Writing instruments for managing provincial resources during the Roman occupation of northeast Hispania (2nd and 1st c. BCE)

Oriol Olesti Vila

Department of Ancient and Medieval Studies. Universitat Autònoma de Barcelona

<oriol.olesti@uab.cat>

ABSTRACT

This article analyzes the presence of writing instruments at several archaeological sites of the northeastern Iberian peninsula (current Catalonia), attempting to assess their historical, social, and economic interest (2nd–1st c. BCE). The evidence of the ancient literary sources, as well as the archaeological contexts in which these objects appeared, allow us to interpret these writing instruments as part of the mechanisms of control and recordkeeping deployed by Rome in this territory during the long and complex process of conquest.

KEYWORDS: Styli, seal-boxes, literacy, Romanization, Hispania Citerior, Roman conquest

Over the last 15 years, several excavations have uncovered evidence of the Roman army in NE Hispania during the 2nd and 1st c. BCE. New data from castra, frequently set near the coast, and from strategic outposts connected to the main roads reveal the army's interest in controlling the territory and its indigenous communities.[1] This network included praesidia,

[1] Recent studies with extensive bibliographies are Olesti 2010; Ñaco del Hoyo and Principal 2012, 159–78; Padrós and Ruiz de Arbulo 2015; Morera et al. 2016; Morera et al. 2017; Ñaco del Hoyo 2017; Olesti 2017; Oller et al. 2018.

garrisons stationed at indigenous oppida, in a system that is well known from the sources (e.g., Liv. 21.61, 28.34, 28.42.3; Plut. *Sert*. 6–7). From them, the army was deployed during conflicts, especially the Sertorian and Civil Wars.[2] I will suggest that a significant part of the army in NE Hispania was settled as garrisons inside key indigenous sites, some of them oppida, others road-stations, to control the most important roads, territories, and resources. In peacetime, these garrisons must have been limited in size and their troops would mostly oversee trade, tax, and the exploitation of the main resources: metals, salt, grain, and livestock. The sites often display material culture and structures similar to traditional Late Iberian examples, but in some cases Roman outposts have been confidently identified. They first appear in the middle of the 2nd c. and remain occupied until the second quarter of the 1st c. BCE. Roman militaria and the use of Roman systems of measurement, architectural practices, materials, and techniques (tegulae, opus signinum, or a high level of metallurgy) signal the presence of the army and local *auxilia*, despite the fact that many lacked walls or defensive structures.

Other than by J. Alonso and E. Ble,[3] little research has been devoted to objects from such sites that are connected to writing, making inventories or registries, and seal use – wax tablets, styli in bronze or bone, spatulae for working the wax, seal-boxes, and seal-rings – whether they were occupied by the Roman army, Iberian communities, or both. Such objects indicate that the diffusion of writing and the use of seals occurred very early on, possibly in connection with an official mail service and with a system of registering and inventorying resources of the provincial administration, but also due to the diffusion of new commercial and

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2 Livy (*Per.* 91.13) mentions such an indigenous city, Contrebia Leucada in the Ebro Valley, which was used as a grain center and strategic point during the Sertorian war.

3 Alonso 2013; Ble (2015), who inventoried the styli and seal-boxes from the Iberian northeast as Roman militaria.

economic management customs. The wide distribution of these *instrumenta scriptoria* in civilian and military contexts challenges the traditional view of a limited diffusion of literacy and writing among the indigenous communities and the local population. I intend to analyze the presence of such writing materials as a reflection of the process of integration into the Roman world, and to assess its historical, cultural, and economic aspects.

The objects

Recent typologies have focused mostly on objects from the early Empire onwards, there being few published parallels from the mid-2nd to mid-1st c. BCE. I will therefore use those typologies for my framework.[4]

Instrumenta scriptoria are not always easily identified in the archaeological record and often not properly published: bone styli are frequently confused with hair needles or spindles,[5] bone seal-boxes are sometimes broken and fragmented,[6] wax-smoothing spatulae are rare (and therefore often unidentified), and tabulae (wood tablets) are usually not preserved in Mediterranean lands,[7] while seal-rings, especially the actual gemstones, are not considered part

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4 Feugère 1995; Gostenčnik 2002, 167–74; Božič and Feugère 2004; Andrews 2017; Eckardt 2017, and the database http://artefacts.mom.fr.

5 According to Božič and Feugère 2004, 30, and Ble 2015, 295, bone styli have an expanded knob-head for smoothing the wax, an expanding shank with a max. diam. of 6–10 mm, and a conical point. In some examples the knob-head is replaced by a simple point: Schenk 2008, 482–86. An accentuated point is not justified on a spindle whorl. Spindle whorls appear mostly in domestic contexts, which is not the case for the styli studied here. With the exception of two at Torre dels Encantats and St. Julià de Ramis, all the styli in this study were correctly identified by the excavators.

6 It is likely that seal-boxes were used to seal not only wax tablets, but also coin purses or sacks of cereal: Marshman 2015, 40; Andrews 2017, 435. Except for the hinged cover and box from Camp de les Lloses and Ilerda (both with three holes), the bone seal-boxes studied here have only their covers preserved. Seal-boxes are always hinged, and the body (but not the cover) always has three holes. On average, they measure 3 cm in length.

7 Owing to poor preservation, we cannot differentiate between wax tablets and ink leaf tablets.

of the writing apparatus.[8] At the same time, not all bone-needle fragments are styli and not all rings are signet rings. Nonetheless, a large number of writing instruments have been found on Late Republican sites, often not only within the same area but in close association. This is especially true of seal-rings, usually considered an object of luxury and personal adornment, but which in a military context should be considered a means of identification and authentication.[9] The case of seal-boxes is particularly complex. Seal-boxes were used to protect single seals from damage. They were containers for wax imprints used to seal a range of items, especially written documents. Seal-boxes were small (they range in size from 2 to 5 cm), hinged, with two main parts: a lid, usually decorated, and a base. The base always has between three and five circular perforations, and the lid is usually decorated. The basic shapes are circular, piriform, square, and lozenge, but it is difficult to identify them if they are not complete.

Below, the objects are discussed according to their findspots in Roman cities, military outposts, and Iberian oppida (Fig. 1). The inventory (Table 1) provides references to drawings or published images, archaeological context, chronology, and typological classification.

A. CITIES

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8 Generally, signet rings are correctly identified on sites and have been well studied: Guiraud 1989; Andrews 2017, 423–38.

9 Mayer 2014. Their importance as a legal instrument, protected by law, has also been documented: Paulus (*Sent.* 5.25.1) condemns "anyone who knowingly and maliciously writes or reads publicly, substitutes, suppresses, removes, re-seals, or erases a will, or any other written instrument; and anyone who engraves a false seal, or makes one, or impresses it, or exhibits it" (transl. Scott 1932, 327). Some rings were worn by women and children, but a ring's diameter could depend also on the chosen finger: see Marshman 2015, 97. Pliny (*NH* 33.6) mentions the little finger to wear a ring. This article includes signet rings only from military contexts.

Valentia

Although Valentia (which was perhaps a Latin colony) falls outside our study area, it is of interest. Near the *tabernae* at the forum, the remains of 14 skeletons were found who have been interpreted as executed members of the Sertorian garrison that protected the city when Pompey's army attacked in 75 BCE. Three were found together, separate from the rest, on the pavement of the *porticus*: two males of c. 20 years and one of c. 40 years, are thought to have been the commander with two officers.[10] The destruction levels of the forum yielded three iron signet rings, one bronze ring, five styli (Fig. 2.1–3), one cover of a bone seal-box, and one possible inkwell.[11] Two styli were found in the *horreum* nearby; the bronze ring and one stylus were found near the three skeletons; two signet rings (one with a glass cameo) were found on their amputated left hands, while the other signet ring and seal-box cover (Fig. 2.4) were found on the floor of the *porticus*.[12] It might be significant that the equipment of military *scribae* were present during the last moments of the city when the last of the garrison was being executed.

Emporion (1.2 on Fig. 1)

The Greek city of Emporion was controlled by Rome from 218 BCE. In the first half of the 2nd c. BCE a castrum or *castra hiberna* was set up. Several bone from the 2nd/1st c. BCE were found,[13] as well as nine seal-boxes,[14] but their exact findspots were not recorded. Our research has further identified the bronze cover of a seal-box bearing the name *Sepullius*

10 Ribera 2014.

11 Ribera 2017, 524 and 527, no. 2866s/n.

12 I thank A. Ribera for information on the unpublished seal-box.

13 Božič and Feugère 2004, 27–28.

14 Božič 1998, 145.

and an image of Mercury and the *caduceus*,[15] as well as two Late Republican lead seals with the names of *Philo() M(arci) s(ervus)* and *Sus(as) Sex(ti) s(ervus)*, probably acting on behalf of their owner (*IRC* V, 152–53). Their presence is probably related to either the military occupation or to the fact that Emporion had an important harbor and was the regional capital.

Grave 23 in the indigenous 'Bonjoan' necropolis, a cremation from the Augustan period, yielded a seal-ring, showing its use by the Iberian population.[16] In grave 24 of the 'Les Corts' necropolis, also considered indigenous but, as attested by the presence of weapons, probably linked to *auxilia*, a token or *sigillum*, similar to an unpublished one from Son Espases (Mallorca), was found bearing the inscription *COR*, probably for *Cor(nelius)*.

Tarraco (Tarragona, 1.3 on Fig. 1)

In the excavations (1926–29) of the 2nd-c. BCE levels of the city's forum, 13 bone styli and the bronze cover of a semi-oval seal-box were found in the area of the Late Republican basilica.[17]

Baetulo (Badalona, 1.4 on Fig. 1)

At this Late Republican foundation (c. 70 BCE), 10 bone styli from the 1st c. BCE (Fig. 3.1–10), as well as the cover of a bone seal-box lacking holes, similar to the one from Valentia (Fig. 3.11), were found in excavations in different parts of the city.[18]

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15 *IRC* V 151. This is the only known reference to the *gens Sepullia* in Hispania. A coin (*RRC* 480/27) of P. Sepullius, monetary magistrate in 44 BCE, shows Mercury and the *caduceus* on the obverse and a *caduceus* on the reverse. Similar seal-boxes with the name *Sepullius* were found at Augusta Raurica*:* Furger et al. 2009, 80. For an update, see http://artefacts.mom.fr/en/result.php?id=BTS-4116&find=BTS-4116&pagenum=1&affmode=vign.

16 Almagro 1955, 165; Ble 2015, 293.

17 Ble 2015, 296, fig. 58.

18 I thank E. Gurri (Museum of Badalona) for allowing me to study these materials.

Iluro (Mataró, 1.5 on Fig. 1)

At Iluro, another Late Republican foundation (c. 70 BCE) on the coast of Catalunya, a group of seven bronze seal-boxes was uncovered in 2002 in a domestic context at Carrer de Na Pau dating to c. 50–25 BCE. Several undated bone styli were also found.[19]

Ilerda (Lleida, 1.6 on Fig. 1)

At the Iberian oppidum on the hill 'Turó de la Seu', a series of rooms was built into the SE slope in the first half of the 1st c. BCE. Here V. Sabaté recently found a bone stylus (Fig. 4.1) and two covers of bone seal-boxes (Fig. 4.2–3).[20] The hill fort was abandoned in the mid-1st c. BCE.

Probably at the same time, a new urban center was founded further down the hillside. In this area (La Paeria), a magnificent intaglio seal made in the 2nd c. BCE, engraved with Hercules with bow and arrows, was found in an Augustan context.[21] An unprovenanced bone stylus might date to the Late Republican period.

Ruscino (Perpignan, 1.7 on Fig. 1)

Controlled by Rome from the beginning of the 2nd c. BCE, it is probable that at least before 125 BCE this Iberian oppidum belonged to Hispania Citerior. It received Latin rights

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19 Cela et al. 2003, 36.

20 Sabaté 2020. I thank the author for giving me access to these materials.

21 Pérez 1998, 189–90.

under Caesar in either 49 or 45 BCE, when it was probably promoted to colony.[22] Three bone styli were found: one in a grain storage pit (silo) of the middle of the 2nd c. BCE and two in a silo of the end of that century. These grain storage pits were the traditional way of storing cereals in the Iberian world. Since I. Rebé has pointed out that all graffiti from 2nd-c. BCE Ruscino are in Iberian, we may suppose that these styli were used to write in the Iberian script.[23]

It is not surprising to discover styli and seal-boxes in urban contexts where interactions between local and Italic populations must have been commonplace. Nearly all were harbor cities, places where the exchange of products took place on a frequent basis, and places where Roman garrison troops were stationed. Striking is the presence of *styli* in cities where the indigenous element was dominant, such as Ruscino or Ilerda, but many of these were key locations for the provincial administration.

B. ARMY OUTPOSTS

In recent years, scholars have identified more and more sites as "outposts of integration."[24] They include different categories of settlements, such as castella and roadside centers, where the army was stationed but with many different functions (e.g., military logistics, territorial control, taxation, road supervision).

Ca l'Arnau (Cabrera de Mar, 2.1 on Fig. 1)

On the coast beneath the Iberian hill fort of Burriac, this proto-urban center flourished between the 2nd c. and 80–70 BCE. It presents multiple signs of Roman military presence, such as *militaria*, imported goods, and a Campanian-style bath. Several *domus* show

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22 Christol 2009; Pensabene et al. 2012, 113–16; Espinosa 2014, 16–19.

23 Rebé 2016, 253–62.

24 Ñaco del Hoyo and Principal 2012; Padrós and Ruiz de Arbulo 2015; Pera (supra n.1).

correlations with Roman and south Italian traditions.[25] The more than 50 graffiti from the site, however, are all in Iberian. They include a personal name inscribed *post cocturam* on one of the architectural terracottas in the dome of the baths.[26] Two bone styli were found in the abandonment layers of c. 80 BCE; two possible fragments of others are being studied (Fig. 5.1–2).[27]

As is common at logistics sites, there were signs of metallurgical activity, mostly iron-working, and several lead weights. Alongside its probable function as the winter quarters of a coastal garrison, there is evidence for the production and repair of weapons, purchase and storage of supplies, and minting of bronze coins.

Camp de les Lloses (Tona, 2.2. on Fig. 1)

A cluster of three Italian-style atrium houses, dated between 125 and 75 BCE, lies at a natural crossroads between the interior and the central Catalunyan coast.[28] *Militaria* (including military tokens[29]), a complete *ludus latrunculorum* (board game with tokens), a small altar, a *simpulum*, and a bronze chandelier confirm a military presence alongside the local population attested by Iberian graffiti, handmade pottery, spindle whorls, and, especially, infant burials inside the houses, a well-documented Iberian funerary practice but one that is rare among Italians.[30] A fragment of a Late Republican funerary monument, probably of a commander,[31]

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25 Martín and García 2000.

