

THE LATIUM COAST FROM OSTIA TO CIRCEO: SETTLEMENT DYNAMICS IN A PECULIAR CONTEXT

Alessandro Maria Jaia, Laura Ebanista

Abstract: The contribution aims to investigate the settlement dynamics of the Latium coastal stretch of approximately 100 kilometres between Ostia and Circeo. This is a strip characterized by peculiar geomorphological and hydrographic features which have determined the outcomes of settlement dynamics starting from prehistoric times. After the protohistoric settlement process, also defined by the presence of watercourses and basins, the Latin cities developed in the coastal and para-coastal strip and found their economic basis on the control of the landings. Coastal basins and their landing places and watercourses are fundamental elements in the definition of economic processes and territorial control. The fundamental *caesura* of the settlement process for this area is 338 BC. The Roman conquest determined a series of dynamics that will be highlighted in the contribution proposed in the light of the relationships of the urban centres with Rome and with each other. Finally, an example on the settlement dynamics of the southernmost district is presented. It is the area historically known as *Palus Pontina* characterized by a greater thinning out of settlements and by peculiar dynamics.

Keywords: Latium coast; Ancient Topography; Settlement dynamics; Lacustrine areas

Alessandro Maria Jaia, Sapienza University of Roma, Italy, alessandro.jaia@uniroma1.it, 0000-0003-3530-0559

Laura Ebanista, Sapienza University of Roma, Italy, laura.ebanista@uniroma1.it, 0000-0002-2650-7657

Referee List (DOI [10.36253/fup_referee_list](https://doi.org/10.36253/fup_referee_list))

FUP Best Practice in Scholarly Publishing (DOI [10.36253/fup_best_practice](https://doi.org/10.36253/fup_best_practice))

Alessandro Maria Jaia, Laura Ebanista, *The Latium coast from Ostia to Circeo: settlement dynamics in a peculiar context*, pp. 614-625, © 2024 Author(s), CC BY-NC-SA 4.0, DOI: [10.36253/979-12-215-0556-6.53](https://doi.org/10.36253/979-12-215-0556-6.53)

Introduction

The stretch of Latium coast between Ostia and the Circeo promontory is 100 km long (fig. 1) and is characterized by peculiar geomorphological and hydrographic features: low and sandy dune coast and a system of lagoons which in ancient times occupied about half of the entire coast strip [6 and 2, pp. 13-41]. The flat conformation of the coast, which is interrupted only by the modest relief of Capo d'Anzio and by the Circeo promontory on its southern edge, has been decisive in the context of settlement dynamics over the long term.

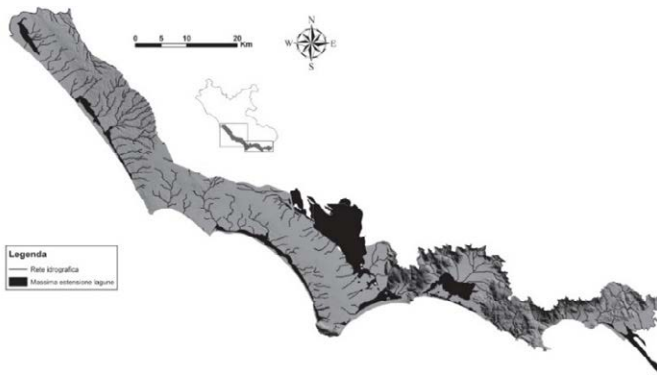


Figure 1 – Southern coastal Latium with maximum extension of the lagoons [2, p. 40].

In the northernmost part of this coastal stretch is the Tiber delta [3, p. 783] where the outermost portion was formed with the solid contributions transported by the river, while the innermost area is a flat territory with altitudes close to sea level which correspond to the area of the ancient lagoons. Immediately further south-east, the coastal strip (fig. 2), characterized by dune sands, is internally contained by pyroclastic flows due to the contribution of the so-called Latium Volcano. The hinterland of Aprilia and Anzio presents a hilly system made up mostly of ancient dune sands which caused, at least until the last reclamation of the last century, strong seasonal swamping phenomena. The so-called «piscine», large depressions, were formed among the dunes that collect the water that does not flow into the sea due to the low slope of the territory [21, p. 23]. More southern, the clastic material due to the activity of the Volcano combined with the contribution of sediments from the watercourses filled the marine basin on the slopes of the Lepini Mountains, determining the formation of the Ancient Red Dune, fundamental element in the formation of the peculiar geological and hydrogeological conformation of the Pontine Plain, characterized by wide marshes, regulated several times over the centuries. The substratum of the plain contains an aquifer fed by the mountain system flowing through the Mesozoic limestone rocks, determining some resurgences (e.g. Ninfa Lake, for example). The minimum slope of the territory, the sometimes-lowest level of the internal soils compared to the external ones, the subsidence of a few centimetres every year, the coastal dune

