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Coinages and economic practices between the 3rd century and the beginning of the 2nd century BC in temperate Europe

Eneko Hiriart, Tomáš Smělý, Julia Genechesi,
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Introduction

In the Celtic world, numismatic research has mainly focused on the *oppida* civilization (late 2nd-1st century BC), a period during which monetarisation of societies was important, the data is abundant, and archaeological contexts are plenty. Focusing on the 3rd century and the beginning of the 2nd century BC, this article deals with early realities, less commonly studied. So far, most approaches have focused either on specific coinages which have been studied separately, or on targeted regions. The novelty of our approach is to understand the phenomenon of the appearance of coinage on the scale of Celtic Europe.

In order to sketch a transversal view between Gaul and Central Europe, this article is structured in three parts: 1) Chronology. We will look at the difficult dating of the oldest Celtic coins by using new archaeological data and recent studies.[1] 2) Circulation. A first cartographic approach will be carried out on a European scale to study the circulation of the first Celtic coinages. 3) Uses. We should ask ourselves whether the gradual development in the monetarisation of the Celtic economy, the model that is often proposed, is not too simplistic (Wigg-Wolf 2011).

The purpose of this article is not to deliver a comprehensive approach, but to lay the groundwork for common reflection. Our study is made possible by the evolution of knowledge over the last decades, particularly through the development of archaeological excavations and non-destructive elemental analyses that have led to a considerable renewal of our knowledge base.

[1] We would like to express our gratitude to V. Geneviève, E. Paris, and C. Sireix who allowed us to publish data, still unpublished, from recent archaeological excavations.

Reflections on the chronology of the first Celtic coinages

State of the art

A dating focused on typological studies

A common model emerges when studying the appearance of the monetary phenomenon in Celtic Europe: the first coins do not constitute original creations but imitate Greek coins, whose iconography, weight, diameter, and metal they adopt.

Since they have not been discovered in archaeological contexts, the dating of these early coinages has long been based on typological considerations derived from the imitated prototypes which then provide valuable *termini post quos*.[2]

North of the Garonne, it is the staters with types of Philip II of Macedonia which are very widely imitated and which give birth to the first Gaulish gold coins (**fig. 1, n°1-2**). Among the many works devoted to these imitations,[3] we particularly note those of S. Scheers who, in several articles, described and defined this large series of imitations, proposed a cartography of their circulation, and put forward chronologies based on textual sources or the evolution of the coinages' precious metal content (*e.g.* Scheers 1978; 1980; 2004; Scheers, Barrandon 1994). The corpus of 'imitations of the stater bearing the types of Philip II of Macedonia' has recently been revised in all its components (Nieto-Pelletier 2016; Nieto-Pelletier, Olivier 2016; Nieto-Pelletier to be published). The discovery – from the 19th century – of staters with types of Philip II,[4] mainly in France, and the fact that very faithful copies of them were minted in Gaulish workshops,

[2] Unless otherwise specified, this article is a collective work.

[3] The term 'imitation' is to be interpreted here in the strict sense of the term, namely that of faithful copies of Greek-Macedonian coinages. For an overall reflection on the concept of imitation, see Nieto-Pelletier (to be published).

[4] For a recent inventory and a critical examination of the staters bearing the types of Philip II which were discovered in Europe, see Nieto-Pelletier, Olivier 2016, p. 172-189.



