Exploring the Gulf of Talamone

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For centuries the coast of Etruria, between the mouths of the river Argentario and the river Ombrone, was an important harbor and trade route. The city of Talamone, located on a small promontory on the north shore of the Gulf of Talamone, was one of the key centers of this trade. The city's prosperity was based on the trade of olive oil, wine, and other local products, which were transported by boat to markets throughout the Mediterranean.

The city of Talamone was founded in the 7th century BC and was an important center of agriculture and trade. The city's economy was based on the cultivation of olives and the production of olive oil, which was exported to other parts of the Mediterranean. The city was also a center of trade, with merchants from all over the Mediterranean coming to Talamone to buy and sell goods.

Talamone was an important center of art and culture, with many temples and monuments dedicated to the worship of the gods. The city was also a center of learning, with many schools and libraries where scholars studied the works of the ancient Greeks and Romans.

Talamone was a seat of government, with a council of elders who made the laws and appointed the officials. The city was governed by a system of checks and balances, with the council of elders and the council of merchants sharing power.

The city of Talamone was a center of power and influence in the region, and its leaders were respected throughout the Mediterranean. The city's merchants and scholars were held in high regard, and the city's influence extended beyond its borders.

Talamone was a city of beauty and prosperity, with its temples, theaters, and markets attracting visitors from all over the Mediterranean. The city's leaders were wise and just, and its citizens were happy and content.

The city of Talamone was a center of commerce and culture, a city of beauty and prosperity, a city of power and influence. Talamone was a city that was loved and respected by all who knew it.
For centuries, the restless sands of the Italian coastline have shifted under the action of winds and currents causing major changes. Rivers have deposited silt in complex patterns and sandbars have been thrown across entrances to coastal lagoons and bays. A region that during the Etruscan period had been teeming with fish and water birds, providing a rich and scenic environment for the populations of the Etruscan city-states, had turned into a deadly malarial swamp by the fall of the Roman Empire. Today the swamps are drained, the lagoons again are breeding grounds where thousands of tons of fish are harvested annually and, after long inactivity, are used by fishermen, yachtmen and coastal traders. But unrecorded changes that occurred in the configuration of the coastline during the intervening period of almost 1,500 years make the search for archaeological materials difficult.

One archaeological problem of Etruria that has never been solved is the exact location of one of its most historic seaports—Telamon. Archaeologists link the port of Telamon with a number of Etruscan city-states from the great fortress city of Rusellae on the north, whose circuit walls of huge polygonal blocks are the oldest and best preserved in Italy, to Vulci on the south. Modern Talamone is located on the promontory dominating the northern reaches of the Gulf of Talamone, roughly halfway between Rusellae and Vulci, and may correspond in a larger sense to the ancient port city of Telamon, as the Italian archaeologist G. Caputo has noted. Since the nineteenth century, however, the loaf-shaped hill of Talamonaccio, across the gulf from Talamone, has been widely accepted as the site of the ancient city although the evidence, according to Caputo, is so far not entirely convincing. The evidence rests on the accidental discovery of “burned ruins” reported by the builders of a coastal fortification at Talamonaccio in 1888, and on a Roman coin with an uncertain inscription ila, corresponding to the name of the city. More recent excavations have revealed the foundations of a late Etruscan temple belonging to the fourth or third century B.C., whose pedimental terracotta reliefs representing the myth of the Seven Against Thebes, are among the most important architectural sculptures discovered in Etruria. But so far no modern scientifically controlled excavation has confirmed the existence of an Etruscan town site in the vicinity.

In antiquity, the city of Telamon became famous as the site of a crucial battle against the Gauls. In 225 B.C., the Roman Consuls L. Aemilius Papus and C. Attilius Regulus defeated the invading barbarian army at Telamon, thereby preventing an attack on Rome itself which might have changed the course of history. Indeed, to this day the name of Regolo is commonly used among the families around the gulf in commemoration of the ancient hero and savior of Rome. During the civil wars which were later to ravage the Italian peninsula, Telamon was once again the site of a major conflict when a Roman consul named Marius disembarked with an army in the Gulf of Talamone to mount a surprise attack on the forces of the general Sulla in 87 B.C. In 82 B.C. Sulla supposedly burned the city of Telamon in retaliation for its support of his enemy. In reality, Telamon had probably ceased to function as the preeminent seaport of the south Etruscan states at a considerably earlier date, having been supplanted by the Roman colony at Cosa during the third century B.C. after the Roman defeat of Vulci. The excavations by the American Academy in Rome at Cosa, located a few kilometers to the south, clearly show that the Romans had developed a flourishing new town and a major port there well before the end of the second century B.C.