which often blocks the mouths of rivers and ditches and the lack of continuity in drainage through the centuries has always slowed down the water flow towards the sea generating extensive swamps. In the coastal stretch these marsh areas took the form of narrow and elongated lagoons, parallel to the coast. The lake basins between the Tiber and Anzio have been completely reclaimed and to date there is no trace of their presence in the modern landscape. South of Astura River, however, after the systematic reclamations undertaken in the Pontine Plain several times up to the 1930s¹, only some of the southernmost basins remain today, reduced in size and contained by concrete embankments: Fogliano, Monaci, Caprolace and Paola or Sorresca lakes², for a linear extension of approximately 20 km. The Circeo promontory represents a clear element of *caesura* within this system with its limestone composition (Lower Lias) [4].

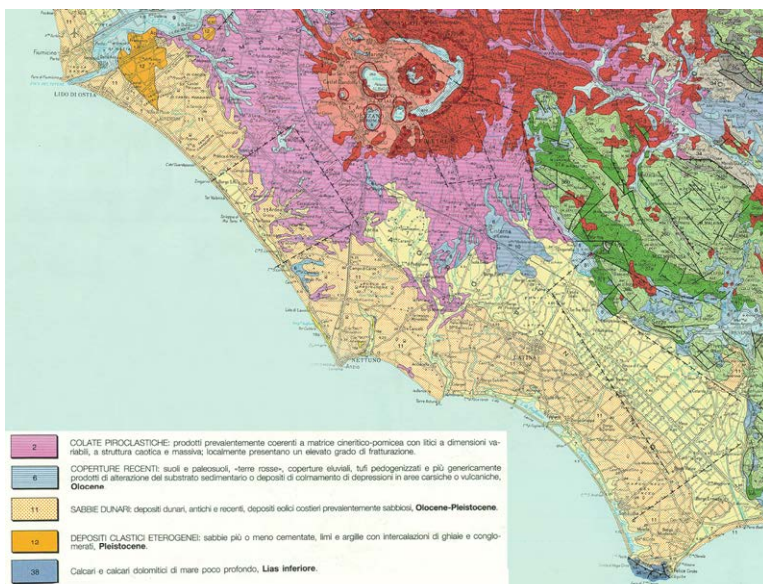


Figure 2 – Lithographic-structural model edited by Regione Lazio, excerpt [4].

The research presented here constitutes the synthesis and the integration of multiple data acquired in the context of territorial research carried out by the

¹ After the reclamations of the Roman age known from ancient sources and after a discontinuous abandonment of the area in the Middle Ages, we remember, among the most important and incisive for the organization of the territory, the reclamation undertaken under the pontificate of Sixtus V in the 16th century and the famous reclamation of Pope Pius VI in the 17th century.

² Paola or Sorresca Lake is the only one not regulated with concrete embankments during the works of the 1930s, but it retains its natural appearance full of inlets.

authors in which survey data on the territory also converge. The aim of the research is the diachronic investigation of the settlement dynamics of this stretch of coast, considering the fundamental relationship between man and the environment in a territory with peculiar characteristics and in which the dominant element is the water: lagoons, rivers, ditches, and historic channellings.

Prehistory and protohistory

Already during the prehistoric age, the population develops along the internal dune system, which overlooked the coastal lagoon, and along the natural waterways. These were slightly raised areas suitable for exploitation for fishing and harvesting. The coast of lower Latium is characterized by the presence of a series of waterways, natural or artificial, which connect the coast with the hinterland, crossing the dune and the lake system.

