



# **THE MYTHICAL PHLEGRAEAN FIELDS**

**CLAUDIO MOLLO**

*History has an irony that is the most refined and subtle that a human being can imagine. It happens that one of the largest and most powerful volcanic complexes on the planet finds itself acting as a small Rome, a theatre for the lives of historical and mythical figures who had no uncertainties about inhabiting a land that literally breathed beneath their feet. Here men and gods have merged and mixed up among themselves, but the arts and knowledge have survived the trial of fire and sea, tracing evidence of beauty that has reached our days. Claudio Mollo accompanies us along this path that winds along the coast of the Phlegraean Fields, he lets us peek into the lives of Nero and Hadrian, escorting us with the Sibyl to the gates of Avernus, passing by the thermal baths and the Macellum market. Regardless of the rumbling of the volcano, with which for centuries, men have lived, built, and loved a land so sweet and sour at the same time, who's moving and exhilarating beauty has inspired and continues to inspire, respect and devotion.*

## INTRODUCTION

I believe there is no place in the world similar to the Phlegraean Fields, and this in itself is already a good reason to visit it.

Here nature has generated phenomena that would normally keep humans away, and instead this has not happened, why?

It seems that when the first inhabitants, in protohistoric times, ventured into these fields thick with vegetation, they did it to hunt, but also because the soil is fertile and rich in minerals. Obviously, there was no shortage of dangers; boiling mud, geysers of sulphurous vapours, thermal springs and craters filled with water, but over time the most daring learned to live there and take advantage of it.

Certainly, thousands of years ago the seismic potential of these fields was unknown, in fact, from the first ancient Greek settlers along these bays until today with the sole exception of Monte Nuovo eruption, the only phenomena observed have been seismic and brady-seismic. This alone could explain the extensive urbanization.

Only in recent times has technology allowed us to know with more accurate attention the responses to these phenomena and danger.

It is therefore evident that the extended periods of seismic calm, the beauty of its shores and the microclimate, have played a decisive role when the time came to decide whether to live here or not.

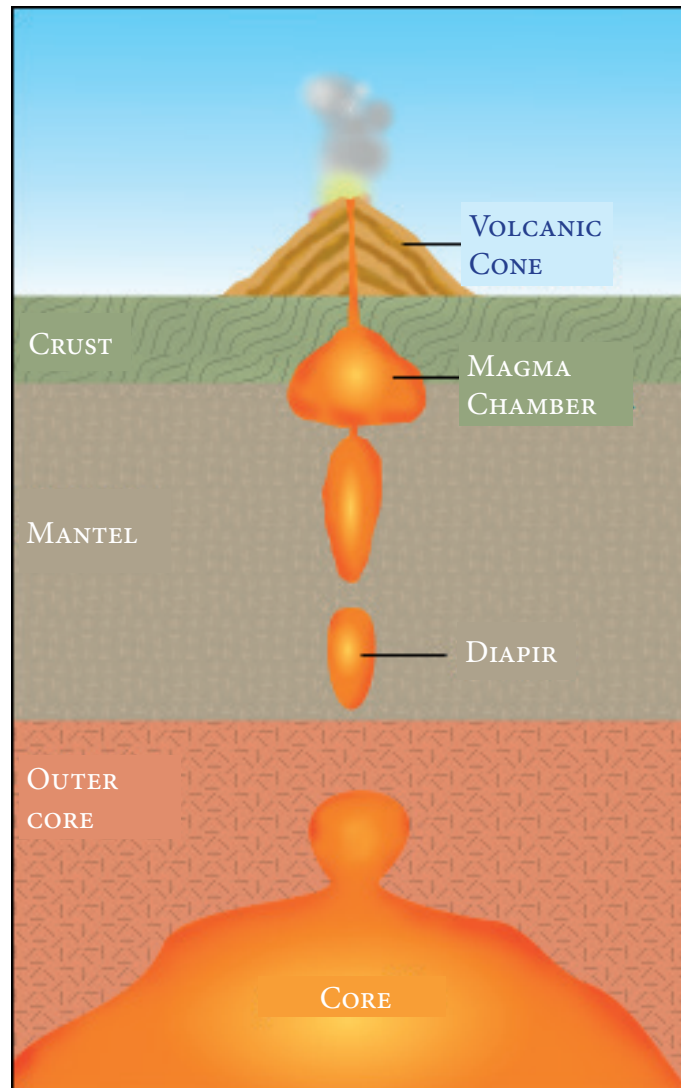
The summary that follows, dear readers, is only a pale taste of the vastness of topics to be covered.

