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Aperlae was a small remote maritime city in ancient Lycia with a millennial *floruit* (late 4th century BC through the late 7th century AD). The harsh terrain of its hinterland forced a reliance on the Mediterranean from its founding to its demise. The Aperlites stabilized and enhanced their urban waterfronts in modest ways over the centuries, but basically they maintained and sustained their intimate relationship with the sea without elaborate docking or harbour installations. Fishing, probably a primary industry, centred on the harvest of *murex trunculus*, the marine mollusk from which purple dye was made. This valuable commodity appears to have been produced in Aperlae for export to Andriake, the international emporium of nearby Myra, for transshipment to textile centres throughout the Mediterranean. There, coastal traders also acquired the necessities and luxuries the city needed but did not produce. Proxy evidence, impressive archaeological features on land and under the sea, speaks to moments of prosperity for Aperlae well beyond mere subsistence. Cabotage was this secondary port's enduring lifeline.   © 2000 The Nautical Archaeology Society

Key words: Aperlae, Lycia, cabotage, *murex trunculus*, purple dye.

Introduction

If a hierarchical pyramid were established for types of sea-borne trade in antiquity, the leading candidate for the lowest course might well be cabotage. The very ubiquity and mundaneness of such coasting trade, the routine transport of goods and ideas along short routes in undistinguished, utilitarian boats that often called at equally unremarkable points along the Mediterranean littoral, seem to militate any candidature for great significance or importance.[1] How could such daily maritime traffic, for example, compare with the mighty freighters of the Roman world, the grain clippers as Lionel Casson has called them, that plied the blue water between Rome and Alexandria in the Imperial Era (Casson, 1959: 235)? The few ancient accounts of these giant vessels in action are full of drama and misadventure.[2] The ill-starred voyage of the *Isis* that led her to Athens via Cyprus then the Levantine coast while en route to Rome leaves the reader wanting more details (Lucian, *Navigium* 5; Casson, 1950, 1971: 186–89). Even

Acts 27, where Paul's disastrous trip to Rome on one of these grain ships is narrated, is replete with excitement and danger on the high seas but sparse in its treatment of shipboard life. And then there is the terse account of Josephus, who was nearly lost in the Adriatic Sea when a clipper on which he had booked passage foundered in *c.* AD 64. His brief mention of this maritime disaster that cast 600 passengers and crew adrift in the sea is presented in droll, annalist style devoid of any of the intense emotion that must have permeated the event (*Vita*, 13–15). After what must have been a night of fear and terror, about 80 survivors saw another vessel at dawn bearing near them and managed to swim to it. Josephus was one of these lucky survivors, but he neglects to mention the fate of the rest of his shipmates.

Yet it was the ordinary, daily coasting trade of countless small ships and boats that moved the bulk of sea-borne trade to final markets.[3] Most were so insignificant that they easily slipped beneath the attention of ancient authors. Such cabotage, however, always provided the constant background activity for the more familiar and

compelling story of larger ships, international trade of diverse commodities such as grain and wine, and the development of grand port cities with elaborate, technologically sophisticated harbour installations. Local coastal trade was the indispensable antecedent and vital *sine qua non* for all maritime life in antiquity. Despite its fundamental importance to all aspects of life around the Mediterranean littoral and beyond, this type of maritime trading is practically invisible to modern investigators. The selective intellectual biases of ancient writers and the capricious survival of records and texts have resulted in literary blindness to one of the vital areas of human life in the distant past.

The study of material remains found in the sea or along coastal zones affords a more promising and ever expanding pathway to a better understanding of this aspect of antiquity. But here, too, the vagaries of fortune as determinatives for archaeological discoveries play major roles in limiting our growing corpus of maritime artefacts. Small boats or impermanent docking facilities, such as wooden piers, are less likely to be discovered beneath the sea or in a coastal environment unless there are most unusual circumstances.[4] The archaeological record to date most surely underrepresents them, while overemphasizing large ships and technically advanced harbour installations.