In the southernmost district examined here as an example, although the Pontinian phenomenon integrally concerns the entire coastal strip, along the western bank of the Astura river, near Quarto delle Cintonare, a deposit attributable to the Lower Paleolithic was identified, further south, on the eastern shore, in the toponym Valle dell'Oro, materials relating to the Upper Palaeolithic. Along the course of the Moscarello ditch in Borgo Maria (Podere La Rosa), were instead materials dating back to the Middle and Upper Paleolithic have been found [19].

Furthermore, the discovery of very abundant lithic industry referable to the Pontinian (Middle Paleolithic) along the entire coastal strip behind the external aeolian dune is decisive in understanding the dynamics of the population. This is material that is largely found in the area corresponding to the ancient lagoon and moved from the internal dune system (whose difference in altitude is now imperceptible) due to the numerous anthropic excavations, fills and natural run-off [9, pp. 35-36, 63, 69, 72, nn. 34S, 87Sa-h e 125S] (fig. 3).



Figure 3 – Hypothesis of the ancient lagoons and river system for the coastline south of Astura with prehistoric finds. 1: Quarto delle Cintonare; 2: Valle d'Oro; 3: Podere La Rosa; 4: Colle Parito; Unnumbered points: lithic Pontinian industry highlighted during the surveys [9].

For the protohistoric age the situation is not extremely dissimilar with the attestation of anthropic frequentation along the waterways and with new attestations along the internal side of the coastal dunes. This phenomenon is documented, starting from the north, in the territory of *Lavinium*, a proto-urban centre with the first attestations referable to the Middle Bronze Age. Here, along the line of the external dunes, concentrations of two types of objects have been identified in several places (fig. 4). The first type includes rough chalice vases, recently identified also in the Caprolace lake area [1] and perhaps attributable to the sea salt extraction process [15]. The second type consists of a series of tuff objects, dating back to the Final Bronze Age 3, worked in the shape of *glandae missiles*, dated within a very broad chronological span, always found in areas connected to lakes, lagoons, and swamps. Examples are known in Latium (along the dunes of Pomezia, Ardea - Torre San Lorenzo, Minturno), in other regions of Italy (Comacchio 3rd century BC, Frattresina Polesine in the context of the Final Bronze Age) and in part of the Mediterranean (e.g. in Greece, to Magoula Balomenou, site of Sarakinos Cave, near Orchomenòs – Boeotia in the context of the Neolithic; Tunisia, Carthage; Turkey, Ulucak, hinterland of Smyrna) [17, pp. 24-25]. It is difficult to identify the function of these objects attested in tuff, stone and pottery but they seem to be either weights for nets of ‘rezzaglio’ type or projectiles for hunting in the swamps [15]. Some unpublished specimens found in Rome in a votive context of the Middle Republican Age in the area of the Circus Maximus have been interpreted as votive slingstones, but the relevant data that emerges is the proximity of the place of discovery to the Tiber River rather than the function, still doubtful³.

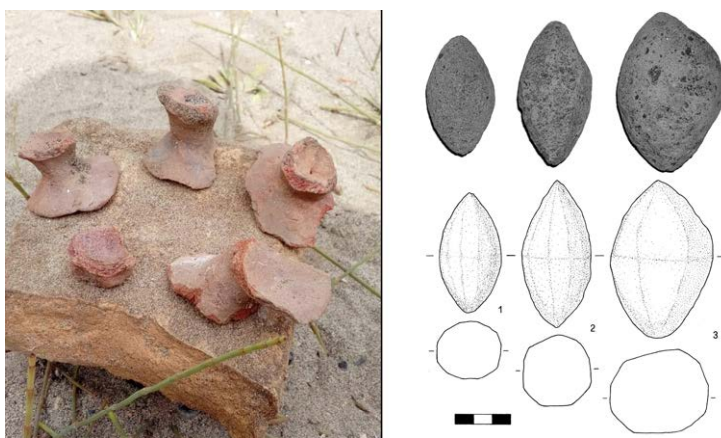


Figure 4 – On the left rough chalice vases attributable to the sea salt extraction process; on the right tuffa object, worked in the shape of *glandae missiles*.

³ Exhibition: The Rome of the Republic. The story of archaeology – Rome 2024 - Capitoline Museums.