Happy reading

## VOLCANOLOGY

Magma (a mixture of molten minerals and metals, plus gas) rising from the Earth's core creates drop-shaped bodies called magmatic diapirs (*dia* separation, *piros* fire), which intrude into the mantles by exploiting pre-existing fractures or creating new ones. The diapirs then stop, for a more or less long period of time, under the Earth's crust, where they form magma chambers with temperatures that exceed one thousand eight hundred degrees Fahrenheit. From here they can explode outside when new fractures are created due to earthquakes or sudden increases in pressure. Or trigger a bradyseism that raises or lowers the Earth's crust, along with everything above it.

During the eruptions, once outside the magma loses its gases and becomes lava.



In the case of the Phlegraean area, the magma chamber remains at a depth of about six miles, and here too, the outer layer of the magma, in the chamber, being cooler loses its gases, and this causes pressure, but encountering on the top a thick coating of impermeable pozzolana, the expansion inflates the terrestrial crust with everything on top of it.

This alone is a cause of positive bradyseism (*bradi* "slow", *seismos* "distress").

Another phenomenon occurs when gases meet aquifers, from which they emerge enriched with minerals in geothermal sources.

The question that everyone asks, including experts, is, will the rising of terrestrial crust end in

a bradyseism event, or it will end into an eruption? The answers to these questions, at the moment, cannot be given with certainty.

However, there is the Vesuvius Observatory of the INGV, on the surveillance page, with a drop-down menu of seismic signals in real time, where everyone can access and watch the seismic trend of the Phlegraean area or other information. <https://www.ov.ingv.it/index.php>

*Phlégra “burning”, ”che deflagra” Campus “fields”*

40°49’39.65” North - 14°08’20.55” East



*Phlegraean Fields*

This volcanic caldera measures seven miles in diameter, the two major activities that structured these fields occurred; thirty-nine thousand years ago, identified in the grey stone called Ignimbrite, and the second fifteen thousand years ago, which is identified in the yellow tuff.



*Grey and Yellow tuff*

Studying the individual geological deposits of the Phlegraean Fields, at least seventy explosive eruptions have been detected in the last fifteen thousand years. This places them among the high-risk volcanic area, with the aggravating factor of being a largely urbanized.

Currently the Phlegraean Fields are divided in a red area, to be evacuated in case of alarm and in yellow area where the danger would not come directly from the volcano, but only from the fall of ash.

Yes, the Phlegraean Fields never stand still, in the last two thousand years it has undergone raises and falls of the order of twenty meters, at a rate of two cm per year. Witnesses of these events are the buildings of ancient Rome starting from the first century b.C. and which today are six meters below sea level, between Baia and Pozzuoli.

Yes, bradyseisms can also be negative, that is, when the Earth's crust sinks due to the partial emptying of the subsoil and consequently the decrease in both pressure and temperature.

The most significant bradyseisms occurred during the fourth century a.D., and in 1538, when the ground rose seventeen meters, and the sea retreated three hundred and seventy meters. On this occasion there was also an eruption that lasted nine days, following which the one hundred-and thirty-three-meter-high Monte Nuovo volcano was born.