26 Sinner and Ferrer 2016, esp. 215–19.

27 I thank A. Martín and A. G. Sinner for access to these unpublished materials.

28 Ñaco del Hoyo and Principal 2012, 160–65; Principal *et al*. (supra n.1).

29 See n.143.

30 The inhumation of perinatal infants beneath the pavements of houses was an Iberian tradition, not documented in Hispania in any Late Republican Roman context: Subirà and Molist 2008, 375–76.

31 Rodà 1993.

and an Iberian warrior's funerary stele,[32] probably for an auxiliary soldier, were discovered at a distance of 6 km from the site.

In 'Building B', which housed a *lararium* and a small altar, a bone stylus, a complete bone seal-box, and the hinges of a tabula were found in the same room.[33] Other finds from the house include an iron spatula[34] and two iron seal-rings, one of which was gilded and engraved with a human figure.[35] A jar set on top of a large piece of iron slag in a ritual deposit in an adjacent building[36] should perhaps be interpreted as an inkwell, completing an array of writing utensils in a limited area.

Iron-, bronze- and lead-working are documented. Scales, weights in lead and bronze, and perhaps coin production[37] point to this settlement being an economic and trade center on a main road used to supply the army.[38]

Monteró (Camarassa, 2.3 on Fig. 1)

This strategically located castellum on top of a hill controls the river Segre, which descends from the Pyrenees. A first cluster of structures, to the west, consists of a set of rooms arranged in an L-shape, some with elaborate pavements in *opus signinum* and remains of wall-paintings. The second cluster contained one building and the remains of a perimeter wall which could have functioned as a rampart.[39] Weapons, imported pottery (e.g., Italian amphoras and

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32 Riera 2013, 46–48.

33 Duran et al. 2008, 124.

34 Ble 2015, 297. Possibly the tool published as a toilet set (Duran et al. 2008, 114) is the upper part of a bronze spatula.

35 Duran et al. 2008, 118–19.

36 Duran et al. 2008, 106.

37 Duran et al. 2008, 60–68; Duran et al. 2015, 303 and fig. 6.8.

38 The existence of the road is documented by three milestones: *IRC* I 175–76 and 181.

39 Ñaco del Hoyo and Principal 2012, 165; Noguera et al. 2014, 43.

cookware), weights, and gaming pieces imply a Roman military context, while three lead tablets with Iberian texts indicate the presence of *auxilia*. The documents have been dated to the 2nd c. BCE and interpreted as either a list or a request,[40] indicating some kind of registration activity. Several styli were also found.[41]

Cardona, 'El camp de futbol' (2.4 on Fig. 1)

A group of storage and domestic spaces belonging to a rural settlement, thought to have been a *statio* that was active between c. 150 and 75 BCE and that controlled access to the rock-salt mines of Cardona, was excavated in 2015.[42] There are no indications of ramparts or a defensive system, but only about 1000 m^2 of the site has been uncovered. There are at least four buildings, one of which covers an area of 100 m^2 and has been identified as a warehouse. Most of the fine- and imported tablewares were found in the warehouse, while amphoras and kitchenware were found in the three buildings of the E sector. A foundation deposit was discovered in a pit under the pavement of the warehouse, containing a ritual jar with talus bones, a marble token, three bone styli (Fig. 6.1–3), and the cover of a bone seal-box (Fig. 6.4). This is probably one of the best archaeological examples of finding seal-boxes and styli together. In other rooms, a glass intaglio from a seal-ring, engraved with a deity, and lead weights were found. Of two graffiti, one is in Latin, reading "]*amios*" (possibly for *Paramios*, either a freedman or a slave, given the Greek name), and another is in Iberian, reading "*Ti*."[43]

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40 Ñaco del Hoyo and Principal 2012, 168.

41 Ñaco del Hoyo and Principal 2012, 165. Perhaps a bronze figurine of a female with a conical end-piece on her head (Ñaco del Hoyo and Principal 2012, 167) should be reinterpreted as an elaborate stylus; its large size (17 cm) and its decoration with a human figure find a parallel in an Etruscan stylus from Orvieto (Antikensammlung Berlin, inv. 7265) depicting a schoolboy.

42 Pancorbo et al. [2019].

43 I would like to thank A. Pancorbo and J. Ferrer for information on these unpublished graffiti.

It is significant that the offering of what could be described as a *scriba*'s "desktop set" was made inside the warehouse, at a *statio* at the entrance of the rock-salt mines that managed their exploitation and trade, under the control of the provincial administration. The *scriba* was probably a *stationarius*.[44]

Tossal de Baltarga (Bellver de Cerdanya, 2.5 on Fig. 1)

On top of a hill overlooking one of the most important trans-Pyrenean routes, a *propugnaculum* or *turris* (6 m^2) was erected during the 2nd half of the 2nd c. BCE, replacing an earlier Iberian site from the 4th/3rd c. This settlement contained several associated buildings, one of which was probably a storehouse.[45] Roman *militaria*, such as *clavi caligae* (hobnails from soldiers' shoes) and six *glandae* (sling bullets), indicate that the site was used by the army, while the presence of a local population is documented through, e.g., the handmade pottery (80% of the total), querns, and spindle whorls. The most striking finds have been four *signacula*, of which three during the excavations (in different buildings) (Fig. 7.1–4): a gilded bronze ring with a glass gem engraved with probably a female goddess;[46] a silver ring engraved with an image of an advancing winged male, perhaps Mercury, holding a javelin or *caduceus*; a gilded iron ring (70% silver, 30% gold) very similar to the Roman rings found in the battlefield at Baecula (206 BCE); and an iron ring bearing a gemstone skillfully engraved

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44 Cato, at the beginning of the 2nd c. BCE, mentions the mines rich in iron, silver, and rock salt north of the Ebro (Gell. *NA* 2.22): *Nam cum de Hispanis scriberet qui citra Hiberum colunt, verba haec posuit: "sunt in his regionibus ferrareae, argenti fodinae pulcherrimae mons ex sale mero magnus; quantum demas, tantum acrescit …."* He also refers to the imposition of taxes (*vectigalia*) from iron and silver mines (Liv. 34.21.7), implying the existence of a tax collection system and probably *stationes* (see n.131).

45 Morera et al. 2016, 147–49.

46 Rings with gilded surfaces under the gems, reflecting the light and increasing the visual effect, are mentioned by Pliny (*HN* 33.6.23).

with Achilles and Penthesileia. Gilded *signacula* imply the presence of Roman officers at the site;[47] to have four at a site of limited dimensions and another one at El Castellot, c. 7 km away, is striking. The evidence of an indigenous population might be linked to *auxilia*, given the site's defensive role.

C. IBERIAN HILL FORTS

This study has also identified writing instruments at indigenous sites, mostly oppida, of the 2nd/1st c. BCE.[48] These sites never attained the status of Roman city but remained *peregrinae*. In contrast to Emporion, Tarraco, or Ruscino, most of them were abandoned during the 1st c. BCE and new – Roman – foundations were established within their vicinity (between 4 and 10 km away). While it is possible that garrisons, praesidia, or hiberna were established at these sites, the presence of writing utensils could equally be explained by the diffusion of writing habits among indigenous communities.

Sant Julià Ramis (Girona, 3.1 on Fig. 1)

This 3-ha-large oppidum of the Indiketae dating back to the 6th c. BCE was transformed during the second half of the 2nd c. BCE with a new street grid, city wall, and defenses. A camp with more than 100 silos was established close by at Bosc del Congost. At the top of the oppidum, a Roman-style monument was erected, possibly a temple. The new defensive system, which included a gate in polygonal masonry and a polygonal tower, was

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47 See nn. 112–14.

48 I believe that many oppida have yielded writing instruments that have not been identified correctly, but the situation is changing: a bone stylus has been correctly identified in a 2nd/1st c. BCE silo in the Iberian oppidum of Ca N'Oliver (Cerdanyola, Barcelona). I would like to thank J. Francès for this information.

planned using Roman units of measurement (with multiples of 4 and 10 RF).[49] The gate and several stretches of pavement have been excavated; a bone stylus was found inside the gate's guardhouse.[50]

Burriac (Cabrera de Mar, Maresme, 3.2 on Fig. 1)

This 4th-c. BCE fortified oppidum of 9 ha was the main city of the Laietani. During the 2nd half of the 2nd c. BCE, a new gate in *opus quadratum* was inserted in the city wall, and the urban plan was transformed with new buildings in Roman units of measurement, most of them houses with a silo inside, and sewers. Inside one of the biggest buildings – a warehouse measuring 40 × 13 RF which contained the base of a wine press and 17 dolia – a (now lost) silver stylus with a zoomorphic figure-shaped end, perhaps a dolphin, was found together with the remains of a linden-wood tabula.[51] 'Room III' yielded a bronze cover of a seal-box near a group of six lead weights.[52] Two bronze styli were excavated by the Late Republican gate (1st half of the 1st c. BCE).[53] The oppidum was abandoned between 80 and 50 BCE.

Torre dels Encantats (Arenys, Maresme, 3.3 on Fig. 1)

This coastal oppidum 15 km north of Burriac was founded in the 4th c. BCE and occupied until the mid-1st c. BCE. The main excavations date from the 1950s and 1960s.[54] In

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49 Burch et al. 2011, 120.

50 Burch et al. 2011, 126 and 135.

51 Barberà and Pascual 1979–80, 229. This is a rare occurrence where remains of a tabula were preserved in direct archaeological relationship with a stylus.

52 Ribas and Lladó 1977, 161, fig. 8.

53 I would like to thank J. Garcia for this unpublished material.

54 Garcés et al. 2013.

layers dated to the 2nd/1st c., two bone styli (Fig. 8.1–2), a possible bronze *calamus*,[55] and a *pondus* stamped with a seal-ring depicting a geometric drawing were found.[56] It is not usual to mark *pondera* in this way, but it has been documented at other Iberian sites under Roman control[57] and could indicate the use of seals to mark and differentiate products and activities (in this case, *pondera* or textile production), implying a system of recording local output. Several Iberian graffiti were also found, as well as one in Latin ("*MAR*") on a piece of Black Gloss pottery, probably an abbreviated name indicating ownership.[58]

Turó del Vent (Llinars, Vallès Oriental, 3.4 on Fig. 1)

Located on top of a coastal mountain range, this minor Laietanian oppidum from the beginning of the 4th c. BCE was partially destroyed during the Second Punic War. It contained a large number of grain silos and a fortified *horreum* inside its walls. Excavations uncovered Roman, Iberian and Celtiberian weapons, as well as *tegulae*, *imbrices*, and a bronze stylus (Fig. 8.3) from the 2nd c. BCE.[59] Despite this Roman military presence, there are also traces of an indigenous population.[60]

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55 Garcés et al. 2013, 252 and 269. The styli had been interpreted as hair pins, but the pointed end of inv. 10059 has the classical form of type 2A, while the other is of type 1A.

56 Garcés et al. 2013, 234.

57 At Cerro de la Cruz (Almedinilla, Córdoba) (Vaquerizo et al. 2001, 401–4), El Palomar de Oliete (Simón 2016; Simón 2018, 11–30), and Puig Castellar (Sta. Coloma de Gramanet; 3.12 on Fig. 1 and in Table 1), another coastal Laietanian oppidum, in silos at the bottom of the hill (1st half of the 1st c. BCE). At the latter, some were stamped with a gem with an engraved foot (in lateral perspective), others with a female figure seated in front of a tripod: De la Pinta 1993, 146–47, figs. 2.1 and 2.3. A similar, though not identical, female figure was stamped in *pondera* from Alcorisa (Teruel) (Castro 1985, 249), but no direct relationship between the sites, or the *pondera*, is known. Also, generally on *pondera* stamped by gems, see Simón 2012.

58 Garcés et al. 2013, 36.

59 The stylus was found in a layer dated to the early 2nd c. BCE: López et al. 1986, 102, fig. 95.3.

60 Menéndez and Sobrevia 2019.

Torre Roja (Caldes de Montbui, 3.5 on Fig. 1)

This Iron-Age oppidum, like many others, was nearly depopulated during the 2nd c. BCE with the Roman offensive, but was reoccupied and transformed at the beginning of the 1st c. BCE.[61] New buildings and houses were constructed in an indigenous tradition, but Roman techniques were also incorporated, e.g., the organization of the houses around an open courtyard and the use of *tegulae* and *imbrices*. Traces of iron production were found, including a reduction kiln.[62] Inside one of several large warehouses with *dolia* and a possible wine press, a bone stylus was found (Fig. 8.4)[63] in a clearly indigenous context dated to the 1st half of the 1st c. BCE, with handmade pottery, Iberian graffiti, and domestic inhumation of perinatals.

Olèrdola (3.6 on Fig. 1)

Olèrdola was initially a secondary hill fort, c. 50 km north of Tarraco, controlling the road (the future Via Augusta) that crossed the east of the peninsula from north to south. At the end of the 2nd c. BCE, the oppidum was significantly restructured, with the construction of a 148-m-long wall using Roman units of measurement (*decempeda*), a watchtower, and a large cistern.[64] Its gate was fortified with two towers in polygonal masonry with *bossage*. The archaeologists believed the site to be a castellum, occupied by a Roman garrison, probably a cavalry unit (because of the presence of, e.g., spurs and horse harnesses),[65] although others

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61 Fortó and Maese 2011.

62 Fortó and Maese 2011, 132.

63 I would like to thank A. Fortó for sharing this unpublished information.

64 Molist 2014, 235.

65 Molist 2014, 230. Spurs appeared, e.g., at the Roman camp at Cáceres el Viejo: Heras 2014, 157. Spurs are also documented in Iberian contexts: Pachón et al. 2008. In the case of Olérdola, Sorba, and Camp de les Lloses, the presence of Roman cavalry can be proposed not only from the spurs, but also from the horse harnesses, bridles, and bronze cowbells.

have interpreted it as an example of *hospitium militare*.[66] The site was abandoned c. 30 BCE. Two bone styli and two bone spatulae from early 1st-c. contexts were found close to the gate, in association with lead weights and plumb bobs.[67] A Late Republican silver Roman seal-ring, found in a medieval layer, carries the Latin inscription "*Atius / Fel(ix)*."[68] These names most probably refer to a freedman of the *gens Atia*, an important family in Hispania during Caesar's Civil War.[69]

L'Esquerda (Roda de Ter, Osona, 3.7 on Fig. 1)

Dating back to the 6th c. BCE, this was probably the capital of the Ausetani. It suffered heavy damages during the Punic Wars, but was still occupied during the 2nd and 1st c. BCE. Its defensive system was dismantled during the Roman occupation and the site became a minor settlement with several houses and silos.[70] Inside "House 3" the cover of a bone seal-box (Fig. 9.1) was found.[71]

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66 *Hospitium militare*, the lodging of Roman military in indigenous villages, could be a heavy burden on a community: Principal and Ñaco del Hoyo 2012, 45.