Aperlae, a paradigm in the making

The purpose of the present article is not to review what this journal's readers already know about the contributions of marine archaeology to the understanding of cabotage, but rather to introduce another tessera in the mosaic scholars are collectively creating on this subject. Its focus will be a discussion of relevant data and observations arising from the continuing survey of Aperlae, a Lycian seaside settlement that has lost its original shoreline to the sea, owing to local coastal subsidence of about 2 m. Throughout the Hellenistic, Roman and Early Byzantine eras, this small city enjoyed an intimate relationship with the sea. Cabotage was Aperlae's lifeline for commodities and news from the world beyond its walls. Without it, this small provincial city could not have survived or sporadically prospered during its millennial existence.[5]

The south-west corner of Anatolia is a region of extraordinarily ruggedness (Fig. 1). The Taurus Mountains dramatically and suddenly meet the sea in ancient Lycia to form a coastal interface distinguished by many headlands that afford numerous leeward roadsteads. Sheltered bays offered protected anchorages from the uncertainties of Mediterranean weather and for emergency situations. Although fresh water was not always readily available in its most secure moorings, the Lycian shore was essentially a benevolent venue for seafaring. But even a friendly coast had its perils, as the discovery of the Uluburun shipwreck some 13 km to the west of Aperlae dramatically indicated (Pulak, 1997, 1998).

Although water transport was relatively easy along the Lycian coast, land movement from the sea to the interior was a different story. Waves of mountain ridges rise from the coast and march inland, blocking easy access except by natural valleys and river basins (Fig. 2). For much of this region, the terrestrial production and consumption centres were not near the distribution and transportation network offered by the sea. The difficulties of land travel to the hinterland almost guaranteed that coastal outposts like Aperlae would remain small.

This city sat deep in the recess of Asar Bay, confined by severe terrain. Its urban core perched precariously on a steep slope above the sea (Fig. 3). Coastal foothills of the Taurus chain hindered easy land communication to the north. Sicak Yarimadasi, a hammer-shaped peninsula dominated by a high ridge, shielded it from the open sea to the south and south-east. A stubby isthmus about 1 km wide provided a land bridge to an eastern water passage, largely in the lee of Kekova Island, that extended to Andriake about 15 km to the east (Fig. 1). A Roman road, the only one found thus far in the Aperlae region, transected this sandy spit. It ran from the city's East Gate, the major entry point to the fortified urban core, to the shore abutting Kekova Roads. Only to the west–south-west, along the axis of Asar Bay, was the city open to the Mediterranean.