The most recent bradyseisms date back to March 1970, when the ground rose about four meters, and it was necessary to evacuate three thousand people from Rione Terra neighbourhood, and again in 1982 the same story.

The last positive bradyseism began a few decades ago and, always during the slow swelling of the Earth's crust, and also in this case every time it reaches the stress point and breaks, this causes seismic shocks.

Once, the first to notice the bradyseisms were the fishers, who, accustomed to setting sail and docking every day, they immediately noticed anomalies in mooring at the docks.



*Pozzuoli Monte nuovo and Averno Lake*

*Averno: from a/privative and aornos/birds*

It seems that the exhalations of poisonous gases from the ancient crater, now a small lake, drove away the flight of birds. The ancient inhabitants of the Phlegraean Fields believed that this body of water had no bottom and that it was connected to the Styx, the river of the underworld, where Charon ferried the souls of the dead.

From this lake in the year thirty-six b.C. a tunnel of one kilometre was dug to Cumae. An engineering work of Cocceius Aucto, six meters wide and up to ten meters high. The work was commissioned for reasons of military strategy by the architect of the Pantheon Vipsanius Agrippa, friend and lieutenant of Augustus.



*Cocceio's tunnel*

*Solfatara, one mile east of Pozzuoli*

The Solfatara is a volcanic caldera of thirty-three hectares, born about four thousand years ago, its last eruptive activity dates back to 1198. Today this large esplanade is the terminal on the earth's crust of underground magmatic activities, where sulphurous steam gusts and mud jets appear, up to temperatures of 305 Fahrenheit degrees. In some points of the caldera, hitting the ground heavily you feel a rumbling of emptiness, as if you were walking on an immense cistern, this is due to the super porosity of the crust.



*The Solfatara Caldera*

## MYTHOLOGY

The ancient fathers of mythology were inspired by the Phlegraean Fields, as a place of mysteries, where mother earth Gaea, produced prodigious benefits from geothermal waters, but also linked to the burning entrance to the underworld, the ideal field place for heroic adventures .

And so, in Virgil's Aeneid, Publius Maro wrote about Aeneas, prince of Troy. After the devastation of his city, the hero was ordered by an oracle to undertake a journey towards the West. An adventure that lasted several years and that led the hero to land on the shores of the Phlegraean Fields. The oracle had been clear, once in the sanctuary of Cuma he had to meet Deiphobe, a priestess of the temple of Apollo, among the most famous Sibyls of the ancient world.

So, Aeneas, after having attended the burial of Miseno, his traveling companion, and performed the rituals at the temple of Apollo, he was accompanied by the Sibyl to Lake Avernus to descend into the underworld. Here he met his father who gave him the final instructions to head towards Latium region.

Aeneas was the son of Anchises and Venus, a demigod that Virgil wanted to appoint him as the divine founder of the Roman civilization. The power that would have subdued the Greeks, thus claiming the honour for the Trojan defeat. Brilliant!

Even today, in the archaeological park of Cuma, you can follow the path of the so-called *Dromos* until reaching the Cave, from where, according to tradition, the Sibyl prophesied.



*Cuma, the Sybil Dromos*

### *Deiphobe, the Cumaean Sibyl*

A fascinating story. It is said that she had offered the nine Sibylline books (something like “the prophecies of Nostradamus”) to Tarquin the Proud (seventh King of Rome), at an exorbitant price, which the King denied. Then the Sibyl burned three books, six remained at the same cost as the nine. And the King rejected again, so Deiphobe burned three more, reformulating the proposal to Tarquin, who this time accepted with gritted teeth.



Deiphobe was truly enchanting, but alas she also made a mistake, and yes, the myth recounts that Apollo had fallen in love, and she reluctantly rejected him, making him understand that she would have accepted his courtship only if he could grant her eternity. Apollo granted it to her, century after century the Sibyl became so old and small that she wanted desperately to die, she had omitted to ask him to remain young. She became physically invisible, but her voice continued to prophesy from the dim lamp that illuminated her cave.