67 Molist 2014, 241, figs. 14.8–9. The bone spatulae have a hole and do not fit within the typology of wax-spatulae.

68 The nominative case of the name implies an order or authentication, not an indication of property (which, as seen for *signacula* stamped in amphoras and pottery, would use the genitive).

69 E.g., Publius Atius Varus was a Pompeian commander in Africa (52–48 BCE) who, after the Battle of Thapsus, was entrusted with the fleet and moved to Carteia (Hispania), where he was defeated and later killed at Munda (44 BCE); Quintus Atius Varus was *praefectus equitum* of Caesar during the Gallic and Civil Wars (Caes. *B Gall.* 3.37). Possibly, a freedman of one of these commanders or of someone of the same *gens* was with the garrison at Olèrdola, as freedmen acting on behalf of their patrons in military logistical contexts have been documented in an inscription from la Cabañeta in the Ebro valley (*Hisp. Ep.* 2032): see Olesti 2014, 129. A freedman of a certain Attius Felix is found in Berenike in 44 BCE: Sidebotham 2011, 72.

70 Ollich et al. 2014, 122.

71 I would like to thank I. Ollich, M. Rocafiguera, and A. Pratdesaba for access to this unpublished material.

Prats del Rei (Sigarra, Anoia, 3.8 on Fig. 1)

Located in an agrarian and pastoral area in central Catalunya, this oppidum from the 5th c. BCE was transformed into the *municipium sigarrensis* during the Roman occupation (1st c. CE). Close to the city wall an Italic temple was erected, probably during the 2nd half of the 2nd c. BCE, of which several columns and blocks survive.[72] Examples of both Roman material culture (e.g., metalware, Italic cooking ware, mortars, and amphoras) and Iberian script have been found.[73] A bone seal-box and a bone stylus have been dated to the 2nd/1st c. BCE.[74]

Sant Miquel de Sorba (Solsonès, 3.9 on Fig. 1)

This village in the foothills of the Pyrenees within the territory of either the Lacetani or the Bergistani specialized in grain storage, as evidenced by a large number of silos *intra muros*. The settlement was transformed during the 2nd and 1st c. BCE, when a new wall and a cistern were built.[75] Weapons, a riding spur, fragments of a horse harness, a *ludus latrunculorum*, and several writing instruments imply, in my opinion, military presence. During the 1930s excavations, five bone styli and the cover of a bone seal-box were found, while more recently a bone stylus, a bronze stylus, and a double wax-spatula were unearthed.[76] This large number of writing instruments might be linked to the site's role as a *horreum*.

El Castellot (Bolvir, Cerdanya, 3.10 on Fig. 1)

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72 Salazar 2018, 40–41.

73 Salazar 2018, 23–25.

74 Salazar 2018, 38.

75 Asensio et al. 2014.

76 I would like to thank D. Asensio and his team for sharing this unpublished information.

Founded during the 4th c. BCE, this minor, 0.6-ha-size oppidum of the Cerretani underwent large restructuring from the mid-2nd c. BCE. A gate protected by two towers and several buildings were built using Roman units of measurement (*decempeda*) and patterns (i.e., larger buildings, symmetrical arrangements, and the use of corridors), as well as grain silos and a metal workshop with evidence of iron, copper, lead, cinnabar, silver, and gold production, the latter possibly linked to the presence of alluvial gold in the region.[77] The fact that 75% of the pottery was handmade suggests an indigenous population, while the metallurgical technology and objects such as a *ludus latrunculorum* and an iron fire starter I believe imply the presence of a Roman garrison. An iron seal-ring (Fig. 9.2) and an iron wax-spatula (Fig. 9.3) were found inside the same building, in a small room with no domestic use, perhaps a scriptorium.[78] At Tossal de Baltarga, 10 km away, another four seal-rings were found, probably in connection with one of the major roads to cross the Pyrenees.

Gebut/Soses (Lleida, 3.11 on Fig. 1)

This oppidum of the Ilergetes was believed to be active between the 6th and 2nd c. BCE, although, while Late Republican objects are known from old excavations, more recently its abandonment has been placed at the end of 3rd c. BCE.[79] In 1844, at a necropolis at nearby Soses, an indigenous grave yielded Iberian coins dated to the 2nd and 1st c. BCE[80] and a silver ring with an onyx cameo depicting a bearded head. It is inscribed with the Iberian non-dual

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77 Morera *et al.* 2017, 419–30; Morera et al. (supra n.1) 146–47.

78 House areas on the site average between 40 and 70 m^2 and always have a fireplace. This building had no fireplace and was c. 26 m^2, planned entirely in Roman feet (24 × 12). For the material culture, see Olesti et al. 2018, 139–42.

79 Lopez et al. 2018.

80 Pujol 1890.

text "*sustartike*," [81] probably a personal name, indicating the use of seal-rings in an unambiguously indigenous context.

Torre de la Sal (Castelló, 3.13 on Fig. 1)

During the 2nd half of the 2nd c. BCE this coastal Iron-Age oppidum of c. 10 ha with its associated harbor, 75 km south of the Ebro, was substantially renovated with the construction of, among other buildings, a large horreum, a lime-kiln, a metallurgical workshop, and military barracks.[82] The settlement is located along the Via Herculea, a coastal road. In a Late Republican layer a complete bronze seal-box (Fig. 9.4) and an iron ring, possibly a seal-ring, were found.[83]At the necropolis, in one of several indigenous cremation burials (dated to the 2nd to mid-1st c. BCE), a possible bone stylus, a box in bronze and wood, and a bronze spatula or *spathomele* were found.[84]

Also at numerous Roman outposts, oppida, and urban centers close to NE Hispania, writing instruments have been identified in layers of the 2nd and 1st c. BCE, where similar patterns can be observed.

HISPANIA CITERIOR

Along the E Mediterranean coast, at Son Espases in Mallorca (Palma), a Roman military camp active between 123 and 50 BCE and linked to Quintus Caecilius Metellus' activities (*Strab.* 3.5.1), three bone styli, a bronze double spatula (Fig. 10.1), a gold signet ring

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81 *MLH* III.2, D.11.1 (dated to the 2nd/1st c. BCE). There were two Iberian alphabets, the dual one (from 6th–3rd c. BCE) and the non-dual one (2nd–1st c. BCE), a simplified version of the earlier.

82 Flors 2009.

83 Flors 2009 on CD, Folder 04-Material culture/04 Metal/01 Iberian, image IS032S03-04-01. The iron ring is mentioned only, without specifications. I would like to thank E. Flors for bringing this box to my attention.

84 Marsà 2008, 18–20.

and an inscribed lead *sigillum* were found,[85] while Tossal de la Cala (Benidorm), where a garrison was established, yielded several styli (one of them in a biconical shape) and one seal-ring in bone.[86] At the oppidum at El Monastil (Elda), two bone styli and an iron seal-ring with a gemstone were documented in an indigenous context.[87]

In the Meseta and Castilla regions, several iron styli, a wax-spatula, and a seal-box have been found in the unambiguously military context of the castella surrounding Numantia (Renieblas), all dating to the 2nd/1st c. BCE.[88] Also at Cáceres el Viejo, most likely the castrum of Caecilius Metellus during the Sertorian War, four bone styli, one iron stylus, and a possible iron double wax-spatula have been documented.[89] At the Celtiberian hill fort of Valdeherras-Azafuera, which had a mixed Roman–indigenous population, a seal-ring with an intaglio engraving was found.[90]

Among the indigenous sites in the Ebro river valley that were occupied by or submitted to the army, several show evidence of writing and of stamping *pondera* with seal-rings.[91] The Iberian 0.8-ha settlement at Palomar de Oliete (Teruel) that was destroyed during the Sertorian War contained a large number of Iberian inscriptions,[92] as well as two bone styli[93] and a *pondus* stamped with the Iberian sign *bim* in a regular cartouche.[94] At La Guardia de Alcorisa (Teruel),

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85 Estarellas et al. 2014, 8 and 11. I would like to thank M. Estarellas, J. Merino, and F. Torres for allowing me to study these unpublished materials.

86 Sala 2012, 223.

87 Poveda 1988, 106, fig. 47.

88 Luik 2002, 225, 373; 343, no. R.88.

89 Ulbert 1984, 129–32, pl. 20; 154, pl. 21; 275, pl. 30.

90 Gamo 2018, 262, fig. 76.

91 Simón, forthcoming.

92 Simón 2018.

93 Simón 2018, 24.

94 Simón 2018, 16.

several *pondera* were stamped by a gem with a *planta pedis*; one of them was stamped three times by the same gem, representing a *planta pedis* surrounded by an Iberian inscription (the only known instance of a gem inscribed with Iberian writing), probably a personal name;[95] other *pondera* were stamped with a female figure, similar to the ones from Puig Castellar. Azaila, el Palao, and Alto Chacón also yielded *pondera* stamped with intaglios/gems.[96] Twenty-three styli were found at La Cabañeta (El Burgo de Ebro, Zaragoza), an urban foundation with a partially Italian population that was abandoned after the Sertorian War.[97]

GALLIA TRANSALPINA

At Marinesque (Loupian), 140 km north of the border of Hispania Citerior, a *mutatio* from 100–50 BCE has been identified along the Via Domitia. Excavations have yielded an astonishing amount of glass and 382 coins (90% of which are bronze and 10% silver) inside the building, but no amphoras.[98] Identified originally as a taberna, I believe it was a *statio* because of the presence of several bone styli and the cover of a bone seal-box (Fig. 10.2–3),[99] but also because of its location on the province's main road. A foundation deposit containing only local silver coins has been seen as evidence for indigenous inhabitants.[100] Along the same road, 70 km south of Marinesque and 70 km north of Ruscino, a cover of a bone seal-box[101]

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95 Simón 2012, 308. I would like to thank I. Simón for his help on this subject.

96 Simón 2012.

97 A. Mayayo, forthcoming. Seventeen appeared in a building with silos connected to the extraction of aggregate, but none were found in the *horreum*. Of the graffiti, 20% were in Iberian, 44% in Latin, and 4% in Greek. These unusual proportions probably indicate a Roman origin for most of the inhabitants.

98 Bermond et al. 2016, 69.

99 I would like to thank C. Pellecuer and I. Bermond for unpublished information about the two styli and the cover of a seal-box. More styli have been found recently.

100 Bermond and Feugère 2017, 8.

101 Božič 1998, 145.

and several styli[102] were discovered at the Iberian oppidum at Enserune (Nissan-Lez-Enserune) belonging to the Elisyces, which underwent significant reform in the 2nd/1st c. BCE.

Ninety-nine bone styli, mostly from the 2nd half of the 1st c. BCE, and the cover of a bone seal-box were discovered in Vieille-Toulouse, the main *oppidum* of the *Volcae Tectosages*.[103] Recent excavations in ZAC Niel, a settlement founded in c. 175 BCE in a plain at 3 km from Vieille-Toulouse also unearthed several writing instruments dated to the second half of the 2nd c. BCE.[104] The latter site showed evidence of metallurgical activity of bronze, lead, iron, and gold, as at El Castellot. Despite the fact that it is considered to have had only an indigenous population,[105] I believe the site still had contacts with the Roman army, possibly through the presence of a *praesidium*, a garrison, or Roman army suppliers. Such a hypothesis is supported by the metallurgical activity, the large imports of wine and oil,[106] an intaglio with a representation of Pegasus, *clavi caligae*, "sandwich gold-glass" bowls from Delos, a block of rough glass from the area of Judea and several bronze jars from Piatra Neamț, the latter usually a sign of the presence of Roman soldiers.[107] The discovery of three complete (Gostenènik Type 2) and two broken styli, the cover of a seal-box, the intaglio, three seal-rings (Guiraud type 1B), and a tabula with its wax preserved (found in a well from the end of the 2nd c. BCE),[108] together could be perceived as a *scriba*'s desktop set from a mostly indigenous site with a small Roman presence.

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102 De Chazelles 2000. I would like to thank I. Simón for information on these styli.

103 Demierre 2015, 175.

104 Demierre 2015, 165.

105 Demierre 2015, 171.

106 A recent study of well-documented Late Republican sites in Catalunya identifies imported vessels, such as Greek wine amphoras from Cos or Rhodes, amphoras from Brindisi, Italic mortars, and cookware, which because of their significant numbers are considered supplies for the army, not just commerce or trade: Carreras et al. 2016; Rodrigo et al. 2015.

107 Demierre 2015, 173. The glass block (c. 450 g) was likely used to produce bracelets.

108 From the La Tène D1B-phase: Demierre 2015, 176.

The literary sources

It is impossible to give an exhaustive list of all ancient references to the use of tablets, seal-rings and writing by the Roman army in Hispania (2nd–1st c. BCE); highlighted here are the most significant ones.[109]

Plutarch (*Vit. Ti. Gracch*. 6) mentions how Ti. Sempronius Gracchus, *quaestor* of Mancinus' army in Numantia (137 BCE), recovered his official written accounts that had been stolen by the Numantines: "However, all the property captured in the camp was retained by the Numantines and treated as plunder. Among this were also the ledgers of Tiberius, containing written accounts of his official expenses as *quaestor*. These he was very anxious to recover, and so, when the army was already well on its way, turned back toward the city, attended by three or four companions."[110]We also know of the *praetor* L. Piso, who broke his *anulus aureus* at Corduba during military exercises. When visiting an *aurifex* in the city's forum to replace it, the new ring, weighing a *semiuncia*, was produced in front of the people to avoid any suspicion of fraud (Cic., *Verr.* 2.4.56).

In the army, rings were a way to identify their owners, usually officials and commanders, e.g., when fallen in combat. Livy (23.12) recounts how in 216 BCE, during the Second Punic War, Hannibal Mago brought to the Carthaginian Senate a large number of gold rings (with a combined weight of three *modii*) that he had obtained on the battlefield. He

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109 A full list can be found in Sarri 2018.

