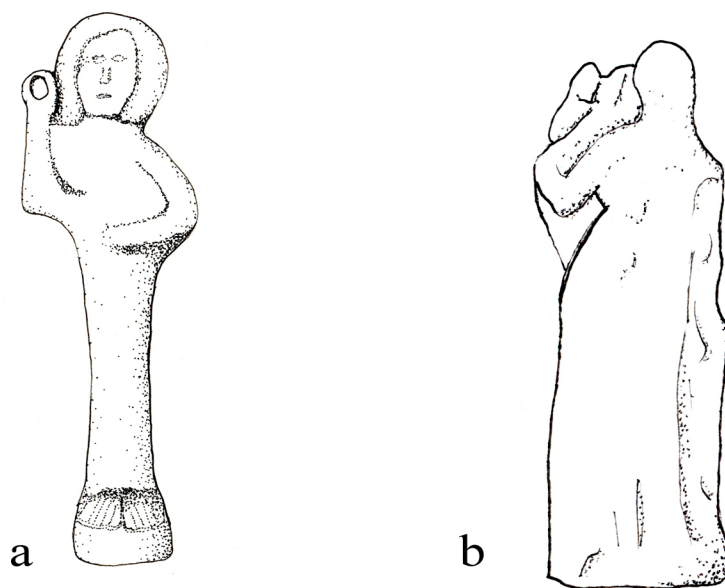


Fig. 9. Female figurines. *a*, Cadiz F, H. 23 cm, W. 4 cm (after Blanco 1970, fig. 5); *b*, El Sec, H. 50-60 cm (after Arribas 1987, fig. 1.2).

Three animals have been found among wrecks including figurines of a boar, a panther, and a rooster. The small terracotta boar, 10 cm long and 5.4 cm tall, was found in the wreck at Gela, dating to 500-480 B.C.E. (fig. 10a).<sup>242</sup> Commonly used in sacrifices, perhaps this figurine of a boar substituted for the actual animal.<sup>243</sup> In the early first-century B.C.E. wreck known as Monaco C, a bronze panther is mentioned among a list of metal artifacts, but size and location are never discussed.<sup>244</sup> Likewise, a silver rooster is recorded in the artifacts from the Camarina B wreck, perhaps as a votive for Asclepius, but more details are not given (fig. 10b).<sup>245</sup>

Many of these figures, like the silver rooster, may have been votive objects, once intended as a dedication. In the wreck of the first-century B.C.E. vessel at Commachio, six small lead temples were found and these are suggested by Berti to have been votives (fig. 10c).<sup>246</sup> At only 8 cm tall, these models have a figure of either Hermes or Venus inside and were fit with a ring on the roof, possibly from which it was suspended or carried.

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<sup>242</sup> Panvini 2001, 33, 61.

<sup>243</sup> see Toynbee 1973, 131-6.

<sup>244</sup> Benoit 1971, 409.

<sup>245</sup> Di Stefano 1992, 196. Toynbee (1973, 256-7) also lists other applications of the rooster, such as a sacrifice to the Lares (Juv. 13.233) and as accompanying Mercury.

<sup>246</sup> Berti 1990, 205-10.

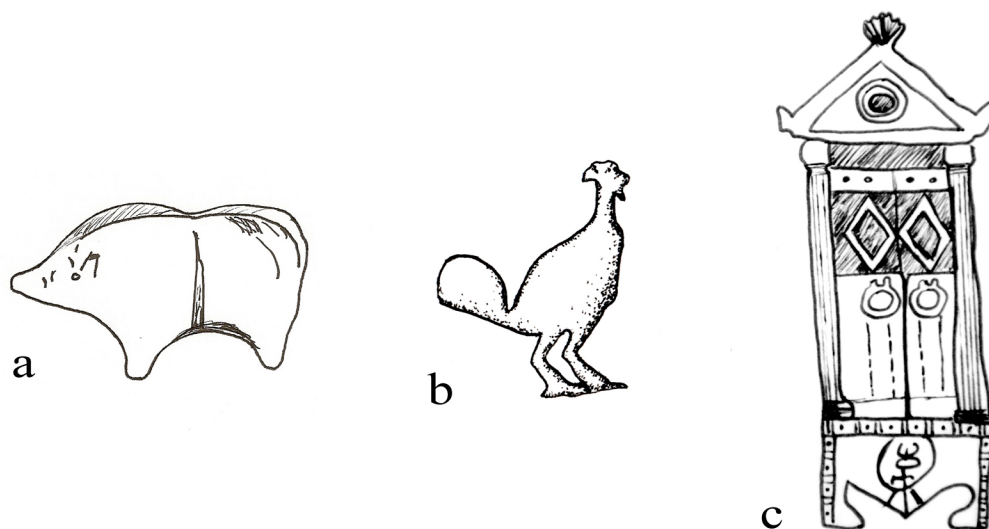


Fig. 10. Models and animal figurines. *a*, Gela, H. 5.4 cm, L. 10 cm (after Panvini 2001, fig. 40); *b*, Camarina B (after Di Stefano 1992, fig. 27); *c*, Commachio, H. 10.8 cm, W. 9 cm (after Berti 1990, 209).



Fig. 11. Figurine fragments. *a*, Gela, L. 3.5 cm, W. 1 cm (after Panvini 2001, fig. 41); *b*, El Sec (after Arribas 1987, fig. 1.3).

Finally, several fragments of statuary and figurines have been found with little indication of what deity or figure they may have represented. Nonetheless, these fragments suggest that a figurine was carried on board. A wooden forearm is the only remnant of a statue aboard the ship at Gela (fig. 11a),<sup>247</sup> whereas a small bronze forearm was found at El Sec (fig. 11b),<sup>248</sup> and a marble arm in the first-century B.C.E. wreck at Madrague de Giens.<sup>249</sup> Several pieces of a small bronze statue were found at the Ognina A wreck and are perhaps of a seated male approximately 20-25 cm in height.<sup>250</sup>

Although many of these wrecks have evidence of only one figurine, it appears that at least six wrecks had multiple figurines on board. Most commonly these involve at least one human figurine. The wreck at Gela had a piece of a wooden forearm along with a terracotta boar. At Kızılburun, excavators found a terracotta herm and a female figurine. Likewise both a male and female figurine were found in the Cadiz F wreck. A man and boy were found in the wreck referred to as Planier A. A female figurine and a forearm were discovered at El Sec. Lastly, a bronze statue and a female figurine were reported at Ognina A. Despite the recorded number of few figurines in comparison to excavated shipwrecks, it would seem common for ships to carry multiple figurines on board, possibly among the most portable of the religious objects.

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<sup>247</sup> Panvini 2001, 33, 61.

<sup>248</sup> Arribas 1987, 599.

<sup>249</sup> Parker 1992, 249-50.

<sup>250</sup> Kapitän and Price 1974, 150.



### *Hull Addenda*

There are a few examples of objects added to a ship's hull to provide the ship with necessary advantages to safely navigate the sea. Illustrations of ships show a round eye on the bow of a merchantman or a stylized eye on the prow of a warship.<sup>251</sup>

Additionally, representations of warships in particular show horns in the bow region.

Thus, the final category of religious objects found among shipwrecks includes lead horns, marble eyes, and foundation coins.

Five lead horns have been found on wrecks, dating from the third century B.C.E. until the end of the first century C.E. The earliest example was found about 20 to 25 m east of Corinthian A and B amphoras belonging to a mid third-century B.C.E. wreck at Savelletri, Italy.<sup>252</sup> The horn is slightly curved and tapers for an overall length of 22 cm.

A similar shape was found among Campanian A black glazed pottery and Dressel 1A amphoras of the mid second-century B.C.E. shipwreck at Punta Scaletta (fig. 12a).<sup>253</sup>

Found in the bow, it was an actual animal horn made heavier by pouring lead inside of it; traces of the original animal horn were still present. Another lead horn came from the wreck at Albenga, dating to 100-80 B.C.E. (fig. 12b). Interestingly, three holes pierce the 26.5 cm long horn suggesting that it was affixed to something, or that something was

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<sup>251</sup> Nowak 2001, 91; Carlson 2009.

<sup>252</sup> Kapitän 1973, 186.

<sup>253</sup> Lamboglia 1964b, 252.

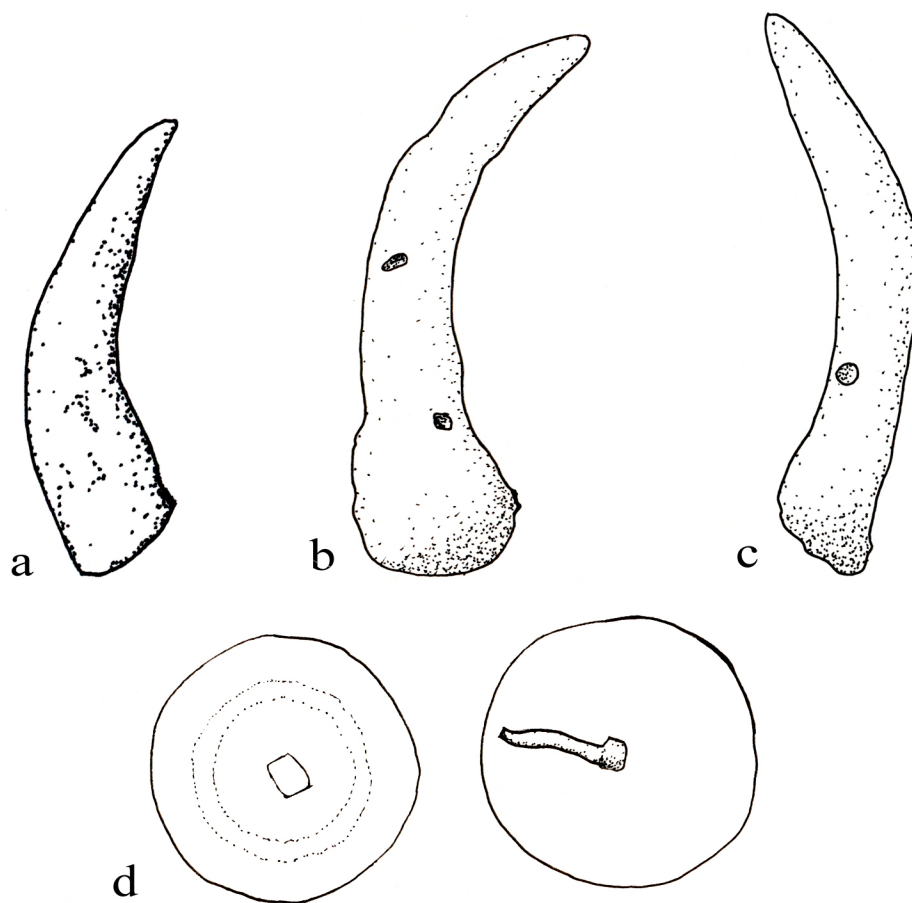


Fig. 12. Hull addenda. Lead horns (*a-c*) and marble eyes (*d*): *a*, Punta Scaletta (after Lamboglia 1964, fig. 18); *b*, Albenga, p. L. 26.5 cm (after Lamboglia 1952, fig. 43); *c*, Monaco C, p. L. 34 cm (after Benoit 1971, fig. 11); *d*, Tekta Burnu, obverse and reverse, Dia. 14 cm (modified from Carlson 2003, fig. 23).

affixed to it.<sup>254</sup> Similarly, nails crossed through the 34 cm long lead horn found in the first-century B.C.E. Monaco C wreck (fig. 12c). It appears to have been cast inside an animal horn as evidenced by the vein patterns on the surface, and had a slightly concave base suggesting that it was fixed atop a curved piece.<sup>255</sup> The last horn was found in the bow of the 70-80 C.E. wreck called Culip D. Although it was not lead filled, it was separate from the other animal bones which were found in the stern, perhaps suggesting that its presence in the bow is somehow significant.<sup>256</sup>

Although more than a dozen marble eyes have been found, only one pair was discovered in direct association with an ancient shipwreck. Found at the site of the fifth-century B.C.E. wreck at Tektaş Burnu, these two white marble disks are about 14 cm in diameter and were incised with concentric circles with reddish stains to imitate the iris of an eye (fig. 12d).<sup>257</sup> The center of each was pierced and affixed with a lead nail to attach the marble eyes to the ship's bow.

In addition to eyes and horns, coins were placed beneath the mast in the mast-step of ancient merchantmen. A recent study by Carlson includes a list of 13 Roman wrecks with these mast-step coins from the second century B.C.E. until the time of

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<sup>254</sup> Lamboglia 1952, 187-9.

<sup>255</sup> Benoit 1962, 173; 1971, 409. Mouchot 1970, 314 suggests that it was affixed to a cylindrical piece such as the yard or mast, but any curved surface would have sufficed.

<sup>256</sup> Nieto Prieto 1989 et al., 219.

<sup>257</sup> Carlson 2003, 595.

Constantine.<sup>258</sup> Several of these wrecks were discussed previously in this chapter for the presence of other religious objects such as the wrecks at Spargi, Madrague de Giens, Planier A, and Grado.<sup>259</sup> Carlson suggests that the coins placed beneath the mast are more than just ‘luck’ coins, drawing parallels to the terrestrial tradition of adding coins to the foundations of temples and private houses in hopes for successful completion of the structure or divine protection.<sup>260</sup> She concludes that the presence of the mast-step coin is evidence for the ancient seafarers’ ritualistic addition to the ship.<sup>261</sup> In light of the frequency of danger of seafaring, it is no surprise that the ancient seafarers felt the need for divine protection, and that consequently “religious” objects were found among many of these same wrecks.

### Spatial Analysis

Based upon the evidence from shipwrecks, it appears that religious ritual was a common occurrence on the ancient ship to which aspects of terrestrial practices were transferred. However, religious objects on board the ship could have functioned in different capacities, either as cargo or as personal items. The simple presence of a religious object is not enough to define its purpose on the ship.

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<sup>258</sup> Carlson 2007b.

<sup>259</sup> Carlson 2007b, 319 Table 1.

<sup>260</sup> Carlson 2007b, 321.

<sup>261</sup> Carlson 2007b, 322.

In order to identify the purpose of religious objects on board the ship, we must first consider the extremes and then attempt to discount them. The two polar null hypotheses would be 1) that everything was brought on board as personal possessions, or 2) that everything was part of the cargo. Disproving either of these statements requires an analysis of the physical attributes of the objects and their location. Namely, where were these objects found in the shipwrecks and are there indications of use on the objects themselves?

### *Physical Attributes*

The uniqueness of each object is important to consider when determining its purpose on board the ship, especially when multiple items are present. Variation in material and size can influence the interpretation, as fabrics such as marble do not need to be in a finished state to be shipped and preferably are shipped unfinished to protect the marble. An unfinished marble object clearly would not have been on board other than as cargo. An example of this situation was seen in the unfinished marble basins and stands for *perirrhanteria* that were found in the wreck at Kızılburun.<sup>262</sup> These marble objects would then be finished at their final destination. However, if these lustral basins were terracotta, they would have been finished before shipment. Thus, while the unfinished *perirrhanteria* for the Kızılburun wreck signify that they were part of a cargo, a finished terracotta water basin was not necessarily made for use on board; rather, it could have been shipped in its finished form and still intended for sale.

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<sup>262</sup> Carlson 2006, 5.

In some cases, a finished object shows signs of use. Residues of charcoal or incense may remain on altars and incense burners, seeping into the ceramic fabric. Additionally, the objects themselves could show signs of re-use as in the *thymiaterion* from Cadiz F which had a possible repair on one side.<sup>263</sup> Other examples of objects with signs of use are seen in eyes and lead horns. The marble eyes from the Tektaş Burnu wreck have marine growth on the spikes apart from an area 2.4 cm long, suggesting this was the thickness of the hull planking.<sup>264</sup> Similarly, the lead horns from Monaco C and Albenga had nails in them, indicating they were attached to something, most likely wooden.<sup>265</sup>

Furthermore, the quantity and the context of the object among the rest of the cargo is an important point to consider. For example, several hundred terracotta figurines have been raised from a wreck off of Shavé Ziyon, Israel, with thousands more estimated to be at the site.<sup>266</sup> It seems improbable that several thousand figurines were carried on board as tutelary deities but were in fact cargo. Consequently, religious objects must be considered but in the context of the wreck and its cargo. Likewise, the six small lead votive temples from the Commachio wreck all appeared very similar in decoration and workmanship, so it seems probable that they were on board as cargo and not as personal possessions.<sup>267</sup> Similarly, the four small terracotta altars from Gela have nearly identical

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<sup>263</sup> Blanco 1970, 53.

<sup>264</sup> Nowak 2001, 87.

<sup>265</sup> Lamboglia 1965, 54; Benoit 1971, 409.

<sup>266</sup> Linder 1973, 182-7.

<sup>267</sup> Berti 1990, 205-10.

dimensions and decorations that are unique from other contemporary *arulae*,<sup>268</sup> again suggesting that these were made by one workshop and carried on board as cargo.