Evidence referable to the Bronze Age and the Iron Age are attested near the lagoon overlooking the *plateau* occupied by the proto-urban centre of *Ardea*, findings referable to the Middle Bronze Age 2A in the Tor San Lorenzo area and to the Final Bronze Age at Tor Caldara [2, pp. 58-59; 65-71]. The area that will then be occupied by the urban centre of *Antium* has yielded numerous evidence of attendance starting from the late Bronze Age, as demonstrated by sporadic materials and the excavation of necropolis areas.

The oldest presence on the acropolis of what will later be the city of *Satricum* dates back to the Middle and Recent Bronze Age; starting from the end of the 9th century BC instead, a village of huts is documented [16]. Attendance along the Astura and Moscarello waterways continued in the protohistoric age with dynamics like those of the prehistoric age.

Historical age

After the protohistoric settlement process, also defined by the presence of watercourses and basins, the Latin cities developed in the coastal and para-coastal strip and found their economic basis in the control of landing places. Coastal basins and their landing places and watercourses are fundamental elements in the definition of economic processes and territorial control. The urban centres developed in their internal relationship between the inhabited area and the port (fig. 4).



Figure 4 – Landings and harbor on the coast between Ostia and *Circeii* before the Roman conquest (base: IGM 1:25.000 series 25/v, mosaic).

Considering on the northern limit the mouth of the Tiber, with respect to whose relationship with the city of Rome it is not necessary to dwell, we encounter proceeding in a south-eastern direction: *Lavinium* and the *Sol Indiges* sanctuary at the mouth of the *Numicus* river (Campo Ascolano), Ardea and the *Castrum Inui* sanctuary at the mouth of the Incastro ditch, Colle Rotondo and the Sant'Anastasio ditch, *Antium* and Capo d'Anzio, *Satricum* and the landing at the mouth of the Astura river, *Circeii* and its harbour on the western side of the promontory. In the absence of urban contexts along the coast south of Astura and before the Circeo promontory, the *Clostris* - Rio Martino binomial seems to be a fundamental topographical junction.

Considering that the coast by its natural conformation is without natural ports, in all cases the coastal settlement which act as landing places develops at the mouth of a watercourse: river, ditch or built canal. The use of internal lagoons, as part of a cabotage activity, as a resting place should also be considered in this context.

The difference between the coast north and south of *Antium* is evident, determined by the distinct hinterland with the southern presence of the Pontine plain between the sea and the Lepini mountains. In the archaic and late archaic periods, these two different landscapes corresponded to two different socio-political contexts: to the north the community of the Latins and to the south that of the Volscians, who advanced from the south until settling along the *Antium* - *Satricum* - *Velitrae* axis. In this context, we note the piracy activities that characterize the economy of the Volscians of Anzio which reach as far as the eastern Mediterranean. Even if this "traditional" activity practiced on such a vast scale, seem to be a strong point for the Volscian populations, it is, in reality, an indication of residual economic activities, practiced by communities that control territories that they are unable to make productive reaching in this way the *surplus* of valuable goods they need. Meanwhile the coastal Latin communities of *Ardea* and *Lavinium* and inland (Colli Albani), involved in the continuous wars against the Volscians and in tensions with Rome, also suffered a notable economic stagnation. Not unrelated to this economic regression of the late archaic period is the reduced production panorama of the individual Latin city-states, which also lacked a large and unified market.

The great caesura from a settlement point of view was 338 BC, the year of the Roman conquest of Latium.

Along the entire coastal arc from the Tiber to Circeo there is notable economic growth due to the Roman reorganization: new city *elites* in the historic Latin cities; strong increase in the Viritan distribution of the land; foundation of new *coloniae romanae* (*Antium* and probably Ostia) and the revitalization of the Latin colony of *Circeii*; furthermore, the unification of the markets and the free movement of goods. This period lasted until the late 2nd century BC when the conquest of the Mediterranean, Greece and Carthage brought substantial changes in the economic and political perspective of Rome. The descendants of the *coloni* who widely occupied the countryside of the Latium coast and the early hinterland moved en masse towards more promising territories and markets.