Fig. 1.1. Stater of Philip II of Macedonia (© BnF; Luynes 1592); **2**. Imitation of the stater of Philip II of Macedonia (© S. Nieto-Pelletier; Musée de Saintes; M1983.1); **3**. Stater of Alexander III of Macedonia, Athena-Nike type (© ANS; 1965.77.103); **4**. Imitation of a stater of Alexander III of Macedonia, Athena-Nike type (© ANS; 1965.77.161); **5**. Drachma of *Emporion*, Horse-Nike type (© MNAC; 020543-N); **6**. Imitation of the drachma of *Emporion*, Horse-Nike type (© E. Hiriart; BnF 2276); **7**. Drachma of *Rhoda* (© MNAC; 020491-N); **8**. Imitation of a drachm of *Rhoda* (© E. Hiriart; BnF 2318); **9**. Drachma of Marseille (© F. Lontcho; Musée A. Danicourt . Péronne); **10**. Imitation of a drachma of Marseille (© ANS; 1944.100.18009); **11**. Obol of Marseille (© F. Lontcho; Musée A. Danicourt . Péronne); **12**. Imitation of the obol of Marseille (© MAAP Périgueux; L73); **13**. Horse with rosette type, drachma (© T. Smělý); **14**. Horse with rosette type, obol (© T. Smělý); **15**. Athena Alkidemos type, stater (© T. Smělý); **16**. Athena Alkidemos type, 1/3 stater (© T. Smělý); **17**. Athena Alkidemos type, 1/8 stater (© T. Smělý); **18**. Athena Alkidemos type, 1/24 stater (© T. Smělý); **19**. Roseldorf/Němčice type, obol (© T. Smělý); **20**. Androkephales Pferd type, 1/24 stater (© Leu Numismatik AG, Auction 2, 11.5.2018, Lot 14); **21**. Janus type, 1/24 stater (© Leu Numismatik AG, Auction 2, 11.5.2018, Lot 11); **22**. Bohemian gold coin, Triskele-horse type, 1/8 stater (© T. Smělý); **23**. Bohemian silver coin, Horse with horns with S symbol type, obol (© T. Smělý); **24**. SW Gaul, Horse type, silver fraction (© E. Hiriart; La Peyrouse; Hiriart 2018); **25**. SW Gaul, Rider with shield type, drachma (Eysses; Callegarin *et al.* 2013); **26**. Mid-western Gaul, Bridiers type, drachma (© E. Hiriart; BnF 2296).

led to an attempt to date on the one hand the arrival of Greek-Macedonian coins, and on the other hand the production of imitations by the Celts. Currently, researchers agree that Greek-Macedonian staters arrived in Gaul between the late 320s and the 270s (Sills 2003, p. 123; Guihard 2012, p. 60; Pion 2012, p. 152; Martin 2015, p. 333-334; Nieto-Pelletier, Olivier 2016 for an episode which is limited in terms of both the chronology and the importance of the phenomenon). This chronological range is based on the dating of the Philippe II issues concerned, on that of a number of monetary deposits buried in southern Italy and Sicily (Scheers 1999; Nieto-Pelletier, Olivier 2016), but also on the oldest, and rare, known contexts for Gaulish gold coins (see 1.2.1 below). On the basis of these data, the imitations minted by the Celts could therefore appear during LT B2-C1.

The imitations of the drachma of *Emporion*, a Greek colony located on the Catalan coast, are one of the earliest emissions in south-western Gaul[5] (**fig. 1, n°5-6**). When there is no archaeological context, their dating often relies on the dating of their prototypes. According to L. Villaronga, the production of *Emporion* drachms depicting a standing horse, whose reverse iconography shows Carthaginian influence, should be prior to 241 BC[6] (end of the First Punic War). After this date, the issue of drachms depicting horses would have been abandoned in favour of Pegasus ones, more in line with Greek stylistic canons. This early date for *Emporion* imitations with standing horses, based as it is on historical interpretation, fits well with the view of most numismatists, who date them to the last two thirds of the 3rd century BC.[7] Thus, we think that the first imitations – those with both sides corresponding to the prototype – were issued as early as 270/250 BC. The minting of imitation derivatives of *Emporion* could have continued until the beginning of the 2nd century BC (especially for the Bridiers type coinage, which is lighter and stylistically farther from the prototype; **fig. 1, n°26**).

The golden staters of the Athena-Nike type imitating those of Alexander III of Macedonia and his successors represent the oldest issues of Celtic coins minted in Central Europe (**fig. 1, n°3-4**). H. Polenz was the first who emphasized the necessity of an early dating for these coins based on the discovery of two staters placed in a grave in Dobian in Thuringia during the period LT B2/C1 (Polenz 1982). Unfortunately, no other findings of Athena-Nike type staters from archaeological contexts are known.[8] It is clear that the staters of the Athena-Nike types represent a type group of coins minted over a longer period throughout the wider area of Central Europe, and probably also in south-eastern Europe. The earliest production may probably be dated to sometime at the turn of the 4th and 3rd centuries BC. A significant majority of the staters of the Athena-Nike type found in the central settlements of Němčice nad Hanou and Nowa Cerekwia in the Amber Road corridor consists of pieces that are heavily worn and with test cuts, or fragments of staters. The beginnings of these settlements date back to the middle of the 3rd century BC. Probably shortly after the middle of the 3rd century BC, intensive development of the coinage of Athena Alkidemos type coins took place along the Amber Road corridor. It is likely that the staters of Athena-Nike type came to these settlements as old coins.