110 τὰ δὲ ἐν τῷ χάρακι ληφθέντα χρήματα πάντα κατέσχον οἱ Νομαντῖνοι καὶ διεπόρθησαν. ἐν δὲ τούτοις καὶ πινακίδες ἦσαν τοῦ Τιβερίου, γράμματα καὶ λόγους ἔχουσαι τῆς ταμιευτικῆς ἀρχῆς, ἃς περὶ πολλοῦ ποιούμενος ἀπολαβεῖν, ἤδη τοῦ στρατοῦ προκεχωρηκότος ἀνέστρεψε πρὸς τὴν πόλιν, ἔχων μεθ' ἑαυτοῦ τρεῖς ἢ τέτταρας (transl. Loeb 1921). A 2nd-c. CE papyrus mentions a soldier "*ad praetorium cum librariiss* [sic]" among the *cohors I Hispanorum Veterana Equitata* in Moesia Superior: Bruckner and Marichal 1971, 127, P. 2851.

claimed that such gold rings were worn only by Roman *equites*, and mainly by the *primores*.[111] During the Third Punic War, after Manilius' defeat at Carthage in 148 BCE, Scipio asked Hasdrubal to bury the tribunes. They searched for them among the bodies "recognizing them by their signet rings (for the military tribunes wore gold rings while common soldiers had only iron ones)" (App., *Pun.* 15.104).[112] Although Pliny (*HN* 33.5) writes that Late Republican commanders used iron rings and that widespread use of gold rings came only later, these examples indicate that they were used at least by the Second Punic War.

Many *anuli* also functioned as seals during military operations. Appian (*Pun.* 108) mentions a letter sent to Scipio in 148 BCE by Phameas, an allied commander in Africa, which the messenger "showed to the consul under seal. Breaking the seal, they read as follows: "On such a day I will occupy such a place. Come there with as many men as you please and tell your outposts to receive one who is coming by night." Such was the content of the letter, which was without signature, but Scipio knew that it was from Phameas."[113]Despite the absence of a signature, Scipio's recognition shows that the seals, and thus the seal-rings, must have contained unique images, signs, or symbols that allowed identification of a sender.[114]

Recently, F. Beltran has pointed out the discrepancy between the small number of preserved Latin documents in Hispania, compared to what must have been produced[115] –

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111 Plin., *HN* 33.6 mentions the same fact, specifically the three sacks (*trimodii*) of rings.

112 δ' ἐρευνησάμενος τὰ νεκρά, καὶ ἀπὸ τῆς σφραγῖδος εὑρών ˙χρυσοφοροῦσι γὰρ τῶν στρατευομένων οἱ χιλίαρχοι, τῶν ἐλαττόνων σιδηροφορούντων˙ ἔθαψεν αὐτούς (transl. White 1899).

113 καὶ ὁ μὲν ἐν τῷδε ἦν ἀπορίας, ἐπιστολὴν δέ τις ἐκ τοῦ Γολόσσου στρατοῦ ἔφερε τῷ Σκιπίωνι. ὁ δ', ὡς εἶχε, σεσημασμένην ἐπέδειξε τῷ στρατηγῷ. καὶ λύσαντες ηὗρον: 'ἐς τήνδε τὴν ἡμέραν ἐγὼ μὲν τόδε τὸ χωρίον καταλήψομαι: σὺ δ' ἐλθὲ μεθ' ὅσων βούλει, καὶ τοῖς προφύλαξιν εἰπὲ δέχεσθαι τὸν νυκτὸς ἀφικνούμενον.' ἡ μὲν ἐπιστολὴ χωρὶς ὀνομάτων τοιάδ' ἐδήλου, συνῆκε δ' ὁ Σκιπίων εἶναι παρὰ Φαμέου (transl. White 1899).

114 The best examples of seal-rings in an archaeological Roman military context are 4 out of 12 iron rings from the battlefield at Baecula (online only: http://www.battlefieldofbaecula.es/baecula-mapa-map).

115 Beltrán 2005.

especially, as E. Garcia Riaza has highlighted, given the importance of writing in the relationship between Romans and indigenous communities during the 2nd and 1st c. BCE. He mentions epigraphic sources such as the Contrebian Bronzes (three plaques in Celtiberian and one in Latin of c. 100–75 BCE) as well as literary references, such as Cato's letters (Liv. 34.17.7) to the NE Iberian communities in 195 BCE and the exchange of letters between Scipio and the Numantines in 133 BCE (App. *Hisp.* 90).[116] Although very few epigraphic examples survive, I believe that the large number of writing utensils from the NE Iberian peninsula confirms the importance of written documents in the daily life of the province.

While there is little data regarding tablets, letters, and seals in relation to civic and economic affairs from Hispania, examples from Gallia Narbonensis exist. All debts, loans, registers, and trade needed to be put into writing in account-books and using seals. Cicero (*Font*. 2.3) refers to the debts recorded in *tabulae*: "No one – no one, I say, O judges – will be found, to say that he gave Marcus Fonteius one *sesterce* during his praetorship, or that he appropriated any out of the money which was paid to him on account of the treasury. In no account-books (*tabulis*) is there any hint of such a robbery among all the items contained in them; there will not be found one trace of any loss or diminution of such monies,"[117] and further that (*Font*. 10–11): "in the time of this *praetor*, Gaul was overwhelmed with debt. From whom do they say that loans of such sums were procured? From the Gauls? By no means. From whom then? From Roman citizens who are trading in Gaul. Why do we not hear what they have got to say? Why are no accounts (*tabulae*) of theirs produced? … All Gaul is filled with traders, full of Roman citizens. No Gaul does any business without the aid of a Roman citizen; not a

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116 Garcia Riaza 2010.

117 *nemo, nemo, inquam, iudices, reperietur qui unum se in quaestura M. Fonteio nummum dedisse, aut illum ex ea pecunia quae pro aerario solveretur detraxisse dicat; nullius in tabulis ulla huius furti significatio, nullum in eis nominibus intertrimenti aut deminutionis vestigium reperietur* (transl. Yonge 1856).

single *sesterce* in Gaul ever changes hands without being entered into the account-books of Roman citizens."[118]

These customs were, however, also employed in private life, as Cicero (*Fam.* 16.26) mentions in reference to his mother: "It was her custom to put a seal (*obsignabat*) on wine-jars even when empty to prevent any being labeled as empty that had been surreptitiously drained."[119]

Who was writing and using sealing instruments, and what were they writing about?

The writing utensils discussed in this research show only limited patterns in their deposition, probably due to the different types of sites (Roman cities, outposts, and oppida). For a third of them, no archaeological context is known and some were found ex situ, in levels of abandonment or in silos (Tossal de Baltarga, Ruscino). In Valentia and Tarraco they were found in the fora, while in other cities (Ilerda, Iluro, and Baetulo) they emerged from private houses. At the outposts, some come from private houses (Camp de les Lloses), public buildings (the *statio* at Marinesque) or even ritual deposits (Cardona). At oppida, several appear at city gates (Olèrdola, St. Julià de Ramis, and Burriac), in a private house (l'Esquerda), and in warehouses (Torre Roja and Burriac). Two signet rings were found in tombs (Emporion and

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118 *Hoc praetore oppressam esse aere alieno Galliam. A quibus versuras tantarum pecuniarum factas esse dicunt? a Gallis? nihil minus. A quibus igitur? A civibus Romanis qui negotiantur in Gallia. cur eorum verba <non> audimus? cur eorum tabulae nullae proferuntur? insector ultro atque insto accusatori, iudices; insector, inquam, et flagito testis. … Referta Gallia negotiatorum est, plena civium Romanorum. nemo Gallorum sine cive Romano quicquam negoti gerit, nummus in Gallia nullus sine civium Romanorum tabulis commovetur* (transl. Yonge 1856). In this case, *tabulae* were used for accounting, but they were also used for short letters and messages. For one used as an *abacus*, see Sarri 2018, 83–84.

119 *sic ut olim matrem nostram facere memini, quae lagonas etiam inanis obsignabat, ne dicerentur inanes aliquae fuisse quae furtim essent exsiccatae* (transl. Shuckburgh 1908–9). Perhaps these sealed jars are a parallel to the stamped *pondera* (cf. n.59), as management and control of domestic production and/or consumption.

Gebut). While domestic contexts dominate, the locations relating to economic activities and access control are hardly surprising.

At Valentia, I believe that the writing instruments were part of the equipment of the Roman commander and two officers. Sallust's account (*Hist.* 3.83) of Sertorius' murder, stabbed while reclining at the table with his two *scribae*,[120] seems to indicate that Roman commanders always had their *scribae* with them (so perhaps, at Valentia, the two younger men were *scribae*); they also always carried their *anuli*, as did Piso in Cordoba.

In other cities, too, the writing utensils were part of the economic and administrative tasks. Cicero's comments about the role of Roman citizens or Italici in business, trade, agriculture, and livestock in Gallia Narbonensis, and about the use of tablets and signet rings, are probably just as applicable to Hispania Citerior.[121] Most of the time, their business is conducted with Gauls.[122] The presence of an iron seal-ring at Emporion in an indigenous grave

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120 Probably the two *scribae* of Sertorius were freedmen; c*ontra*, Purcell 2001, 647.

121 For Gallia Narbonensis, Cicero (*Font.* 19) describes the role of the *civis romanus* and of private companies in the exploitation of provincial resources: "There is not one Roman citizen who thinks he requires any excuse for being eager on this man's behalf. All the publicans of that province, all the farmers, all the grazers, all the traders, with one heart and one voice, defended Marcus Fonteius" (*nemo est ciuis Romanus qui sibi ulla excusatione utendum putet; omnes illius prouinciae publicani, agricolae, pecuarii, ceteri negotiatores uno animo M. Fonteium atque una uoce defendant*; transl. Yonge 1856); and "Nevertheless, induced by acquaintance and intimacy with the man, Quinctius, as I have said, entered into a partnership with him as to those articles which were procured in Gaul. He had considerable property in cattle, and a well-cultivated and productive farm. … As there was some little debt left behind, the payment of which was to be provided for at Rome, this Publius Quinctius issues notices that he shall put up to auction in Gaul, at Narbonne, those things which were his own private property" ((*Quinct.* 3.3): *tamen inductus consuetudine ac familiaritate Quinctius fecit, ut dixi, societatem earum rerum quae in Gallia comparabantur. erat ei pecuaria res ampla et rustica sane bene culta et fructuosa … Cum aeris alieni aliquantum esset relictum, quibus nominibus pecuniam Romae curari oporteret, auctionem in Gallia P. hic Quinctius Narbone se facturum esse proscribit earum rerum quae ipsius erant privatae*; transl. Yonge 1856).

122 Woolf (1994) has pointed out the spread of writing among the Gauls before Roman presence through, e.g., Strabo's account (4.15) of how the Massaliotes taught Gauls to write down contracts. A similar situation might have happened at Emporion.

from the 2nd half of the 1st c. BCE shows that seals were not only used by the Italian and Greek populations and, just as with inscriptions, sealed documents in Iberian must have existed. The two Late Republican lead seals mentioning the slaves *Philo() M(arci) s(ervus)* and *Sus(as) Sex(ti) s(ervus)* are probably connected to families connected to Caesar, the *deductor* of the city.[123] At Tarraco, the writing instruments were found near the basilica in the forum. As the province's capital and a major harbor, the collection and control of the *portoria*, the taxes at provincial boundaries, took place here.[124] Also at Iluro and Baetulo, the presence of writing instruments can be linked to their function as coastal cities, open to maritime trade and supply chains. At Ilerda, the stylus and seal-box were found in the Late Republican structures on the hill, and not inside the lower, Ibero-Roman city. Similarly, at Ruscino the styli come from earlier contexts than the Augustan foundation. The usage of the writing instruments dates in both cases to a phase between the Romanized oppidum and the new Roman city, so indigenous inhabitants as well as new Roman settlers could have been the owners.

For Roman outposts, the question is why so many writing instruments are found there. In line with the example of Tiberius Gracchus above, many scholars have highlighted the enormous number of written documents that the army produced for recording, e.g., supplies, role lists, payments, orders, duties, and appointments, especially between the 1st and 3rd c.

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123 Caesar settled veterans at Emporion in 44 BCE (Liv. 34.9). Publius and Titus Sextius were part of Caesar's army in Gaul. The *gens Marcia* was also connected to Caesar through Quintus Marcius Crispus, one of his military tribunes during the Civil War, or Lucius Marcius Philipus, Caesar's friend and consul in 56 BCE. Related to the seal-box inscribed *Sepullius* (cf. n. 16) might be P. Sepullius Macer, *magister monetalis* in 44 BCE (*RRC* 480/5 to 480/27) for Caesar and M. Antony.

124 Cic. *Verr*. 2.22.74–75 mentions Canuleius, who, as *magister* of a *societas publicanorum* at Syracuse, kept his own *libelli* of the monthly imports by Verres that avoided *portoria* taxes. The *libelli* included commodities such as 400 amphoras of honey, textiles from Malta, and 50 *triclinia*. Even though the accounts were illegal, the written records were extremely precise. Several *scribae*, one of them using a gold ring, were involved in the extortion of local communities, such as at Halaesa (Cic. *Verr*. 2.23.76).

CE.[125] Most of these would have been only for temporary use and written on perishable material. Therefore, the tablets, styli, seal-rings, and seal-boxes at these sites could be indicators of military presence. Some outposts, however, were further occupied by *negotiatiores*, *mangones*, traders, women, indigenous people, freedmen, and *publicani*, especially those connected to the control and management of local resources: rock salt at Cardona; gold, silver, and iron at Tossal de Baltarga; and iron at Camp de les Lloses. Some must therefore have been *stationes* where the provincial administration deployed their *stationarii* and tax collectors and where official communications were sent.[126] Provincial administrative presence would not oppose military presence at the same time, as they could combine their interests. Some scholars have pointed out the connection of these outposts with

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125 Purcell 2001 for a *status quaestionis*. Veg. *Mil*. 2.19: "For the administration of the entire legion, including special services, military services and money, is recorded daily in the Acts (*acta*) with one might say greater exactitude than records of military and civil taxation are noted down in official files. Daily, even in peacetime, soldiers take it in turns from all centuries and 10-man sections to do night-watch duties, sentry duty, and outpost-duties. The names of those who have done their turn are entered in lists so that no one is unjustly overburdened or given exemption. When anyone receives leave of absence and for how many days, it is noted down in lists" (*Totius enim legionis ratio, siue obsequiorum siue militarium munerum siue pecuniae, cotidie adscribitur actis maiore prope diligentia, quam res annonaria uel ciuilis polyptychis adnotatur. Cotidianas etiam in pace uigilias, item excubitum siue agrarias de omnibus centuriis et contuberniis uicissim milites faciunt: ut ne quis contra iustitiam praegrauetur aut alicui praestetur immunitas, nomina eorum, qui uices suas fecerunt, breuibus inseruntur*; transl. Milner 1993). One *scriptorium* is attested archaeologically, in the *principia* of the camp at Bu Njem (Libya): see Cooley 2012, 275. For examples of military documents in France, see France and Nelis-Clément 2014, 204–5. The roles of the *apparitor*, assistant of the commander, and the *quaestor*, responsible for financing the provincial army, could explain part of these documents.