No readily obvious sources of drinking water have yet been found at the site. There may have been springs, but if so they are not active today except for one that debouches under the sea near the West Baths. Numerous cisterns, filled during the rains of winter and early spring, appear to have been the major water supply. Although no aqueducts into the city have been found, Roman baths have been located along the shore (Vann & Hohlfelder, 1998: 429; 1999: 444–45). Their presence suggests that more abundant water resources
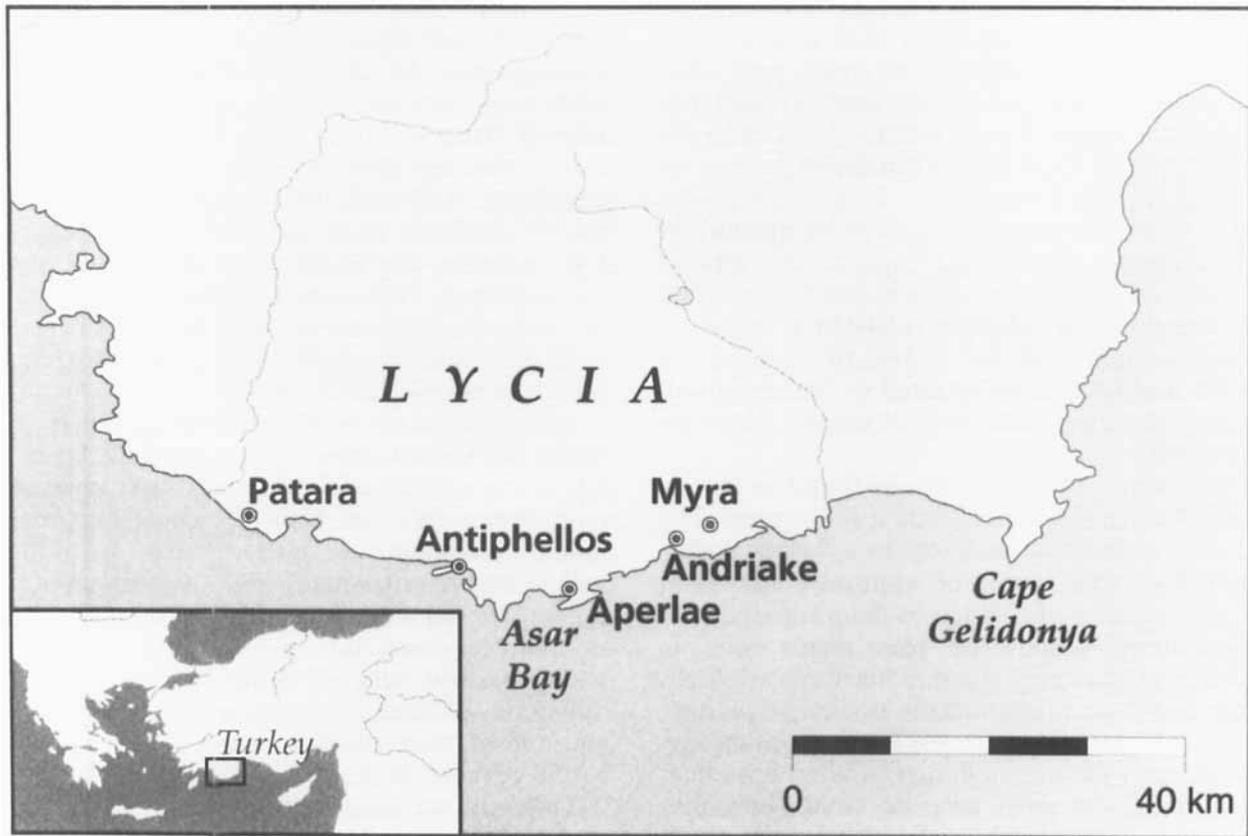
Figure 1. Location of Aperlae and neighbouring Lycian ports.

Figure 2. Asar Bay, Aperlae, the Isthmus, and Kekova Roads in the distance. View from near the summit of Sicak Yarimadisi looking north-east. (Photo: R. L. Hohlfelder)

Figure 3. The urban centre of Aperlae. The fortification wall to the west (left) ends where the southern city wall once stood before its dismantlement in the Roman era. The wall to the east (right) extending down to the sea dates from the refortification of the city in Late Antiquity. A section of the underwater ruins is also visible. View from the slopes of Sicak Yarimadisi looking north across Asar Bay. (Photo: R. L. Hohlfelder)

were available then, although they have yet to be determined (Fig. 4).

Today the surrounding hills are covered with nearly impenetrable scrub, but in antiquity they may have been forested or retained a more fertile soil. Winds from the west–south-west beat down the bay most of the day during the summer

months when Aperlae's maritime life would have been most active. Ancient mariners under sail could easily have reached the city; if conditions

Figure 4. A typical Lycian tomb now sits in the sea owing to coastal subsidence. Building in the background is the East Bath complex. In the distance is Uluburun. View looking west down Asar Bay. (Photo: R. L. Hohlfelder)

deteriorated, they could have left only with great difficulty.

Virtual isolation is perhaps the best way to describe Aperlae's relationship with its two neighbouring terrestrial settlements, Apollonia and Isinda. Paths and tracks across the mountains and through bosky, difficult terrain do exist and are occasionally trafficked today by locals, but no ancient roads leading inland away from the city have yet been discovered. The only practical link with the world beyond its restrictive natural boundaries was by boat. An ancient coaster could manoeuvre directly out of Asar Bay even in a running sea provided it was small enough to make its way under oars until it reached open water. A second maritime gateway existed on the east shore of the isthmus and could be reached after a short land trek on the isthmian road. The remains of some small buildings are visible beneath the sea at the head of Kekova Roads, but given the very protected nature of this roadstead—almost always windless—permanent facilities for handling coasting trade would have been modest at best. The site is called Polemos Bükü in the *Admiralty Guide*, but that name has disappeared from common local parlance. The site required no extensive stone quays, so none were built. It was probably a satellite, casual workplace that largely emptied at night as people returned to their homes in Aperlae or on the surrounding hills. A wooden pier or two, plus abundant and suitable points for running shallow-draft coasters aground, would have served the communal mooring needs.