Also in the period following Romanisation, the fate of the Latium coast seems to be divided into two areas with two different outcomes: the one north and south of *Antium*. The construction of Via Appia (312 BC) certainly falls within the scope

of this great mutation (fig. 5). To the north of *Antium* the coast is widely occupied with productive settlements at the mouths of the waterways (on average there is a settlement every 2.5 km). This phenomenon develops to the detriment of the area behind it; the Appia, in fact, passes near the Alban Hills and therefore the area that receives the greatest benefits is precisely the one at the foot of the hills. Meanwhile, the via Appia has a great influence in the Pontine Plain where, after *Cisterna Neronis*, constitutes a straight line that reaches Terracina, cutting across the plain, without crossing any of the urban centres located upstream (*Cora*, *Norba*, *Setia*, *Privernum*), nor downstream (*Satricum*).



Figure 5 – Location of the main centers after the Roman conquest and the construction of the Via Appia (base: GoogleEarth)

The main road artery certainly determined, in the long term, the movement of road traffic to a more internal area, resulting in a loss of importance of the coastal area. If already in the mid-4th century BC, as material data attests, the city of *Satricum* had ceased to exist as an urban centre and its relevance was linked only to cult of the *Mater Matuta*, the episode of the fall of lightning in 207 BC, mentioned by sources⁴, determined the end of use also of the sanctuary. This certainly is contributed to a progressive abandonment of the natural landing place at the mouth of the Astura river. The archaeological data testify a dense population in the immediate hinterland between the Astura river and the Circeo in the

⁴ Liv. *Ab Urbe* 28, 11, 1-3.

Republican age, attested by villas and farms set on the strip, modestly at altitude (30-45 m above sea level), located about 6 km from the modern line of coast. In this southernmost area, whose settlements are further apart due to the natural distance between the waterways, there is evidence, starting at least from the 2nd century BC, of aristocratic residences related to the suburban *otium*.

The production of amphorae seems to attest to how the coastal stretch of lower Latium falls within the Campania economic system rather than the Roman one.

The northernmost place where the production of amphorae is attested is Astura, where a manufacturing workshop producing Greco-Italic amphorae and Dressel 1 is attested in the place where the villa will later be built [18].

Pontine Plain

Below is an example of the Pontine district, a peculiar territory as it is characterized by an extreme distance of urban realities from each other, as well as, as is known, by a particular situation connected to water management.

At a moment that cannot be better defined in the Late Republican period, there was a thinning out of the presence of settlements in this internal area, as demonstrated by the material data relating to surface surveys undertaken in the last 50 years [20; 9, pp. 32, 37-40]. At the same time, however, it is only the places located on the coast, at the confluence of rivers or ditches, that preserve continuity for settlements, even until the late imperial age. Among these, proceeding from the north, the villa of Astura, built on the *insula*, located immediately north of the mouth of the river, the villa located at the mouth of Moscarello ditch, totally destroyed by the rectification undertaken during the regimentation of the 30s of the last century [9, pp. 37-39, 61, n. 8S] and further south, between Fogliano and Monaci lakes, the settlement located at the mouth of the Rio Martino, with phases of occupation from the 1st century BC until at least the 4th century AD, as attested by the funerary inscription of Kamenio, owner of the villa in the late imperial age and there buried [9, pp. 50-56, n. 11F and 12]. The role of these waterways is decisive at this point because they constitute lines of penetration perpendicular to the coast which allow the hinterland to be reached, first up to the via Appia and then, through the foothill route, up to the Lepini centres. This system of waterways is joined by the coastal cabotage system in the lagoons, effectively defining the route systems for this section of the Pontine plain, according to two travel lines: along the coast and from the coast to the hinterland. For the routes along the coast, just think about how the coastal route of the so-called Via Severiana, known, although without a name from the Tabula Peutingeriana. For the stretch between *Astura* and *Circeii* the route integrate road routes and waterways along the coastal lagoons and the canals that connect them (and partially connected them even in ancient times), which essentially follow the path of the Fossa Augusta, a canal with a dual function of disposing of marsh water and navigation from the mouth of the Tiber to Avernus Lake, commissioned by Nero, but left unfinished at his death [13].

It is not a case that all these waterways (natural and artificial) constituted, during all the historical regimentation⁵, part of the hydrographic system for the canalization of water and its flow into the sea, maintaining a topographic value, often also defining boundaries.