These few examples show the importance of numismatic studies in trying to understand the chronologies of these emissions. However, it is very often the case that typological and stylistic criteria do not allow us, on their own, to attribute a precise date to certain coins. It is necessary to use archaeological contexts in order to determine their chronologies (as in most cases it is not the coin that dates a context, but rather the context that makes it possible to specify the dating of the coinage; Schäffer 2007, p. 125).

H. Polenz – a new approach focusing on archaeological contexts

In 1982, H. Polenz laid the foundations for a reflection based on archaeological contexts, relying exclusively on coins excavated from tombs. He found that the traditional dating of Celtic coins

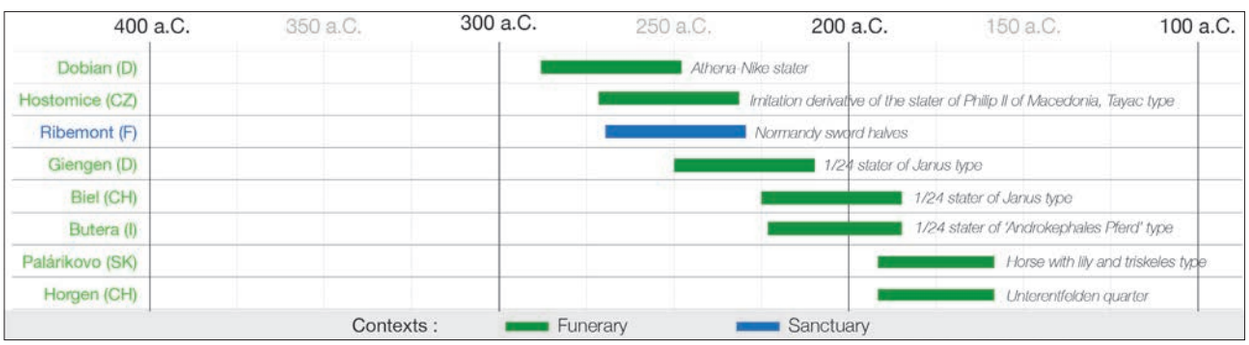


Fig. 2. State of the art: chronology of coins from archaeological contexts prior to or contemporaneous with the beginning of the 2nd century BC (graph: E. Hiriart; sources: Polenz 1982 and Sills 2003).

[5] In parallel with this coinage, other early series were issued in the south-west of Gaul between the 3rd and the beginning of the 2nd century BC: they are imitations of the *Rhoda* drachma, so-called 'hybrid' imitations, silver fractions with bucrania, horse fractions, wolf fractions, monnaies à la croix, Aquitanian coins with protuberances, "Sotiates" drachmas with horse, etc. (*cf.* Feugère, Py 2011; Callegarin *et al.* 2013a).

[6] However, L. Villaronga believes that the imitations with dolphins on the obverse, around the head, were issued after this date (the dolphins are borrowed from the Pegasus drachms).

[7] Villaronga 2000, p. 179; Rancoule 2013, p. 18.

[8] Judging by the iconography, the second archaeologically documented Athena-Nike type stater, that from the grave at the necropolis of Pezdirčeva njiva in Podzemelj in Slovenia from 2018, probably represents the closing stage of production of Athena-Nike staters. The find was not published in detail yet.

did not generally correspond to that of the archaeological sites where they were found (Polenz 1982, p. 28). H. Polenz recorded the funerary contexts that had produced coins, and made a first attempt to synchronize numismatic and archaeological data (Polenz 1982; Schäffer 2007). These data are included in the monograph of J. Sills (2003), with the sole addition of Ribemont-sur-Ancre, which highlights how few early contexts were known during the early 2000s[9] (**fig. 2**).

Some of these contexts remain controversial

H. Polenz's approach also demonstrates the fragility of reasoning based on a small number of finds, all from funerary contexts. Indeed, the chronology of several of these sets remains fiercely controversial, especially of those in Hostomice and Ribemont-sur-Ancre.