Aperlae had little choice but to turn to the sea for its succour and survival. It was a maritime community from its foundation in the early

Hellenistic era (late 4th or early 3rd century BC) to its demise in Late Antiquity (*c.* late 7th century AD). It seems to have largely escaped notice in surviving texts most likely because it never played any notable role in major historical events during its long *floruit*. It was always a small, ordinary, and politically insignificant and geographically remote coastal city that never influenced directly the geopolitical forces that constantly swept the eastern Mediterranean during its millennial existence.

However, Aperlae was not unique in its topography or siting (Zimmermann, 1992; Foss, 1984). Many other similar maritime settlements existed along this section of the Lycian coastline. These include: Simena (modern Kale), a site even more isolated and geographically restricted to sea access; Teimiussa (modern Ucagiz) to the east; and Antiphellos (modern Kaş) to the west. All were neighbours, but practically accessible only by boat. Their reliance on cabotage for survival and prosperity was no doubt similar. Together they represent some of the many Lycian communities that apparently prospered when Rome's control of the Mediterranean encouraged people to move from the former safety of the mountains to the shore to explore and exploit the economic opportunities afforded by the new thalassocracy.

In the era of Roman imperial peace and relative prosperity, new regional political affiliations formed. Along with the two inland cities of Isinda and Apollonia, Aperlae and Simena joined together at some point in their history to form a larger political entity called a *sympoliteia* or local federation which Aperlae headed (*IGS*, III, 692). According to epigraphical evidence, it was in existence at the time of the emperor Claudius (41–54 AD) through the reign of Titus (79–81 AD), although there is no record of its precise span (*IGS*, III, 690). Beyond this political alliance, some other economic links may have existed, although this surmise is tenuous in the absence of literary or archaeological evidence.

When political conditions deteriorated in Late Antiquity, the earlier migration pattern occurred in reverse. People responded to the dangers of sea raids by once again seeking the relative security of inland habitation. Most coastal settlements withered in the late 7th century AD, as their inhabitants moved to safer locations. Some cities, like Aperlae, were abandoned completely in the face of Arab corsairs.

Aperlae's appeal as an archaeological site is its potential to add to the understanding of how a

Figure 5. A piece of entablature from a large public building. (Photo: R. L. Hohlfelder)

typical, small coastal port, apparently unremarkable in antiquity and largely overlooked in classical sources, carried on its life and its relationship with the sea. It was never one of the great international emporia, like Caesarea Maritima or Paphos, which have attracted the attention of scholars studying sea-borne commerce. As a prime representative of the large class of undistinguished coastal stations, Aperlae affords an excellent case study.

While its isolation, ordinariness, and small size precluded any significant political role for the city in the major developments that shaped Lycian history, its remoteness has also deterred all but the most determined or immediate looters from ransacking its ruins after its abandonment in the late 7th century. Although most of its marble has disappeared over time for burning to make lime, much of its architectural fabric is intact. Even many large ashlar blocks, always an attractive prize for those who quarry building materials from ancient sites, are still in place in its extensive fortification system or can be found littering the ground where they fell (Fig. 5).

Explorations at Aperlae

Travellers and scholars visited the site in the 19th and 20th centuries; Robert and Cynthia Carter, two amateur archaeologists, undertook the first survey of the Aperlae in the 1970s. They sailed their yacht into Asar Bay on several occasions in that decade and carefully noted what was visible on land and below the sea as seen through mask and snorkel. They fastidiously followed Turkish protocols governing this type of informal investigation and dutifully reported the results of their snorkel survey of the submerged ruins both to the Ministry of Culture and to the scholarly community through the vehicle of this journal (Carter, 1978).