### *Location of Objects*

Based on descriptions from site reports, the provenience of the objects under discussion here is either unknown, scattered at the edge of the site, in the bow, at amidships, or in the stern. Out of all of the objects, more than half (65%) did not have a recorded location. However, if these unknown objects are removed from the analysis, more religious objects were found in the stern (42%) than those scattered near the sites' edges (29%) or in the bow (29%). Although not included in the statistical analysis, the mast-step coins are the only group of religious objects in the amidships region. The distribution between the bow and the stern suggests further analysis is necessary within each of these specific regions.

Based on the available archeological evidence, there appears to be a common grouping of objects based upon their ritual function. Objects in the bow region appear to be ritual pieces added to the hull of the ship, such as eyes and horns. Comparatively, the objects used in libations and sacrifices appear more commonly in the stern of the ship. Most of the figurines had an unknown provenience; only the figurines from the wrecks at Grado and Kızılburun were recorded in the stern and bow, respectively.<sup>269</sup> Consequently, it

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<sup>268</sup> Panvini 2001, 60.

<sup>269</sup> Lopreato 1994, 33; Tortorici 1994, 52; Carlson, pers. comm.

would appear that among those objects with a known location, the ritual items used for libation and sacrifice were located in the stern of the ship and the items which were added to the hull were found in the bow and amidships. Perhaps these locations can be explained by function as the items in the stern for sacrifice and libation aided in an exchange between the gods and the seamen and the items in the bow were there as help for the ship itself to navigate and protect itself as defensive aids.

The location of these religious objects is elucidated by the purpose of the religious ritual. A ship's helmsman stood in the stern to guide and control the ship,<sup>270</sup> but the ship sliced through waves at the bow. Thus, the stern was important to the seamen as a place to receive divine guidance and deliverance, whereas the bow was important for the ship itself to watch for danger.

The location of objects, however, can change between the time when the ship was sailing, when it sank, and its discovery by divers. Indeed, the high number of religious objects with an unknown provenience and those displaced near the edges of the sites suggests that wreck formation processes are a significant factor in assessing the distribution of these objects.

The study of wreck formation processes shows the progression of a site from an intact ship to a scattered distribution of artifacts and focuses on the processes of wrecking,

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<sup>270</sup> Definitions for the helmsman (La: *gubernator* Gr: κυβερνήτης) vary from the captain of the ship to the navigator but it is certain this steering took place in the stern as seen in numerous depictions and in literature (Plut. *Mor.* 812c).



attempted salvage, disintegration of perishables, seabed movement, and excavation techniques.<sup>271</sup> There are two main types of processes: 1) ‘extracting filters’ which remove artifacts from a site and 2) ‘scrambling devices’ which displace artifacts from their primary provenience.<sup>272</sup> Examples of extracting filters could be the decay of wood or looting of a site, whereas scrambling devices could be bioturbation from burrowing organisms or movement of an object by the nets of fishermen. Both types of processes have been further subdivided into depositional and post-depositional theories<sup>273</sup> and into cultural-transforms (c-transforms) and natural-transforms (n-transforms).<sup>274</sup>

Depositional factors include processes that happen as the ship is sinking, such as breaking apart or capsizing. Post-depositional factors include actions that happen after the wreck has occurred, like modern intrusions or salvaging. N-transforms have been well studied as extracting filters due to bioturbation from sediment-burrowing organisms, octopuses, and sea grasses and as scrambling devices of geophysical processes that move artifacts or carry objects away from the site, such as waves, tides, currents, and even gravity.<sup>275</sup>

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<sup>271</sup> Muckelroy 1976, 282 fig. 6.

<sup>272</sup> Muckelroy 1976, 283, 286.

<sup>273</sup> O’Shea 2002, 212.

<sup>274</sup> Murphy 1983, 76; Schiffer 1983, 675-706.

<sup>275</sup> Stewart 1999, 578-83.

Table 2. Artifact locations. Objects with religious significance from shipwrecks sorted by location on the wreck. \* = ritual objects noted as cargo

| Wreck             | Date        | Object                 | Location of Object | Looting |
|-------------------|-------------|------------------------|--------------------|---------|
| Tektaş Burnu      | 440-425 BCE | hull addenda           | bow                | no      |
| Punta Scaletta    | 140-130 BCE | hull addenda           | bow                | unknown |
| Culip D           | 70-80 CE    | hull addenda           | bow                | no      |
| Kızılburun*       | 100-1 BCE   | libation, figurines    | bow and stern      | no      |
| Elissa            | 800-700 BCE | sacrifice              | stern              | no      |
| Capo Graziano F   | 300-250 BCE | purification           | stern              | unknown |
| Kyrenia           | 290 BCE     | purification           | stern              | no      |
| Spargi*           | 120-110 BCE | purification, libation | stern              | yes     |
| Stentinello       | 300-280 BCE | purification           | edge               | unknown |
| Savellettri       | 280-250 BCE | hull addenda           | edge               | unknown |
| Lastovo B         | 150 BCE     | purification           | edge               | unknown |
| Losinj            | 300-250 BCE | purification           | edge               | yes     |
| Palagruža A       | 50 BCE      | purification           | edge               | yes     |
| Palagruža B       | 50-100 CE   | sacrifice              | edge               | yes     |
| Madrague de Giens | 70-50 BCE   | figure                 | unknown            | ancient |
| Commachio         | 25-1 BCE    | figurine               | unknown            | no      |
| Pisa Wreck E      | 100 CE      | figurine               | unknown            | no      |
| Pisa Wreck-Punic  | 200-100 BCE | sacrifice              | unknown            | no      |
| Cadiz F           | 700-500 BCE | sacrifice, figurines   | unknown            | unknown |
| Camarina A        | 175-200 CE  | figurine               | unknown            | unknown |
| Grado             | 200 CE      | sacrifice, figurines   | unknown            | unknown |
| Monaco C          | 100-25 BCE  | hull addenda           | unknown            | unknown |
| Ognina D          | 400 BCE     | libations              | unknown            | unknown |
| Cabrera B         | 250-225 BCE | purification           | unknown            | yes     |
| El Sec            | 360-340 BCE | figurines              | unknown            | yes     |
| Gela*             | 500-480 BCE | sacrifice, figurines   | unknown            | yes     |
| Ognina A          | 215-230 CE  | figurine               | unknown            | yes     |
| Albenga           | 100-80 BCE  | hull addenda           | unknown            | yes     |
| Camarina B        | 100-200 CE  | libations, figurines   | unknown            | yes     |
| Capo Ali          | 400 BCE     | purification           | unknown            | yes     |
| Cavallo A         | 40-60 CE    | figurine               | unknown            | yes     |
| Planier A         | 1-15 CE     | figurines              | unknown            | yes     |

Since more than 75% of the religious objects under consideration have an unknown provenience or were scattered near the edge of the wreck, it seems likely that site formation processes have acted upon the objects, especially on artifacts around the wrecks' peripheries (Table 2). In an example from the Kızılburun wreck, it has been suggested that the small terracotta herm discovered underneath the edge of a large boulder was dragged there by fishing nets which were snagged on the boulder.<sup>276</sup> This would be an example of a post-depositional, c-transform, scrambling device.

Perhaps the most common process to have affected the study of religious objects from shipwrecks is looting, the post-depositional, c-transform, extracting filter. Of the 32 wreck sites, only 25% suffered little to no known effects of looting. In the most extreme cases, artifacts are completely missing from sites, with no indication that they were on board the ship; their association is attested, however, as at the Spargi wreck and the wreck at Cabrera B, by pictures of the artifacts removed from the wreck, offering archaeologists at least the possibility of acknowledging the presence of these objects. At Gela, the four altars were removed from the wreck first and brought to archaeologists before excavation commenced at the site.<sup>277</sup> Consequently, the effects of site formation processes are readily apparent in the analysis of religious objects, especially those effects from c-transforms of looting and other disturbances at human hands.

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<sup>276</sup> Carlson 2007a, 4.

<sup>277</sup> Fiorentini 1995-1996, 353.

### Summary and Conclusion

A survey of known Greco-Roman shipwrecks in the Mediterranean yields a database of 32 wrecks with identifiable religious artifacts classified according to four use categories: libations, sacrifices, or prayer, and objects that were added to the ship's hull. The objects include *perirrhanteria* or *louteria*, basins, altars, tripods, *thymiateria*, candelabra, figurines, lead animal horns, and marble eyes. Out of the 71 objects, 40% are figurines. Ritual objects for libations and sacrifices account for 28% and 25%, respectively. The remaining 9% are ritual objects that were added to the hull of the ship. Other examples may have been ephemeral and are now lost to archaeologists, like paintings on the hull.

When these artifacts are analyzed according to their spatial position on the wreck, only 25% have a known provenience. The remaining 75% have either an unknown location or are recorded to have been at the wreck's periphery. Furthermore, nearly 40% of the wrecks were subjected to heavy looting, destroying the provenience of the artifacts and integrity of the site. However, among the ritual objects with a known location, a pattern emerges: objects associated with libations and sacrifices tend to occur more frequently in the stern while apotropaic objects are found more often in the bow.

Ultimately, it is difficult to prove without a doubt whether certain objects were used on board or carried as cargo. Instead, the object assumes its function not solely on the basis of provenience on board the ship but also from its connection with social and sacred spaces of the ship as illuminated through iconography and literature.

## CHAPTER IV

## SACRED SPACE IN LITERATURE AND ICONOGRAPHY

ἐπεὶ δ' ἐμβόλου  
 κρέμασαν ἀγκύρας ὑπερθεν,  
 χρυσέαν χεῖρεσσι λαβὼν φιάλαν  
 ἀρχὸς ἐν πρύμνῃ πατέρ' Οὐρανιδᾶν ἐγχεικέραυνον Ζῆνα, καὶ  
 ὠκυπόρους  
 κυμάτων ῥιπὰς ἀνέμων τ' ἐκάλει, νύκτας τε καὶ πόντου  
 κελεύθους  
 ἄματά τ' εὐφρονα καὶ φιλίαν νόστοιο μοῖραν.<sup>278</sup>

When they had slung the anchors high above the beak, taking a golden *phiale* in his hands, the captain, from the stern, called on the father of the Uranidae, Zeus the lightning-speared, for the wave surge and the winds to be swift running, for the nights and sea paths and days to be serene, and for their homecoming to be fortunate.

In this passage from Pindar's early fifth-century B.C.E. *Pythian Ode*, a captain stands at the stern of his ship with a golden *phiale* in hand, offering a libation to powerful Zeus, entreating him for a safe and successful voyage. Not only do we learn of the religious object and the ritual, but we are told the location and purpose of this ritual. Such details often are difficult to determine based only on the archaeological record. Rather, evidence from literature and iconography has the potential to provide a different type of information, elucidating the underlying cognitive processes towards shipboard ritual and the ancients' conceptualization of the ship. This approach includes the way in which the ship was portrayed and is discussed as a sum of more than simply the hull and cargo.

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<sup>278</sup> Pindar *Pyth* 4.191-6.

This chapter explores the significance of the ship as a ritual object and a sacred landscape and then presents evidence for ritual and sacred spaces aboard the ship. By including evidence from literature and iconography, this chapter will attempt to demonstrate that certain areas of the ship, whether the entire hull or specific portions, had a religious significance. This significance concurs with the functional capabilities of the ship, setting up the bow as a place for looking ahead to keep away misfortune and the stern for navigation and contemporary thank-offerings.

### The Ship as a Sacred Landscape

A landscape results from a variety of human actions such as regional delineations, movements, and rituals performed inside that space. The ship, however, is more than a vessel formed from the individual planks on which men conduct their daily lives at sea. Rather, the ship also is conceptualized as a symbolic component in terrestrial religious practices representing the ancients' reliance on the sea. This conceptualization is evidenced by the use of the ship in festivals, as models, and even in monuments and temples. Additionally, the individual components of the ship are used as icons and metaphors in ceremonial and religious contexts.

### *The Ship as a Religious Entity: Naming Devices*

Perhaps the clearest connection between deities and the ship is the frequency with which ships are given religious names. In a practical sense, ships were named to distinguish them for purposes of ownership, legal responsibilities, and record keeping, but some

names also served religious purposes.<sup>279</sup> Although the Greeks' first known named ship was the *Argo*, we do not know whether the Greeks recorded ships' names until the Themistocles decree in 480 B.C.E.; after his decree, Athenian naval inventories included many names of the galleys in the fleet.<sup>280</sup> In addition to warships, the names of merchantmen have also been preserved, many of which were the names of deities.<sup>281</sup>

Records of the names were preserved, but how were these names displayed on the ship? In particular, were names written on the hull, identified by pictures, attached as flags, or simply not represented? Popular names, such as Faith (*Fides*) or Virtue (*Virtus*), may have been written since these abstract concepts would have been more difficult to represent with pictures.<sup>282</sup> At least three examples of written names have been found among iconography, but whether these names were indeed the name of the ship is debatable due to the ambiguous placement of the writing. Most importantly, all of the examples in question depict sacred ships.

The first potential written ship name is found on an ivory plaque from the temple of Artemis Orthia at Sparta (650-600 B.C.E.), carved to show a ship with the word "Orthaia" on the bow. Perhaps the ship was named in dedication to the goddess.

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<sup>279</sup> Kennedy 1974, 1. Even though Kennedy distinguishes between categories, one name could satisfy all of these objectives.

<sup>280</sup> Casson 1971, 350; Kennedy 1974, 21.

<sup>281</sup> see Casson 1971, 351-3, 359 and Kennedy 1974, 22-3 for a summary of ships named after Greek and Roman deities.

<sup>282</sup> Casson 1971, 345 n. 5.

Similarly, in a painting from Ostia, the words “Isis Geminiana” are written near the stern of a ship being loaded with grain. Finally, a fresco found in a cult center at Nymphaion, a Greek colony on the north coast of the Black Sea, has the name *Isis* scratched onto the hull of the ship along with a representation of the Dioskouroi, suggesting either names might be suitable for the ship.<sup>283</sup>

Representations of deities as identification devices placed on the hull have been interpreted from texts and iconography as *episema* (marks or inscriptions), *parasema* (distinguishing symbols), or *insignia* (signs). These terms have subtle differences in meaning.<sup>284</sup> Plutarch writes about the *parasema* of a ship that were cut off and dedicated to Apollo.<sup>285</sup> Paul sailed from Alexandria to Rome on a ship with the *insigne* of the Dioskouroi.<sup>286</sup> Latin inscriptions mention Isis of Pharos as the *parasemon* of a ship.<sup>287</sup> It seems that all written sources place the *episeimon* or *parasemon* on either the prow or the stern of the ship.<sup>288</sup> Lucian cites a ship named for Isis with a picture of the goddess on both sides of the prow<sup>289</sup> and Diodorus mentions that naming devices of triremes are also

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<sup>283</sup> Murray 2002, 540-1.

<sup>284</sup> Casson 1971, 344 n. 2.

<sup>285</sup> Plut. *Them.* 15.2.

<sup>286</sup> *Acts* 28.11.

<sup>287</sup> *CIL* III 3.

<sup>288</sup> One passage references that the name was inscribed near the eyes, presumably in the bow of the ship (Poll. *Onom.* 1.86).

<sup>289</sup> Lucian *Navig.* 5.



on the prow.<sup>290</sup> Conversely, Ovid writes that pictures of the gods were on the curved stern.<sup>291</sup> Devices painted onto the hull or added as carvings or plaques are also described by Hippocrates and Aristophanes.<sup>292</sup> Two reliefs may depict evidence for these plaques on the bows of ships: one at Praenestae shows the head of Medusa on a small plaque and one at Portus has a representation of Bacchus. These pictures of the gods or decorative elements were added to a hull's bow structure known as the *stolos*.<sup>293</sup> An example of the horned-shaped *stolos* is shown in the Isis ship fresco at Nymphaion, which was decorated with a representation of a female, possibly Isis. Furthermore, several Roman reliefs from Ostia and Praeneste show the head of Minerva atop the *stolos* of a trireme dating to the first century C.E.<sup>294</sup>

Another possible addition to the ship's stern is a wooden pole known as a *stylis*, potentially beginning with the first Greek ship the *Argo*. This wooden pole has an extensive typology within the Greek context, and several patterns emerge to suggest that it may have had religious significance as a scepter, crowned with different emblems of the gods, similar to a military standard.<sup>295</sup> Commonly, the *stylis* resembled a *thyrsos*, or the staff of Dionysos. Svoronos has suggested that the *stylis* was an image of the

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<sup>290</sup> Diod. Sic. 13.3.2.

<sup>291</sup> Ov. *Her.* 16.114.

<sup>292</sup> Ar. *Frogs*, 933; Hippoc. *Ep.* 14; Plin. *Pan.* 2.208-9.

<sup>293</sup> Svoronos 1914, 122; Wachsmuth 1967, 88-90 n. 82.

<sup>294</sup> Basch 1985, 140.