The topographic place located at the mouth of the Rio Martino deserves a dedicated mention (fig. 5). It is an area for which there are no attestation of the existence of inhabited centres, in fact, proceeding south of Astura, the first attested urban centre is *Circeii*. From an archaeological point of view, on the southern bank of the canal, probably excavated for the first time as part of the reclamation of Cornelio Cethego in 162 BC⁶, there are the remains of a *villa* with a porticoed area (fig. 6), excavated at the end of the 19th century and documented in a contribution by Elter [14].



Figure 6 – *Clostris - Clostra Romana* in a historical photo from 1934 [AFCB⁷, nn. 1031-1032].

It has already been possible to connect this place with the *statio* of *Clostris* [9, pp. 50-56 and 12]⁸, known in the *Tabula Peutingeriana* as part of the road route identified as the *via Severiana*. The mention of this place made by Pliny⁹ in the list of places in coastal Latium between Ostia and Circeo should be considered. In this review the place is mentioned as *Clostra Romana*, next to the *fluvius Nymphaeus*. The toponym, expressed in the nominative plural in the sense of ‘locks’, rather than as for *Clostris* ‘near the locks’ (dative or ablative), has in itself the significant reference to this place as Roman. Certainly, excluding the hypothesis that this place could fall within the pertinences of *Antium* as proposed by L. Chioffi [7, p. 56 n.

⁵ Reference is made to the papal reclamations of Leo X, Sixtus V and Pius VI, up to the so-called ‘Integral reclamation’ of the last century.

⁶ Liv., *Ab Urbe* 46.

⁷ Archivio fotografico del Consorzio di Bonifica dell’Agro Pontino.

⁸ In this context, the discovery, within the context of nineteenth-century excavations, of an interesting epigraphic document which refers to hydraulic works carried out by one or more people, perhaps imperial prosecutors, is fundamental: [---] *l(ibertus) Phaenippus* + [---] / [---] *opera c]ludentium et substruc[tiones ---] / [---] de sua peq(unia) fac(iundum) cur(avit)*. See *EphEp* 8, 650; *AE* 2011, 225 and [9], pp. 53-54 (=EDR164601).

⁹ Plin., *Nat. Hist.* III, 56-57.

28], it is possible, at this point, to attribute to this place an important value in the context of the definition of the borders. The mouth of the Rio Martino falls in a border area between *Antium*, *Circeii* and *Setia*, getting closer to the latter in terms of geographical distances. In the context it is also very significant that Pliny mentions *Clostra Romana* next to the *fluvius Nymphaeum* in a combination already known for other coastal sites (*lucus Iovis Indigetis / amnis Numicius, Astura flumen et insula*). The Ninfeo river originates from the sub-lake springs of Ninfa Lake and flows into the sea through the Rio Martino. The long history of the Rio Martino artificial canal becomes fundamental at this point in the relationship with the *Clostris - Clostra Romana statio*. The *Nymphaeum*, naturally, does not have a sufficient flow to arrive to the sea without anthropic intervention. It is interesting that its terminal section south of *via Appia*, known as Rio Martino, is the most regulated and re-excavated canal over the centuries, also used in ancient time for the water management of the locks of Fogliano Lake for fish farming and fishing activities [12]. As part of every reclamation for which sufficient documentation is available, it has been used as a water collector, preserving its functional and topographical role; in the most recent reclamation of the 1930s, it constitutes the terminal section of one of the main collectors, the 'Acque Medie' canal. The topographic position of *Clostris - Clostra Romana* must therefore be read in close relation with its watercourse which constitutes the waterway that allowed, overcoming the *Via Appia*, to reach the *via Pedemontana* near Ninfa and, therefore, the Lepini mountain centres (mainly *Norba* and *Setia*). The Plinian definition of 'Romana' could at this point be connected to the definition of a 'limit of roman control', starting from the period following the conquest of Latium, also considering that *Setia* constituted the last Lepine outpost before the Volscian city of *Privernum*. It is no coincidence that even in the most recent changes of ownership (Tuscolo, Frangipane, Caetani families) a link between the Fogliano area and the mountain and piedmont hinterland is maintained.