### *Apollo*

Among the meanings given by the historians to his name, I find indicative; “A” as privative and “*poloi*” as “many” and that is “the only” “the unique”.

Solar deity, which generates light, heat, and life.

His sanctuary of reference was in Delphi, where the grand people of those days went on pilgrimage to hear from the Pythias, priestesses of Apollo, the predictions about their future.

Apollo lived for six months of the year in the land of the Hyperboreans, (a place where the ancient Greek fathers located the Arctic) here the sun shone for the entire period of his stay. Mythology tells that Apollo, right here, learned about the destiny of humans and on his return he transferred his knowledge to the Sibyls and Pythias.



*Cuma, the sanctuary of Apollo*

### Cuma, from kime “wave”

It is believed that Cuma was founded around the ninth century by Greek settlers from Chalcis (*Euboea*).



Over time, Cuma established its dominance along the entire region coastal area, but the regaining of the neighbouring peoples, however, was not long in coming. In fact, in 524 and 474 b.C., the Etruscans formed a league with other population, to conquer Cuma but the clashes solved in favour of the Cumaeans, thanks also to the military aid and strategic ability of the tyrants Aristodemus called Malaco and Gerone of Syracuse.

A century later, Cuma was incorporated into the Roman system, as well as the cities of Miseno and Baia, without losing its identity as a sanctuary city, where people went on pilgrimage to listen to the Sibylline oracles, often, after long waits with donations and rituals to Apollo.

### Miseno

At the beginning of the Roman Empire, the entire bay of Miseno became the key point for a naval base and military school, where an impressive fleet with over three hundred combat triremes was stationed.

During the second half of the first century a.D., the command of the fleet was entrusted to the admiral and man of natural science, Gaius Plinius Secundus (*Pliny the Elder*).

Noteworthy mention of his stay in Miseno can be read in the dispatches written by his nephew Gaius Cecilius Secundus (*Pliny the Younger*), to Tacitus.

Yet today in Miseno you can visit the *piscina mirabilis*, a gigantic cistern cathedral that could contain up to twelve thousand cubic meters of water, completed at the beginning of the first century a.D. it was of vital importance for the water supply to the Misenate naval fleet. This water reserve was fed by the Augustan aqueduct, approximately sixty-three miles long from the sources of the Serino in the Apennines to Miseno, a majestic work of hydraulic engineering.



*Miseno, Piscina Mirabilis*

## Baia



As well this toponym dates back to the Homeric tradition, namely to *Bajos* the legendary helmsman of Ulysses' crew, this suggests that the mythical Odysseus knew these places.

Worthy of note are two marble statues identified as Ulysses and Bajos, found in the submerged area of the city. Today these sculptures can be admired in the show rooms of the archaeological museum of the Aragonese castle in Baia.

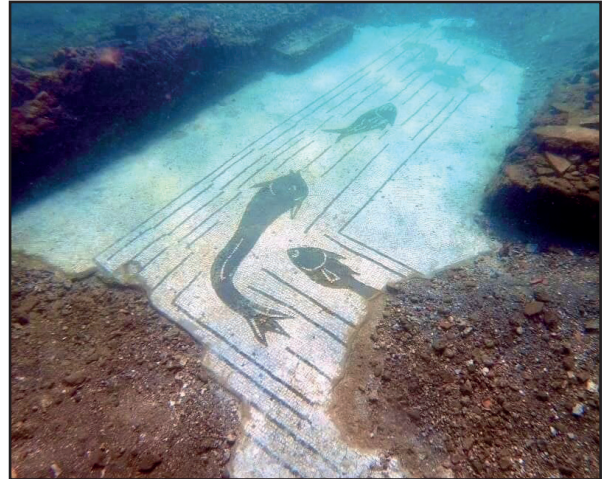
Archaeology dates the first residential community of Baia, around the third century b.C. The city had a notable and rather elegant urban development.