<sup>295</sup> Svoronos 1914, 84-95.

guardian deity of the ship, placed on the stern since that was where navigation and steering originated.<sup>296</sup> Thus, if the *thyrsos* was connected to Dionysos, it seems likely that it called upon the god for aid in navigation when placed in the stern as a *stylis*. Since there are no known references to the *stylis* as a feature of Roman warships, perhaps they had images of gods on the ship which replaced the *stylis*.<sup>297</sup>

If the *stylis* was an image of a god, or symbolically represented a god, then the purpose of the lengthy pole would have been to make the emblems visible without adding weight or jeopardizing sailing characteristics. Additionally, the act of planting a scepter or a staff could be a form of supplication since, according to myth, Athena planted her lance in the ground in order to seek the help of other gods in stopping Poseidon from submerging a particular area of land. This notion of divine protection is represented on a fourth-century B.C.E Greek vase on which the cross bar of the *stylis* is inscribed with “ZEUS SOTER,” protector of sailors and guardian of the ship. This inscription with Zeus’ epithet “Savior” spells out the purpose of the *stylis*, perhaps reaching up to the heavens and invoking the tutelary deities of the ship.

### *The Ship as a Religious Entity: Festivals and Celebrations*

The ancient ship also played a prominent role in Greek and Roman festivals. In some cases, the festivals were related directly to the prosperity of maritime ventures. For

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<sup>296</sup> Svoronos 1914, 98, 100.

<sup>297</sup> Verg. *Aen* 10.171; Svoronos 1914, 100.

example, in one of the primary religious festivals connected with the start of the sailing season, the Greco-Roman interpretation of the Egyptian goddess Isis was invoked to provide good sailing conditions, influential for prosperous commerce in the upcoming season. Known as the Πλοιαφέσια to the Greeks or as the *Isidis Navigium* to the Romans, this festival culminated with the launching of a new ship named *Isis* which was dedicated to the goddess and decorated with elaborate paintings.<sup>298</sup> The crewless ship was put out to sea, laden with offerings to Isis while the priest proclaimed the “Launching of Ships.”<sup>299</sup> This nautical festival focused solely on the ship by offering it as a votive sacrifice. The hull was thus turned into a religious object worthy of Isis as the goddess who watched over and protected the ventures of this – and all other – ships at sea.

Conversely, some festivals celebrated the deity rather than the ship, employing the ship to transport divine images or offerings between temples.<sup>300</sup> In a festival known as the Anthesteria, participants celebrated Dionysos and his connection to fertility and wine by transporting the god in a ship-chariot.<sup>301</sup> This three-day festival most likely occurred at

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<sup>298</sup> Griffiths 1975, 259. The Πλοιαφέσια occurred on March 5<sup>th</sup> according to the calendar of Philocalus recorded in 354 C.E. (*CIL* 1.1; Lydus, *Mens.* 4.45). The most detailed account of this festival was recorded at Cenchræe, the port of Corinth, by Apuleius in the second century C.E. (*Apul. Met.* 11.8-18).

<sup>299</sup> *Apul. Met.* 11.17.

<sup>300</sup> Griffith 2001, 220.

<sup>301</sup> Burkert 1983, 216-26.

the same time as the opening of the sailing season in spring.<sup>302</sup> Decoration on five examples of black-figure pottery shows processions involving Dionysos and ship-carts, possibly depicting this festival.<sup>303</sup> As part of a Greek festival known as the *Oschophoria*, an archaized, 30-oared ship (*triakontor*) traveled from Phalerum to Delos, carrying a chorus of youths and maidens.<sup>304</sup> This festival was thought to commemorate Theseus' return to Athens from his mission to Crete where he saved Athenian youths and maidens.<sup>305</sup> Once on Delos, the traveling chorus danced around the ancient altar of Apollo and when the ship left, the stern was wreathed by a priest of Apollo.<sup>306</sup> A sacred island, Delos was used frequently for seafaring festivals and sacrifices by mariners.<sup>307</sup> In the *Oschophoria*, the ship functioned as a method of transportation important to the ritual's implementation.

In addition to carrying people in a festival procession, ships transported other sacred objects. In the Panathenaea, the mast of a ship-cart supported a newly-woven, sacred

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<sup>302</sup> Dionysos' role in sailing and the ship reoccurs in many facets as discussed earlier with the possible association between the *stylis* and *thyrsos* (supra p. 89).

<sup>303</sup> Göttlicher 1992, 103-7.

<sup>304</sup> Robertson 1992, 120-1; see Kadletz 1980.

<sup>305</sup> Robertson 1992, 128.

<sup>306</sup> Robertson 1992, 129-30. A wreathing ceremony may have been common practice when ships were launched; an altar dedicated to the 'Hero at the Stern' may refer to the helmsman (Callim. *Aet.* 4.103; Paus. 1.1.4; Wachsmuth 1967, 90-3).

<sup>307</sup> Lucian *Salt.* 16. Mariners were thought to have stopped at Delos in order to dance around the altar, providing laughter to Apollo (Callim. *Hymn* 4, 316-24; Lawler 1944, 23-5).

*peplos* that was transported for Athena up to the Acropolis.<sup>308</sup> Boat races were included as part of the athletic festivities near the harbor of Piraeus<sup>309</sup> and were a common feature of other festivals;<sup>310</sup> during the festival of Mounychia at Piraeus, sacred ships were raced from the Grand Harbor to the Mounychia Port where the participants would climb to Artemis' shrine and offer sacrifices.<sup>311</sup> The ship was an important part of these festivals because it transported objects for the deity, whether these items were people in a processional convoy or votive objects.

*The Ship as a Religious Entity: Models, Monuments, and Temples*

Small ship models also have been found in religious or ritual contexts. Throughout ancient Greece, models of ships have been identified as votives due to their discovery in sanctuaries; many of these models are found on islands which placed a greater emphasis on seafaring.<sup>312</sup> Seafarers offered votives in hopes of avoiding disaster at sea or in fulfillment of their safe return; the many offerings to maritime gods are indicative of the high degree of faith that was placed upon these divinities by the seafarers in hopes of gaining protection.<sup>313</sup> Early votive models from Crete were discovered within Middle

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<sup>308</sup> See Robertson 1985; Mansfield 1985; Shear 2001.

<sup>309</sup> Gardner 1881, 93; Canney 1938, 136; Griffith 2001, 220.

<sup>310</sup> see Arnold 1933 and Gardner 1890.

<sup>311</sup> Garland 1987, 114.

<sup>312</sup> Johnston 1985, 2, 126-7. Johnston analyzed boat and ship models in ancient Greece and determined that three-quarters of the models were from islands and about two-thirds of those with a known provenance were votives. Many of the models had an unknown provenience so the number of models used as true votives may, in fact, be not as great.

<sup>313</sup> Mikalson 2005, 23.

Bronze Age peak sanctuaries, perhaps dedicated by seafarers who were embarking or returning and giving thanks for surviving a dangerous voyage.<sup>314</sup> Two Corinthian terracotta ship models at Perachora and the 22 wooden models from the Heraion on Samos were crudely fashioned, which suggests a proletarian's production possibly as a dedication either by the sailors or the returning crew of a victorious warship.<sup>315</sup> The dedication of ship models as votives continued through the end of the Hellenistic period but these models also were given secondary functions in religious rituals and ceremonies.

Ship models were frequently used as lamps and ritual containers for liquids. Lamps were particularly common in religious processions, especially those that took place at night as mentioned by Apuleius in the *Isidis Navigium*, in which the lamp was described as a golden boat, an *aureum cymbium*.<sup>316</sup> The earliest archaeological example of a ship-shaped lamp is a cast bronze lamp dating to the Classical period. This bronze lamp was probably not a common, every-day object as these would have been normally made from clay; more indicative of its sacred function was the dedicatory inscription to Athena, specifically identifying it as a votive.<sup>317</sup> Additionally, ship lamps from modern Serbia,

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<sup>314</sup> Johnston 1985, 12, 13, 23, BA 9, BA 11. In the Homeric Hymns, Poseidon is a savior of ships and in his temple at Penteskouphia, sailors hung votive offerings to thank him for an uneventful voyage or beg for safe return (Hom. Hymn Pos.; Detienne 1981, 29).

<sup>315</sup> Kopecke 1967, 100-48; Johnston 1985, 50-1; Kyrieleis 1988, 217.

<sup>316</sup> Apul. *Met.* 11.4, 10; Griffiths 1975, 32.

<sup>317</sup> Johnston 1985, 76.

dating from the second to fourth centuries C.E., were cast in bronze and are identified as votives since they are found in temples or with dedicatory inscriptions.<sup>318</sup>

In addition to lamps, ship models also functioned as cups or vessels for pouring libations. The hull of the ship likely seemed to be an appropriate shape from which to pour out libations of wine. Several examples of ship-shaped spouted vessels have been found in Archaic period burials and more elaborate drinking vessels of the Classical and Hellenistic periods were in the shape of a ship's prow.<sup>319</sup> Indeed, there appear to be many connections between drinking and seafaring. References to symposiasts describe them as sailors, and many decorated drinking cups extend the maritime metaphor by depicting seafaring or maritime scenes in the central tondo.<sup>320</sup>

Votives, however, were not just dedicated on a small scale; whole ships were also dedicated as monuments or parts of temples.<sup>321</sup> Like the models, these offerings presumably were dedicated to the gods in return for safety while at sea and as a thank-offering for a naval victory. There are a few examples of actual ships and full-sized replicas dedicated to the gods. From literary accounts, we know that the Argonauts offered their ship to Poseidon at his temple on the Isthmus of Corinth in thanks for a safe

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<sup>318</sup> Karovic 2002, 461-4.

<sup>319</sup> Johnston 1985, 50, 76, 92.

<sup>320</sup> Slater 1976, 163; Davies 1978, 72-90.

<sup>321</sup> Hom. *Od.* 12.346; Paus. 2.32.2, 3.24.7.

voyage.<sup>322</sup> On Samos, a full-sized warship was dedicated in the seventh-century B.C.E. sanctuary to Hera and Poseidon. Placed along the sanctuary's access road, it was in a position that would have attracted frequent attention.<sup>323</sup> At least seven more ships were dedicated to Hera and Poseidon as recorded in a sixth-century B.C.E. inscription from the Heraion.<sup>324</sup> Finally, an entire monument was built to hold a trireme on Delos. Known as the Monument of the Bulls or the Neorion, this early third-century B.C.E. building was probably dedicated after a naval victory and was adjacent to the temple of Apollo.<sup>325</sup>

Occasionally instead of the entire ship, parts of a ship were used as votive offerings. On Delos, a marble inscription records that Demetrius of Sidon had dedicated a part of a deck which supposedly saved his life when the ship started falling apart while at sea.<sup>326</sup> In a similar fashion, Agamemnon is said to have dedicated a rudder to Hera at Samos.<sup>327</sup> Perhaps the most common part of the ship used as a monumental votive was the prow. The earliest known example was found in a fourth-century B.C.E. bathbuilding at Epidauros where a warship prow served as a base for a small statue dedicated to the gods

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<sup>322</sup> Apollod. *Bibl.* 1.9.27.

<sup>323</sup> Kopecke 1967, 145.

<sup>324</sup> Ohly 1953, 111-2.

<sup>325</sup> Wescoat 2005, 153-72.

<sup>326</sup> Hauvette-Besnault 1882, 340 no. 47.

<sup>327</sup> Callim. *Hymn* 3. 228.



after a naval victory.<sup>328</sup> The small statue was most likely of Nike, the winged goddess of victory, who is frequently depicted on coins alighting atop the bow of the ship on many coins. Many prows were actually part of funerary monuments or served as bases for statues and, according to the inscriptions, were dedicated on account of naval victories such as the Nike of Samothrace prow.<sup>329</sup> Other prow models were connected specifically to the cults themselves. The first-century B.C.E. Isola Tiberina prow was constructed at the downstream end of the island in the Tiber at Rome and had a carved staff and snake of Asklepios commemorating the arrival of the god to Rome from Epidauros.<sup>330</sup>

### *The Metaphorical Ship*

Evidence from models, monuments, iconography, and literature points toward the whole ship as a sacred entity and a landscape, imbued with the protection of a god or goddess. However, additional sacred objects could be added to the hull, imbuing the ship with an animate quality. In one way, the ship itself possessed the ability to speak. For example, Athena's oak beam added to the bow of the *Argo* rendered it anthropomorphic:<sup>331</sup>

αὐτίκα δ' ἄφνω  
 ἴαχεν ἀνδρομέη ἐνοπῆ μεσσηγὺ θεόντων  
 αὐδῆεν γλαφυρῆς νηὸς δόρου, τό ῥ' ἀνὰ μέσσην  
 στεῖραν Ἀθηναίη Δωδωνίδος ἦρμωσε φηγοῦ.

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<sup>328</sup> Johnston 1985, 93.

<sup>329</sup> Johnston 1985, 92-3; Morrison and Coates 1996, 214-9.

<sup>330</sup> Morrison and Coates 1996, 227; Piteros 2002, 581-96.

<sup>331</sup> Apoll. Rhod. 4.580-83.

And straightway on a sudden there called to them in the midst of their course, speaking with a human voice, the beam of the hollow ship, which Athena had set in the center of the stem, made of Dodonian oak.

Moreover, certain images could be added to a ship to enhance its appearance as a living being with anthropomorphic or zoomorphic qualities. In particular, devices were added to the bow, such as eyes, animal figureheads, and horns.

The most common representations of animal heads are found in boar-shaped naval rams, stylized horns or goat heads, and avian imagery.<sup>332</sup> A study of ninth- to seventh-century B.C.E. ship models with zoomorphic figureheads suggests that the animal head initially was formed separately and affixed to the bow; eventually, however, it seems that the figurehead and hull were seamlessly formed together.<sup>333</sup> This integration of the figurehead may reflect the evolution of the ship from ancillary decorative devices to a hull with an intrinsic nature. Consequently, the hull was considered to be more than simply timbers and figureheads; rather it was now a living creature.

In addition to figureheads, a *stolos* usually shaped like a horn was put atop a stem. The horn itself was an apotropaic feature of the hull, and pictures of the gods on this structure added to its religious potency. An example of the horn-shaped *stolos* decorated with a representation of a female, possibly Isis is shown in the Isis ship fresco at Nymphaion.

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<sup>332</sup> Wachsmuth 1967, 235-9; Williams 1989, 293.

<sup>333</sup> Tiboni 2006, 141-4.

Several representations of ships in vase paintings depict a horn-like projection at the bow as part of the ornamentation, perhaps intended to further imbue the ship with a zoomorphic identity and protect against evil.<sup>334</sup>

Additionally, eyes on the hull are depicted in iconography, especially in vase paintings where a round, stylized eye is shown on the bow of a merchantman or an elongated eye on the prow of a warship.<sup>335</sup> The apotropaic role of the eye has its roots in Greek drinking cups where stylized eyes were added to ward off evil.<sup>336</sup> This similarity suggests that the eyes on the bow of a ship were also apotropaic, providing a way for the ship to see its path safely through the dangers of the sea.<sup>337</sup>

Literature supports the ancient perception of the ship as a zoomorphic or anthropomorphic entity. In particular, references to the ship as an animate object are found in the *Odyssey* where the ships of the Phaeacians were able to understand the thoughts and minds of men; consequently they had no need of helmsmen (κυβερνητες) and steering oars (πηδάλια).<sup>338</sup> Additionally, the ships in the *Odyssey* are described as moving in a manner similar to birds.<sup>339</sup> The stern of the ship “leapt on high” traveling so

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<sup>334</sup> Thimme 1983, 30-47.

<sup>335</sup> Nowak 2001, 91; Carlson 2009.

<sup>336</sup> see Steinhart 1995 for the use of eyes in terrestrial contexts.

<sup>337</sup> Hornell 1943, 127; Wachsmuth 1967, 87 n. 82, 256-7.

<sup>338</sup> Hom. *Od.* 8.557-63.

<sup>339</sup> Hom. *Od.* 7.36.

quickly that not even the swiftest bird, the circling hawk, could keep pace.<sup>340</sup> In the *Argonautica*, so many ships were launched that they were compared to a swarm of birds clamoring over the sea.<sup>341</sup> According to Aeschylus, ships were dark-eyed (κυανῶπις) and sail-winged (λινόπτερος), again suggesting zoomorphic qualities for the ship.<sup>342</sup> Areas of the ship also were referred to in anthropomorphic terms, like the red- and purple-cheeked (μυλοπάρης and φοινικοπάρης) painted bows of the ship.<sup>343</sup>

Consequently, within literature, the ship was portrayed occasionally as an animate object with the ability to speak, see, and fly. Likewise, in depictions of ships, these qualities manifested by certain features located in areas such as the bow and stern. Looking at the ship as a landscape, different areas were singled out to portray the traits and qualities necessary for a successful voyage.

### Shipboard Rituals

The ship can be viewed as a landscape within which seamen toiled and rejoiced, conducting their daily activities. On land, daily activities included religious rituals of sacrifice, libation, and prayer. Indeed, the evidence suggests that these rituals occurred both on board the ship and on land beside the ship, especially while embarking or

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<sup>340</sup> Hom. *Od.* 13.84-7.