References

- [1] Alessandri L., Achino K.F., Attema P.A.J., de Novaes Nascimento M., Gatta M., Rolfo M.F., Sevink J., Sottili G., van Gorp W. (2019) - *Salt or fish (or salted fish)? The Bronze Age specialised sites along the Tyrrhenian coast of Central Italy: New insights from Caprolace settlement*, PLoS One Nov 13;14 (11).
- [2] Alessandri L. (2007) - *L'occupazione costiera protostorica del Lazio centromeridionale*. BAR Int. Ser., 1592, Oxford.
- [3] Bellotti P. (2000) - *Il modello morfo-sedimentario dei maggiori delta tirrenici italiani*, Boll. Soc. Geol. It., 119, pp. 777-792
- [4] Bigi G., Cosentino D., Parotto M. (ed.) (1988) - *Modello litografico-strutturale della Regione Lazio*, Roma
- [5] Boni C., Bono P., Calderoni G., Lombardi S., Turi, B. (1980) - *Indagine idrogeologica e geochimica sui rapporti tra ciclo carsico e circuito idrotermale nella Pianura Pontina*, Geologia Applicata e Idrogeologia 15, pp. 204-247.
- [6] Cerreti C. (2003) - *Il quadro geografico del Lazio come base dell'antropizzazione*, Sommella P. (ed.) (2003) - *Atlante del Lazio*, Roma, pp. 1-26.
- [7] Chioffi L. (2018) - *Antium. Noterelle antiatinae*, Anzio.

- [8] Cosentino D., Parotto M., Praturlo A. (ed.) (1998) - *Guide Geologiche Regionali. Lazio*, Roma.
- [9] Ebanista L. (2017) - *Ager Pomptinus I* (Forma Italiae 46), Roma.
- [10] Ebanista L. (2019) - *Water regimentation in the Pontine Plain between Astura and Fogliano in the dynamics of ancient population*, in *Groma* 4 (2019), pp. 1-18.
- [11] Ebanista L. (2020) - *Interventi di regimentazione idrica sul litorale pontino nel corso dei secoli*, in Busana M.S., Novello E., Vacilotto A. (ed.) - *Archeologi nelle terre di bonifica. Paesaggi stratificati e antichi sistemi da riscoprire e valorizzare*, Padova, pp. 63-81.
- [12] Ebanista L. (in press) - *Lo sfruttamento dei laghi come vivai ittici: il caso dei bacini lacustri pontini*, in Barahona, M., Pizzo, A (ed.), *Dighe, argini e sbarramenti: il dominio e la gestione delle acque nell'Italia romana* (Serie Archeologica) - Atti del Convegno Roma 24-27 ottobre 2022.
- [13] Ebanista L. (in press) - *La via Severiana. Questioni di percorrenza in agro pontino*, in Atti dell'VIII Congresso di Topografia Antica in memoria di Giovanni Uggeri, Ferrara, 14-15-16 giugno 2023 (JAT 2024).
- [14] Elter A. (1884) - *Antichità pontine*, *Bullettino dell'Istituto di corrispondenza archeologica* (Roma) 4, pp. 56-79
- [15] Fenelli M., Jaia A.M. (2007) - *Camposelva*, in Belardelli C., Angle M., di Gennaro F., Trucco F. (ed.) - *Repertorio dei siti protostorici del Lazio. Province di Roma, Viterbo e Frosinone*, Firenze, pp. 235-237.
- [16] Gnade M., (ed.) (2007) - *Satricum. Trenta anni di scavi olandesi. Catalogo della mostra Le Ferriere. Latina 26 ottobre 2007 – 29 febbraio 2008*, Amsterdam.
- [17] Jaia A.M. (2010) - *L'area di Lavinium dal Bronzo Medio al Bronzo Finale*, in Jaia A.M. (ed.), *Prima di Lavinium*, Roma 2010, pp.19-25.
- [18] Jaia A.M. (2017) - *Appunti per una storia economica della costa laziale tra Ostia e il Circeo. Approdi e contesti produttivi*, *Scienze dell'Antichità* 23 (2017), pp. 209-221.
- [19] La Rosa M., Milliken S., Peretto C. (1996) - *Il sito del Paleolitico inferiore di Quarto delle Cinfonare (LT): Ambiente paleografico e sfruttamento della selce*, in Atti dell'XI Congresso degli Antropologi Italiani, Isernia 1995, Forlì, pp. 143-154.
- [20] Piccarreta F. (1977) - *Astura - Forma Italiae XII*, Firenze.
- [21] Pompilio F. (2009) - *Carta archeologica d'Italia. Contributi. Aprilia*, Roma.