126 Such a concept for the term *statio* (i.e., tax collection point and military post office) has been documented only from the early Empire onwards (when also the word *mutatio* was used). In Caesar (*BG* 6.42) and Livy (6.23.12) the word merely indicates a garrison or military center: see France and Nelis-Clément 2014, 119–20, who nevertheless believe that precedents existed from the end of the 2nd c. BCE. At that time, it might have been called *tabelarius*, as found in the so-called Polla-inscription (*AE* 1956, 00149) regarding the building of a road and accompanying structures by a magistrate: *in ea via ponteis omneis miliarios tabelariosque*.

the logistical needs of the army in the NE and their role in key events, such as the Cimbrian Wars. The number of supplies and *auxilia* that the Roman army required for wars at the end of the 2nd c. BCE, especially in Gaul, explains the exploitation of these sites in NE Hispania.[127] Not all Roman outposts, however, can be linked to this theory, because many were founded around the middle of the 2nd c. BCE and because the needs of the Roman army formed only part of the total requirements: metals, cattle, cereals, and wood were also taxed and collected for provincial revenue, for the interests of *publicani*, and for Rome.[128]

It is probably impossible to distinguish between military and fiscal *stationes* during the Late Republican period,[129] although the absence of military defenses could be an indication, as would be the presence of freedmen. Early imperial tributary *stationes* (linked to the *portoria* or the *vectigalia*) were occupied by freedmen or slaves under the control of the provincial or imperial *procuratores*, a role that in the 2nd and 1st c. BCE had to be performed by *publicani* or even their subordinates.

The presence of writing instruments in the oppida is, however, the most remarkable result of this research. Many indigenous settlements continued under Roman occupation,[130]

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127 Noguera et al. 2014, 40; Ñaco del Hoyo 2017, 31. These scholars use the concept of "war stress" to emphasize the supply needs of the Roman army during the Cimbrian Wars, and their territorial repercussions not only in Gallia Transalpina but also in Hispania Citerior.

128 Some outposts probably also levied the *portoria*. Examples from Gallia include Col du Petit-Saint-Bernard, which was probably a *statio* at the border of Alpis Graia, where 13 styli were found in a building erected during the first half of the 1st c. CE (Crogiez-Petrequin 2016, 118), and Aosta, a *statio* of the Quadragesima Galliarum for the provincial *portoria* (*AE* 1989, 334). At the latter, a tomb from the Flavian period included a complete kit for a *stationarius*, with *instrumenta scriptoria* such as an inkwell, spatula, and *calamus*, but also a weight scale and a bronze abacus: Ronc and Ferreti 2018.

129 Military *stationes* are defined by France and Nelis-Clément (2014, 117, 124) by the presence of *beneficiarii*, officers identified by their seal-rings, as in the iconography of *CIL* III 6601 and in some Early Imperial documents. The presence of *vilici*, freedmen or imperial slaves, or a *tabularium*, might identify *portoria* collection points (France and Nelis-Clément 2014, 205).

130 Olesti 1995; Olesti 2000; Olesti 2017, 65–68.

and the landscape was transformed and adapted (with the appearance of new indigenous farms in the lowlands) but it was still based on indigenous productive patterns in agriculture, rearing of livestock, and trade. The Roman administration employed several systems to control and collect taxes,[131] e.g., by *praefecti* (in this context, military officials) in the oppida.[132] It is clear that the Roman taxation system was still at an early stage, based in part on ad hoc requisitions,[133] but this does not change the importance of local patterns of production. Oppida still controlled and exploited a large part of the land and its resources (especially agriculture and livestock), and the Roman administration drained off some of the surplus. Wheat was their main production, as evidenced by the silos at St. Miquel de Sorba, El Castellot, Burriac, Turó del Vent, Puig Castellar, and St. Julià de Ramis. The presence of writing instruments probably constitutes proof of recording systems, inventories, and the exchange of messages and documents, especially when found in combination with weights and balance scales. As C. Nicolet has pointed out, Rome undertook the inventory of the world, in this case at the oppida, and writing instruments were part of the procedure.[134] Of course, this inventory system was developed by the Roman army and the army's infrastructure was at the base of the taxation system, but the oppida were equally part of the network. In some cases, it is possible to determine the existence of a garrison (such as a *praesidium* or a *hiberna*) at an oppidum and this could explain the presence of writing instruments – Olèrdola is probably the best

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131 Olesti 2010, 434–36.

132 E.g., Liv. 43.2, in reference to the selling of the *vicesima* at a fixed price in 171 BCE. See also Olesti 1995; Olesti 2000; Ñaco del Hoyo 2010.

133 Ñaco del Hoyo 2003, 245–48.

134 Nicolet 1988, chap. 7.

example.[135] But it is also possible to find Roman traders or dependents of the *publicani*, such as freedmen, interacting with the Iberian communities.

Lastly, Iberian people probably also used writing instruments for their own needs, such as trade and management. The expansion of Iberian writing during the 2nd/1st c. BCE implied an increase in the need for recordkeeping and communication,[136] brought on by the interaction between the indigenous people – especially the elites – and the Romans, the integration of the local economy into a Mediterranean framework, and the incorporation of new technologies in agriculture, pottery production, and metallurgy. As evidence for these processes, scholars have pointed at styli found inside wine-warehouses at Burriac and Torre Roja, the *pondera* in Puig Castellar marked by gems, and stamps in Iberian script and with Iberian anthroponyms on local amphoras imitating Dr. 1, mortars, *dolia*, and other types of pottery.[137] Iberian *auxilia*, whose cultural, linguistic, and writing traditions were adapted by participation in the Roman army,[138] played an important role in the diffusion of writing.

As to the question of who was writing, the military presence at most of the sites, including at *stationes* and oppida, implies that members of the Roman army were the main

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135 Evidence of these garrisons could be the fortified gates using Roman units of measurement, as well as double towers and a guard corps at Olèrdola, St. Julià de Ramis, Burriac, and El Castellot. Plutarch (*Sert*. 21.3) refers to such a fortification of an *oppidum*'s gate by Sertorian troops: καὶ γενομένης οὕτω παλιντρόπου τῆς νίκης, ὁ Σερτώριος ἐκείνοις τε φυγὰς ἀδεεῖς μηχανώμενος καὶ τεχνάζων ἑτέραν αὐτῷ δύναμιν συνελθεῖν ἐφ᾽ ἡσυχίας, εἰς πόλιν ὀρεινὴν καὶ καρτερὰν ἀναφυγὼν ἐφράγνυτο τὰ τείχη καὶ τὰς πύλας ὠχυροῦτο, πάντα μᾶλλον ἢ πολιορκίαν ὑπομένειν διανοούμενος, ἀλλ᾽ ἐξηπάτα τοὺς πολεμίους ("therefore Sertorius, contriving a safe retreat for his men and devising the quiet assembly of another force for himself, took refuge in a strong city among the mountains, and there began to repair the walls and strengthen the gates, although his purpose was anything rather than to stand a siege"; [Loeb transl.]).

136 Diaz et al. 2019, 406–10.

137 Ferrer 2008; Olesti 1998; Olesti 2017, 454–55.

138 The increase of writing among Iberians is documented by property names on pottery (Sinner and Ferrer 2016) and adoption of Latin names and adoption of inscribed funerary steles (Riera 2013).

people writing.[139] Contributions and taxes were collected by the provincial administration with the support of the army through this network of outposts and oppida, and the system generated a large number of written documents. *Auxilia* and indigenous *scribae* were also using these writing and sealing instruments, in this way spreading Latin among Iberians.[140]

A second group of people would be Italian traders (e.g., *negotiatores* and *mangones*), landowners, and *publicani* who accompanied the army and provincial administration. In this study, they are probably represented by the freedmen documented at Cardona, Olèrdola, and Emporion.[141] At Camp de les Lloses, Cardona, and Olèrdola, writing instruments were found in the same rooms as lead and bronze weights and sometimes steelyard balances, indicative of measuring and accounting.[142] This could mean that many writing instruments were not used for writing texts but for book-keeping related to the new commercial patterns, taxation, and a monetized economy.

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139 A parallel, despite the difference in chronology, can be found in Roman Britain, where the army was an articulator of the "information flow network" through three elements: the road network, coinage, and written documents (Haynes 2002). Haynes also points out the role of the army in the control of weight standards (Haynes 2002, 124).

140 The same thing happened in the northwest provinces, where the Batavi in the Roman army adopted the use of writing and seal-boxes: Derks and Roymans 2002. I thank G. Woolf for bringing this to my attention.

141 Similarly, at Cartagena a *collegium* of 10 freedmen and slaves (*magistri*) sponsored the transformation of the harbor (*CIL* II 3434 and 5927), while at La Cabañeta two freedmen (also *magistri*) sponsored the erection of a temple linked to the *horreum* (*AE* 2011, 1237): Olesti 2014, 123. At Saguntum, a bilingual (Iberian and Latin) inscription (*MLH* III, F.11.8) records that M. Fabius Isidorus, a freedman, sponsored the construction of a building.

142 Tokens (circular pieces in glass, stone or pottery of c. 2–3 cm diam.) are found often in association with writing instruments, as at, e.g., Cardona (Pancorbo et al., forthcoming), El Castellot (Morera *et al*. [supra n.78] 427), Burriac (Ribas and Lladó 1977, 172), Camp de les Lloses (Duran et al. 2008, 114 and 129), Olèrdola (Molist 2014, 240), and ZAC Niel (Demierre 2015, 172). They are often part of the *ludus latrunculorum*, but could also be associated with inventory, as accounting units or part of an abacus, as at the tomb at Aosta (1989). I would like to thank R. González Villaescusa for this information.

Finally, the presence of these objects in unambiguously indigenous contexts allows us to reconsider the spread of literacy. Given the number of writing utensils, the lack of written documents cannot be considered indicative of a low level of literacy and Latinization among the local communities, both of which are higher and older than expected. The predominance of Iberian texts on pottery (mostly property marks) could be balanced if we accept that documents and writing by indigenous populations are implied by the presence of styli and seals in oppida and at logistical sites where the percentage of Iberian graffiti overshadows the Latin ones. We may never know which language they used on *tabulae* or papyri, but the rapid spread of Latin from the Augustan period onward and the quick disappearance of Iberian is easier to understand if we take into account these missing earlier texts.

Conclusions

The writing instruments in this research date to a turbulent period of occupation and exploitation in the NE Iberian peninsula. From the middle of the 2nd c. BCE the economic and social transformation after the conquest involved deep changes in settlement patterns. Many oppida were transformed using Roman techniques, and both oppida and new indigenous farms were controlled by Roman outposts. The mechanisms for land management, exploitation of local resources, and taxation partly survive in the archaeological record through the diffusion of writing instruments.

From the start of provincial organization, literary sources (Liv. 34.21.7; Gell. *NA* 2.22.28) mention that the first tax control systems were implemented on key resources.[143] Taxation and control imply evaluating and the keeping of records, which require the use of *instrumenta scriptoria*. The function of some sites in this research that yielded writing

[143] Olesti and Mercadal 2017; Pancorbo et al., forthcoming.

instruments was to control these resources: salt at Cardona; gold and silver at El Castellot de Bolvir; iron production at Cabrera de Mar, Camp de les Lloses, Torre dels Encantats, and El Castellot; and cereals at Torre Roja, St. Miquel de Sorba, and Torre de la Sal.[144] A first phase, which took place roughly during the first half of the 2nd c. BCE, was still based on a system of management of resources and populations inherited from the war period, sometimes defined as the "war economy."[145] This system nevertheless further developed strategies that increased key resources, such as agriculture (especially grain and livestock), minerals, and humans (in the form of *auxilia* or even slaves). From the middle of the 2nd c. BCE, however, a more interventionist and dynamic period began, which involved the formation of a network of productive establishments, logistical sites, roadside centers, and garrisons. The sites presented above were part of this network, and most of the *instrumenta scriptoria* identified in this paper belonged to this period, which lasted until c. 50 BCE. This network of *stationes* and garrisons had a double function. On the one hand, it was to guarantee the control and submission of the conquered areas, hence its proximity to the main indigenous oppida and its insertion into the existing road network. On the other, it was to serve as logistical centers for the collection of the natural, productive, and human resources of the territory. Directly or indirectly, the Roman army was present in these logistical centers and its infrastructure was the backbone through which provincial goods circulated, guaranteeing both its own supply and exports to Italy.

Although not always correctly identified by archaeologists, the styli, seal-boxes, wax-spatulae, and signet rings may be archaeological indicators of Roman involvement in the

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144 Recently another iron-smelting atelier was discovered at a Late Republican military site: Pera et al. 2019, 37–38.

145 Ñaco del Hoyo 2003, 194–206. A possible example of population management is the so-called Botorrita Bronze III (*MLH* IV, K.1.3; *Hesperia* Z.09.03), which contains a list of 247 anthroponyms, implying a registry or distribution of an unknown product (perhaps land or silver) or even a list of people affected by an unknown disposition: Beltran et al. 1996.

management of Spanish resources and peoples. This way, the need for control and exploitation contributed to the spread of writing and inventorying among indigenous communities, as well as to the complex mechanisms of cultural integration and Romanization.

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References

Almagro, M. 1955. *Las necrópolis de Ampurias*. *Vol. 2, Necrópolis romanas y necrópolis indígenas*. Barcelona, Seix-Barral.

Alonso, J. 2013. "Cápsulas de sellos en Hispania Romana: Aproximación a una primera clasificación formal." *Sautuola* 18: 213–26.

Andrews, C. 2013. "Are Roman seal-boxes evidence for literacy?" *JRA* 26: 423–38.

Asensio, D., R. Cardona, J. Morer, J. Pou, B. Gilimón, J. Cantero, L. Sánchez. 2014. "Novetats de la recerca en els nuclis lacetans del Castellvell (Olius) i Sant Miquel de Sorba (Montmajor): Les campanyes del 2011 al 2013." In *II Jornades d'Arqueologia de la Catalunya Central*, 104–9. Vic: Museu Episcopal de Vic.

Barberà, J., and R. Pascual. 1979–80. "Burriac, un yacimiento protohistórico de la costa Catalana (Cabrera de Mar, Barcelona)." *Ampúrias* 41–42: 229.

Beltrán, F. 2005. "Cultura escrita, epigrafía y ciudad en el ámbito paleohispánico." *Paleohispánica* 5: 157–74.

Beltran, F., J. De Hoz, and J. Untermann. 1996. *El tercer bronce de Botorrita (Contrebia Belaisca)*. Zaragoza: Diputación General de Aragón.

Bermond, I., and M. Feugère. 2017. "Un dépôt de fondation (monnaies gauloises) sur le site de Marinesque Combe-Rouge à Loupian (Hérault)." *CN* 213: 8.