<sup>341</sup> Apoll Rhod. 4.236-40.

<sup>342</sup> Aesch. *Pers.* 559 (ships of the Persians); Aesch. *Supp.* 743 (ships of the Egyptians).

<sup>343</sup> Hom. *Od.* 9.125, 11.124; Il. 2.637.

disembarking.<sup>344</sup> Ancient literary sources provide different information about the rituals such as where they took place and what objects were used; by combining all the evidence we acquire a clearer picture of religious ritual practices on the ancient ship.

Diodorus described the elaborate departure of the Athenian warriors readying to sail from Piraeus to Sicily in 415 B.C.E.<sup>345</sup> Decorated warships are anchored in the harbor, being equipped for the voyage ahead. A crowd has gathered to witness the departure and perform the requisite rituals so that the gods will grant success to the expedition. Throughout the harbor, there are *thymiateria* for burning incense and silver *kraters* full of wine from which golden cups (ἔκπωμα) are used to pour libations. Indeed, it seems that such a departure ritual was common, as Herodotus recorded that Xerxes also burned incense before pouring a libation from a golden *phiale* into the sea as he prayed for a successful crossing. As a final offering, he threw a sword, the *phiale*, and a golden *krater*, presumably used for mixing the wine, into the sea.<sup>346</sup> In the *Argonautica*, before the *Argo* set sail, proper sacrifice was conducted by slaying two bulls, scattering barley (οὐλοχύται), and pouring holy water from a basin (χέρονιβον).<sup>347</sup> In addition to

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<sup>344</sup> see Greene 1995 for an analysis of embarkation scenes in the *Odyssey*.

<sup>345</sup> Diod. Sic. 13.3.2.

<sup>346</sup> Hdt. 7.54.1-2.

<sup>347</sup> Apoll. Rhod. 1.402-39.

conducting rituals prior to setting sail, accounts by Vergil and Valerius Flaccus mention that sacrifice and libation were performed after land was safely reached.<sup>348</sup>

There is also an indication that similar terrestrial rituals were initiated on shore and continued on board the ship. Arrian records that Alexander sacrificed to the gods as was customary prior to boarding and once on board he poured libations from the bow into the river from a golden *phiale* before departure.<sup>349</sup> Similarly, Aeneas sacrificed on land and then stood in the bow and poured the entrails and wine from a *patera* (= *phiale*) into the sea before the ship was underway.<sup>350</sup>

Evidence also suggests that sacrifice and libations were commonly conducted while on the ship. Appian records that when Octavian sailed from Puteoli he was offering sacrifices and pouring libations.<sup>351</sup> Additionally, Achaean captains poured libations of wine into the sea from the prows of their ships before departing with their spoils of war.<sup>352</sup> Likewise, the Argonauts poured wine into the sea at the onset of their journey,<sup>353</sup>

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<sup>348</sup> Val. Flacc. 1.193; Verg. *Aen.* 3.548.

<sup>349</sup> Arrian *An.* 6.3.1-2.

<sup>350</sup> Verg. *Aen.* 5.771-8.

<sup>351</sup> Appian *Bell. Civ.* 5.11.98.

<sup>352</sup> Quint. *Smyr.* 14.378-82.

<sup>353</sup> Apoll. *Rhod.* 1.534.

and at one point in the voyage they sacrificed sheep over the stern to the god of the sea.<sup>354</sup>

Literary accounts also indicate the use of specific ritual objects, namely the *krater* and *phiale*, in libations, on land and at sea. In the *Odyssey*, after Telemachus and Athena boarded the ship and sat in the stern, their ship sets sail and they pour libations from a *krater*.<sup>355</sup> In a similar scene from the *Aeneid*, Anchises prays from stern and pours out a libation from a wreathed *krater*.<sup>356</sup> In Thucydides' account of the Peloponnesian war, officers offer vows as they mixed wine in *kraters* and poured libations from gold and silver drinking cups (ἔκπωμα) as the warships were setting sail.<sup>357</sup>

In addition to libation and sacrifice, simple prayer was performed while on board the ship. In the *Aeneid*, the sacrifice of a white bull was promised along with a libation as the suppliant raised his hands out over the waves in prayer.<sup>358</sup> Furthermore, Athenaeus records that in the midst of a bad storm on a trip from Cyprus to Naucratis, the crew prayed to a small statue of Aphrodite and were delivered from the storm and their

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<sup>354</sup> Apoll. Rhod. 5.1593-602.

<sup>355</sup> Hom. *Od.* 2.405-34.

<sup>356</sup> Verg. *Aen.* 3.521.

<sup>357</sup> Thuc. 6.32.1.

<sup>358</sup> Verg. *Aen.* 5.232-43.

seasickness.<sup>359</sup> Thus, in addition to sacrifices and libations, simple prayer to likenesses of the gods was also part of the repertoire of religious practices aboard the ancient ship.

There is also some indication of specific ritual places on board the ship from literature and iconography due to the presence of cultic items. In a description of two fancifully large ships, one attributed to King Hieron and the other to King Ptolemy Philopater, Athenaeus references a shrine to Aphrodite in the stern cabin of each vessel.<sup>360</sup>

Although it is questionable whether these ships were ever actually built, the account suggests that space for a deity aboard a ship was not an exceptional notion.

Indeed, a late third-century C.E. relief discovered at Torlonia shows a sacrificial scene on the stern of a ship (fig. 13). In the relief, two cargo ships are in a harbor: one ship in the process of having its cargo unloaded and the other either arriving or departing.<sup>361</sup> On the aft deck cabin of the ship underway are two men and one woman, standing around a portable altar with a high flame. The man is throwing incense on the flame while the woman holds an *acerra*, or incense box, and the other man holds a bowl, presumably for purification or a wine libation.<sup>362</sup>

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<sup>359</sup> Ath. 15.575-76. This account by Athenaeus also indicates that the statue was made ἀγαλμάτιον (specifically in honor of the goddess), and was only σπιθαμιαῖον (the length between the thumb and little finger), which was about 7-8 inches high.

<sup>360</sup> Ath. 5.205-7.

<sup>361</sup> Meiggs 1973, Pl. 20; Casson 1971, 182 n. 69.

<sup>362</sup> It may be of importance to note that an altar is not visible on the ship to the right side of the relief which is unloading cargo. This suggests that the altar was portable and stowed when not in use or that this vessel did not have an altar on board.



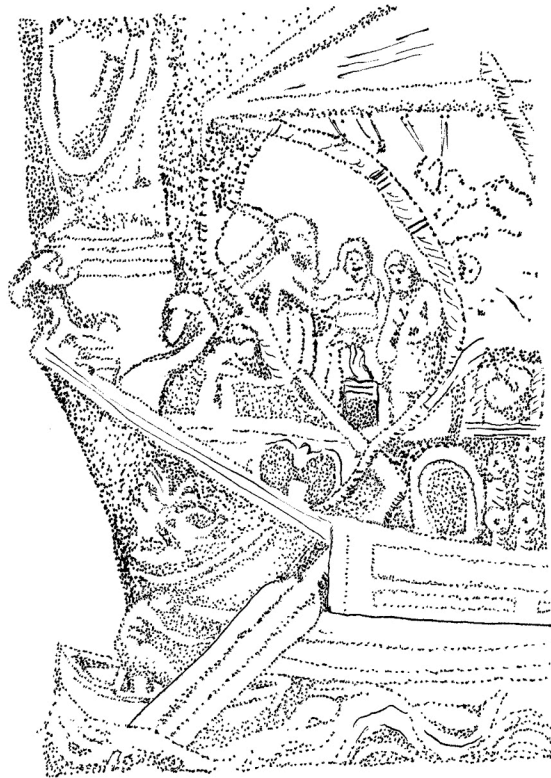


Fig. 13. Torlonia relief. On the stern of a ship, two men and a woman stand around an altar, offering incense and libations (after Meiggs 1973, plate 20).



Fig. 14. Severan coin. Ship transporting ritual equipment for the games (after photo by C. Lawton).

Based upon the identification of the participants on the Torlonia relief, different conclusions can be drawn about the nature and purpose of this scene. Wachsmuth suggests that the shipowner (*navicularius*) is throwing incense on the fire to celebrate a safely-completed journey (*embaterion*), with his wife and the ship's captain (*magister navis*) also participating in the ceremonial rites.<sup>363</sup> Thus, it would appear that the purpose of this part of the relief is to portray the rites commonly celebrated upon arrival into port for a typical merchantman (*navis oneraria*). However, Scrinari proposes that this ship is not simply a *navis oneraria* but is one of imperial elegance as shown by the ornately decorated sails, stem, and stern; Scrinari suggests that the sacrifice is not done merely by the *navicularius* but by the Roman emperor Septimius Severus and his wife Julia Domna.<sup>364</sup> Nonetheless, either interpretation of the participants in this relief still supports the conclusion that a viewer would have recognized the practice of religious ritual on board the ship.

Although the Torlonia relief is one of few depictions of religious ritual occurring on board the ship, a Cypriot ship model from the sixth century B.C.E. shows a man standing with a *thymiaterion* on the forecastle in the bow, facing the stern of the ship. In the stern are three other men, possibly a helmsman, an officer, and a captain. It has been

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<sup>363</sup> Wachsmuth 1967, 144-9.

<sup>364</sup> This interpretation is based upon the features of the man and woman which mirror traditional facial features recorded in other reliefs of Septimius Severus and Julia Domna (Scrinari 1979, 53-5). Scrinari also argues that this scene does not represent a ship in arrival but rather in departure as the sail is swollen from a direction indicating movement away from the port and not into the port. This interpretation means that the sailors are raising the anchor, working the sail, and preparing the rudder to depart; thus this conclusion depicts an *apobaterion* or rites conducted while leaving port to ensure a safe journey rather than an *embaterion*.

suggested that the man in the bow is a priest raising his right arm in a gesture of benediction, blessing the ship, the crew, and cargo.<sup>365</sup> Based upon the prior discussion of *thymiateria* from shipwrecks and literature, it seems likely that *thymiateria* were used in embarkation ceremonies and may have been carried on board the ship.<sup>366</sup>

Moreover, a passage in the *Argonautica* does suggest that ships carried religious equipment, as the ship's tripod was given in a sacrifice to the god of the sea so that the sailors could continue their voyage.<sup>367</sup> Perhaps, this inclusion of ritual objects on board is depicted on a Severan coin on which a ship is shown transporting ritual objects such as *perirrhanteria*, tripods, altars, and *thymiateria* or *candelabra* (fig. 14).

Thus, when considered together, the evidence from literature and iconography indicates that religious rituals in the form of sacrifice and more often libations were indeed conducted on board the ship. Moreover, many of these references and depictions provide spatial references for the location of these rituals, permitting a spatial analysis of the ship as a religious "landscape".

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<sup>365</sup> Basch 1999, 54-5.

<sup>366</sup> Supra p. 39-40, 57.

<sup>367</sup> Apoll. Rhod. 4.1546-9.

### Spatial Analysis of Rituals

From literature and iconography, there is sufficient evidence to indicate a dichotomy of religious space between the stern and the bow of the ancient ship. The stern is where the captain poured libations from his *phiale* in Pindar's *Pythian Ode*.<sup>368</sup> The stern is also the location for Anchises' libation in Vergil's *Aeneid*<sup>369</sup> and Telemachus' libation in the *Odyssey*.<sup>370</sup> Not surprisingly, the extremely elaborate ships recorded by Athenaeus had shrines in the sterns.<sup>371</sup> Finally, the Argonauts sacrificed sheep from the stern and delivered the entrails into the sea.<sup>372</sup> The Torlonia relief also shows a sacrificial scene in the ship's stern, and several iconographic depictions suggest that a *stylis* was placed there, perhaps to invoke the gods to aid the navigational abilities of the helmsman.<sup>373</sup>

However, the bow was also reserved for rituals and cult objects pertaining to the ship. Based on iconography, literature, and archaeology, it appears that certain devices were added to the ship's hull in order to invoke protection from the gods. At the bow, eyes were added to the hull to bestow an anthropomorphic or a zoomorphic identity upon the ship itself. This identity was enhanced by horns and figureheads. Sources concur that the ship had zoomorphic traits enabling it to fly through the water in a manner similar to

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<sup>368</sup> Pind. *Pyth.* 4.141-96.

<sup>369</sup> Verg. *Aen.* 3.521.

<sup>370</sup> Hom. *Od.* 2.2405-34.

<sup>371</sup> Ath. 5.205-7.

<sup>372</sup> Apoll. Rhod. 4.1593-602.

<sup>373</sup> Svoronos 1914, 98, 100.

a bird. Occasionally, representations of gods were also placed in the bow, perhaps indicating that the ship belonged to that deity, an early manifestation of naming ships. By displaying the gods in the bow, the ship was then under their protection.

From literature, there are several references to libations occurring in the bow of the ship such as Alexander's libation from a golden *phiale*,<sup>374</sup> the Achaean captains' libations before leaving port,<sup>375</sup> and Aeneas' pouring out of wine and entrails from a *patera* before sailing.<sup>376</sup> Perhaps, the burning of incense also occurred in the bow as shown by the Cypriot ship model of the priest in the bow with a *thymiaterion*.

### Summary and Conclusion

This study shows that there seems to be a spatial significance for the occurrence of ritual practices and the presence of sacred objects at either the bow or the stern of the ancient ship. Objects in the bow appear to have served primarily the aid of the ship, while those in the stern for the crew and voyage. In the bow, the eyes, horns, and figureheads gave the ship an anthropomorphic or zoomorphic identity; in the stern, the presence of the *stylis* was meant to invoke the gods and help the helmsman or captain in navigation. Similarly in literature,<sup>377</sup> it seems that rituals in the bow occurred after everyone had boarded but prior to the actual voyage. The ship was “looking” ahead to the upcoming

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<sup>374</sup> Arrian *An.* 6.19.5.

<sup>375</sup> Quint. *Smyr.* 14.378-82.

<sup>376</sup> Verg. *Aen.* 5.771-8.

journey. Conversely, rituals conducted in the stern occurred once the voyage was underway and the ship was at sea, or as thank-offerings for safely delivering the ship and its crew.

Thus, evidence from literature and iconography suggests that the ancients viewed the ship as a sacred object and a landscape in which religious rituals were performed.

Further analysis of archaeological material is needed if we are to attain a clearer picture of rituals aboard the ancient ship using terminology from current spatial studies.

## CHAPTER V

## CONCLUSION: SPATIAL ANALYSIS OF THE ANCIENT SHIP

Through the cultural artifact of a name, undifferentiated space is transformed into marked and delimited place. Stories and tales may be attached to such places, making them resonate with history and experience. The culturally constructed elements of a landscape are thus transformed into material and permanent markers and authentications of history, experience and values. Although the stories change in the retelling, the place provides an anchor of stability and credibility.<sup>377</sup>

Although referring to general places, the quote above is applicable to the ancient ship.

Even though details may change for each ship or each artifact on board the ship, there are overarching patterns between them, such as artifact placement in the ship's landscape or the conceptualization of the ship itself. This final chapter works to elucidate those similarities, drawing together material from the prior chapters and presenting an interpretation of shipboard life based on social and religious space. Considering the purpose of objects in terrestrial ritual, the evidence for ritual objects on shipwrecks is compared to the evidence for ritual as outlined by literature and iconography. Finally, a review of social and religious space theories from terrestrial studies is applied to shipwreck data in an effort to propose new interpretive perspectives about old ships.

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<sup>377</sup> Pearson and Richards 1994, 4.

### Religious Objects and Ritual

In the initial definition of ritual in Chapter I, parameters were provided for identifying religious ritual and objects in a terrestrial environment, and ritual was identified as an activity, specific to a group of people, that expresses a conceptual orientation with a specific intent in the action.<sup>378</sup> By applying these definitions to artifacts from shipwrecks, we may come a step closer to determining whether they also were used in religious ritual on board the ship. Namely, why are some objects identified as religious and what was their purpose aboard the ship?

First, let us consider the definition that ritual action expresses a conceptual orientation with an intention specific to a group of people. Ritual on board a ship directly involves and affects those on board the ship (*i.e.* the captain, crew, and passengers) and it seems that the structure of rituals on board might resemble those of a family in a domestic setting; instead of the *pater familias*, the captain presided over the ritual. The intention of those on board is quite simply to safely and successfully maneuver the ship and everything within it to a destination. To identify traces of this activity on shipwrecks, we must look at the objects used in the actions of purification, libation, sacrifice, prayer, and protection.

Evidence from all sources (textual, iconographical, and archaeological) must be considered to elucidate the practice of religious rituals on board ancient Greek and

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<sup>378</sup> Supra p. 12-6.