It was during the course of the recent excavations at Cosa that the plan for an archaeological survey of the Gulf of Talamone took shape. Apart from the continuing controversy over the location of the city of Telamon, more information on the existing ancient remains along the gulf’s shores and environs would be useful in developing a more coherent picture of the region during the Etruscan and Roman periods. Few details are provided by the literary sources and the interpretation of history in this region rests almost entirely on archaeology. The goal of the expedition, therefore, was to locate and record any archaeological remains in the waters or along the beaches of the Gulf of Talamone that might shed new light on the maritime history of the region north of Cosa. At the same time it hoped to accumulate data on the currents, wind patterns and other coastal phenomena that might offer clues to the changes which evidently obscured traces of the ancient port of Telamon.

A general description of the Gulf of Talamone must begin with the high, hook-shaped promontory forming a natural protection for the northern part of the gulf from the winds of the west and northwest which in certain seasons are frequently capable of reaching gale force. Today a small yacht harbor lies within the shelter of this promontory. Crowning its heights are the ruins of a castle, one of the most important landmarks on the Tyrrhenian coast, built by the Republic of Siena in the early fifteenth
century. From the castle the mountain continues northward forming precipitous cliffs along the coast for several miles, while a beach curves away from it to the east in an arc across the head of the gulf. On the eastern shore, this arc of beach meets the long, low loaf-shaped hill of Talamonaccio.

South of Talamonaccio, the landward flank of the gulf forms a single curving sweep of sandy beach and low dunes, backed by dense and aromatic pine groves, until the beach encounters the next in the series of rocky spurs that punctuate the coast. This long, continuous line of beach is broken by three channels. Just beneath the hill of Talamonaccio on its southern end, the Osa River noisily empties into the sea over a bed of rocks. This mouth could never have been navigable, but in ancient times may have been approachable some distance down the beach away from this rocky ledge. It is not inconceivable that the docking area for Telamon lay in the Osa River. Halfway down the curve of beach, the Albinia River slowly winds its way, finally managing to reach the sea around the barrier of a sandbar evidently created by its own silt. There an artificial canal connects the waters of the gulf with the Lagoon of Orbetello where the beach meets the promontory of the Argentario further to the south. This lagoon is the largest of the tidal saltwater basins that survive along the Tyrrenhian coast, providing natural fish-breeding grounds today as it did in antiquity. The town of Orbetello lies on a peninsula, a finger of land that reaches out from shore behind the Argentario extending outward to divide the waters of the lagoon in half. Today this peninsula with its town is connected by a causeway to the Argentario, thus dividing the lagoon into two separate parts. In ancient times, the peninsula ended in the middle of the lagoon. At its tip lay an ancient town, as yet unidentified, marked by considerable stretches of ancient polygonal walls that have been said to date to the end of the fourth century B.C. P. Bocchi Pacini has recently suggested that a portion of the sandbar between the Albinia River and the Argentario that encloses the Orbetello lagoon may have been partially uniformed in ancient times, in which case the polygonal walls at Orbetello may have protected a major ancient seaport.