As for the burial of Hostomice in Bohemia, its dating by dendrochronology to the first half of the 3rd century BC (Polenz 1982, p. 72-74) is now being questioned. Doubts were also expressed about the authenticity of the collection and the presence of the coins at the time of the discovery of the tomb (Kruta 1982, p. 77; Sills 2003, p. 217; Nieto-Pelletier, Olivier 2016, p. 194).

We should also mention the discoveries made at Ribemont-sur-Ancre in the 'charnel house' (a deposit of hundreds of decapitated corpses and weapons) dated to LT C1 based on the archaeological material (around 250-220 BC according to Lejars 2007). Twelve gold coins were unearthed from the mass grave or in its immediate vicinity, which led some authors to date these coins to the middle of the 3rd century BC (Delestrée 2001, p. 202; Brunaux, Delestrée 2005; Guihard 2012, 70) or from the 230s to 200s BC (Fercoq du Leslay 2017, p. 139). However, the synchronism of the mass grave and coins was challenged by B. Lambot and K. Gruel. They have voiced reservations regarding the integrity of the stratigraphic context[10] (Lambot 2004; Gruel 2014).

These controversies highlight both the fragility of the data and the lack of stratigraphic discoveries for early coinage (Haselgrove 2000, p. 410; Wigg-Wolf 2011, p. 301). The three oldest contexts presented so far are questionable and disputed. Thus, it was necessary to take stock of the available data.

A survey of the first archaeological contexts with Celtic coins

This article offers the opportunity to provide a renewed inventory including recent discoveries within contexts dating to the 3rd and early 2nd century BC. The problematic contexts are discarded.

Updating the stratigraphic contexts available

The inventory we carried out allowed us to identify 43 coins discovered in archaeological contexts that we describe as 'early', that is to say prior to or contemporaneous with the beginning of the 2nd century BC. Unlike previous works (**fig. 2**), this updated inventory (**fig. 3, A**) is mainly dominated by silver coins.[11]

A brief presentation of the known early contexts is a necessity:

– **Dobian (D)**: In 1825, two Athena-Nike staters and a bronze bracelet were discovered in a tumulus. The burial was dated to the second quarter of the 3rd century BC, or at the latest to the middle of the 3rd century BC (Polenz 1982, p. 57-58; Ziegaus 1999, p. 108-112).

– **Thézy (F)**: A half-stater of Hesperange type (main area of circulation, north Gaul; Sillon 2014, p. 99; Sillon 2016, p. 234-236) was discovered during the excavations carried out at Thézy-Glimont, in a silo dated to early LT C1 (second third of the 3rd century BC; Delestrée, Le Béchennec 2014).

– **Ribemont-sur-Ancre (F)**: A recent publication details the stratigraphic position of each coin. In particular, it highlights that two of them were located on the ground, in a dense area of remains dating from the third quarter of the 3rd century BC (Delestrée, Fercoq du Leslay 2018, p. 13-21).

– **Pech Maho, Sigean (F)**: Recent excavations conducted at Pech Maho have produced two 'bucranium' type obols (Feugère, Py 2011, IBL 163B) in two different contexts: one dated between 325 and 225 BC, the other in a level prior to 200 BC (Paris 2017, p. 218-219). Furthermore, an obol of the type with a horse turning his head back (Feugère, Py 2011, IBL 164) belongs to a stratigraphic context of the last quarter of the 3rd century BC (Paris 2017, p. 218-219).

– **Giengen (D)**: In 1973, during the excavation of a necropolis by J. Biel, tomb 13 delivered a 1/24 gold stater of Janus type. The coin was associated with calcinated bones, iron objects and bronze ornaments (fibulae, chains, rings) dated to LT C1 (*ca* 250-210 BC; Polenz 1982, p. 65-68).

– **Nitra (SK)**: In 1961, during the excavations at the site of Martinský vrch by B. Chropovský, in house no. 36 ceramic material, the fragment of a glass bracelet, and 3 coins were found: a Roman Republic aes grave, a silver tetradrachm of horse with lily type, and a silver obol of Athena Alkidemos type. Near the house another two coins were discovered: a silver obol of horse with triskeles type, and a fragment of gaulish potin (Kolníková 1964; 2007). Only the coins from this excavation were published in detail. On the basis of the ceramics and the glass bracelet, the archaeological context of house no. 36 was dated to LT C1 (Pieta 2010, p. 25, 29). The two obols and the tetradrachm represent the coinage of south-western Slovakia during approximately the last quarter of the 3rd century and first half of the 2nd century BC.