During the Roman imperial era, in fact, the villas and palaces, were all of them with swimming pools, fish farms, in particular sea breams and moray eels, clearly indicating the opulence and social rank of their owners.

It can be said that at the end of the Republic, and the beginning of the Empire, Baia was a “little Rome”. The imperial families and friends who came here to laze around for eight months a year were choosing Baia not only for the climate, the beauty and the enchanting red sunsets, but also because the gulf was considered a safe place, well protected, and only a few miles from the military base of Miseno. The poet Horace wrote “*Nullus in orbe sinus Baiis praelucet amoenis*”: nothing in the world shines more than the pleasant gulf of Baia.

Today due to the negative bradyseism part of the ancient Roman Baia, lies under the sea at a depth of 23 feet, and up to 400 meters from the shore.

This archaeological site is visible with a glass-bottomed boat.



*The Imperial baths*

In Baia, the upper archaeological area consists of the grandiose complex of the Imperial Baths. Rich in rooms for thermal treatments, due to the geothermal water springs and vapours at various temperatures, the building had also enclosures for the most varied tendencies of its guests. All of it enriched by terraced pools for theatrical, musical and dance performances.

These baths have seen the idleness of Julius Caesar, Cicero, Seneca, Tiberius, Pliny the Elder, Licinius Grassus, Caligula, Claudius, Nero and his mother Agrippina, Hadrian, Antoninus Pius, Commodus and finally Alexander Severus.

The freed man Titus Claudius Secundus wrote:

«*Balnea, vina, venus corrumpunt corpora nostra sed vitam faciunt*»  
«Baths, wine and love ruin us but make life beautiful!»

Here below the domed hall with a large bathtub, a frigidarium with chilly water. The dome is 21 meter high.



Entirely preserved, this frigidarium is a majestic work of art, and if we add the interior decoration in marble and mosaics, as showed by the traces of anchoring on the walls the spectacle must have been hugely impressive.

A construction on the model of the pantheon with an eye at the top and plays of light.

This type of facilities made the emperor Nero choose to govern the roman empire from Baia, and not from Capri like his predecessors.

Nero lived as a guest in the house of Gaius Calpurnius Piso, politician and general. Here he felt so safe and at ease, to the point of walking around the palace without any protection; but it was his host friend who was plotting to take his place, and as soon as Nero discovered the conspiracy, he forced Gaius Calpurnius Piso to commit suicide.

The same fate befell his mother Agrippina and his friend guardian Seneca. The emperor not knowing how to flee their control, plotted a deception against his mother by stabbing her and forced Seneca to commit suicide under suspected accusations of being part of the Piso's conspiracy. It is written in the annals that Nero organized a fake party in honour of his mother and sent sailors to recover her with a rigged boat. During the short crossing, once in the centre of the bay of Pozzuoli, the boat began to sink, providence wanted fishers passing by to help her by bringing Agrippina and the sailor-murderers to shore.

The woman had however understood that she had no escape from her son conspiracy, and in a final lucid gesture, she asked her persecutors to be struck in the belly, where an ungrateful son had been carried in her womb.

Seneca's death is well documented in the annals of Tacitus XV, 60-64, the great thinker, philosopher and tutor of the emperor. He was reached on his farm a few miles from Rome, by the praetorian Gaius Silvanus with the order to commit suicide. To Seneca was not even given time to make a will.

And yet Nero himself, caught in the grip of his own unstable initiatives, declared an enemy of the fatherland by the Senate, fled Rome to hide in the house of one of his freedmen, and here, understanding that he had no escape, aided by his secretary, he committed a suicide.

It was June 9, in the year 68 a.D. His last words were “what a great artist dies with me!”.