Two decades passed before their work was continued. At their urging and with their generous financial support, the authors began a systematic survey of Aperlae in 1996 both on land and underwater (although without the benefit of SCUBA owing to licence restrictions). Robert Carter was on hand to share his experience and expertise. Two more short seasons followed in 1997 and 1998 with a study season in 1999. The last summer of survey will be undertaken in 2000. To date, due to license restrictions, no excavation has been conducted either on land or under the sea and none is contemplated for the immediate future. The observations offered below represent research in progress. Conjectures and surmises may well change.

The life and times of Aperlae

It is not clear from available evidence precisely why or when Aperlae was founded. In seems unlikely that a settlement of any significance could have existed without the benefit of fortifications in Asar Bay, given the military and political volatility of the region in Classical antiquity. The date of the first city walls, which enclosed a sloping area of about 3 ha bordering the sea, would most likely have been contemporaneous with the beginning of the city (Fig. 3). The remains of the earliest fortifications still standing seem in design and magnitude to approximate those at other nearby Lycian settlements dated between the late 4th and 2nd centuries BC (McNicoll & Milne, 1997). Thus it appears that Aperlae was founded in the Early Hellenistic Period. Perhaps it started as a military outpost to further the great plans of one of the Diadochi in the tumult following the death of Alexander the Great in 323 BC. It is also possible that the fortifications were 'democratically built' to use McNicoll's designation for walls built at Prirene, Erythrae, Colophon, and Cnidus late in the 4th century (McNicoll & Milne, 1997: 212). In that context, the term means walls constructed by an independent community to obtain some measure of security in the uncertainty and danger that prevailed in Lycia at that time.

Figure 6. View from Aperlae's urban centre looking down (south) to the now submerged coastline. Notable features (from east to west): 1, building awash to the east (left) is a *vivarium*; 2, *vivarium*; 3, jetty juts from the sea wall into the bay (*c.* 22 × 6 m); 4, defensive tower from Late Antiquity; 5, section of defensive wall from Late Antiquity; 6, east–west road. (Photo: Steven Carter)

What does seem certain is that the original fortifications did not embrace the city's shoreline, although this seafront seems to have been strengthened and stabilized at that time by a wall of headers (Figs 3 & 6). A now-submerged section of this quay has been found to the east of Eastern Fortification Wall. The conscious decision not to fortify the city's unprotected seaside suggests that no permanent structures of any worth were built there either, since they would have been far removed from the city's defences up the mountainside and most vulnerable to any attacks from the sea. It appears that in its Hellenistic phase the seaside consisted only of a long quay, perhaps with wooden piers built out from it, and beaching points at the easternmost reaches of the bay.[6]

The waterfront may have had an open space that could have served as a shipyard or location where boats could be slipped when storms rolled into Asar Bay turning it into a dangerous cul-de-sac (Fig. 7). The extent of the arable fields and pasture lands in the city's immediate hinterland or

the volume of potable water available from mountain springs or simply collected in the many cisterns discovered to date are key data not yet