– **Montlaurès, Narbonne (F)**: An obol of the type with a horse turning his head back was discovered at Montlaurès, in a habitation level dated to the 3rd century BC (Paris 2017, p. 220).

– **Pezdirčeva njiva, Podzemelj (SLO)**: A gold stater of Athena-Nike type was discovered during the archaeological excavations carried out in 2018 in the necropolis of Pezdirčeva njiva (15 burials from the end of the 4th and the 3rd century BC). The

[9] In his work, J. Sills only lists gold coins discovered in archaeological contexts.

[10] The charnel house was full of 'voids' due to the decomposition of flesh and organic matter; it is possible that the coins got there due to 'porosity', after being trapped in an older context.

[11] There are 10 early contexts containing gold coins, represented by an asterisk on the graph (**fig. 3**).

coin was found placed on a belt in a closed grave from the 3rd century BC.[12]

– **La Grande Borne, Aulnat (F)**: the excavations carried out between 1972 and 1981 by J. Collis delivered a quarter stater 'with alder branch' (BnF 3959 var., Brenot, Scheers 1996, p. 323) in a LT C1 context of the mid-3rd century. The coin came from the bottom of the filling of a ditch, the sealing of which is dated by the finds (glass bracelet, weapons, and ceramics) to 250-200 BC (Deberge *et al.* 2007, p. 168, 197; Nieto-Pelletier, Olivier 2016, p. 193-194; Gruel 2017, p. 259, 261). The quarter stater can no longer be considered an imitation of the coins of Philip II of Macedonia since it already shows very Celtic iconographic features.

– **Lattes (F)**: A monnaie à la croix comes from SU 4475, corresponding to the foundation trench of a wall (MR125), the construction of which dates to between 225 and 200 BC. A layer of domestic occupation, dated around 200 BC, has also delivered seven monnaies à la croix with cross, presumably making up a small *peculium* (Py 2006, p. 540; Hiriart 2017, p. 51-53).

– **Martigues (F)**: During the excavations in the quarter of 'L'Île' at Martigues, a unique obol with a horn (OBP-32; Feugère, Py 2011) was discovered in a LT C context (225-190 BC; Écard 1992, p. 22, n°129).

– **Roseldorf (A)**: Since 1995 the excavations at Roseldorf have brought to light several coins of the Roseldorf/Němčice type with an archaeological context. However, the findings have not yet been published in detail. During the excavations of the Object 1 sanctuary carried out in 2004 by V. Holzer, an obol (Roseldorf/Němčice type I) was discovered at the bottom of a trench (SE 37) in zone 6 (Holzer 2009, p. 58). Two other obols (Roseldorf/Němčice type II) were found in this sanctuary, from layers SE 2 and SE 103 respectively (Holzer 2009, p. 60). Based on the archaeological context, the coins of both types Roseldorf/Němčice I and II were struck before the end of the 3rd century BC (Dembski 2009, p. 97-98), more precisely in the second half of the 3rd century BC.

– **Butera (I)**: A 1/24 gold stater of 'Androkephales Pferd' type was found in the necropolis of Butera in Sicily. The abandonment of the cemetery soon after the end of the Second Punic War (around 200-190 BC) provides a precious *terminus ante quem* (Steffgen, Ziegaus 1994, p. 26).

– **Palárikovo (SK)**: During the excavations of the necropolis at Palárikovo in 1973, a burial (tomb 64; probably that of a young girl) delivered an obol of horse with lily and triskeles type minted in south-western Slovakia. The coin was located at chest height, near a shell and glass beads. The tomb also provided abundant ceramics and metal material, including ornamental elements (glass bracelets and beads, chains, bronze rings, etc.). The context is dated to the end of LT C1 or the beginning of LT C2 (*ca* first quarter of the 2nd century BC; Polenz 1982, p. 84-85, fig. 3; Benadik 1984, p. 97-102). The necropolis is dated to LT B1-C1 (Repka 2014). The obol represents the coinage of south-western Slovakia approximately at the turn of the 3rd and 2nd centuries, or of the first third of the 2nd century BC.