Hadrian also lived in the Villa of Calpurnius Piso. Here, in his sad solitude, disappointed by the fate of his relationships, both political and sentimental, the emperor wrote from the gardens of the palace the lyric *Animula vagula blandula*, a song to the gods contemplating the sunsets of Baia:

*“Little soul, gentle and drifting, guest, and companion of my body,  
now you will dwell below in pallid places, stark and bare;  
there you will abandon your play of yore.....  
Let us try, if we can, to enter into death with open eyes...”*

It was July tenth, of the year hundred and thirty-eight a.D. when his heart abandoned him, on his last day in Baia. He was over 62 years old.

Hadrian distinguished himself for having promoted art and culture, for having personally visited and embellished the cities with libraries, theatres and thermal baths of almost all the provinces of the empire. During his reign the emperor always promoted peace both internally and externally.



*Port Julius*

### *Pozzuoli*

Its ancient Greek toponym was *Dicerachia*, the city of the right government.

The documented history of this port begins during the mid-sixth century b.C., when Greek exiles from Samos, landing on the shores of Pozzuoli, settled in this small gulf under the approval of their compatriots, the Chalcidians of Cuma.

Only towards the second half of the fourth century b.C., with the expansion of the Roman world, the city was called Puteoli, from *puteos* – wells, perhaps because of the many cavities of geothermal water.

The morphology of the gulf and the nature of the Phlegraean fields of those times, was considered ideal for commercial security, Pozzuoli therefore had a significant success in maritime traffic, so much so that the extravagant Nero had an impossible navigable canal designed that, by land, connected Pozzuoli to Rome. Hmm!

Anyhow, from Pozzuoli there was a paved road to Rome that worked very well. The first stretch was Via Campana which started at the Amphitheatre for twenty-one miles to Capua and from here, another 132 miles along the Appian Way to Rome.

A distance that could easily be covered in five to six days, by cargo wagons.

While couriers with dispatches covered the route in about ten hours. The system was a pony express relay, there were stations to change horses and riders every 12 to 18 miles, depending on the difficulty of the route.

Only in the year 54 a.D., the emperor Claudius completed the imposing port of Ostia, and this caused loss of traffic and commercial abandonment of Pozzuoli.

Not much time passed, and two other disastrous events reached the gates of the Campanian coasts, the great earthquake of March 62 and the eruption of Somma, then Vesuvius, in October 79. Real coups de grace, a spectacular and flourishing city, with imperial palaces, amphitheatres, port facilities with silos and shipyards, headed towards an undeserved decline.

I imagined the port of Pozzuoli in its maximum splendour, with the intense traffic of cargo ships at the docks, the coming and going of military squadrons and merchants, the frenetic races of the cursors-postmen, the transit of emperors and staff, here also Paul of Tarsus, landed see Acts of the Apostles, 28:11.

This landing took place in the early months of the year 61 a.D. Paul was escorted by the Roman militia; he must reach Rome where he will be put on trial and condemned by the Consuls under the guidance of the emperor Nero.

Paul, imprisoned in Jerusalem, following the accusation of subversion instigated by the Jewish clergy, being Roman citizenship, he appealed to the judged by the tribunal of Rome. Leaving the port of Caesarea, after stopping in Malta, due to bad sea conditions, he left again after three months, stopping in Syracuse, Reggio Calabria, and finally in Pozzuoli. Here Paul was received and hosted for a week by a small group of neo-Christian Jews. After which he was accompanied to Rome where, remaining at the disposal of the Roman judicial system, he underwent various degrees of trial until his final condemnation in the year of grace 64.

Yes, the Gulf of Naples, Pozzuoli and the road network to Rome supported important traffic at least until the first half of the first century a.D.

I imagine the correspondence that had to reach Rome daily, not only from the eleven coastal cities, but also from Capri Island, where at least until the year thirty-seven lived first Caesar Augustus Octavian and then Tiberius.

The archaeologist and historian Amedeo Maiuri, studying texts by Tacitus and Suetonius, gave us extracts of thirty dispatches, that the emperor Tiberius from his Palazzo Jovis in Capri sent to his family and to the Senate of Rome.