Figure 7. Some log rollers, pieces of line, and a dilapidated wooden capstan in the abandoned Greek village of Tersane along the southern Turkish coast testify to the simplicity and impermanence of an installation for hauling boats and small ships from the sea. (Photo: R. L. Hohlfelder)
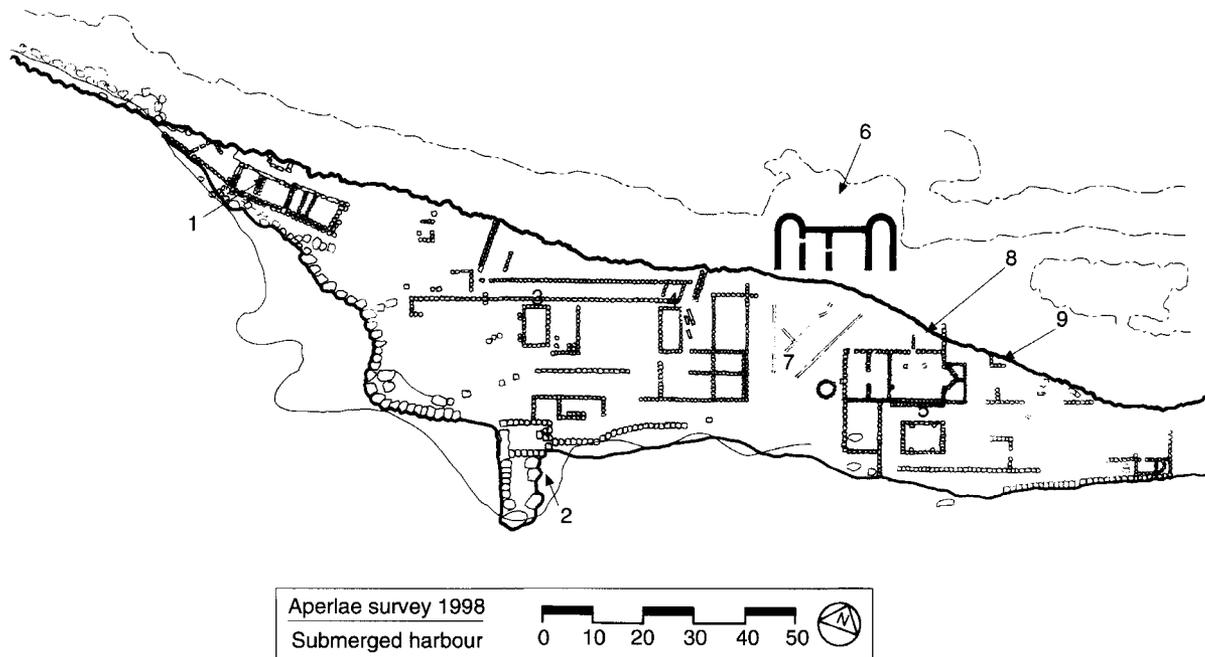
Figure 8. Plan of submerged structures of Aperlae. Notable features (west to east): 1, industrial building; 2, jetty; 3–5, *vivaria;* 6, West Bath Complex; 7, open space except for bath drains, perhaps for storing and repairing boats; 8, church complex; 9, site of large public building. (Drawing: Kathryn H. Barth)

available. Hundreds of agricultural terraces have been located above the fortified area, on the isthmus, and on Sicak Yaramadasi. Some are still in use today; some probably date back to Aperlae's foundation. At this point, there is no way to assess the size and productivity of available land and water resources. It may be that the city was able to feed itself and even provide a surplus for marketing, but it is equally possible that it never was agriculturally self-sufficient.

From investigations to date, it seems that the keystone of economic life in the city was the manufacture of purple dye, possibly the most precious commodity ever produced in the ancient world. Two sprawling, dedicated deposits of *murex trunculus* shells and shell fragments exist to the west of the city cut by a ravine that enters the sea. Its mouth and sides are also littered with shells. The debris field, which covers an area of more than 1600 m², consists of countless pieces of shell, although a conservative estimate of their number would be in the hundreds of thousands. Shell fragments also appear as regular components in the mortar of structures erected in Late Antiquity. In the sea, three large basins tentatively associated with the dyeing industry in the Roman and Early Byzantine eras were uncovered (Fig. 8). They stood above ground and were made of

Roman bricks and hydraulic mortar that enclosed a ceramic tile floor resting on a bed of cobbles. These tanks, clearly intended to contain liquids, may have been *vivaria*—holding facilities for snails that were kept alive until sufficient quantities were available to begin processing (Hohlfelder & Vann, 1998: 34). Although those that remain today date from the Roman era onwards, something similar may have existed in the Hellenistic Period as well. Another complex of three rooms near the shore of undermined date may have also been an industrial facility associated in some way with dye manufacture (Fig. 8). Each tank and this complex of rooms were in proximity to cisterns up the slope of the hill that could have supplied fresh water by gravity flow if required.

Cabotage at Aperlae

The working hypothesis at this stage of investigation is that the dye itself was the export product that sustained the Aperlite economy. A simple trading model is the most likely. After processing on site, the dye was transported to regional or foreign markets via coasters operated by Aperlites or other Lycian skippers. Andriake was the probable point of exchange (*Stadiasmos,* 240).

Figure 9. Small boat hauls sage collected locally to the site to be sun-dried before transport to local villages for the production of oil. (Photo: R. L. Hohlfelder)

From there, this commodity with a considerable international value would have been transshipped in larger vessels to textile centres around the Mediterranean. It also would have been the place where the needs of this small provincial city, beyond those that could be met locally, could have been filled by goods available only in a large commercial emporium.