Bermond, I., M. Christol, M. Feugère, Ch. Pellecuer, Ch., C. Sanchez. 2016. "Marinesque (Loupian, Hérault): Un relais routier sur la voie Domitienne." *Gallia* 73: 69.

Ble, E. 2015. *Guerra y conflicto en el nordeste de Hispania durante el período Romano Republicano (218–45 aC). La presencia del ejército Romano a partir de sus evidencias arqueológicas metálicas*. PhD diss., Univ. de Barcelona.

Božič, D. 1998. "Neues über die kontakte längs der Bernsteinstrasse während Spätlatènezeit." *Arh. Vestnik* 49: 145.

Božič, D., and M. Feugère. 2004. "Les instruments de l'écriture." *Gallia* 61: 21–41.

Bruckner, A., and R. Marichal. 1971. *Chartae latinae antiquores III: British Museum, London*. Lausanne. Urs-Graf-Verlag.

Burch, J., J. M. Nolla, and J. Sagrera. 2011. *Excavacions arqueològiques a la muntanya de St. Julià de Ramis*. *Vol. 4, Les defenses de l'oppidum de Kerunta*. Girona: Universitat de Girona.

Carreras, C., A. Martín, J. Pera, and E. Rodrigo. 2016. "Las ánforas de Brindisi en Hispania Citerior: Pautas de distribución y consumo." *Saguntum* 48: 103–21.

Castro, Z. 1985. "*Pondera*: Examen cualitativo, cuantitativo, espacial y su relación con el telar con pesas." *Empúries* 47: 249.

Cela, X., J. García, and J. Pera. 2003. *Fem arqueología, descobrim la ciutat*. Mataró: Ajuntament de Mataró.

Christol, M. 2009. “Les cités de droit latin en Gaule méridionale.” In *Rome et l’Occident. Gouverner l’empire (II^e siècle av. J.-C.–II^e siècle ap. J.-C.)*, ed. F. Hurlet, 315–58. Rennes: Presses universitaires de Rennes.

Cooley, A. 2012. *The Cambridge Manual of Roman Epigraphy*. Cambridge: Cambridge University Press.

Crogiez-Petrequin, S. 2016. “Alpis Graia (col du Petit-Saint-Bernard, Savoie et Val d’Aoste): Découvertes anciennes et recherches récentes.” *Gallia* 73: 118.

de Chazelles, C.-A. 2000. “Éléments archéologiques liés au traitement des fibres textiles en Languedoc occidental et Rousillon au cours de la protohistoire (VI^e–I^er s. av. n. è.).” In *Archéologie des textiles. Des origines au V^e siècle*, ed. D. Cardon and M. Feugère, 115–30. Monogr. Instrumentum 14. Montagnac. Editions Mergoil.

De la Pinta, J. 1993. “Estampillas sobre producciones cerámicas ibéricas: Una aportación a su catálogo.” *Gala* 2 (1993): 146–47.

Demierre, M. 2015. “Le petit mobilier des fouilles récentes de la ZAC Niel à Toulouse (Haute-Garonne): Chronologie, caractérisation des assemblages et contacts avec le monde méditerranéen.” In *Actualité de la recherche sur les mobiliers non céramiques de l’Antiquité et du haut Moyen Âge*, ed. S. Raux, I. Bertrand and M. Feugère, 175. Monogr. Instrumentum 51. Montagnac. Editions Mergoil.

Derks, T., and N. Roymans, 2002. “Seal-boxes and the spread of Latin literacy in the Rhine delta.” In *Becoming Roman, Writing Latin? Literacy and Epigraphy in the Roman West*, ed. A. E. Cooley, 87–134. JRA Suppl. 48. Portsmouth, R.I. JRA.

Diaz, B., M. J. Estarán, and I. Simón. 2019. “Writing, colonization, and Latinization in the Iberian peninsula.” In *Palaeohispanic Languages and Epigraphies*, ed. A. Sinner and J. Velaza, 406–10. Oxford: Oxford University Press.

Duran, M., I. Mestres, and J. Principal. 2008. *Les colleccions de l'exposició permanent del Camp de les Lloses (Tona)*. Tona: Ajuntament de Tona.

Duran, M., I. Mestres, J. Principal, and C. Padrós. 2015. "El Camp de les Lloses (Tona, Osona): Un post avançat amb tallers metal·lúrgics al servei de la logística de l'exèrcit Romano Republicà (125–75 ane)." *Revista d'Arqueologia de Ponent* 25: 293-307.

Eckardt, H. 2017. *Writing and Power in the Roman World: Literacies and Material Culture*. Cambridge: Cambridge University Press.

Espinosa, D. 2014. *Plinio y los "oppida de antiguo Lacio." El proceso de difusión del Latium en Hispania Citerior*. Oxford: BAR International Series 2686.

Estarellas, M., J. Merino, and F. Torres. 2014. *Roma conquesta Mallorca. Les excavacions a Son Espases*. Palma: Museu de Mallorca.

Ferrer, J. 2008. "Ibèric tagiar: Terrissaires que signen les seves produccions: Biuŕko, ibeitigeŕ, biuŕbedi i compañía." *Sylloge Epigraphica Barcinonensis* 6: 81–93.

Feugère, M. 1995. "Les spatules à cire à manche figuré." In *Provinzialrömische forschungen. Festschrift fur G. Ulbert zum 65. geburtstag*, ed. W. Czysz, 321–38. Espelkamp: Verlag M. Leidorf.

Flors, E., ed. 2009. *Torre La Sal (Ribera de Cabanes, Castellón). Evolución del paisaje antrópico desde la prehistoria hasta el medioevo*. Monogr. Prehistoria i Arqueologia Castellonenques 8. Castelló: Diputació de Castelló.

Fortó, A., and X. Maese. 2011. "La Torre Roja: Un jaciment ibèric i medieval (Caldes de Montbui, Vallès Oriental)." *Tribuna d'Arqueologia 2009–2010*: 113–52.

France, J., and J. Nelis-Clément. 2014. "Tout en bas de l'empire: Les *stationes*, lieux de contrôle et de representation du pouvoir." In *La statio. Archéologie d'un lieu de pouvoir dans l'Empire Romain*, ed. J. France and J. Nelis-Clément, 204–5. Bordeaux: Ausonius Éditions.

Furger, A., F. Wartmann, and E. Riha. 2009. *Die Römischen siegelkapseln aus Augusta Raurica*. Forschungen in Augst 44: SelbstverlagAugusta Raurica.

Gamo, E. 2018. *La romanización de Celtíberos y Carpetanos en la Meseta Oriental*. Madrid: Ediciones del Museo Arqueológico Regional de la Comunidad de Madrid.

Garcés, I., F. Masó, and R. Bruguera. 2013. *Catàleg dels materials arqueològics de la Torre dels Encantats*. Arenys de Mar: Ajuntament d'Arenys de Mar.

Garcia Riaza, E. 2010. "Escrituras de guerra: particularidades de la comunicación textual durante la expansión Romana en Hispania y Galia." In *La praxis municipale dans l'Occident Romain*, ed. L. Lamoine, C. Berrendonner, and M. Cébeillac-Gervasoni, 157–74. Clermont-Ferrand: Presses universitaires Blaise Pascal.

Gostenčnik, K. 2002. *Die beinfunde vom Magdalensberg. Neufunde seit 1989*. Jb. Landesmuseums für Kärnten: Landesmuseums für Kärnten.

Guiraud, H. 1989. "Bagues et anneaux à l'époque Romaine en Gaule." *Gallia* 46: 173–211.

Haynes, I. 2002. "Britain's first information revolution: The Roman army and the transformation of economic life." In *The Roman Army and the Economy*, ed. P. Erdkamp, 121–24. Amsterdam: Gieben.

Heras, F. J. 2014. "El campamento de Cáceres el Viejo y las guerras civiles en Hispania." In *Las huellas de las guerras civiles Romanas en el sureste de Hispania*, ed. F. Sala, 157. Alicante: Universitat d'Alacant.

López, A., J. Rovira, and J. Sanmartí. 1986. *Excavaciones en el poblado Layetano del Turó del Vent. Llinars del vallés. Campañas 1980 y 1981*. Monografies arqueològiques 3. Barcelona: Diputació Provincial de Barcelona.

Lopez, J., N. Alonso, and J. Bernal. 2018. "L'*oppidum* ibèric de Gebut (Soses, Segrià): Avanç dels resultats de la campanya d'excavacions 2017." *Revista d'Arqueologia de Ponent* 28: 247–82.

Luik, M. 2002. *Die funde aus den Römischen lagern um Numantia in Römisch-Germanischen Zentralmuseum*. Bonn: Verlag des Römisch-Germanischen Zentralmuseum in Kommission bei Dr. Rudolf Habelt GmbH.

Marsà, V. 2008. "Fragmento de instrumento musical: Poblado Ibérico de Torre la Sal (Cabanes, Castellón)." *Millars: Espai i Història* 31: 18–20.

Marshman, I. J. 2015. *Making Your Mark in Britannia: An Investigation into the Use of Signet Rings and Intaglios in Roman Britain*. Ph.D. diss, Univ. of Leicester.

Martín, A., and J. García. 2000. "Nuevas aportaciones sobre la Romanización en el territorio de *Iluro* (*Hispania Tarraconensis*)." *Empúries* 52: 29–54.

Mayayo, A. Forthcoming. "Instrumentos de escritura en hueso procedentes de la Cabañeta (Burgo de Ebro, Zaragoza)." In *Cultura material Romana en la Hispania Republicana*, ed. H. Uroz, Albacete XX–XX. XXXX: XXXX.

Mayer, M. 2014. "*Signata nomina*: Sobre el concepto y valor del término *signaculum* con algunas consideraciones sobre el uso de los instrumentos que designa." In *Instrumenta inscripta V. Signacula ex aere*, ed. A. Buonopane and S. Braito, 11–34. Rome: Science e Lettere. Università degli Studi di Verona.

Menéndez, P., and E. Sobrevia. 2019. "El Turó del Vent (Llinars del Vallès, Vallès Oriental): Un nucli d'activitat econòmica especialitzada a la Laietània." *Laietania* 20: 113–23.

Milner, N. P. 1993. *Vegetius: Epitome of Military Science*. Liverpool: Liverpool University Press.

Molist, N. 2014. "La fortificación tardo Republicana de Olèrdola y el control del acceso norte a *Tarraco*." In *Las huellas de las guerras civiles Romanas en el sureste de Hispania*, ed. F. Sala, 235. Alicante: Universitat d'Alacant.

Morera, J., O. Olesti, and J. Oller. 2016. “El control del Pirineo en época Ibérica y Romana Republicana.” In *Fortificaciones y control del territorio en la Hispania Republicana*, ed. J. Pera and J. Vidal, XX-XX. Zaragoza: Pórtico Editores.

Morera, J., *et al*. 2017. “La Cerdanya i l’explotació dels recursos naturals en època antiga: El Castellot de Bolvir y el Tossal de Baltarga.” *ArqueoPyrenae, Treballs d’Arqueologia* 21: 97–126.

Morera, J., et al. 2017. “Actividades metalúrgicas en los Pirineos durante la antigüedad: El yacimiento del Castellot de Bolvir (Cerdanya) y el pueblo de los Ceretanos.” In *Production et proto-industrialisation aux Âges du Fer*, ed. S. Marion, 419–30. Colloque AFEAF 3. Bordeaux: Ausonius Éditions.

Ñaco del Hoyo, T. 2003. *Vectigal incertum. Economía de guerra y fiscalidad Republicana en el Occidente Romano: Su impacto en el territorio (218–133 a.C.)*. BAR S1158. Oxford: BAR International Series.

Ñaco del Hoyo, T. 2010. “Garrisons, military logistics and civil population in the Late Republic: Africa and Hispania.” In *The Western Roman Atlantic Façade: A Study of the Economy and Trade in Mar Exterior from the Republic to the Principate*, ed. C. Carreras Monfort and R. Morais, 145–50. BAR S2162. Oxford: BAR International Series.

Ñaco del Hoyo, T. 2017. “‘Conectividad,’ integración militar y ‘estres bélico’ en el N.E. de Hispania Citerior (c. 125–100 a.C.).” In *Roma en la Península Ibérica presertoriana. Escenarios de implantación militar y provincial*, ed. J. Principal et al., 17–38. Coll. Instrumenta 56. Barcelona: Universitat de Barcelona.

Ñaco del Hoyo, T., and J. Principal. 2012. “Outposts of integration? Garrisoning, logistics and archaeology in N.E. Hispania, 133–82 B.C.E.” In *Processes of Integration and Identity Formation in the Roman Republic*, ed. S. T. Roselaar, 159–78. Leiden: Brill.

Nicolet, C. 1998. *L'inventaire du monde. Géographie et politique aux origines de l'Empire romain*. Paris: Fayard.

Noguera, J., J. Principal, and T. Ñaco del Hoyo. 2014. "La actividad militar y la problemática de su reflejo arqueológico: El caso del Noreste de la Citerior (218–45 a.C.). In *La guerre et ses traces. Conflits et sociétés en Hispanie à l'époque de la conquête Romaine (III^{e}–I^{er} s. a.C.)*, ed. F. Cadiou and M. Navarro, 43. Bordeaux: Ausonius Éditions.

Olesti, O. 1995. *El territori del Maresme en época Republicana (s. III–I a.C.). Estudi d'arqueomorfologia i historia*. Mataró: Fundació Caixa Laietana.

Olesti, O. 1998. "Els inicis de la producció vinícola a Catalunya: El paper del món indígena." In *El vi a l'Antiguitat. Economia, producció i comerç al Mediterrani Occidental*, ed. M. Comas and P. Padrós, 246–57. Badalona: Museu de Badalona.

Olesti, O. 2000. "Integració i transformació de les comunitats ibèriques del Maresme durant els s. II–I aC: Un model de Romanització per a la Catalunya litoral i prelitoral." *Empúries* 52: 55–86.

Olesti, O. 2010. "Urbanització, integració i gestió del territori al nord-est de la Península Ibèrica en època Republicana (s. II–I a.C.)." In *Time of Changes: In the Beginning of the Romanization*, . 11–60 Girona: Universitat de Girona.

Olesti, O. 2014. *Paisajes de la Hispania Romana. La explotación de los territorios del Imperio*. Sabadell: DStoria.

Olesti, O. 2017. "La génesis de la sociedad provincial y el proceso de urbanización en el noreste de la Península Ibérica (siglos II–I a.C.)." *Gerión* 35: 427–59.

Olesti, O., and O. Mercadal. 2017. "L'explotació dels territoris Pirinencs orientals en època antiga (s. VI–I ane)." *ArqueoPyrenae. Treballs d'Arqueologia* 21: 9–47.