On the southern shore of the Gulf of Talamone along the cliffs of the Argentario is an ancient Roman villa that serves as the foundation for a great modern house which effectively obscures most of the ancient structure. Beyond the villa, known as Santa Liberata, the headland of the Argentario extends seaward to enclose the south-
The Gulf of Talamone was the site of multiple underwater explorations in search of Etruscan and Roman remains. (Inset) The rocky cliffs outside the northern entrance to the gulf form tiny coves where a variety of ancient structural materials were trapped when they fell from the heights of Talamone as a result of erosion.
variegated composite of thick, heavy mud or shifting, loosely packed silt and sand, partially covered by deep patches of eel grass. Evidently a continuous silting process had taken place in this area. Currents, winds and wave patterns seem to have lifted the silt from the two river mouths, particularly the Albinia, forcing it northward and dropping it at the head of the gulf between the rock cliffs of Talamone on one side and the hill of Talamonaccio on the other. Even today, this silt is being continuously deposited against the low northern beach, gradually shrinking the northward reaches of the gulf. This process, caused mainly by the steady two-knot south-to-north current that affects the entire Tyrrenian coast of Italy, resulted in the diminution of the gulf in late antiquity and the creation of a marsh where the sea had once been. Just how far north the gulf may have extended in ancient times is unknown, but its shape is perhaps suggested by the contours of the malarial swamp that resulted as deforestation caused the silting of rivers and lagoons. According to a German authority, R. Naumann, the northern shore of the Gulf of Talamone might be placed as much as five kilometers farther to the north of the present location of the beach, creating a much deeper area of sheltered water between the Talamone promontory and the shore at Talamonaccio. Naumann suggests that a port serving the city of Rusellae may have been located in this northern part of the bay, which now lies beneath an area of fertile wheat fields created when the ancient swamps along the coasts of central Italy were drained and the land was reclaimed for agriculture under the dictatorship of Mussolini.

The survey team soon confirmed that the silting process described by Naumann continues to this day. Certain key positions were nevertheless checked to make sure that conclusions concerning the silting process were correct. After a number of dives in the vicinity of the modern port, a sweep was made on the inner side of the channel, along a line of yacht moorings that mark a sudden change in depth. All observations confirmed the fact that beyond a line drawn between the headland of Talamone and the hill of Talamonaccio, the entire northern end of the gulf is gradually filling up. Any ancient materials that might once have been located on the north end of the gulf now must be buried and unrecoverable except by major dredging and land excavation. Indeed, frequent dredging appears to be necessary to maintain access to the present harbor.

The seaward side of the promontory of Talamone, however, is unaffected by the silting process. As the current moves counterclockwise through the gulf, the hook-shaped headland evidently traps any remaining silt not already dropped along the beaches of the gulf by the slowly moving waters. The outer shores of the headland are therefore perfectly clean and underwater visibility is excellent. Here the irregular and jagged arms of rocky cliffs and coves hold ancient materials that might other-
wise have been dispersed by the pounding seas. Under these cliffs divers found the bottom strewn with an assortment of ancient Roman building materials from structures that once must have risen along the heights above. Terracotta bricks and fragments of terracotta roof tiles were seen everywhere, together with potsherds representing a variety of household wares. In this area, the cliffs rise so steeply that such finds must be interpreted as fallen debris. Evidently an ancient Roman settlement or perhaps a Roman watchtower or military base was once situated along the heights of Talamone beneath the present Mediaeval castle. Since no tesserae or other Roman paving materials were found among the fallen objects at Talamone, it is possible that ancient floors are still in situ on the heights around the castle awaiting discovery.

Opposite the promontory with its castle, in the area designated Zone B, lies the hill of Talamonaccio believed to be the site of ancient Telamon by some archaeologists. This possible Etruscan port was evidently still in use when the ancient geographer Strabo, who traveled the Tyrrhenian coast in the early first century, composed his list of maritime settlements. Although the location of a burned city on Talamonaccio, described by nineteenth-century observers, has not been confirmed by more recent archaeological work, one place along the shore of Talamonaccio marked by a large rock known to locals as the "Scoglione" has been for decades a favorite hunting ground for skin divers in search of ancient sherd. Our survey divers found this area picked clean. Not a single fragment of ancient terracotta was to be seen in the shoals between Talamonaccio and the Scoglione, which lies some 50 meters out from the beach. Nevertheless, the configuration of this shoal, which forms a long curving line connecting the Scoglione with the beach at Talamonaccio, suggests the shape of a type of mole seen elsewhere along the Tyrrhenian coast. This type usually consists of a line of piled-up rocks reaching outward from a landing place and turning parallel to the shore to provide protection from wave action. Such breakwaters are not necessarily uniquely ancient, but when the shoal was examined more closely underwater, it soon became clear that many of the boulders were, in fact, pieces of loose roughly-shaped limestone rock of the kind used in ancient rubble masonry. Apart from the island of Scoglione itself, the line of stones connecting the Scoglione with the shore is not natural but rather a fall of loose rubble that may very well have belonged to an ancient structure.