Roman ships. Interpretations based solely on the archaeological evidence may be misleading due to the failure of some materials to survive underwater, thereby providing a biased view of religious practices. Is there a difference between what survives in the archaeological record and what is portrayed in literature and iconography? Perhaps there is. Representations in literature and iconography are just that – representations or interpretations based on the goals of the artist. Perhaps the ancient poet did record an accurate account of libations from the ship, correctly noting the location and use of ritual objects. However, the possibility also exists that the author exaggerated or erroneously depicted the events for propagandistic purposes or simply to fit the appropriate meter. Given these challenges, conclusions can best be reached by combining evidence from archaeology, literature, and iconography in an attempt to determine what they have in common.

#### *Purification and Libation*

When comparing those objects used for purification and libation discovered in shipwreck contexts to those same objects as they are portrayed in literature and iconography, it appears that the archaeological evidence does not concur. Although *louteria* or *perirrhantaria* have been discovered in shipwrecks, these containers are not mentioned or featured in iconography.

For objects used in purification rituals, it is difficult to equate terrestrial use with shipboard use. In a terrestrial context, lustral basins were used in religious purification

and ritual washing. *Perirrhantaria* were set up around the sanctuary to provide a method for religious purification. *Horoï*, or boundary markers, were used to guard and protect the area and remind the visitors that this was sacred space.<sup>379</sup> Within a secular context, the large basin or *louterion* was used for bathing and washing, and a later basin type was added to the Roman garden. On board the ship, it would seem impractical to use a large basin for bathing or for delineating a sacred area. However, one possibility would be the specialized function of a lustral basin on board the ship, deviating slightly from its terrestrial use.

It is tempting to assume from archaeological evidence that *louteria* or *perirrhantaria* were carried on the ship for shipboard purification or even for use once at port, since only one example is often associated with a given wreck, but literary sources and iconography concerning ships do not mention these basin types. Sources, however, do mention another type of water container used in rituals for purification and handwashing prior to sacrifice – the *chernips* (χέρνιψ or χέρνιβον). Inasmuch as this container was smaller, it makes sense that this type would be carried on board the ship rather than the large lustral basin. Furthermore, the terrestrial context of the *perirrhantaria* indicates that in a ritual space its main function was to set up a perimeter or a boundary around the sanctuary, delineating sacred space and a means for purification to enter that space. Based on this evidence, it seems that the large basins found in shipwrecks were not always on board for ritual use. Instead, most of the examples were likely a

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<sup>379</sup> Cole 2004, 46.

*perirrhanterion* or *louterion* being transported as cargo or even a *louterion* carried on board the ship for bathing purposes once on land. Further research into the manufacture and trade of this artifact type may shed some light onto which of these uses, cargo or bathing, is most likely. Finally, each example requires supplementary interpretation based on their context within the wreck.

Although there appears to be a discrepancy in the evidence for libations since objects present in literature are absent from archaeology, several different factors may be working together to produce this result. It is likely that objects have not survived in the archaeological record because they were looted from a site, especially if they were made from gold or silver. Additionally, it is difficult to determine whether simple terracotta cups played any role in religious ritual, acting as impromptu religious equipment meaning that ritual may not be so obvious.

### *Sacrifice*

Objects used for sacrifice in terrestrial contexts have direct parallels to those found among shipwrecks. Although only one altar was found on the wreck at Spargi, multiple *thymiateria* and tripods have been discovered on five different wrecks, suggesting that the ritual of burning incense in smaller, more portable containers was preferred over altar sacrifice. It is also possible that as altars were needed, they were constructed out of turf on land or whatever was available, rather than being transported, or sacrifice was

conducted on an altar when the ship put into harbor.<sup>380</sup> Conducting sacrifice on land rather than on board the ship and using *thymiateria* decrease the risk of the ship catching fire.

Evidence for the occurrence of sacrificial rituals on board the ship is seen in both the archaeological record and in literature and iconography. Objects used in such rituals, such as the *thymiaterion*, *candelabrum*, tripod, or altar, have been found in ten shipwrecks, with two wrecks excluded because multiple examples were found on each wreck, indicating that these objects were cargo.<sup>381</sup> Rituals utilizing these objects in connection with seafaring are recorded in literature and iconography, primarily during the departure or arrival ceremony. It appears that the *thymiaterion* was indeed carried on board the ship for ritual use prior to departure and a sacrifice was conducted in several examples from literature and iconography.

#### *Prayer and Votive Offerings*

Other votive items, such as figurines, were transported quite easily. Archaeological evidence from wrecks indicates that figurines were frequently carried on board ships, many very similar to those like the household Lares and Penates figurines of Pompeii.

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<sup>380</sup> Supra n. 87.

<sup>381</sup> Supra p. 55-9.

Although the pattern is little better than tenuous between the archaeological record and the literary and iconographic evidence, there is evidence for the use of figurines and prayer on board the ship. Many statuettes have been discovered among shipwrecks ranging from animals to body parts to entire male and female figures.<sup>382</sup> However, statuettes and figurines are not well attested within literature and iconography. In only one account was a figurine noted to be carried on board the ship.<sup>383</sup> On the other hand, prayer is mentioned frequently in literature, often in connection with libations or sacrifice and occasionally as the sole ritual. Despite scanty evidence from literature and iconography for the presence of shipboard figurines, there appears to be solid evidence from shipwrecks. Their high number aboard ships is most likely due to their portable nature and use in terrestrial and maritime contexts as tutelary deities.

#### *Hull Addenda*

The protective and anthropomorphic or zoomorphic devices that were added to a ship's hull also have precedence in terrestrial contexts, as exemplified by the use of eyes on famous 'eye cups,' and city walls.<sup>384</sup>

It seems that there was also a corollary between archaeological, literary, and iconographic evidence for the addition of objects and features to the hull of the ship,

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<sup>382</sup> Supra p. 60-70.

<sup>383</sup> Ath. 15.675.

<sup>384</sup> see Steinhart 1995 and Carlson 2009 for an overview of the use of eyes in terrestrial and maritime contexts, respectively.

such as eyes, horns, and figureheads. Within literature, the ship is assigned a zoomorphic or an anthropomorphic identity, giving it the power to see and move.<sup>385</sup> Additionally, representations of ships show eyes and figureheads on the bow, and symbols or figureheads on the stern. Although only a few examples of these objects have been found among shipwrecks, it is probable that they were lost due to formation processes, whether cultural or natural.<sup>386</sup> Evidence points toward the existence of these objects as made of ephemeral materials like paint or on portions of the ship, such as the superstructure, which do not survive archaeologically. Consequently, evidence from archaeology, literature, and iconography all point toward the tradition of adding religious objects to the hull of the ship.

### Religious Space

Other patterns in shipboard religion emerge from a comparison of religious ritual and objects from shipwrecks, iconography, and literature. In particular, data suggest a spatial dichotomy between the bow and stern. This dichotomy is best explained by considering the purpose of objects found in these areas. Literary sources and iconography provide evidence for seaman offering libations while under sail and sacrifices occurring in the stern.<sup>387</sup> Several objects from shipwrecks also point towards the stern as a place for religious practices such as the altar at Spargi and *thymiaterion* on

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<sup>385</sup> Aesch. *Pers.* 559; Apoll Rhod. 4.236-40; Hom. *Od.* 7.36, 13.84-7.

<sup>386</sup> *Supra* p. 71-4.

<sup>387</sup> Ath. 5.205-7; Pindar *Pyth* 4.191-6; Verg. *Aen.* 3.521.

the *Elissa*.<sup>388</sup> Comparatively from literature and iconography, religious activity in the bow refers to libations and sacrifice before departing and after arriving.<sup>389</sup>

Is there a difference between the objects and rituals in the bow and those in the stern? Indeed, there appears to be a pattern in the type of objects discussed and found in each region. The objects in the bow appear to safeguard the ship and the cargo and crew on board, while those in the stern appear to serve the crew and guide the voyage. Consequently, location plays a key role in the type of ritual, and understanding the nuances of space aboard the ship may permit a deeper interpretation of religious ritual.

#### Spatial Theory Applied to the Ship

In a biological approach to space, humans adapt buildings to fit their needs or requirements. They alter a building when it no longer accommodates their needs, or change their behavior “to fit the physical environment, especially when it presents limitations.”<sup>390</sup> This view is equally appropriate for the ship as a building adapted to fit the requirements of life at sea. Once at sea, seamen changed their behavior to accommodate this fixed space. One aspect of this change in religious practices was that they opted for more symbolic objects and portable devices, relying heavily on the conceptualized religious connection with the ship.

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<sup>388</sup> *Supra* p. 55, 57.

<sup>389</sup> *Arrian An.* 6.19.5; *Quint. Smyr.* 14.378-82; *Verg. Aen.* 5.771-8; Basch 1999, 54-5

<sup>390</sup> Lawrence and Low 1990, 460.

Prior spatial analyses have looked at the broader landscape as well as the rooms and objects within the ancient house. In particular, the Greek and Roman landscape has been studied for the placement of sanctuaries<sup>391</sup> and the connection between the environment and rituals.<sup>392</sup> Ault proposes that the ancient Greek house was a blueprint for the organization of the *polis* that was both public and private, and that the house contained simple materials used in domestic cult ritual.<sup>393</sup> In another study, Clarke suggested that the Romans also tended to delineate domestic space in terms of the ritual or activity within that space.<sup>394</sup> The axis set up by the *tablinum*, *impluvium*, and *alae* for the business of the *pater familias* was a reminder of his position in and control of the house.<sup>395</sup> Likewise, the atrium had many family rituals associated with it, including the display of familial images and the *lararium*.<sup>396</sup> In a study on the houses at Pompeii, Grahame analyzes the architectural layout of houses, identifying a spatial syntax theory for the pattern of social encounters.<sup>397</sup> This spatial analysis of houses is based on the fact that “no two houses are the same, and yet all evidence would suggest a level of identity arrived at through subtleties that transcend the scope of mere formal repetition,

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<sup>391</sup> Alcock 1993.

<sup>392</sup> Cole 2004.

<sup>393</sup> Ault 2000, 483, 492.

<sup>394</sup> Clarke 1991, 1.

<sup>395</sup> Clarke 1991, 6.

<sup>396</sup> Clarke 1991, 6-7; Knights 1992, 129.

<sup>397</sup> Grahame 2000.



and imply a strong sense of interpretative flexibility.”<sup>398</sup> Indeed, this description seems applicable to the ship, as analysis from each shipwreck points toward a ship that was slightly different; yet upon closer examination, clear patterns emerge about spatial layout and religious objects.

Renfrew states that during religious ritual, a human celebrant employs ritual objects in several ways.<sup>399</sup> First, the actions are attention focusing, putting the human in a heightened state of awareness or religious excitement, which may be contingent upon sight, sound, or smell. Next, there may also be special aspects of the liminal zone that must be taken into consideration, such as pollution and procedures. Thirdly, the presence of the deity is ensured by a cult image or symbols. Lastly, there must be a participation and offering of prayers, gestures, sacrifices, or objects. Together, these aspects construct ritualizing schemes, which “invoke a series of privileged oppositions that, when acted in space and time through a series of movements, gestures, and sounds, effectively structure and nuance an environment.”<sup>400</sup>

The ancient Greeks had a defined view of the directionality and movement associated with profanity. In particular, the “right” was a source of good, a seat of sacred, lucky, and auspicious power, whereas the “left” was a profane side with no virtue, unlucky,

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<sup>398</sup> Knights 1994, 119.

<sup>399</sup> Renfrew 1985, 18.

<sup>400</sup> Bell 1992, 140.

awkward, and ill-omened significance.<sup>401</sup> This underlying notion of duality for the Greeks also is evident in the arrangement of deities between the sky, the Olympian gods and the earth, the chthonic deities.<sup>402</sup> Additionally, in Plato's *Republic* the just souls go to the right and upwards through the sky but the unjust go left and downwards.<sup>403</sup> These directions reflect a compass of the human body based on the idea of front, back, left, and right.<sup>404</sup>

In looking at the way in which the human body approaches religious space, Anttonen advocates a cognitive approach that does not simply describe the ways in which the sacred is present in the lives of humans; rather it shows how “ontologies of cultural systems become possible and how they are comprehended by the members of these systems as realities to be lived in.”<sup>405</sup> For sacred components of the ship, this means analyzing the ship for religious evidence and considering the life of the sailor at sea. This approach serves to analyze what Soja has termed “thirdspace” – a fully active area of life, both real and imagined.<sup>406</sup> In doing so, it transitions beyond looking at religious

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<sup>401</sup> Lloyd 1962, 56-8.

<sup>402</sup> see Burkert 1985, 199-203 for a comparison of the Olympian and chthonic deities.

<sup>403</sup> Plato, *Rep.* 10.614c. Aristotle (*Metaph* 1.986a, 22-7) also provides a list of corresponding pairs.

<sup>404</sup> Rupke 2007, 174.

<sup>405</sup> Anttonen 1996, 39.

<sup>406</sup> Soja 1996. “Thirdspace” builds upon “firstspace,” the concept of material aspects of space, and “secondspace” the mental or ideational aspects of space (see Robin and Rothschild 2002, 162 for a review of these concepts and an application of thirdspace analysis).

objects from shipwrecks to include how ideas are transmitted, represented, and perceived.

As territorially– and socially–bounded beings, humans organize their lives in accordance with spatial routines and territorial divisions in their lives.<sup>407</sup> In particular, this division of sacred from profane is set up via boundary markers, or markers of anomaly and liminality. As a definition, an anomaly is any element that is perceived as exceptional; liminality refers specifically to a marginal phase in the ritual process relating symbols to culture.<sup>408</sup> Liminality offers a way of creating clarity from confusion by using religious actions and architectural structures like roads, paths, and boundary markers.<sup>409</sup> In antiquity, this organization was developed from the landscape and encoded by regular ritual practice.<sup>410</sup>

Space plays an important role in ritual because ritual needs a space to be carried out. Space, however, is not necessarily a stimulus for ritual, as it is the ritual that is sacred and the behavior that induces a sacred space.<sup>411</sup> A spatial framework is given meaning only by human activities. Stated another way, everyday actions create space. This

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<sup>407</sup> Anttonen 1996, 40.

<sup>408</sup> Anttonen 1996, 55.

<sup>409</sup> Rupke 1990, 53-5.

<sup>410</sup> Rupke 2007, 175.

<sup>411</sup> Knott 2005, 43.

meaning does not need to be fixed, but rather is invoked in the context of rituals.<sup>412</sup>

Insoll cautions that there is a complexity in the formation of a sacred versus a secular landscape, and there is not usually a clear distinction since a landscape can mean different things to different people.<sup>413</sup> Nevertheless, when rituals are performed within a place or space, they are then “inscribed in the memory of the participants.”<sup>414</sup> For a group, these beliefs are less constrained by logic and become more specialized.<sup>415</sup>

These nuances of religious space are equally applicable to the ship, especially when considering the creation of sacred space on board. Returning to Eliadae’s dichotomy between sacred and profane space, the sea is a profane, disorganized, and chaotic space. Indeed, the sea constitutes a good medium for wandering because of its unsolid paths and watery ways that cannot be absolutely controlled.<sup>416</sup> In the *Odyssey*, nothing is worse than wandering,<sup>417</sup> or, for Odysseus, worse than the sea.<sup>418</sup> An analysis of Odysseus’ wanderings leads Montiglio to conclude that “to be removed from the sea as one can conceive – to be removed from the very conception of the sea – means to stop

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<sup>412</sup> Pearson and Richards 1994, 5.

<sup>413</sup> Insoll 2004, 88.

<sup>414</sup> Kyriakidis 2007c, 299.

<sup>415</sup> Bell 1992, 185.

<sup>416</sup> Montiglio 2005, 8.

<sup>417</sup> Hom. *Od.* 15.343.

<sup>418</sup> Hom. *Od.* 8.138.

wandering.”<sup>419</sup> There is also a link between the sea and gods who embrace a spatial component. For example, Hermes represents movement, flow, and a contact between foreign elements. He is a transitory traveler, moving between the earth and the underworld. Representing something not settled, permanent, nor restricted, Hermes was often placed at the door of a house or used as a boundary marker.<sup>420</sup> The ship, however, was an object that organized and oriented the chaotic space of the sea. The ship served as a sacred place where it was a necessity to carry religious objects on board and utilize spaces in the bow and the stern in order to provide support in the midst of the chaotic uncertainty of the sea.

This dichotomized location between the bow and the stern is epitomized by the purpose of the religious objects found there. Those ritual objects that appear in the stern were primarily for aiding the communication between gods and men, setting up the stern as the axis mundi, or the center of communication. Acts of ritual are the key components of this communication, since ritual itself is defined as an opportunity for the exchange of messages – prayers and requests from men to gods, and warnings and messages of acceptance from gods to men.<sup>421</sup> Thus, the ship becomes a platform of communication between men and gods articulated by acts of ritual – sacrifice, libations, purification, and incense burning. I would argue that the stern was the place where divine communication

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<sup>419</sup> Montiglio 2005, 7.

<sup>420</sup> Vernant 1983, 129.