Olesti, O., J. Morera, J. Oller, and O. Mercadal. 2018. “Paisatge i territori a la Cerdanya antiga: Novetats arqueològiques al Castellot de Bolvir i el Tossal de Baltarga.” *Tribuna d’Arqueologia 2015–2016*: 139–42.

Oller, J., et al. 2018. “Los Ceretanos y la Iberización del Pirineo oriental (s. IV–III a.n.e.). Una nueva aproximación histórica y arqueológica.” *AEspArq* 91: 183–204.

Ollich, I., M. Rocafiguera, and O. Amblàs. 2014. “L’oppidum ibèric de l’Esquerda: Darreres aportacions i noves línies de recerca.” In *II Jornades d’Arqueologia de la Catalunya Central*, 122. Vic: Museu Episcopal de Vic.

Pachón, J., J. Carrasco, and J. Gámiz. 2008. “Las espuelas de jinetes ibéricas en Andalucía Oriental: el ejemplar del Cerro de las Agujetas, Pinos Puente (Granada).” *Revista del Centro de Estudios Históricos de Granada y su Reino* 21: 21–48.

Padrós, C., and J. Ruiz de Arbulo. 2015. “*Castella* i *praesidia* a la façana mediterrània de la Hispània tardo Republicana.” *Revista d’Arqueologia de Ponent* 25: 229–325.

Pancorbo, A., A. Martín, and O. Olesti. Forthcoming. “La explotación y el control de la sal en época Romana en Cardona (II–I a. n. e.): El yacimiento del ‘Campet de la Sal’.” In *III Int. Congr. Anthropology of Salt. Añaña*, XX–XX. XXXX: XXXX.

Pensabene, P., I. Rebé, and I. Rodà. 2012. “The *marmora* from the forum of *Ruscino* (Château-Roussillon, France).” In *Interdisciplinary Studies on Ancient Stone: Proc. IX Asmosia conf.*, ed. A. Gutiérrez, P. Lapuente, and I. Rodà, 113–16. Tarragona: Institut Català d’Arqueologia Clàssica.

*R*Portico Ediciones.Pera, J., E. Rodrigo, N. Romaní, and C. Carreras. 2019. “Puig Castellar de Biosca (Lleida): Una fortificación Romana del s. II a.C. en el noreste de la Hispania Citerior.” *Gladius* 39: 37–38.

Pérez, A. 1998. “Entallo Romano-republicano de la Paeria, Lleida.” *Revista d’Arqueologia de Ponent* 8: 189–90.

Poveda, A. 1988. *El poblado Ibero-romano de "El Monastil."* Elda: Ayuntamiento de Elda.

.. Barcelona: Universitat de Barcelona

Pujol, C. 1890. "Un anillo ibérico." *Boletín de la Academia de la Historia* 16: 163–69.

Purcell, N. 2001. "The *ordo scribarum*: A study in the loss of memory." *MÉFRA* 113: 647.

Rebé, I. 2016. "Les stylets de Ruscino." In *Studi su Ruscino*, ed. G. Baratta, 253–62. Sylloge Epigraphica Barcinonensis 2. Barcelona: Universitat de Barcelona

Ribas, M., and J. Lladó. 1977. "Excavació d'unes habitacions pre-romanes a Burriac (Cabrera de Mataró)." *Pyrenae* 13–14: 161.

Ribera, A. 2014. "La destrucción de Valentia (75 a.C.) y la cultura material de la época de Sertorio (82–75 a.C.)." In *Las huellas de las guerras civiles Romanas en el sureste de Hispania,* ed. F. Sala, 63–75. Alicante: Universitat d'Alacant.

Ribera, A. 2017. "Contextos cerámicos de Valentia (Hispania) entre su fundación (138 a.C.) y su destrucción (75 a.C.)." In *SFECAG. Actes du Congrés de Narbonne*, 524 and 527, no. 2866s/n. Narbonne: SFECAG.

Riera, R. 2013. "Estelas Ibéricas con lanzas y tropas auxiliares en el nordeste peninsular." *Gladius* 33: 46–48.

Rodà, I. 1993. "Escultura Republicana en la Tarraconense: El monumento funerario de Malla." In *Actas de la 1 reunión sobre escultura Romana en Hispania*, ed. T. Nogales, 207–19. Mérida: Ministerio de Cultura.

Rodrigo, E., C. Carreras, and V. Porcheddu. 2015. "Marques africanes i ròdies de Can Tacó (Montmeló)." *Pyrenae* 46, no. 2: 31–47.

Ronc, S., and L. Ferreti. 2018. "Histoire des premières recherches sur la tombe t. 11 de la nécropole rurale de Saint-Martin-de-Corléans à Aoste." *Bollettino della Soprintendenza Aosta* 14: 62–66.

Sabaté, V. 2020. "*Instrumenta scriptoria* en Ilerda." *Sylloge Epigraphica Barcinonensis* 18: 32-40. Barcelona. Universitat de Barcelona.

Sala, F. 2012. "El litoral de la Contestania Ibérica ante la conquista Romana: Una cuestión de confines en el sureste de Hispania." In *Confines. El extremo del mundo durante la Antigüedad*, ed. F. Prados, I. Garcia, and G. Bernard, 223. Alicante: Universitat d'Alacant.

Salazar, N. 2018. *Segarra-Sikarra*, *Cruïlla entre Ibèria i Hispania*. Prats de Rei: Ajuntament dels Prats de Rei.

Sarri, A. 2018. *Material Aspects of Letter Writing in the Graeco-Roman World*. Berlin: De Gruyter.

KuRsf :Museum Augusta Raurica

Schenk, A. 2008. *Regard sur la tabletterie antique*. *Doc. Musée romain d'Avenches* 15.Laussane: Musée romain d'Avenches.

Scott, S. P. 1932. *The Civil Law*, vol. 1. Cincinnati: The Central Trust Company.

Shuckburgh, E. S. 1908–9. *The Letters of Cicero*. 4 vols. London: George Bell and Sons.

Sidebotham, S. 2011. *Berenike and the Ancient Maritime Spice Route*. Berkeley: University of California Press.

Simón, I. 2012. "La primera inscripción Ibérica sobre una gema (La Guardia de Alcorisa, Teruel)." *ZPE* 181: 303–9.

Simón, I. 2016. "El esclavo refugiado en el altar: Una escena de la comedia griega en un entalle del Palomar de Oliete [Teruel]." In *I Congr. Arq. y Patromonio Aragonés*, 383–95. Zaragoza: Gobierno de Aragón.

Simón, I. 2018. "La epigrafía de El Palomar de Oliete: Cultura escrita en un poblado Ibérico." *Revista d'Arqueologia de Ponent* 28: 11–30.

Simón, I. Forthcoming. "Los estilos de hueso en los yacimientos del Valle medio del Ebro." In *Cultura material Romana en la Hispania Republicana*, ed. H. Uroz, Albacete.

Sinner, A. G., and J. Ferrer. 2016. “Del *oppidum* de Burriac a las termas de Ca l’Arnau: Una aproximación a la lengua y a la identidad de los habitants de *Ilduro* (Cabrera de Mar, Barcelona).” *AEspArq* 89: 193-223.

Subirà, M. E., and N. Molist. 2008. “Inhumacions perinatals múltiples i espais de treball en els assentaments ibers.” In *Nasciturus, infans, puerulus vobis mater terra. La muerte en la infancia*, ed. F. Gusi et al., 375–76. Castelló: Diputació de Castelló.

Ulbert, G. 1984. *Cáceres el Viejo. Ein spätrepublikanishes legionslager in Spanisch-Extremadura*. Mainz am Rhein: Philipp von Zabern

Vaquerizo, D., F. Quesada, and J. F. Murillo. 2001. *Protohistoria y Romanización en la Subbética Cordobesa*. Cordoba 2001: Universidad de Córdoba.

White, H. 1899. *The Roman History of Appian of Alexandria*. London; G. Bell

Woolf, G. 1994. “Power and the spread of writing in the West.” In *Literacy and Power in the Ancient World*, ed. A. K. Bowman and G. Woolf, 84–98. Cambridge: Cambridge University Press.

Yonge, C. D. 1856. *The Orations of Marcus Tullius Cicero.* London: G. Bell.

FIGURES

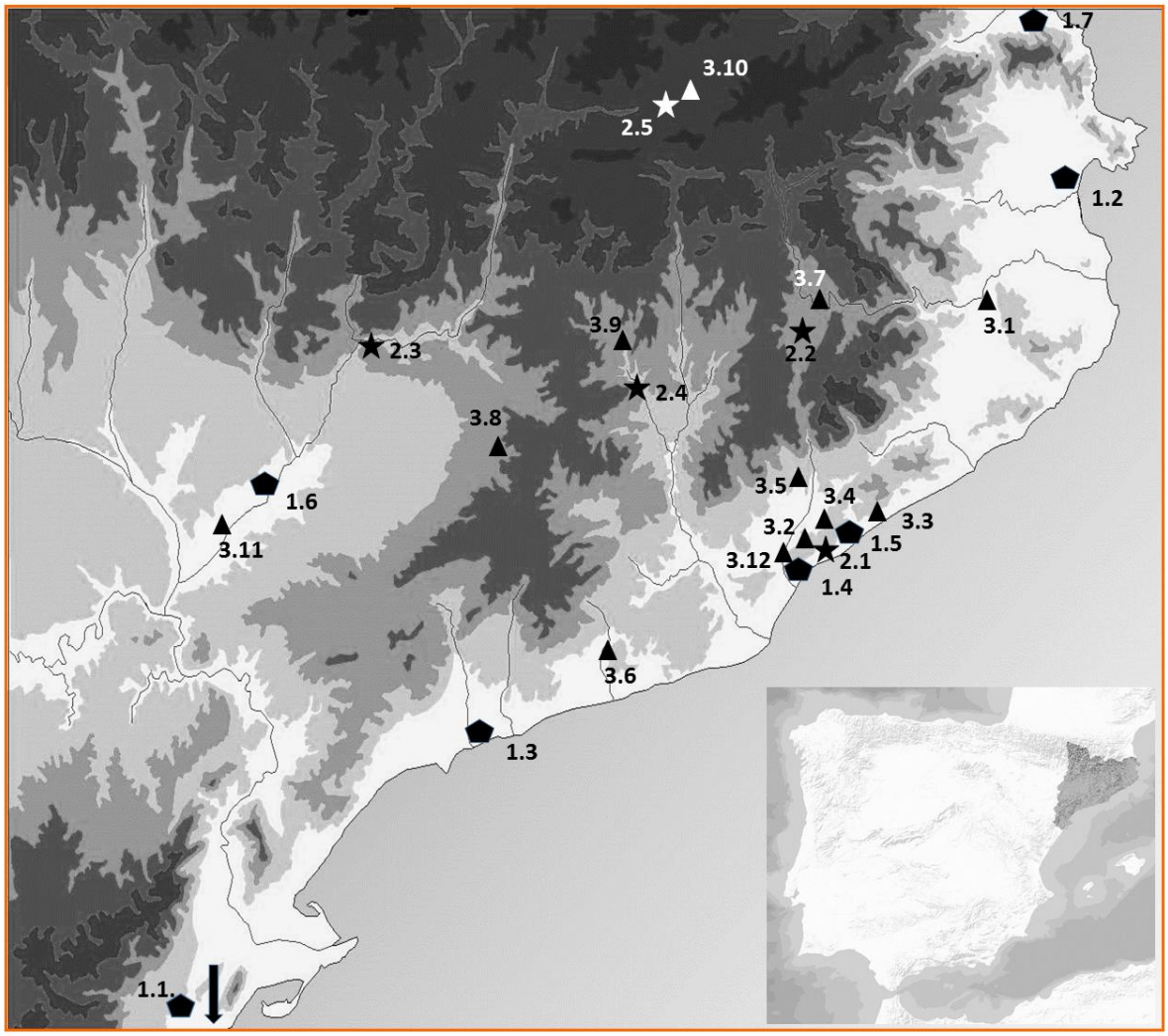

Fig. 1. Map of sites mentioned: ⬟cities ★Roman outposts ▲Iberian hill forts.
1.1 Valentia (off the map to the south). 1.2 Emporion. 1.3. Tarraco. 1.4 Baetulo. 1.5 Iluro. 1.6 Ilerda. 1.7 Ruscino. 2.1 Cabrera de Mar. 2.2 Camp de les Lloses. 2.3 Monteró. 2.4 Cardona. 2.5 Tossal de Baltarga. 3.1 St. Julià de Ramis. 3.2 Burriac. 3.3 Torre dels Encantats. 3.4 Turó del Vent. 3.5 Torre Roja. 3.6 Olèrdola. 3.7 L'Esquerda. 3.8 Prats del Rei (Sikarra). 3.9 St. Miquel de Sorba. 3.10 Castellot de Bolvir. 3.11 Gebut (Soses). 3.12 Puig Castellar de Sta. Coloma. 3.13 Torre de la Sal (Cabanes, Castelló) (off the map to the south).

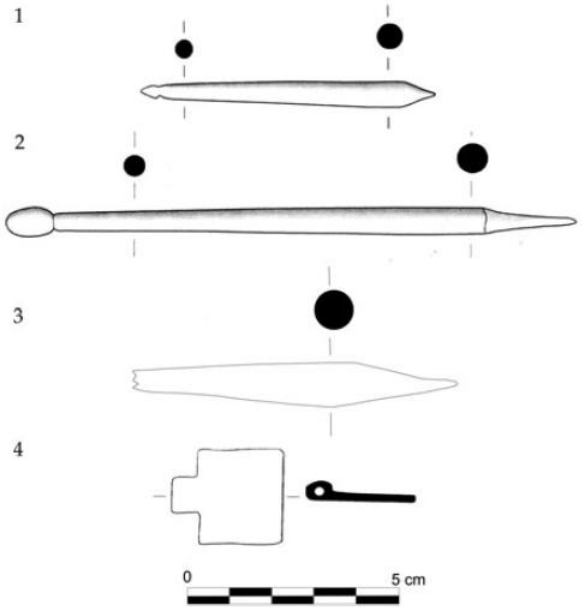

Fig. 2. Writing utensils from Valentia (Drawings by O. Olesti).