Mixed in with these rubble stones were a number of rectangular blocks worked on all six sides. Such blocks are used in ancient rubble walls at the corners of rooms, or at doorways to reinforce the ends of walls. One such block of white marble, more carefully worked, could have been a slab from a sarcophagus reused for some structural purpose. Something else becomes apparent in an aerial photograph taken with the aid of a balloon and suspended camera. The landward side of the Scoglione is almost perfectly straight and, moreover, is aligned with the shore. One might suspect that the stone was worked in order to produce such an alignment. It may also be significant that the Scoglione with its line of rubble connecting it to the beach occurs at the one point on the shore of Talamonaccio not backed by a sharply rising cliff. In other words, if there was indeed a landing place to serve a town on the crest of Talamonaccio, this is
the only point along the coast where the town could have been reached by a path from the sea. The rise of the hill is much too steep elsewhere.

North of Talamonaccio, the area at the head of the gulf has been so drastically transformed by silting that underwater activities were limited to individual dives to observe the present extent of the silting along the shore, where silt and grasses lie just below the surface for an average of 300 meters out from the northern beach. Then there is the first of a series of sudden drops, forming steps in the bottom until depths of about ten to fifteen meters are reached. These depths continue across the entire width of the gulf to the modern breakwater beneath the castle at Talamone.

While nothing ancient was found underwater in this sector, our efforts were rewarded on land. The once malarial mud flats lying north of the present beach, drained but not yet reclaimed as farmland, were literally strewn with ancient sherds. It is remarkable that all the sherds found sprinkled over this area are small, few larger than two or three centimeters. It is also surprising that few if any modern materials are mixed in with the ancient sherds that cover the flats stretching northward. Evidently these flats have remained entirely undisturbed except for the ditches dug by bulldozers when they were drained. Thus, the surface of this drained swamp forms a curious and interesting sight. The mud is hard and smooth but slightly rippled, exactly like the sea bed in certain areas. It is marked by miniature knolls and rises with rounded, sculptural profiles, also similar to the forms in an underwater scene. Thousands of potsherds all lie with their smooth, curved shapes upward and their rough, broken edges slightly buried in the sand, gripping the surface so that it takes a bit of a tug to get them up just as is the case when they are found underwater. All this seems to suggest that these sherds were floated onto the surface of the mud flats by the action of tides when the area was still open to the northern reaches of the gulf. On every side, drainage ditches about a meter-and-a-half deep, cut through like excavation trenches, afford a view of the stratification, only here there is no stratification. The ditches reveal a completely featureless deposit of pale sandy silt, with the majority of the sherds lying only on the surface.

The pottery found on the surface of the mud flats was carefully sampled. It shows a great variety of common ware and kitchen ware forms. The rim shapes and bases and the types of terracotta closely parallel the common ware fragments found in the excavation of houses at Cosa. Also typical of the Cosan context is the mixture of Roman types of pottery with late Etruscan pseudo-bucchero, a dark gray unglazed pottery that in its finish and in certain shapes follows in the tradition of bucchero. This type continued in use until about the end of the Roman Republican period, or about the middle of the first century B.C.

Because of the existence of a counterclockwise current in the gulf, the obvious conclusion to be drawn from the evidence of the northern flats is that the sherds found on the surface of the silt must have come there from a destroyed settlement lying further to the south, very likely in the vicinity of Talamonaccio. The fact that they can be found only on the surface of the flats and not in the walls of the bulldozer trenches suggests that they are not a gradual accumulation but the result of a single deposit. They may represent a dumping of refuse which could have entered the sea on one particular occasion. The sherds themselves suggest a date in the early first century B.C. All of these facts would seem to align themselves with Sulla’s destruction of ancient Telamon; subsequently, parts of the ruins of Telamon must have been cleared and reoccupied, and large quantities of potsherds may then have been dumped into the gulf, the heavier pieces sinking to the bottom, the smaller and lighter fragments moving northward with the tides and currents and gradually coming to rest on the surface of a developing swamp. There they remained in plain sight ever since the draining of the swamp by Mussolini’s engineers.