See the book "Letters of Tiberius from Capri":

...to Antonia (sister-in-law and friend of Tiberius, wife of Drusus Major)

*The blood of the innocents has fallen on me. Apicata, the unfortunate wife of Sejanus, before dying, wanted to reveal to me the true cause of the death of my son Drusus, so that I too would suffer as she had suffered for the torture of her children... Well, Drusus was poisoned by Sejanus, with the complicity of his wife Livilla, to keep him away from me, from my succession, from the empire.*

*A terrible revelation and a terrible mother's revenge. Thus, after eight years, my grief as a father is renewed more bitterly, more inconsolably. Nor will I ever be able to forgive myself for not having been able to defend my son from an unworthy minister and an unfaithful wife.*

*I have locked myself in the most solitary villa in Capri, to be alone, more alone, and more distant from everyone...*

*...to Pontius Pilate, governor of Judea*

*I have read the acts of your praetorium and the trial on the condemnation to crucifixion of a certain Chrestos of Nazareth... I fear, Pontius, that in condemning him you have obeyed more the will of those who hold the keys of the temple and the law of the synagogue in Jerusalem than the power of judge of the law of Rome...*

*...to the Senate*

*The evidence collected, oh conscript fathers, of the betrayal by Agrippina and Nero is so serious and numerous, that to me, in my dual role as head of the family and Head of State, there is nothing left but to apply the same punishment that the divine Augustus would have applied. I have confined Agrippina to the island of Pandataria and Nero to that of Pontia*

Of all this, visiting Pozzuoli today, one can still admire monuments of notable archaeological value. In the Rione Terra, there is the Roman temple of the Capitoline Triad, Jupiter, Minerva and Juno. This sanctuary is incorporated into the construction of the church of Proculus, the patron saint of Pozzuoli. A true masterpiece of restoration, I would say unique in its kind. The construction was commissioned by Lucius Calpurnius Piso, politician and father-in-law of Julius Caesar and built by the Cuman architect-engineer Lucius Cocceius Aucto, in the first century b.C..



*Entering columns of the church*

Other observable monuments from the imperial era, which due to negative bradyseism, are 28 feet below the sea surface facing Epitaffio point, are the remains of an imposing palace where the emperor Claudius lived. Here with appropriate glass bilge boats, you can see intact the wonderful mosaic floors, and the various sculptures that decorated the Nymphaeus. Among which was found the statues of Antonina Minor, Claudius' mother, and those, later identified, of Ulysses and Bajos.



*Pozzuoli, the submerged area facing the Nymphaeum, where the discovery of statues, of clear Homeric scenography, decorated the entrance*



### *Pozzuoli, the Macellum with the Temple of Serapis*

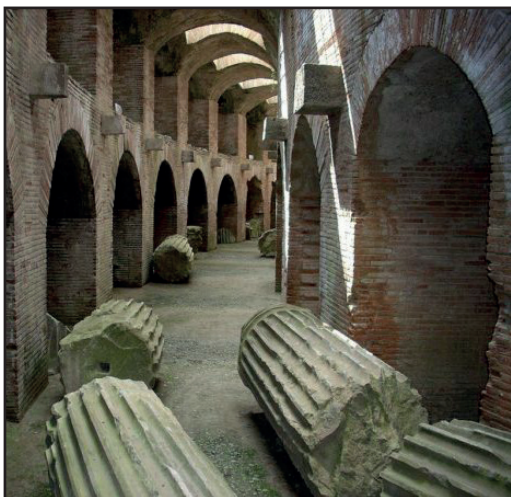


This building Macellum, was the large open-air market, with at the back the temple dedicated to Serapis, an Egyptian-Greek deity combined between Osiris and Apis with the appearance of Zeus introduced by the Ptolemies.