– **Lacoste, Mouliets-et-Villemartin (F)**: Several coins were discovered in stratigraphic contexts during the rescue excavations carried out between 2007 and 2008 by C. Sireix on the artisanal settlement of Lacoste. Phase Ib, dated around 220/210 to 180/170 BC, produced 13 silver coins: 8 imitations of drachms of *Rhoda*, 2 silver fractions with horse, 2 silver fractions with wolf, and 1 Celtic drachma from S-W Gaul (Geneviève 2012; Geneviève, Sireix 2014).

– **Bienne (CH)**: In the nineteenth century, a 1/24 gold stater of Janus type was discovered in a tomb near Bienne. It was associated with a bronze fibula and a fragment of a glass bracelet. The estimated dating of the context is LT C (225-150 BC; Polenz 1982, p. 56-56, fig. 3).

– **Veľký Slavkov (SK):** In 1977, a silver drachma of Athena Alkidemos type was found at the hillfort of Burich during archaeological excavations by B. Novotný (Hlinka 1980; Kolníková 2006, p. 14-15; Pieta 2010, p. 125). The archaeological context of this find remains unknown, as the results of the excavations have not yet been published. The coin was probably struck in southern Slovakia or northern Hungary at the turn of the 3rd and 2nd centuries BC or in the early 2nd century BC.

– **Bánov (SK)**: In 1959 two silver tetradrachms of horse with lily type were found in a grave during excavations by J. Pavúk (Pavúk 1964, p. 323-330; Benadik 1984, p. 102-103). Stratigraphically, the burial was located above an older house dated to the turn of the 3rd and 2nd centuries BC. The tetradrachms were struck in south-western Slovakia probably at the turn of the 3rd and 2nd centuries BC, or in the first half of the 2nd century BC.

– **Manching (DE):** In 1972, a small coin hoard of six gold coins in a bronze container ('purse') was found in Manching during archaeological excavations (Kellner 1990, p. 35). The set consists of four 1/24 staters of 'Androkephales Pferd' type and one 1/4 stater of plain bulge type both minted in South Bavaria and one 1/24-stater of imitation of Athena Alkidemos type minted in Bohemia. The archaeological context of this find represented the early phase of settlement at Manching but remains unknown in detail, as the results of the excavations have not yet been published. The coins were probably struck at the end of the 3rd century or at the turn of the 3rd and 2nd centuries BC (Steffgen, Ziegaus 1994, p. 26-27; Nick 2006, p. 19-20).

A few comments

Until recently, documented contexts mainly came from funerary complexes (**fig. 2**). However, we now have coins uncovered in habitation contexts (shown in red, **fig. 3**). The latter represent the majority, 72% of the specimens identified. It is interesting to note that a large part of the data (17 specimens, *i.e*. 40%) comes from open settlements such as Aulnat, Lacoste or Roseldorf (shown in dark red, **fig. 3**). This documentary evidence could be updated thanks to the evolution of archaeological work over the last decades.

Moreover, it is important to note that none of the finds inventoried can be considered an actual 'imitation'. All the coins

[12] https://balkancelts.wordpress.com/2019/02/06/discovery-of-a-balkan-celtic-burial-complex-at-podzemelj-eastern-slovenia