The survey team next turned its attention to the southern side of the Gulf of Talamone—Zone C—where a canal enters the Lagoon of Orbetello and the Roman villa of Santa Libera is located close by the entrance to the canal. Although the bottom conditions and visibility were even worse here than in the north, a variety of ancient materials were discovered. The team worked in an area stretching from the canal and its seaward approaches to the villa of Santa Libera, and then westward toward the breakwater protecting the modern harbor of Porto Santo Stefano. The present canal evidently follows the path of an older channel, for near the entrance to the lagoon of Orbetello remnants of ancient concrete were seen still adhering to an outcropping of bedrock. Ancient terracotta bricks and fragments of a dolum, one of the huge, globular vessels used by the Romans for underground storage of perishables, are embedded in the concrete. The rim of the dolum has a profile datable to the first century B.C., showing that at least here the sandbar separating the gulf from the lagoon was already present in antiquity. Then, as now, an artificial construction was evidently necessary to maintain an open seaway connecting the gulf and the waters of the lagoon.

Large quantities of Roman debris were found in the waters of the canal and along its banks. Among the sherds sampled were fragments of black-glazed tableware and two datable amphora fragments of the second century B.C. One, a rim fragment, comes from a narrow-mouthed type of wine jar that is now commonly called “Greco-Italic.” The piece, with its rounded edges, shows the results of centuries of buffeting by tides after the jar from which it came was broken. The rim is flared, triangular in section; the amphora was manufactured in the second cen-
The area of investigation was extended to the west along the southern coast of the gulf toward the villa at Santa Liberata. In addition to a masonry fish tank, one of the most important on the entire coast, we observed a large masonry pier, undoubtedly of ancient construction, just awash at the tip of the rocky point that separates the extant ruins of the villa from the fish tank. The basic structure of the pier is concrete made of rubble and mortar: the fairly uniform rubble stones are tufa, while the mortar is densely packed with black sand and large sherds. The height of the preserved portion of the pier is about 5.20 meters. A segment of this structure, 8.70 meters by 9.15 meters, has broken off from its root on the shore, while part of the concrete still adheres to the cliff where the pier once attached to the live rock. In an aerial photograph it is obvious that the two pieces of the pier fit together, although there is a 20-degree difference between the axis of the detached segment and the root of the pier on shore. This can be explained by the fact that the broken segment must have slid gradually down the slope as the sandy bottom underneath it shifted away.

Offshore in the vicinity of the villa of Santa Liberata about 20 meters out from the pier, the team found Roman amphora fragments dating from the late second century B.C. to the third century after Christ. One of them is a rim fragment from an amphora of "Dressel 1A," a type of shipping container for wine, dating from the late second and early first centuries B.C. Almost as early in date is the amphora toe from a type of jar sometimes referred to as "Apulian II." Jars of this type originated in southern Italy and apparently served as export containers for fine olive oil during the early first century B.C. Later amphora fragments found underwater off the villa included what was probably the lower part of a long, hollow toe that once belonged to an amphora of "Dressel Type 14." Such jars brought garum, the fish sauce of ancient Rome, to Italy from Spain in the first century after Christ. Garum amphorae regularly had hollow bases or toes for reasons we do not know. The lower part of an amphora neck, with a portion of the shoulder and the lower attachment of one handle still preserved, also dates to the first century. The handle, which was apparently bifurcated, and the clay, which contains conspicuous white bits, enabled us to classify this fragment as "Tarraconense," a term used to describe jars that brought cheap Spanish wine to Italy.

The four latest amphora fragments found near the Roman villa indicate that it may have been inhabited until the second and third centuries after Christ. A jar fragment lacking only the base and part of the lower belly belongs to a class of amphora manufactured during the late first century through the second century in the Roman province of Mauretania Caesariensis, present-day Algeria. Such jars often bore stamped impressions on their handle or rim naming the ancient province from which they came. Jars of similar shape but different clay were also apparently manufactured in France and elsewhere during the Roman period. Another piece found underwater may come from this same type of amphora, but it is such a small fragment that estimating mouth and rim diameters—a procedure essential for accurate typing of Roman amphora fragments—is hazardous. A third late piece found off Santa Liberata is a neck fragment from a small amphora of distinctively pinkish clay. It may have been another Spanish garum container. The last pottery piece from Santa Liberata is a rim fragment from an amphora belonging to the so-called Big African class, which was manufactured in great quantities in North Africa during the third...
century, especially Tunisia, after Africa had succeeded Spain as the chief producer of olive oil in the Mediterranean. Altogether, this battered and outwardly nondescript group of amphora fragments helps date the period of occupancy of the villa at Santa Liberata and, by extension, throws light on the dates and far-flung trade in the area during the Roman period. Over half a millennium of economic activity is represented by these fragments found in the villa’s waters and between the villa and the canal entrance to the lagoon.