<sup>421</sup> Beard et al. 1998, 37.

was especially important since the helmsman controlled the direction of the ship from the stern.<sup>422</sup> What better place to offer libations or sacrifice to the gods than from the location where divine help was needed most? Additionally, it seems likely that ritual items would have been found in the stern where the captain and wealthy passengers would have resided in the ship.

Comparatively, those ritual objects associated with the bow were generally for the assistance of the ship itself. Eyes imbued the ship with the capability to watch for danger, while horns likely were apotropaic objects to protect a ship from oncoming evils.

### Summary and Conclusion

This synthesis of literary, iconographic, and archaeological evidence is an effort to move beyond simply identifying religious objects on board ancient shipwrecks. Instead, it presents one approach for distinguishing items of cargo from personal possessions and analyzing the conceptualization of the spaces on board Greco-Roman ships. From this approach, future study should move toward understanding the economics of trade in religious objects and the role of the ship in the dissemination of religion. As we have only begun to identify religious ritual on board the Greco-Roman ship, this study is a first attempt to apply current archaeological spatial theory to the ship, offering the ship itself as a landscape upon which many Greeks and Romans lived their daily lives.

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<sup>422</sup> The helmsman himself often had divine status or gifts associated with him. See Hom. Hymn Apollo 400-39.

## WORKS CITED

- Alcock, S. 1993. *Graecia Capta: The Landscapes of Roman Greece*. Cambridge: Cambridge University Press.
- . 1993. "Spaced-Out Sanctuaries: The Ritual Landscape of Roman Culture." In *Theoretical Roman Archaeology: First Conference Proceedings*, edited by E. Scott, 155-65. Brookfield: Avebury.
- Alcock, S. and R. Osborne, eds. 2007. *Classical Archaeology*. Malden, MA: Blackwell Publishing.
- Ambrogi, A. 2005. *Labra di età romana in marmi bianchi e colorati*. Roma: L'Erma di Bretschneider.
- Amyx, D. 1958. "The Attic Stelai: Part III. Vases and Other Containers." *Hesperia* 27:163-254.
- Anttonen, V. 1996. "Rethinking the Sacred: The Notions of 'Human Body' and 'Territory' in Conceptualizing Religion." In *The Sacred and Its Scholars: Comparative Methodologies for the Study of Primary Religious Data*, edited by T. Idinopulos and E. Yonan, 36-64. New York: E.J. Brill.
- Arnold, I. 1933. "Local Festivals at Delos." *AJA* 37:452-58.
- Arribas, A. 1987. *El Barco de El Sec (Calvià, Mallorca): Estudio de los materiales*. Mallorca: Universitat de Les Illes Balears.
- Ault, B. 2000. "Living in the Classical Polis: The Greek House as Microcosm." *CW* 93:483-96.
- Babbini, L. 1994. *Operazione Iulia Felix: Lo scavo subacqueo della nave romana rinvenuta al largo di Grado*. [Italy]: Edizioni della laguna.
- Bakker, J. 1994. *Living and Working with the Gods: Studies of Evidence for Private Religion and Its Material Environment in the City of Ostia (100-500 AD)*. Amsterdam: J.C. Gieben.
- Ballard, R., L. Stager, D. Master, D. Yoerger, D. Mindell, L. Whitcomb, H. Singh, and D. Piechota. 2002. "Iron Age Shipwrecks in Deep Water off Ashkelon, Israel." *AJA* 106:151-68.
- Banton, M. 1966. *Anthropological Approaches to the Study of Religion*. London: Tavistock Publications.

- Barasch, M. 1996. "Visual Syncretism: A Case Study." In *The Translatability of Cultures: Figurations of the Space Between*, edited by S. Budick and W. Iser, 37-54. Stanford: Stanford University Press.
- Barreca, F. 1986. "Sardegna." *BdA* 3:213-14.
- Basch, L. 1985. "The ISIS of Ptolemy II Philadelphus." *Mariner's Mirror* 71:129-51.
- . 1999. "Un modèle de navire chypriote du VIe siècle av. J.-C. trouvé en mer au large d'Amathonte." *BCH* 123:43-64.
- Bass, G. and F. van Doorninck. 1982. *Yassı Ada: A Seventh-Century Byzantine Shipwreck*. College Station: Texas A&M University Press.
- Bass, G., S. Matthews, J. Steffy, and F. van Doorninck. 2004. *Serçe Limanı: An Eleventh-Century Shipwreck*. Vol 1, *The Ship and Its Anchorage, Crew and Passengers*. College Station: Texas A&M University Press.
- Beard, M., J. North, and S. Price. 1998. *Religions of Rome*. New York: Cambridge University Press.
- Belayche, N. 2007. "Religious Actors in Daily Life: Practices and Related Beliefs." In *A Companion to Roman Religion*, edited by J. Rüpke, 275-91. Malden, MA: Blackwell Publishing.
- Bell, C. 1992. *Ritual Theory, Ritual Perspective*. New York: Oxford University Press.
- . 1997. *Ritual: Perspectives and Dimensions*. New York: Oxford University Press.
- . 2007. "Response: Defining the Need for a Definition." In *The Archaeology of Ritual*, edited by E. Kyriakidis, 277-88. Los Angeles: University of California.
- Beltrame, C. 2000. "A Review of the Roman Wreck of Spargi (Sassari/Italy): An Evidence of the Commerce of Luxurious Furniture during Late-Republican Age." In *Schutz des Kulturerbes unter Wasser: Veränderungen europäischer Lebenskultur durch Fluß- und Seehandel: Beiträge zum Internationalen Kongreß für Unterwasserarchäologie (IKUWA '99), 18.- 21. Februar 1999 in Sassnitz auf Rügen*, edited by H. Schmettow, 155-62. Lübstorf, Germany: Archäologisches Landesmuseum für Mecklenburg-Vorpommern.
- Benoit, F. 1962. "Nouvelles epaves de Provence (III)." *Gallia* 20:147-76.
- . 1971. "Pièces de gréement et d'armement en plomb, engins et pièces décoratives trouvées en mer." In *Actes du III<sup>ème</sup> Congrès International d'Archéologie Sous-*



- marine*. Barcelone, 1961, 394-411. Bordighera, Italy: Institut International D'Études Ligures.
- Berti, F. 1990. *Fortuna Maris: La nave romana di Comacchio*. Bologna, Italy: Nuova Alfa.
- . 1992. “La nave di Valle Ponti (Comacchio).” In *V rassegna di archeologia subacquea. V Premio Franco Papo. Atti. Giardini Naxos 19-21 ottobre 1990*, 219-26. Messina, Italy: P&M Associati.
- Bibee, W. 2008. “*Καθάρως*: The Semitic Origin of a Greek Purification Term.” Honors Thesis, The University of Texas, Austin.
- Blanco, C. 1970. “Nuevas piezas fenicias del Museo Arqueológico de Cadiz.” *ArchEspArq* 43:50-61.
- Blinkenberg, C. 1898. “Epidaurische Weihgeschenke.” *AM* 23:1-23.
- Bottini, A. 2000. “*Thymiateria*.” In *Le navi antiche di Pisa*, edited by S. Bruni and M. Abbado, 210-12. Firenze: Polistampa.
- Brann, E. 1961. “Protoattic Well Groups from the Athenian Agora.” *Hesperia* 30:305-79.
- Brody, A. 1998. *‘Each Man Cried out to His God’: The Specialized Religion of Canaanite and Phoenician seafarers*. Atlanta: Scholars Press.
- Broneer, O. 1947. “The Corinthian Altar Painter.” *Hesperia* 16:214-23.
- Broodbank, C. 1993. “Trade without Sails: Trade, Distance, Knowledge and Power in the Early Cyclades.” *WorldArch* 24:315-31.
- Bruni, S., and M. Abbado. 2000. *Le Navi Antiche di Pisa*. Firenze: Polistampa.
- Burkert, W. 1983. *Homo Necans: The Anthropology of Ancient Greek Sacrificial Ritual and Myth*. Translated by P. Bing. Berkeley, CA: University of California Press.
- . 1985. *Greek Religion*. Translated by J. Raffan. Cambridge, MA: Harvard University Press.
- Callipolitis-Feytmans, D. 1965. *Les Louteria Attiques*. Athènes: Direction des antiquités et des anastyloses.
- Canney, M. 1938. “Boats and Ships in Processions.” *Folklore* 6:132-47.

- Carlson, D. 2003. "The Classical Greek Shipwreck at Tektaş Burnu, Turkey." *AJA* 107:581-600.
- . 2006. "A Monumental Cargo: The Roman Column Wreck at Kizilburun, Turkey." *INA Quarterly* 33:3-10.
- . 2007a. "An Uplifting Summer: The 2006 Excavation Season at Kizilburun, Turkey." *INA Quarterly* 34:3-10.
- . 2007b. "Mast-Step Coins among the Romans." *IJNA* 36:317-24.
- . 2009. "Seeing the Sea: Ships' Eyes in Classical Greece." *Hesperia* 78:347-65.
- Carlson, D. and C. Atkins. 2008. "Leaving No Stone Left Unturned: The 2007 Excavation Season at Kizilburun, Turkey." *INA Annual 2007*: 22-28.
- Casson, L. 1971. *Ships and Seamanship in the Ancient World*. Princeton, NJ: Princeton University Press.
- Cavalier, M. 1985. "Capo Graziano, Relitto F." *BdA* 29:89-91.
- Cerda, D. 1978. "Una nau cartaginesa a Cabrera." *Fonaments* 1:89-105.
- Clarke, J. 1991. *The Houses of Roman Italy, 100 B.C.-A.D. 250: Ritual, Space, and Decoration*. Berkeley, CA: University of California Press.
- Cole, S. 1988. "The Uses of Water in Greek Sanctuaries." In *Early Greek Cult Practices. Proceedings of the Fifth International Symposium at the Swedish Institute at Athens, 26-29 June, 1986*, edited by R. Hägg, N. Marinatos and G. Nordquist, 161-65. Stockholm: Paul Åströms Förlag.
- . 2004. *Landscapes, Gender, and Ritual Space: The Ancient Greek Experience*. Berkeley, CA: University of California Press.
- Corsi-Sciallano, M., and B. Liou. 1985. *Les epaves de Tarraconaise a chargement d'amphores Dressel 2-4*. *Archaeonautica*, 5. Paris: Editions du Centre national de la recherche scientifique.
- Crumlin-Pedersen, O. and S. McGrail. 2006. "Some Principles for the Reconstruction of Ancient Boat Structures." *IJNA* 35:53-57.
- Davies, M. 1978. "Sailing, Rowing, and Sporting in One's Cups on the Wine-Dark Sea." In *Athens Comes of Age: From Solon to Salamis*, edited by W. Childs, 72-90. Princeton, NJ: Archaeological Institute of America.

- Detienne, M. 1977. *The Gardens of Adonis: Spices in Greek Mythology*. Princeton, NJ: Princeton University Press.
- . 1981. "The 'Sea-Crow'" In *Myth, Religion, and Society*, edited by R. Gordon and M. Detienne, 16-42. Cambridge: Cambridge University Press.
- Di Stefano, G. 1991. "Antichi relitti nella baia di Camarina." in *IV rassegna di archeologia subacquea, IV Premio Franco Papo. Atti. Giardini Naxos 13-15 ottobre 1989*, 126-34. Messina, Italy: P&M Associati.
- . 1992. Camarina 1990. "Nuove ricerche e recenti scoperte nella baia e nell'avamposto." in *V rassegna di archeologia subacquea. V Premio Franco Papo. Atti. Giardini Naxos 19-21 ottobre 1990*, 175-206. Messina, Italy: P&M Associati.
- Dubourdieu, A. 1989. *Les origines et le développement du culte des Pénates à Rome*. Rome: Ecole Française de Rome.
- Ducat, J. 1964. "Perirrhanteria." *BCH* 88:577-606.
- Egelhaaf-Gaiser, U. 2007. "Roman Cult Sites: A Pragmatic Approach." In *A Companion to Roman Religion*, edited by J. Rüpke, 205-21. Malden, MA: Blackwell Publishing.
- Eliade, M. 1957. *The Sacred and the Profane: The Nature of Religion*. Translated by W. Trask. New York, NY: Harcourt, Brace & World, Inc.
- Ferguson, J. 1989. *Among the Gods: An Archaeological Exploration of Ancient Greek Religion*. New York, NY: Routledge.
- Fiorentini, G. 1995-1996. "Ricerche archeologiche sottomarine da Sciacca a Gela e Isole Pelagie." *Bollettino di Archeologia Subacquea* 1-2:351-56.
- Flatman, J. 2003. "Cultural Biographies, Cognitive Landscapes and Dirty Old Bits of Boat: 'Theory' in Maritime Archaeology." *IJNA* 32:143-57.
- Frost, H. 1973. "An Ancient Roman 'Yacht' from a Dispersed Cargo." *Mariner's Mirror* 59:334.
- Fullerton, M. 1986. "The Archaistic *Perirrhanteria* of Attica." *Hesperia* 55:207-17.
- Gager, J. 1992. *Curse Tablets and Binding Spells from the Ancient World*. New York, NY: Oxford University Press.

- Galinsky, K. 2007. "Continuity and Change: Religion in the Augustan Semi-Century." In *A Companion to Roman Religion*, edited by J. Rüpke, 71-82. Malden, MA: Blackwell Publishing.
- Gardner, P. 1881. "Boat-Races among the Greeks." *JHS* 2:90-7.
- . 1890. "A Stele Commemorating a Victory in a Boat-Race." *JHS* 11:146-50.
- Gargallo, P. 1972. "An Ancient Roman Yacht." *Mariner's Mirror* 58:443-46.
- Garland, R. 1987. *The Piraeus: From the Fifth to the First Century B.C.* Ithaca, NY: Cornell University Press.
- Geertz, C. 1966. "Religion as a Cultural System." In *Anthropological Approaches to the Study of Religion*, edited by M. Banton, 1-46. New York: Tavistock Publications.
- Ghinatti, F. 1983. "Manifestazioni votive, iscrizioni e vita economica nei santuari della Magna Grecia." *Studia Patavina* 30:241-322.
- Gibbins, D. 1991. "The Roman Wreck of c. AD 200 at Plenmirio, near Siracusa (Sicily): Third Interim Report." *IJNA* 20:227-46.
- Ginouvès, R. 1962. *Balaneutikè: Recherches sur le bain dans l'antiquité Grecque.* Paris: De Boccard.
- Giustolisi, V. 1975. *Le navi romane di Terrasini.* Palermo, Italy: Centro di documentazione e ricerca per la Sicilia antica "Paolo Orsi".
- Goldman, H. 1942. "The Origin of the Greek Herm." *AJA* 46:58-68.
- Göttlicher, A. 1992. *Kultschiffe und Schiffskulte im Altertum.* Berlin: Gebr. Mann Verlag.
- Grahame, M. 2000. *Reading Space: Social Interaction and Identity in the Houses of Roman Pompeii, a Syntactical Approach to the Analysis and Interpretation of Built Space.* Oxford: Archaeopress.
- Grant, D. 2001. "Symbols, Stories, and Practices: New Empirical Directions in the Study of Religious Meaning." *The Sociological Quarterly* 42:223-51.
- Greene, E. 1995. "The Critical Element in the Embarkation Scenes of the Odyssey." *GRBS* 36:217-30.
- Griffith, R. 2001. "Sailing to Elysium: Menelaus' Afterlife ("Odyssey" 4.561-569) and Egyptian Religion." *Phoenix* 55:213-43.

- Griffiths, J. 1975. *The Isis-book: (Metamorphoses, Book XI)*. Leiden: E.J. Brill.
- Haensch, R. 2007. "Inscriptions as Sources of Knowledge for Religions and Cults in the Roman World of Imperial Times." In *A Companion to Roman Religion*, edited by J. Rüpke. Malden, MA: Blackwell Publishing.
- Hahn, F. 2007. "Performing the Sacred: Prayers and Hymns." In *A Companion to Roman Religion*, edited by J. Rüpke, 235-48. Malden, MA: Blackwell Publishing.
- Hauvette-Besnault, A. 1882. *De l'authenticité des épigrammes de Simonide*. Paris: F. Alcan.
- Hellenkemper Salies, G., H.-H. von Prittwitz, and G. Bauchhens. 1994. *Das Wrack: der antike Schiffsfund von Mahdia*. Köln, Germany: Rheinland Verlag.
- Holloway, R. 1994. *The Archaeology of Early Rome and Latium*. New York, NY: Routledge.
- Hornell, J. 1943. "The Prow of the Ship: Sanctuary of the Tutelary Deity." *Man* 43:121-28.
- Insoll, T. 2004. *Archaeology, Ritual, Religion*. New York, NY: Routledge.
- Invernizzi, A. 1997. "Coppe e bracieri da incenso nell'oriente classico." In *Purpumi d'Arabia: atti del convegno*, edited by A. Avanzini, 121-46. Rome: L'Erma di Bretschneider.
- Iozzo, M. 1987. "Corinthian Basins on High Stands." *Hesperia* 56:355-416.
- Johnston, P. 1985. *Ship and Boat Models in Ancient Greece*. Annapolis, MD: Naval Institute Press.
- Kadletz, E. 1980. "The Race and Procession of the Athenian *Oscophoroi*." *GRBS* 21:363-71.
- Kapitän, G. 1973a. "An Ancient Roman 'Yacht'?" *Mariner's Mirror* 59:229-30.
- . 1973b. "A Corinthian Shipwreck at Savelletri (Brindisi, Apulia, Italy)." *IJNA* 2:185-86.
- . 1976. "Il relitto corinzio di Stentinello nella baia di S. Panagia (Siracusa). Ricerche 1974 e 1975 e osservazioni sulla formazione del relitto." *Sicilia Archeologica* 30:87-103.
- . 1979. "Louteria from the Sea." *IJNA* 8:97-120.