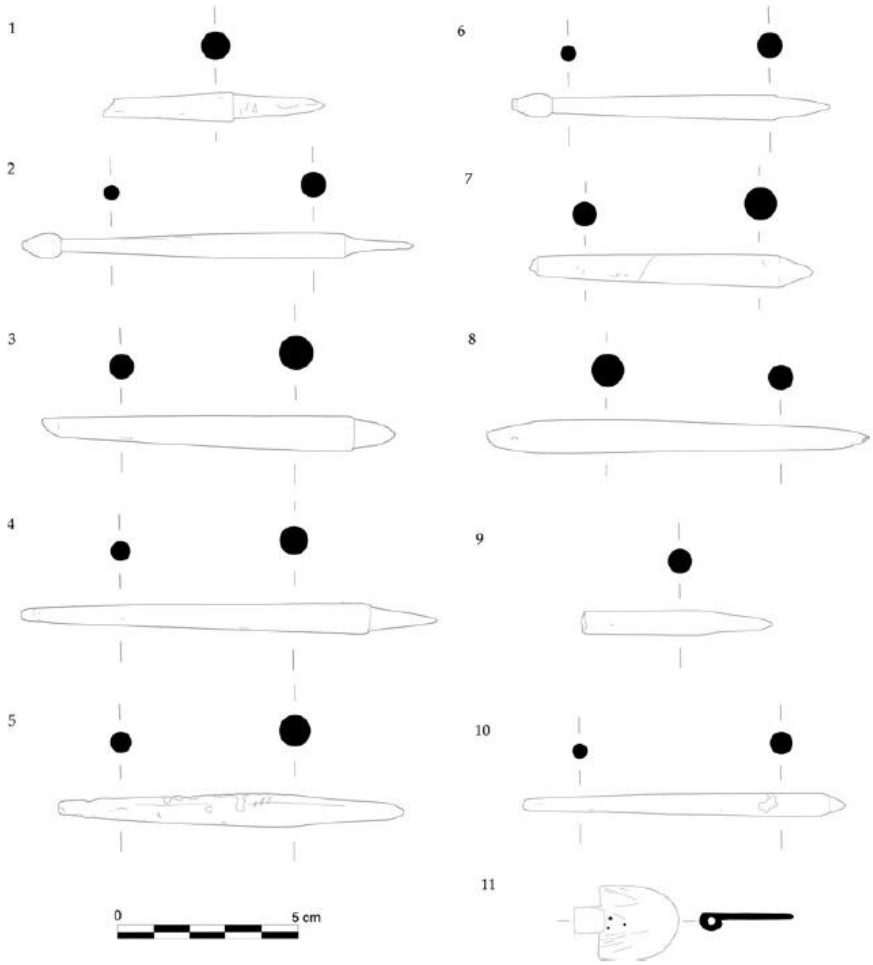

Fig. 3. Writing utensils from Baetulo (Drawings by O. Olesti).

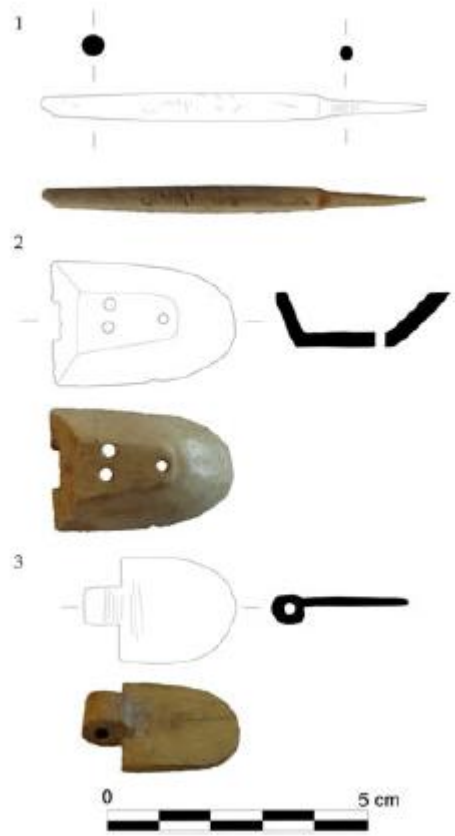

Fig. 4. Writing utensils from Ilerda. (Drawings by O. Olesti. Photos courtesy V. Sabater.)

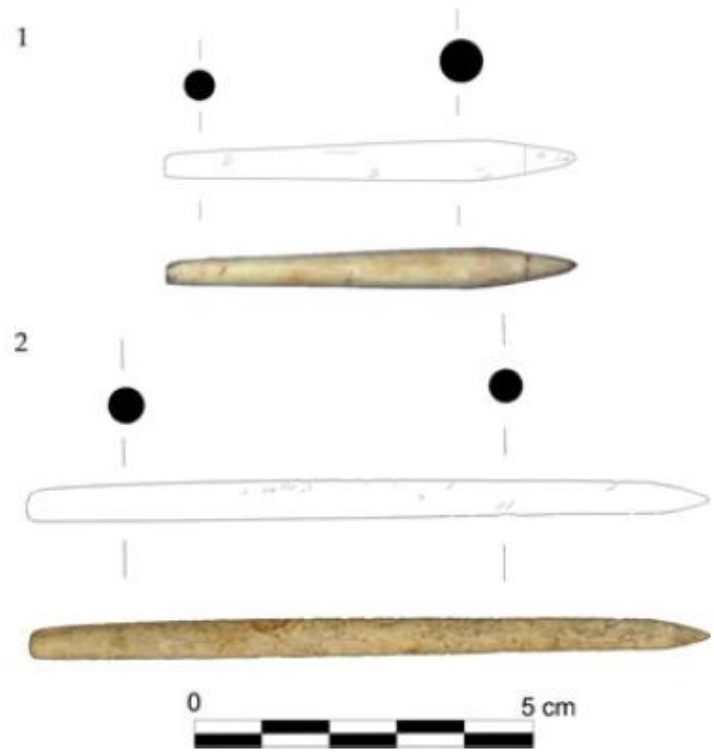

Fig. 5. Writing utensils from Cabrera de Mar. (Drawings by O. Olesti. Photos courtesy A. G. Sinner).

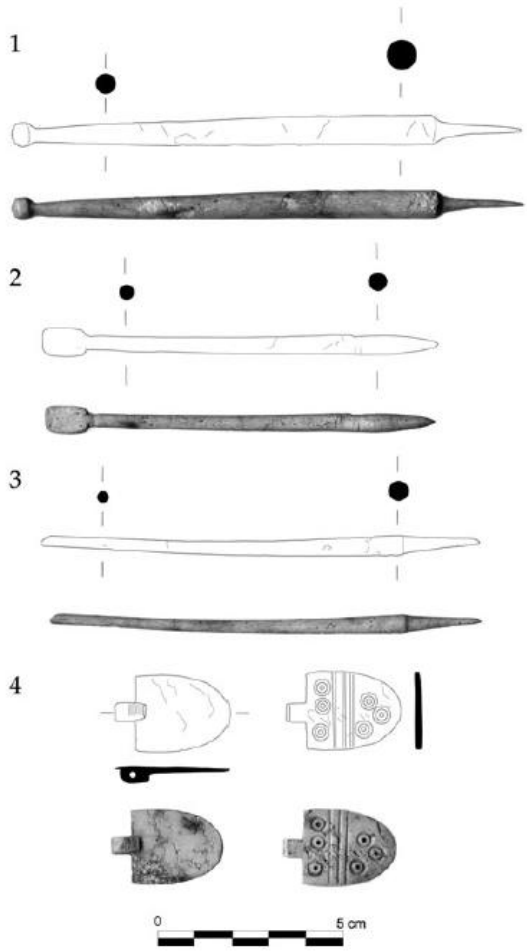

Fig. 6. Writing utensils from Cardona. (Drawings by O. Olesti. Photos courtesy A. Pancorbo.)

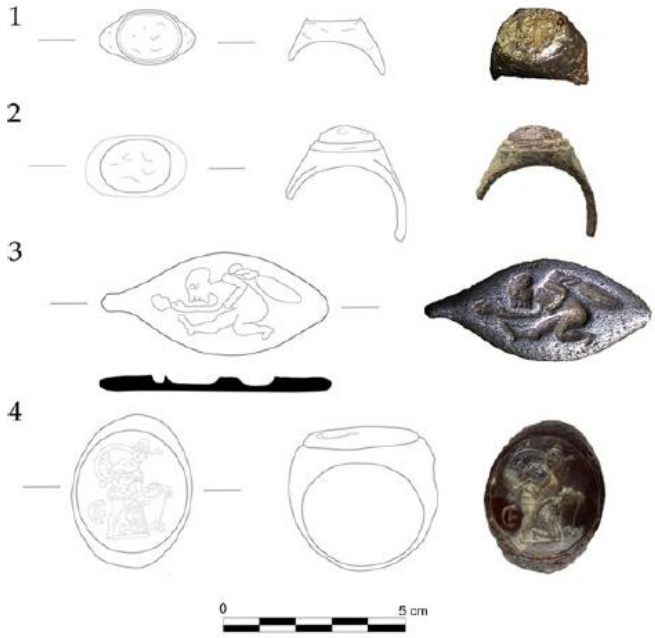

Fig. 7. Seal-rings from Tossal de Baltarga. (Photos and drawings by O. Olesti.)

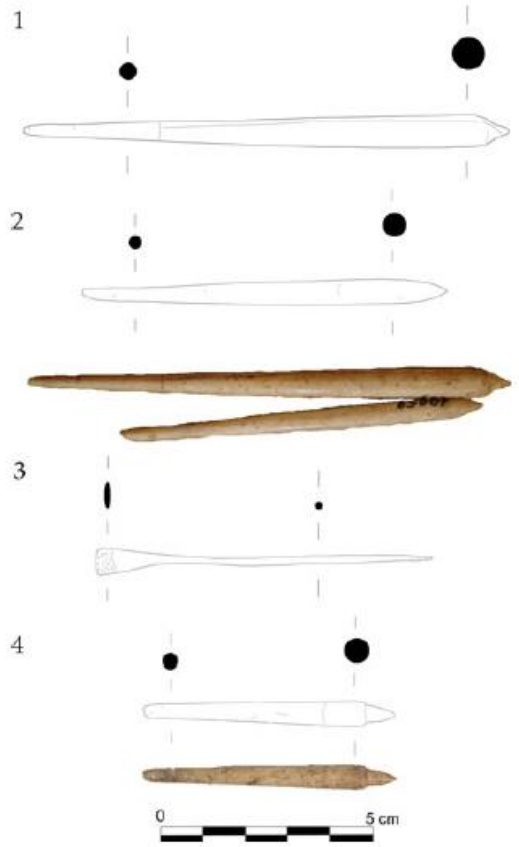

Fig. 8. Writing utensils from Torre dels Encantats, Turó del Vent and Torre Roja. (Drawings by O. Olesti. Photos courtesy Museu d'Arenys de Mar.).

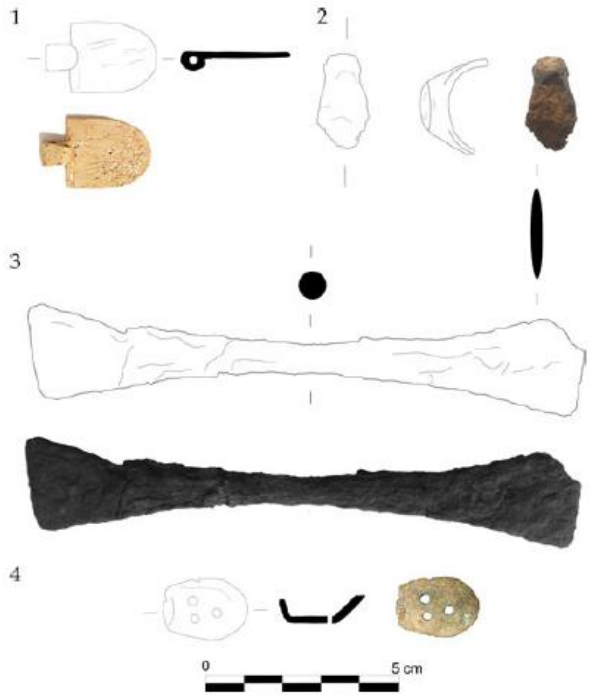

Fig. 9. Writing utensils from L'Esquerda, Castellot and Torre de la Sal (Castelló). (Drawings by O. Olesti. Photos courtesy M. Rocafiguera and E. Flors.)

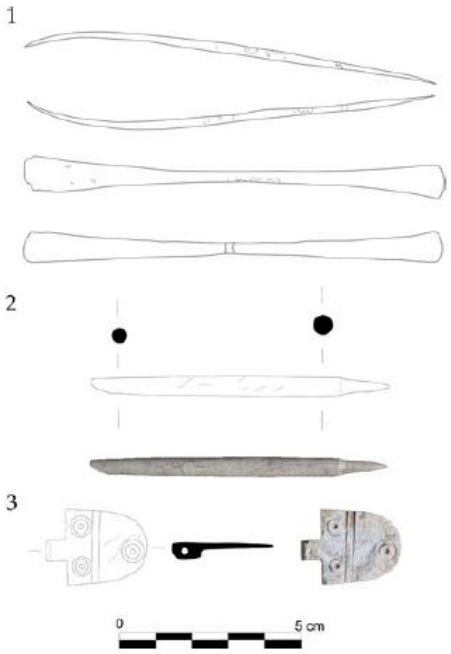

Fig. 10. Writing utensils from Son Espases (Mallorca) and Marinesque (Loupian). (Drawings by O. Olesti. Photos courtesy M. Feugère.)

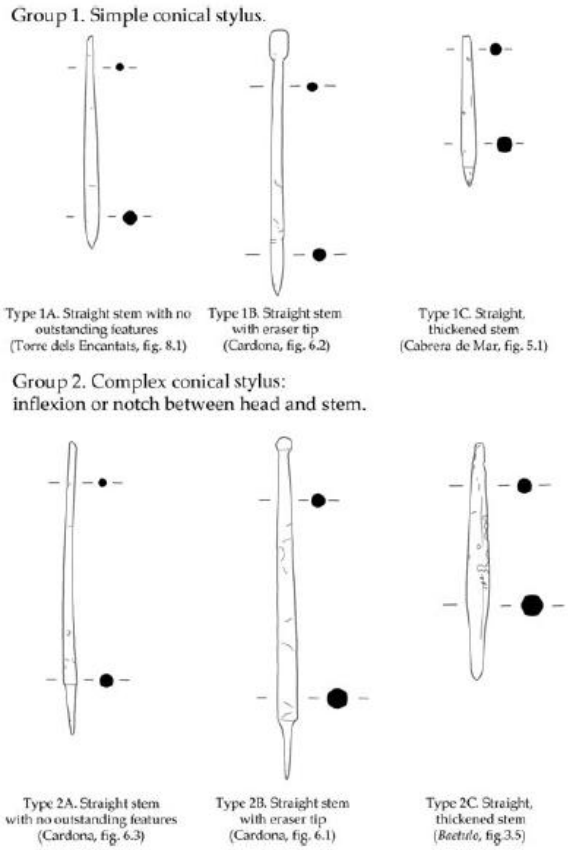

Fig. 11. Author's typology of styli from NE Hispania.