The last area of exploration—Zone D, the Giglio Channel and the Isola Rossa—also proved fruitful. Although an initial series of dives in deep coves off the island of Giglio recovered no ancient materials, the opposite side of the Giglio Channel behind the Isola Rossa, a natural bay on the Argentario protected from both the mistral and the sirocco, contained numerous amphora fragments. One representative piece is so heavily encrusted with a multicolored marine deposit that it looks like an example of rococo sculpture. It is the upper part of a garum amphora dating to the first century after Christ. The natural protection afforded by the Isola Rossa and the sheltered position of the cove behind it suggest the possibility that this was the site of an ancient anchorage, a place where ships might have waited for storms to pass. The quantity of amphora fragments found here might also indicate a stopover at some sort of coastal settlement before ships rounded the Argentario on their way into the Gulf of Talamone, or before beginning a journey out of the area toward the south.

The comprehensive land and water survey of the Gulf of Talamone has thus yielded more evidence about the Romans than about the Etruscans. Pottery sherds, perhaps from ancient Telamon, lie on the mud flats north of Talamonaccio. But they date from a period when control of the coast had already passed from the Etruscans to the Romans. Roman amphora fragments dating from at least the second century B.C. to the third century after Christ point to trading activity for over 500 years with Spain, Africa and other parts of Italy. The remains of a Roman structure on the headland of Talamone—as evidenced by the roof tiles and bricks found in the waters beneath its cliffs—the Roman villa of Santa Liberata, Roman construction in the canal of the Lagoon of Orbetello, and finally, the Roman anchorage at the Isola Rossa all illustrate the scope of Roman activity in and around the gulf. As for the location of the Etruscan port city of Telamon, nothing convincing was found. The alignment of the loose rubble stones behind the Scoglione of Talamonaccio, however, suggests the possibility of an ancient anchorage and underlines the need for systematic exploration of Talamonaccio to rediscover and resudy the “burned city” of the earliest archaeological reports. Our survey suggests more clearly than ever before the need for an archaeological project of even higher priority. The polygonal circuit walls of the town of Orbetello on its finger of land within the Orbetello lagoon still constitute the most imposing ancient monument in the entire region of the Gulf of Talamone. The evidence of the amphora fragments uncovered by the expedition from the waters of the canal into the lagoon and from its seaward approaches clearly point to a destination within the lagoon as the most important seaport and center of trade in the area, at least during Roman times. One would therefore wish to learn more than is presently known about the ancient city that was once protected by those enigmatic walls at Orbetello. What was its ancient name? What was its relationship to Telamon? A series of excavations inside the Orbetello lagoon might answer these questions and many others.

An expedition to explore the Gulf of Talamone was organized in 1973 by author Vincent Bruno under the auspices of State University of New York at Binghamton, with funding by the Atlantic Foundation sponsored by Seward Johnson, whose crew aboard the yacht Bashal then stationed at Porto Santo Stefano on the southern coast of the gulf, provided valuable support throughout the survey. Additional support came from Mrs. Solie Reinhardt and from the Marchese Corsini of Porto Ercole whose knowledge of the local waters enabled him to guide the survey diving team to an important find spot at Isola Rossa. Diving operations along the shores of the gulf under the supervision of co-author Joseph Schwarz, were supplemented by aerial photography carried out by Julian Whittlesey and the Whittlesey Foundation by means of a camera suspended from a balloon and controlled from a rubber dinghy. The interpretation of the fragments of pottery recovered from the sea during the course of the survey was undertaken by co-author Elizabeth Lyding Will in 1977 and 1978, whose research on the amphora was of paramount importance in defining the overall results of the project.

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