Such trade could easily have been sustained by small craft, operating with sail when weather conditions permitted or under oar when they did not. Aperlae needed only the most elementary docking or beaching facilities to accommodate this trade, while the fishing boats used in the harvesting of the snails also needed only rudimentary docking installations.[7]

Working coasters occasionally still come into the bay, manned by locals who harvest sage from the surrounding hills (Fig. 9). They simply run their craft as close to the shore as possible, disembark in the shallow water, and then carry the heavy sacks containing this herb on their shoulders to areas where the sage is spread out to dry in the sun. Seen in action the sage collectors are not unlike the stevedores of antiquity who off-loaded coastal lighters in the same way. For these individuals, the absence of harbour facilities at the ruined site is hardly an inconvenience. One can easily imagine that their predecessors who lived and worked at ancient Aperlae were at least as resilient and resourceful in their working relationship with the sea.

At some point in its history, probably in the centuries of peace and enhanced wealth that followed Rome's acquisition of Lycia in 43 AD,

Aperlae reached its zenith of economy prosperity, probably connected with an increase in the production of purple dye. These good times saw great changes in the city's waterfront area. The southern city wall up the slope was dismantled to allow the expansion of the urban area down to the shoreline (Fig. 3). New public and private buildings, including two baths and a possible *horreum*, as well as a large structure that may have been a temple or basilica, sprouted in this newly available urban space (Fig. 6). At the same time, permanent stone buildings were constructed on the seashore in accordance with an orthogonal street plan (Fig. 7). All of this construction might well provide proxy evidence for the success of the *murex* industry.

The harbour installations are likely to have been improved at that time, perhaps by the construction of a jetty about 22 m long and 6 m wide which extended south from the earlier quay (Fig. 6). The structure provided some relatively secure water moorings. This new feature, however, may have belonged to a later refurbishment of the harbour area in Late Antiquity, when the city fortifications were revived to include much of the expanded urban area and part of the shorefront as well.

What is noteworthy is that at no point in the city's history did the Aperlites chose to build a rubble breakwater out from the shore to the west of the city (Figs 1 & 3). Such a simple construction was well within their technological capacities during the Empire and within the city's means. Another window of opportunity would have been in the 6th century when Aperlae enjoyed another florescence of building. It can only be concluded that such a structure was not built because it was not required; the rudimentary docking facilities worked well enough.

George Houston's observation that most of the everyday trade of the Roman Empire was carried out in simple ports undistinguished by man-made facilities seems very true in the light of maritime life at Aperlae (Houston, 1988). It must be stressed again that this small city was not poor. Although there is no archaeological evidence from excavations to support this assertion, considerable architectural features provide compelling testimony for times of prosperity. By themselves the impressive fortifications and the scores of tombs indicate a city of no small means. Later in the Christian Era, Aperlae supported four churches even though its population seems far too small for such an extravagance. Whatever the explanation

may be, the churches themselves are indisputable evidence in stone and mortar of considerable communal wealth. Thus it can be concluded with some confidence that the decision by the Aperlites not to construct a rubble breakwater to afford their city with a secure anchorage was not informed by poverty. For their commercial needs it would have been a superfluous prestige symbol rather than an economic necessity. They decided to use their capital on other structures that were deemed more important.

Conclusion

The lesson of Aperlae is important. The absence of permanent or sophisticated harbour installations, similar to those that distinguished the great ports of the ancient Mediterranean, is not in itself an appropriate yardstick for assessing the prosperity of small coastal settlements or the extent of their maritime life or dependency on the sea. Rather, the Aperlae paradigm suggests that from the repertoire of solutions for handling coastal trading, each seaside settlement selected what worked best and most expeditiously for its own situation. There was no need for grand maritime facilities if more simple options worked as well.

Like most other coastal settlements, Aperlae was only a tributary to the stream of maritime traffic that moved on the Mediterranean Sea. It was never the destination for large merchantmen, a major military port, or a gateway point where land and sea communication and distribution systems met. This modest coastal station lay between the two large international port cities, Andriake and Patara. As such, it was a minor, almost invisible component of a Mediterranean trading network that literally ran past the mouth of Asar Bay.