- . 1989. "Archaeological Evidence for Rituals and Customs on Ancient Ships." In *Tropis I: International Symposium on Ship Construction in Antiquity at Athens*, edited by H. Tzalas, 147-62. Piraeus: Hellenic Institute for the Preservation of Nautical Tradition.
- Kapitän, G. and M. Price. 1974. "A Roman 3<sup>rd</sup>-century AD Shipwreck at Cape Ognina (Siracusa, Sicily)." *IJNA* 30:150-51.
- Kapitän, G. and F. Naglschmid. 1982. A 4<sup>th</sup>-century BC Dispersed Amphora Cargo on the Secca di Capo Ognina, Siracusa, Sicily. In *The Sixth International Scientific Symposium of the World Underwater Federation (CMAS)*, edited by J. Blanchard, 229-39. London: Natural Environmental Research Council.
- Karovic, G. 2002. "Roman Bronze Lamps in the Form of a Ship from the Territory of Serbia." In *Tropis VII - 7th International Symposium on Ship Construction in Antiquity*, edited by H. Tzalas, 461-6. Pylos: Hellenic Institute for the Preservation of Nautical Tradition.
- Katzev, M. 1974. "Last Harbour for the Oldest Ship." *National Geographic Magazine* 146:618-25.
- Katzev, M. and S. Swiny. 1973. "The Kyrenia Shipwreck. A Fourth Century BC Greek Merchant Ship." in *Marine Archaeology*, edited by D. Blackman, 339-59. Hamden, CT: Archon Books.
- Kaufmann-Heinimann, A. 2007. "Religion in the House." In *A Companion to Roman Religion*, edited by J. Rüpke, 188-201. Malden, MA: Blackwell Publishing.
- Kennedy, D. 1974. *Ship Names: Origins and Usages During 45 Centuries*. Newport News, VA: Published for the Mariners Museum, by University Press of Virginia, Charlottesville.
- Knights, C. 1994. "The Spatiality of the Roman Domestic Setting: An Interpretation of Symbolic Context." In *Architecture and Order: Approaches to Social Space*, edited by M. Parker Pearson and C. Richards, 113-46. New York: Routledge.
- Knott, K. 2005. *The Location of Religion: A Spatial Analysis*. Oakville, CT: Equinox Publishing.
- Kopcke, G. 1967. "Neue Holzfundte aus dem Heraion von Samos." *MdIA* 82:100-48.
- Kyriakidis, E. 2005. *Ritual in the Bronze Age Aegean: The Minoan Peak Sanctuaries*. London: Duckworth.

- . 2007a. "Finding Ritual: Calibrating the Evidence." In *The Archaeology of Ritual*, edited by E. Kyriakidis, 9-22. Los Angeles: University of California.
- . 2007b. "Archaeologies of Ritual." In *The Archaeology of Ritual*, edited by E. Kyriakidis, 289-308. Los Angeles: University of California.
- Lamboglia, N. 1952. "La nave romana di Albenga." *RStLig* 18:131-213.
- . 1964a. "Il saccheggio della nave romana di Spargi (La Maddalena, Sardegna)." *RStLig* 30:258-66.
- . 1964b. "La campagna 1963 sul relitto di Punta Scaletta all'isola di Giannutri." *RStLig* 30:229-57.
- . 1965. "Albenga." In *Marine Archaeology*, edited by J. Taylor, 53-66. New York: Thomas Y. Crowell Company.
- Lawler, L. 1944. "The Dance of the Ancient Mariners." *TAPA* 75:20-33.
- Lawrence, D., and S. Low. 1990. "The Built Environment and Spatial Form." *Annual Review of Anthropology* 19:453-505.
- L'Hour, M. 1984. "Les statuettes de bois de l'epave Planier 1 à Marseille." *Archaeonautica* 4:53-74.
- Linder, E. 1973. "A Cargo of Phoenicio-Punic Figurines." *Archaeology* 26:182-87.
- Lloyd, G. 1962. "Right and Left in Greek Philosophy." *JHS* 82:56-66.
- Lopreato, P. 1994. "La scoperta della Iulia Felix." In *Operazione Iulia Felix: Lo scavo subacqueo della nave romana rinvenuta al largo di Grado*, edited by L. Babbini, 29-34. Italy: Edizioni della Laguna.
- Lupu, E. 2005. *Greek Sacred Law: A Collection of New Documents (NGSL)*. Boston: E.J. Brill.
- Mansfield, J. 1985. "The Robe of Athena and the Panathenaic Peplos." Ph.D. diss., University of California, Berkeley.
- Marchi, A. 1896. *Il culto privato di Roma antica*. 2 vols. Milano: U. Hoepli.
- Mattingly, D. 1990. "Paintings, Presses and Perfume Production at Pompeii." *OJA* 9:71-90.
- Meiggs, R. 1973. *Roman Ostia*. 2nd ed. Oxford: Clarendon Press.

- Mikalson, J. 2005. *Ancient Greek Religion*. Malden, MA: Blackwell Publishing.
- Moede, K. 2007. "Reliefs, Public and Private." In *A Companion to Roman Religion*, edited by J. Rüpke, 164-75. Malden, MA: Blackwell Publishing.
- Montiglio, S. 2005. *Wandering in Ancient Greek Culture*. Chicago, IL: University of Chicago Press.
- Morrison, J. and J. Coates. 1996. *Greek and Roman Oared Warships*. Oxford: Oxbow.
- Morton, J. 2001. *The Role of the Physical Environment in Ancient Greek Seafaring*. Boston, MA: E.J. Brill.
- Mouchot, D. 1970. "Pieces d'ancres, organeaux et ornements de plomb antiques decouverts entre Antibes et Monaco." *RStLig* 36[1972]:307-18.
- Muckelroy, K. 1976. "The Integration of Historical and Archaeological Data Concerning an Historic Wreck Site: The 'Kennemerland'." *WorldArch* 7:280-90.
- Murphy, L. 1983. "Shipwrecks as a Database for Human Behavioral Studies." In *Shipwreck Anthropology*, edited by R. Gould, 65-89. Albuquerque, NM: University of New Mexico.
- Murray, W. 1988. "The Spoils of Actium." *Archaeology* 41:28-35.
- . 2002. "Observations on the 'Isis Sgraffito' at Nymphaion." In *Tropis VII - Seventh International Symposium on Ship Construction in Antiquity*, edited by H. Tzalas, 539-62. Pylos: Hellenic Institute for the Preservation of Nautical Tradition.
- . 2003. "Foundation and destruction: Nikopolis and northwestern Greece." *JRA* 16: 475-8.
- Naiden, F. S. 2006. *Ancient Supplication*. Oxford: Oxford University Press.
- Neilson, H. 2002. "A Terracotta Phallus from Pisa Ship E: More Evidence for the Priapus Deity as Protector of Greek and Roman Navigators." *IJNA* 31:248-53.
- Nieto Prieto, J. 1991. "Le navi romane e medievali di Cala Culip." *Atti. IV rassegna di archeologia subacquea, Giardini Naxos 13-15 ottobre 1989*, edited by P. Gianfrotta, 179-86. Messina, Italy: P&M Associati.
- Nieto Prieto, F, A. Jover Armengol, P. Izquierdo Tugas, A. Puig Griessenberger, A. Alaminos Exposito, A. Martin Menendez, M Pujol Hamelink, H. Palou Miquel, and S. Colomer Marti. 1989. *Excavacions arqueològiques subaquàtiques a Cala*



*Culip, Sèrie monogràfica*. Girona, Spain: Centre d'Investigacions Arqueològiques de Girona.

- Nowak, T. 2001. "A Preliminary Report on Ophthalmoi from the Tektaş Burnu Shipwreck." *IJNA* 30:86-94.
- Ogden, D. 1999. "Binding Spells: Curse Tablets and Voodoo Dolls in the Greek and Roman Worlds." In *Witchcraft and Magic in Europe. Ancient Greece and Rome*, edited by B. Ankarloo and S. Clark, 3-90. Philadelphia, PA: University of Pennsylvania Press.
- Ohly, D. 1953. "Holz." *MdIA* 68:77-126.
- Orr, D. 1978. "Roman Domestic Religion: The Evidence of the Household Shrines." *ANRW* II.16.2, 1557-91.
- Osborne, R. 2004. "Hoards, Votives, Offerings: the Archaeology of the Dedicated Object." *WorldArch* 36:1-10.
- . 2007. "Cult and Ritual: the Greek World." In *Classical Archaeology*, edited by S. Alcock and R. Osborne, 246-62. Malden, MA: Blackwell Publishing.
- O'Shea, J. 2002. "The Archaeology of Scattered Wreck-sites: Formation Processes and Shallow Water Archaeology in Western Lake Huron." *IJNA* 31:211-27.
- Panvini, R. 2001. *The Archaic Greek Ship at Gela: And Preliminary Exploration of a Second Greek Shipwreck*. Palermo: Regione Siciliana.
- Parker, A. 1992. *Ancient Shipwrecks of the Mediterranean and the Roman Provinces*. Oxford: Tempus Reparatum.
- Parker, R. 1983. *Miasma: Pollution and Purification in Early Greek Religion*. Oxford: Clarendon Press.
- Parker Pearson, M., and C. Richards. 1994. "Ordering the World: Perceptions of Architecture, Space and Time." In *Architecture and Order: Approaches to Social space*, edited by M. Parker Pearson and C. Richards, 1-37. New York, NY: Routledge.
- Pimpl, H. 1997. *Perirrhanteria und Louteria: Entwicklung und Verwendung grosser Marmor- und Kalksteinbecken auf figürlichem und säulenartigem Untersatz in Griechenland*. 1. Aufl. ed, *Wissenschaftliche Schriftenreihe Archäologie*. Berlin: Verlag Köster.
- Piteros, C. 2002. "Votive Prow of a Ship at the Sanctuary of Asklepios at Epidaurus." In *Tropis VII: Seventh International Symposium on Ship Construction in Antiquity*,

edited by H. Tzalas, 581-96. Pylos: Hellenic Institute for the Preservation of Nautical Tradition.

- Radić, I. 1991. "Three More Louteria Finds in the Eastern Adriatic." *IJNA* 20:155-60.
- . 2002. "Rimski Svijećnjak iz Podmorja Palagruže." *Vjesnik Arheološki Muzej u Zagrebu* 35:173-89.
- Ramirez Delgado, J.R. and V. Mateos Alonso. 1985. "La arqueología sub-acuática en la Bahía de Cadiz." *VI Congreso Internacional de Arqueología Submarina*, 75-82. Cartagena, Spain: Ministerio de Cultura.
- Renfrew, C. 1985. *The Archaeology of Cult: The Sanctuary at Phylakopi*. London: British School of Archaeology at Athens: Thames and Hudson.
- . 2007. "The Archaeology of Ritual, of Cult, and of Religion." In *The Archaeology of Ritual*, edited by E. Kyriakidis, 109-22. Los Angeles: University of California.
- Robertson, N. 1985. "The Origin of the Panathenaea." *RhM* 128:231-95.
- . 1992. *Festivals and Legends: The Formation of Greek Cities in the Light of Public Ritual*. Toronto: University of Toronto Press.
- Robin, C. and N. Rothschild. 2002. "Archaeological Ethnographies: Social Dynamics of Outdoor Space." *Journal of Social Archaeology* 2:159-72.
- Romano, I. 1988. "Early Greek Cult Images and Cult Practices." In *Early Greek Cult Practice. Proceedings of the Fifth International Symposium at the Swedish Institute at Athens, 26-29 June, 1986*, edited by R. Hagg, N. Marinatos and G. Nordquist, 127-34. Stockholm: Paul Åströms Förlag.
- Rotroff, S. 1997. *Hellenistic Pottery: Athenian and Imported Wheelmade Table Ware and Related Material*. 2 vols, *The Athenian Agora*. Princeton, NJ: American School of Classical Studies at Athens.
- Rüpke, J. 1990. *Domi militiae: die religiöse Konstruktion des Krieges in Rom*. Stuttgart: F. Steiner.
- . 2007. *Religion of the Romans*. Cambridge: Polity.
- Saler, B. 2000. *Conceptualizing Religion: Immanent Anthropologists, Transcendent Natives, and Unbounded Categories*. New York: Berghahn Books.
- Saliba, J. 1976. "*Homo Religiosus*" in *Mircea Eliade: An Anthropological Evaluation*. Leiden: E.J. Brill.

- Salmeri, G. 1997. "Dell'uso dell'incenso in epoca romana." In *Profumi d'Arabia: atti del convegno*, edited by A. Avanzini, 529-40. Rome: L'Erma di Bretschneider.
- Scheid, J. 2007. "Sacrifices for Gods and Ancestors." In *A Companion to Roman Religion*, edited by J. Rüpke, 263-71. Malden, MA: Blackwell Publishing.
- Schiffer, M. 1983. "Toward the Identification of Formation Processes." *AmerAnt* 48: 675-706.
- Scrinarì, V. 1979. *Le navi del Porto di Claudio*. Roma: Tipografia Centenari.
- Scully, V. 1962. *The Earth, the Temple, and the Gods: Greek Sacred Architecture*. New Haven, CT: Yale University Press.
- Sebeok, T. 1994. *Signs: An Introduction to Semiotics*. Toronto: University of Toronto Press.
- Shear, J. 2001. "Polis and Panathenaia: The History and Development of Athena's Festival." Ph.D. diss., University of Pennsylvania, Philadelphia.
- Slater, W. 1976. "Symposium at Sea." *HSCP* 80:161-70.
- Smith, C. 2007. "The Religion of Archaic Rome." In *A Companion to Roman Religion*, edited by J. Rüpke, 31-42. Malden, MA: Blackwell Publishing.
- Soja, E. 1996. *Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places*. Oxford: Blackwell.
- Spiro, M. 1966. "Religion: Problems of Definition and Explanation." In *Anthropological Approaches to the Study of Religion*, edited by M. Banton, 85-126. New York: Tavistock Publications.
- Steffy, J. 1985. "The Kyrenia Ship: An Interim Report on Its Hull Construction." *AJA* 89:71-101.
- . 1994. *Wooden Ship Building and the Interpretation of Shipwrecks*. College Station, TX: Texas A&M University Press.
- Steinhart, M. 1995. *Das Motiv des Auges in der griechischen Bildkunst*. Mainz: P. von Zabern.
- Stewart, D. 1999. "Formation Processes Affecting Submerged Archaeological Sites: An Overview." *Geoarchaeology* 14:565-87.
- Svoronos, J. 1914. "Stylides, ancres, hieral, aphlasta, stoloi, acrostolia, embola, proembola et totems marins." *JIAN* 16:81-152.

- Swindler, M. 1932. "A Terracotta Altar in Corinth." *AJA* 364:512-20.
- Tchernia, A., P. Pomey, and A. Hesnard. 1978. *L'epave romaine de la Madraque de Giens*. Paris: Fouilles de l'Institut d'Archeologie Meditterraneenne.
- Tiboni, F. 2006. "Animal-shaped Figureheads and the Evolution of a "Keel-Post-Stem" Structure in Nuragic Bronze Models and Boats between the 9th and 7th Centuries BC." *IJNA* 35:141-44.
- Tortorici, E. 1994. "Il Carico." In *Operazione Iulia Felix: Lo scavo subacqueo della nave romana rinvenuta al largo di Grado*, edited by L. Babbini, 45-53. [Italy]: Edizioni della Laguna.
- Toynbee, J. 1973. *Animals in Roman Life and Art, Aspects of Greek and Roman Life*. Ithaca, NY: Cornell University Press.
- Van Straten, F. 1995. *Hiera Kalá: Images of Animal Sacrifice in Archaic and Classical Greece, Religions in the Graeco-Roman World*. Leiden: E.J. Brill.
- Vernant, J. 1983. "Hestia-Hermes: The Religious Expression of Space and Movement in Ancient Greece." In *Myth and Thought Among the Greeks*, 127-75. Boston, MA: Routledge & Kegan Paul.
- Vreeken, W. 1953. *De lege quadam sacra Coorum (Ditt. Syll.3 1000)*. Groningae: M. de Waal.
- Wachsmuth, D. 1967. *Pompimos ho daimon: Untersuchung zu den antiken Sakralhandlungen bei Seereisen*. Berlin: [s.n.].
- Weinstock, S. 1960. "Two Archaic Inscriptions from Latium." *JRS* 50:112-18.
- Werlen, B. 1993. *Society, Action and Space: An Alternative Human Geography*. Translated by G. Walls. New York, NY: Routledge.
- Wescoat, B. 2005. "Buildings for Votive Ships on Delos and Samothrace." In *Architecture and Archaeology in the Cyclades*, edited by M. Yeroulanou and M. Stamatopoulou, 153-72. Oxford: Archaeopress/British Archaeological Reports.
- Westerdahl, C. 2000. "From Land to Sea, From Sea to Land. On Transport Zones, Borders and Human Space." In *Down the River to the Sea, 8th ISBSA, Gdańsk 1997*, edited by J. Litwin, 11-20. Gdańsk: Polish Maritime Museum.
- . 2005. "Seal on Land, Elk at Sea: Notes on and Applications of the Ritual Landscape at the Seaboard." *IJNA* 34:2-23.