Serapis was a multitasking deity, he was worshipped as Hades-Pluto with Cerberus the three-headed dog guardian of the underworld but also associated with Demeter-Ceres goddess of the harvest, and Dionysus-Bacchus god of wine, ecstasy and liberation of the senses.

Today the popularity of this building is due to the tall columns. Which being periodically flooded by sea water due to bradyseism, have been corroded by molluscs on the surface of the water. This means that by studying the various levels of corrosion it is possible to establish the periods of uplift and down lift of the earth crust.

### *The Amphitheatre of Pozzuoli*



The construction dates back to the rule of the Julio-Claudian gens, from an epigraphic inscription “Colonia Flavia Augusta/Puteolana pecunia sua,” at their expense.

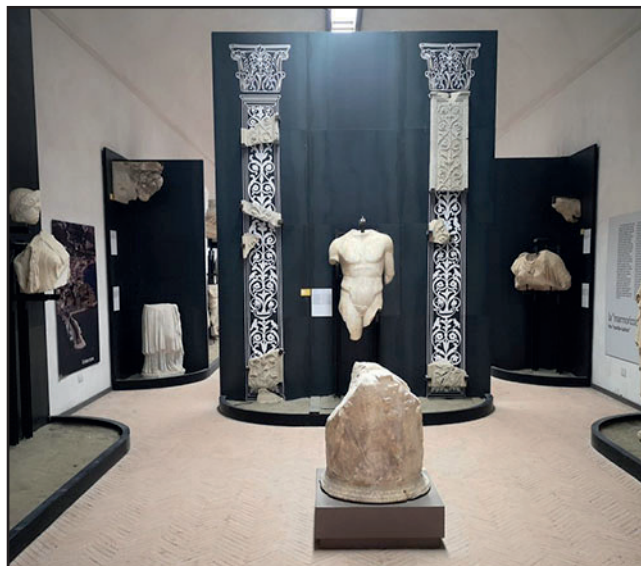
The Amphitheatre could accommodate up to forty thousand spectators considered then the third in the Roman world, after the Colosseum and Capua. The trapdoors on the arena were connected to the underground, through which the beasts were hoisted during the gladiatorial games, just like at the Colosseum.

I close this brief summary, mentioning the magnificent destination of the Phlegraean Fields Archaeological Museum, hosted in the Aragonese castle of Baia.



The visit involves a journey through large halls and corridors where the archaeological finds of Cuma, Baia and Pozzuoli are masterfully in exhibition. The itinerary is enriched by ramps, and suggestive panoramic terraces.

It is said that the Castle was built on the remains of a Roman villa, a maritime residential complex that led from the sea to the top of the promontory with still traces of mosaics.



*One of the Museum rooms*

And finally, a significant dispatch on the emperor Tiberius. It was the year of grace 37, the sixteenth day of the month of March.

From the annals of Tacitus and Suetonius, the emperor Tiberius lives his last day in the palace, once owned by Lucullus Lucius Licinius in Miseno. He had decided to return to Rome, but having arrived a few dozen miles from the gates of Rome, he was struck by bad omens that made him decide to return to Capri.

*...yesterday, around the ninth hour (3:00 p.m.), Tiberius Caesar arrived from Astura (the city of Latina) with the prefect Macro and his adoptive son Gaius Caesar Caligula, ...the strong Libyan wind prevented him from leaving for Capri, ...he was tired and feverish due to, as it was later learned, an attack of pneumonia, ...abruptly freeing his arm from the hand of the doctor who was trying to feel his pulse, he rose to his feet and, standing upright in the middle of the triclinium with the Lictor at his side, received, according to the Roman patriarchal custom, the farewell greeting of each of the guests. Then, exhausted, he fell suddenly at the foot of the kline. He was carried bodily to his cubicle and we never saw him again.*

*He was 78 years old.*

Wrote by the procurator of the villas of Miseno to the procurator of the villas of Capri.