Its small boats carried local products to regional markets, most notably purple dye to Andriake and possibly Patara (*Stadiasmos*, 239–246), but they made few demands on the resources of the city.[8] Docking installations could be minimal and pedestrian while still meeting their needs. Traders from elsewhere came and went on their own schedule in coastal craft that needed nothing other than the facilities Aperlae provided. Such traffic was a routine, quotidian occurrence that could have been easily overlooked, just as the whole phenomenon of cabotage has been undervalued in our efforts to better understand maritime trade in antiquity.

Acknowledgements

Notes

[1] A recent general study of cabotage breaks the silence of neglect (Nieto, 1997). Although Nieto does not mention Aperlae, it would make an interesting case study for discussion of a 'port secondaire'.

[2] There has been a recent discovery of one of these large vessels, possibly involved in the grain trade although on special assignment to transport *pulvis puteolanus* (volcanic sand from the Bay of Naples) and tuff to Caesarea Maritima (Oleson & Bronton, 1992: 60; Fitzgerald, 1994: 163–223; Hohlfelder, 1999: 158–159). The ship measured between 40 and 45 m in length and is the most heavily built shipwreck yet found in the sea (Fitzgerald, 1994: 217). On the role of these giants in ancient maritime trade see Houston, 1988; Rickman, 1991.

[3] An excellent example of a Roman-Period coaster, similar to those which might have regularly used Aperlae, *Oneraria Minore II*, is now on display in the Museo delle Navi Romane at Ostia as Fiumicino 4. It measures approximately 8 × 2·80 m (Scrinari, 1979: 27).

[4] An extremely important discovery has occurred at San Rossore, Pisa, where Stefano Bruni has uncovered more than 10 boats in the mud of a former lagoonal port (Becattini, 1999; Bruni, 1999). At least two of these boats, and probably more, were coasters. One appears to have come from, or at least traded at, the Bay of Naples. Its hull contained a mixed cargo, as one might expect in a coastal trader which worked its way along the Italian coast, buying and selling items along the way. Stacks of amphoras were uncovered that had been filled with wine, fruit, and olives along with other ceramic vessels filled with sand. Also found were cobbles of tuff from the Bay of Naples which functioned as ballast whilst the ship was *en route*, but were probably intended for sale later (Slayman, 1999).

[5] For further information on Aperlae see Hohlfelder & Vann, 1988; Vann & Hohlfelder, 1998, 1999. There is little doubt that Aperlae was a typical small Lycian city rather than simply a coastal village. It had many, but not all the buildings of a Hellenistic or Roman urban centre. While there are impressive fortifications, two Roman baths, and an orthogonal city plan at least in the southern quadrant, there is no theatre. Pliny, however, called Aperlae an *oppidum* (town), while the neighbouring and larger Myra was designated as a *civitas* (5.28.100). Christian Aperlae did have a bishop in residence, which argues for its status as a city at least in Late Antiquity.

[6] Sections of a wooden pier have also been uncovered at San Rossore. Although they seldom appear in the archaeological record of port excavations, such marine constructions of wood were probably common in antiquity. They were relatively inexpensive, durable, and easy to build and repair, particularly in areas like southern Asia Minor where timber was readily available.

[7] In an earlier article (Hohlfelder & Vann, 1998) the authors commented on the potential dangers posed by Asar Bay, specifically the difficulty of sailing from the open bay or finding a safe mooring most afternoons when the sea and wind beat down the bay. An obvious solution was not mentioned: if a dilatory captain missed his opportunity for escaping from what could easily have become a dangerous cul-de-sac, his boat or small ship could have been dragged or lifted from the water. Smaller boats were probably routinely pulled ashore when their owners did not wish to risk the elements. Even though the east side of the isthmus afforded a far more secure anchorage, for reasons still not fully understood, the city was sited on the west of the isthmus facing the open sea.

[8] It is not surprising that one of the epigraphical fragments from Aperlae, published before our survey commenced, mentioned a ship captain or owner (*naukleros*) who was presumably an Aperlite (Diamantras, 1882).

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