- . 2008. "Boats Apart. Building and Equipping an Iron-Age and Early-Medieval Ship in Northern Europe." *IJNA* 37:17-31.
- Williams, H. 1989. "Figureheads on Greek and Roman Ships." In *Tropis I - First International Symposium on Ship Construction in Antiquity, Piraeus, 1985*, edited by H. Tzalas, 293-97. Piraeus: Hellenic Institute for the Preservation of Nautical Tradition.
- Yavis, C. 1949. *Greek Altars, Origins and Typology, Including the Minoan-Mycenaean Offertory Apparatus*. St. Louis, MO: St. Louis University Press.
- Zaccagnino, C. 1997. "L'Incenso e gli incensieri nel Mondo Greco." In *Profumi d'Arabia: Atti del Convegno*, edited by A. Avanzini, 101-20. Rome: L'Erma di Bretschneider.
- . 1998. *Il Thymiaterion nel Mondo Greco: Analisi delle fonti, tipologia, impieghi. Studia Archaeologica*. Roma: "L'Erma" di Bretschneider.
- Zaidman, L. and P. Schmitt Pantel. 1992. *Religion in the Ancient Greek City*. New York: Cambridge University Press.

## APPENDIX I

## INDEX OF SHIPWRECKS

This appendix contains the shipwrecks discussed in Chapter III. The shipwrecks are arranged alphabetically by their site name, followed by the date of the wreck and the country in which they were found. Listed beneath the name are any ritual artifacts found on the wreck and their quantity. There is also a short paragraph summarizing the wreck, its cargo, and religious items. Finally, any and all sources for each shipwreck are listed.

|                      |               |       |
|----------------------|---------------|-------|
| <b>Albenga</b>       | 100-80 B.C.E. | Italy |
| <i>Lead horn (1)</i> |               |       |

Initially investigated in 1950 by digging a trench across the site, it was later excavated from 1957 until the early 1970s. Within an area of 40 x 10 m, excavators raised approximately 12,000 Dressel 1B and Lamboglia 2 amphoras, black-glaze and imitation Campanian ware pottery, galleywares, roof tile fragments, 7 bronze helmets, and a lead horn. It is suggested that the ship was 500 to 600 tons burden, but an accurate size is hindered by the heavy looting that occurred. Additionally, the estimated size of the ship varies for the reports ranging from nine or six layers of 10,000 amphoras, five layers of 5,000 amphoras, and an unknown configuration of 11,000 to 13,000 amphoras.

*Sources:* Lamboglia 1952; 1965; Parker 1992.

**Cádiz F**7<sup>th</sup> to 6<sup>th</sup> c. B.C.E.

Spain

*Terracotta figurines (2)**Terracotta Incense-burner (1)*

A terracotta head, terracotta female statuette, and terracotta incense burner were found among a scattered wreck of pottery that may possibly be multiple wrecks. Among the wreckage were anchor stocks with reliefs of astragals and dolphins.

*Sources:* Blanco 1970; Ramirez Delgado and Mateos Alonso 1985; Parker 1992.

**Cabrera B**

250-225 B.C.E.

Spain

*Terracotta standed dish (1)**Terracotta louterion (1)*

Materials from this wreck were looted between 1965-1970 and subsequently about 100 objects were recovered. The cargo consists mainly of pottery: Punic amphoras, Graeco-Italic amphoras, black-glazed pottery, but four lead ingots have also been found. Among the pottery were also a terracotta dish with a stand, and the basin and stand fragment of a unitary terracotta *louterion*.

*Sources:* Cerda 1978; Parker 1992.

|                         |          |       |
|-------------------------|----------|-------|
| <b>Camarina A</b>       | 250 C.E. | Italy |
| <i>Bronze herm (1)</i>  |          |       |
| <i>Bronze items (1)</i> |          |       |
| <i>Lebes (1)</i>        |          |       |

This ship's primary cargo were two 6.25 m-long *giallo antico* marble columns, 0.7 x 0.3 x 0.2 m sandstone blocks, plates and casseroles of 'black-rim' and 'rilled' ware, small number of African 1 amphoras, two small bronze buckets with curved handles and head of swan, an insulated bronze urn, three decorated strigils, a small bronze herm, and a small urn with blue paste inlay perhaps an incense or perfume container. The small African amphorae are made of a fabric from Tunisia, as are the marble columns, which were considered very valuable. Similar columns were used in Hadrian's Pantheon.

*Sources:* Parker 1976; Di Stefano 1991; 1992; 1995-1996.

|                            |                         |       |
|----------------------------|-------------------------|-------|
| <b>Camarina B</b>          | 2 <sup>nd</sup> c. C.E. | Italy |
| <i>Silver figurine (1)</i> |                         |       |
| <i>Silver dish (1)</i>     |                         |       |
| <i>Marble dish (1)</i>     |                         |       |



In 1990, a 5 x 5 m area was uncovered of a second century C.E. wreck, dated by coins of Septimus Severus and *terra sigillata chiara*. Within the area, excavators uncovered a keelson and floor timbers. Additionally, 63 lamps were found stacked together, dating to end of first century C.E. It was most likely a ship going from Northern Africa to Sicily or the coast of Italy

*Sources:* Di Stefano 1992.

**Capo Ali**

5th c. B.C.E.

Italy

*Terracotta louterion (1)*

From a small site, at least one unidentified amphora, pottery fragments, a unitary *louterion*, and three lead anchor stocks were raised by divers.

*Sources:* Papo 1964; Kaptian 1979; Parker 1992.

**Capo Graziano F**

300-250 B.C.E.

Italy

*Terracotta louterion (1)*



A ship about 25 m long and 5.4 m in beam was found with a cargo of 102 lead ingots amidships, Dressel 6 and Dressel 2-4 amphoras, and Chian amphoras. A living space was found forward with strigils, bath-flask, dice, and gaming pieces. Additionally, six tiny votive lead models of temples with Hermes or Venus inside were found that were fit with a suspension ring. An iron anchor was found in the bow, and the ship had a flat keel plank. The lower part of the hull was laced.

*Sources:* Berti 1990; 1992; Parker 1992.

**Culip D**

70-80 C.E.

Spain

*Goat horn (1)*

Main cargo of 76 Dressel 2 amphoras with stamps, 1500 cups and beakers in fine-wall ware of Baetican origin, 42 lamps made at Rome, and South Gaul *terra sigillata* of 2,000 plain and 750 decorated vessels. Total weight of cargo was about 8.25 metric tonnes spread over an area of 9 x 10 x 3 m. Personal items included a glass *unguentarium*, bones of pig, cattle and sheep or goat were also found. In the bow of the ship was a goat's horn, kept separate from the other bones, which were in the stern.

*Source:* Nieto Prieto et al. 1989; Parker 1992.

**Elissa** mid 8<sup>th</sup> c. B.C.E. Israel

*Terracotta incense burner (1)*

*Terracotta decanter (1)*

A wreck was found at a depth of 400 m with amphorae remains that suggest a ship about 14.5 m x 7 m. Among the remains were a mushroom lipped decanter and a cup-shaped incense stand.

*Source:* Ballard et al. 2002.

**El Sec** 360-340 B.C.E. Spain

*Marble and bronze figurines (2)*

*Candelabrum (1)*

Within a much looted area of 12 x 9 m, many artifacts were found ranging from some bronze vessels of bucks, a krater, pitcher, and candelabrum to 12 large pithoi, Red-figure vases, copper ingots, beads, a bone plaque, marble statuette, bronze figurine, and three gold rings. A stone anchor stock was also found and thought to be the latest example of this kind of stock. In the northern area of the site, some timbers were burnt.

*Sources:* Arribas et al. 1987; Arribas 1989; Parker 1992.

**Gela**

500-480 B.C.E.

Italy

*Terracotta figurine (1)**Wooden figurine (1)**Terracotta altars (4)**Bronze tripod (1)*

In the remains of a ship with planks connected together by plant fibers, a cargo was discovered of Ionian amphoras, Corinthian A and B amphoras, kylikes, red-figured askoi and oinochoe, black-glaze cups. Also found on board was a clay figurine of a boar, a wooden arm of a small statue, four small painted altars, a terracotta pipe, loom weights, and a bronze tripod. Eight baskets were found in the bow of the ship. The wreck area suggests a ship of about 18 x 6.8 m.

*Sources:* Fiorentini 1995-1996; Panvini 2001.

**Grado**

200 C.E.

Italy

*Bronze figurine (1)**Bronze tripod (1)**Metal situla (1)*

A cargo of amphoras of four different types was found in a second century C.E. wreck. The amphoras were African 1, African 2A, Tripolitanian and horn-handled. Also among the wreck was a bronze stand with lions' paws, a large quantity of waste glass, a metal situla, a bronze figurine of Neptune, a bronze steelyard-weight in form of Minerva. The ship was about 18 x 5 m and had lead sheathing.

*Sources:* Babbini 1994; Tortorici 1994; Parker 1992.

**Kızılburun**

1<sup>st</sup> c. B.C.E.

Turkey

*Marble perirrhanteria (2)*

*Terracotta figurines (2)*

A merchantman was found with a marble capital and eight large Doric marble drums, approximately seven tons each. Also on the wreck were two composite *perirrhanteria*, marble blocks, Lamboglia 4 amphoras, terracotta herm, and a female figurine. The marble was from Proconessus, possibly traveling to the temple at Claros.

*Sources:* Carlson 2006, 2007a; Carlson and Atkins 2008.

**Kyrenia**

290 B.C.E.

Cyprus

*Marble louterion (1)*

The ship was estimated at 13.6 x 4.4 m from a cargo that covered an area of 10 x 19 m. A bulkhead was found in the stern but there was no evidence for a fixed galley or stove. Eating utensils and galleyware were found in sets of four. In the stern area, a composite marble *louterion* was found.

*Sources:* Katzev and Swiny 1973; Katzev 1974; Käptian 1979; Steffy 1985; Parker 1992.

**Lošinj**

300-250 B.C.E.

Croatia

*Terracotta louterion (1)*

There seems to be some confusion about this unitary *louterion* and associated cargo. Radić (1991) comments that there were no other artifacts brought in with it, but Parker (1992) notes that it was close to Graeco-Italic amphoras and architectural revetments of painted terracotta.

*Sources:* Radić 1991; Parker 1992





**Monaco C**

100-25 B.C.E.

Monaco

*Lead horn (1)*

A lead horn was found among a small wreck of three ovoid amphoras and one Lamboglia 2 amphora.

*Sources:* Benoit 1962, 1971; Mouchot 1970; Parker 1992.

**Ognina A**

215-220 C.E.

Italy

*Bronze figurines (2)**Marble column (1)*

A dispersed cargo was excavated, beginning in 1971. Dressel 27 amphoras formed more than 90% of the cargo and some coins of Septimius Severus were found, which dated the wreck to the early third century C.E. Also among the wreck were blue *tesserae*, a small column and capital, a bronze satyr bust, part of a small bronze statue, and fine glassware. No wood survived so it was difficult to learn anything about the structure of the ship. Based on the objects, it seems that the ship either had a luxury cabin or was transporting items of a nobleman.

*Sources:* Gargallo 1972; Kapitän 1973a; Frost 1973; Kaptiän and Price 1974; Parker 1992.

**Ognina D**

4<sup>th</sup> c. B.C.E.

Italy

*Terracotta louteria (2)*

Fragmentary remains of a cargo of Greek amphoras were scattered over an area approximately 15 x 15 m. Within it, two pithoi, two unitary *louteria*, and several roof tiles were discovered among the 353 objects. Other objects included many iron objects, stones, and tusks.

*Sources:* Kapitän and Naglschmid 1982; Parker 1992.

**Palagruza A**

mid 1<sup>st</sup> c. B.C.E.

Croatia

*Terracotta louterion (1)*

Among this badly looted site several Dressel 1 and Lamboglia 2 amphoras were found. Additionally, a unitary *louterion* was found near the wreck.

*Sources:* Radić 1991; Parker 1992.

**Palagruza B**late 1<sup>st</sup> c. C.E.

Croatia

*Bronze candelabrum (1)*

A wreck was found with Hispanic wine in Dressel 2-4 and Pascual 1 amphoras, fish sauce in Beltran 2, and several ceramic tablewares including Pompeian plates. Also among the wreck was a candelabrum. Based on the cargo, it seems the ship originated in southern Italy and was sailing to Dalmatia.

*Source:* Radić 2002.

**Punic Pisa Wreck**2<sup>nd</sup> c. B.C.E.

Italy

*Terracotta thymiateria (4)*

Excavation of the harbor of Pisa revealed at least 8 ships along with harbor structures. Four *thymiateria* were found among the remains of a Punic shipwreck, most likely dating to the early second century B.C.E.

*Source:* Bottini 2000.

**Pisa Wreck E**1<sup>st</sup> c. C.E.

Italy

*Terracotta phallus (1)*

Ship E is one of the three cargo ships found in the harbor at Pisa. Along with a terracotta phallus, the ship's cargo was primarily of Dressel 2-4, Dressel 7-11, Dressel 9, and Beltran II amphoras.

*Sources:* Bruni and Abbado 2000; Neilson 2002.

**Planier A**

1-15 C.E.

France

*Wooden figurines (2)*

Dressel 2-4 amphoras were discovered in 1955 in a 12 x 7m area. The site was disturbed and several hundred Tarraconesian amphoras were looted. Also found on the wreck were two wooden figurines about 35 cm tall, one man and one boy with a separate phallus.

*Sources:* L'Hour 1984; Parker 1992.

**Punta Scaletta**

140-130 B.C.E.

Italy

*Lead horn (1)*

Discovered on a wreck from the middle of the second century B.C.E. were Campanian A black-glaze pottery, 13 coins, roof-tiles, a lead horn, an iron dagger, eight anchors, and Dressel 1A amphoras. The hull of the ship was built of oak.

*Sources:* Lamboglia 1964b; Parker 1992.

**Savelletri**

280-250 B.C.E.

Italy

*Lead horn (1)*

Based on the cargo of Corinthian amphoras of types A and B, the ship size is estimated at 10-15 tons. A lead horn was found about 20-25 m east of site.

*Sources:* Kapitän 1972, 1973b, 1989.

**Spargi**

120-110 B.C.E.

Italy

*Marble louterion (1)**Marble bases and columns (4)**Amulets**Bronze candelabrum (1)**Bronze statuette (1)*

This wreck was partially excavated before it was looted and then excavations resumed. There was a main cargo of roughly 400-500 Dressel 1A and 1B amphoras recovered in two layers and black-glaze pottery. However, the entire wreck site was nearly 30 m long, suggesting that either perishable cargo was carried or some of the amphoras were salvaged. Recent excavations found two coins from the mast-step and the ship also carried glass *alabastra*, amulets, buttons, pins, and rings. Other items found on board were ritual in nature such as a composite marble *louteria*, two small columns, two altars, bronze *candelabrum*, lamp, *infundibula* (ladles), and a statuette. The hull was in poor condition with the keel destroyed and lead sheathing crumbled, indicative of a violent impact. A bronze helmet was discovered with a skull attached to the interior.

*Sources:* Lamboglia 1961, 1964a; Kapitän 1979, 1989; Parker 1992.

**Stentinello**

300-280 B.C.E.

Italy

*Terracotta louteria (2)**Bronze bowls and pots*

A large cargo of pithoi and Corinthian type A and type B amphoras were scattered over a wide area 270 m by 60 m. Other items on board included pieces of two *louteria* basins.

*Sources:* Kapitän 1976, 1979; Parker 1992.

**Tektaş Burnu**5<sup>th</sup> c. B.C.E.

Turkey

*Marble ophthalmoi (2)*

Among a cargo of pseudo-Samian, Mendeian, Chian, and Samian-Milesian Amphoras, were table amphoras, kantharoi, askoi, and lamps. Additionally, two white marble eyes were found in the bow.

*Source:* Carlson 2003.

## VITA

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