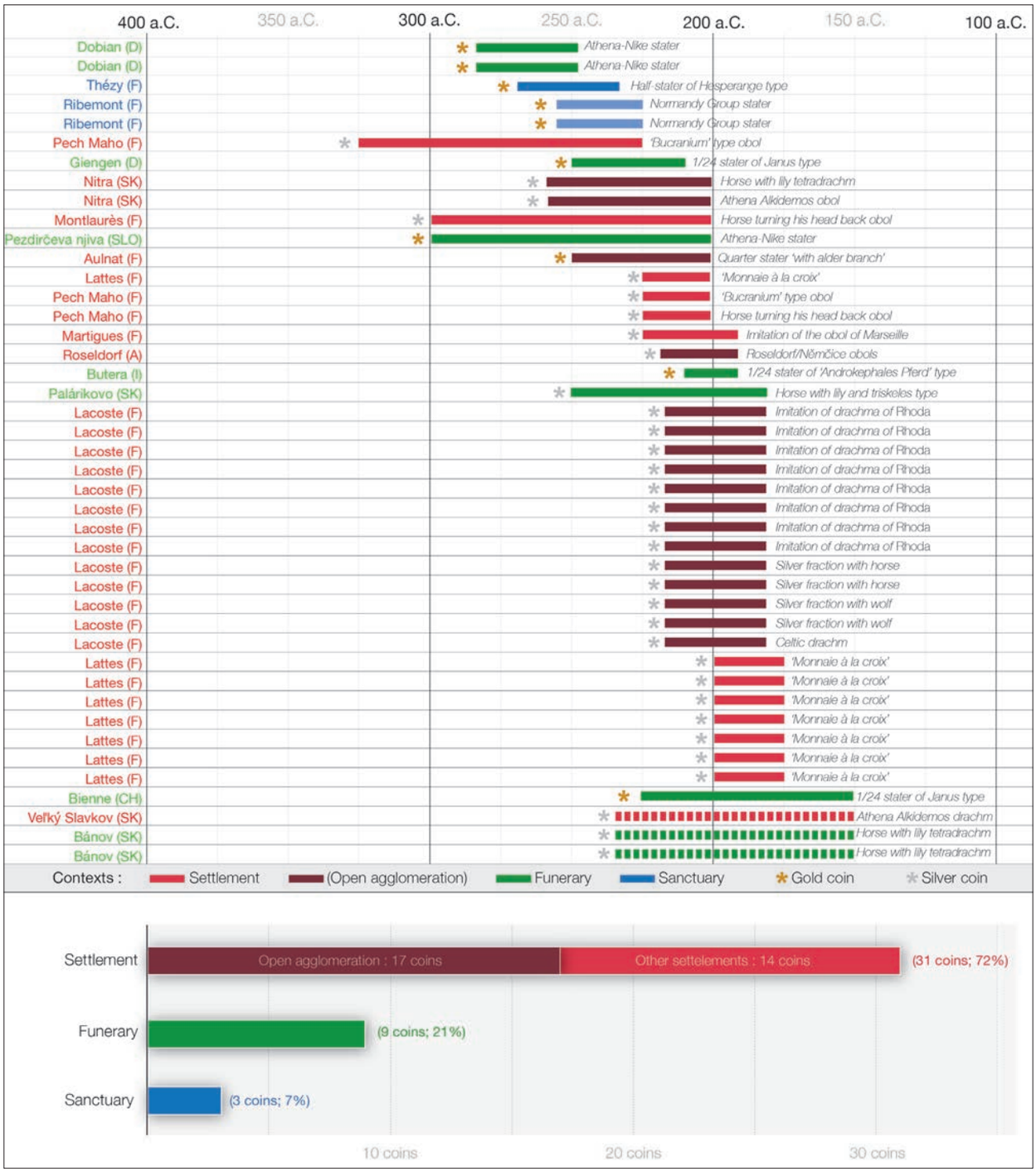


Fig. 3. An updated inventory: **A**- Chronology of coins from archaeological contexts prior to or contemporaneous with the beginning of the 2nd century BC; **B**- Distribution of archaeological discoveries by type of context (graph: E. Hiriart).

found in context are part of an already advanced phase, where coins, emancipated from the Greek prototypes, reveal modes of figuration specific to Celtic art. Therefore, these various contexts provide *termini ante quos* for the dating of imitations and the introduction of coinage in the Celtic world.

The samples discussed here are still very modest and the dating of the first Celtic coins remains fraught and full of gaps. Nevertheless, the archaeological data allow us to approach these questions through an objective, stratigraphic basis.

Early Celtic coinage circulation, a cartographic approach

State of the Art

The broad trends

To understand the circulation of ancient Celtic coinages on a European scale, we often base our reasoning on schematic maps. The circulation of coins is depicted on these maps as schematic areas (**fig. 4**). These reveal that the minting of Celtic coins first took place at the crossroads of several sources of influence, among which a number of extensive geographical and cultural regions can be distinguished (Allen 1980, p. 6-19; Gruel 1989, p. 17-18). These maps also highlight the existence of a spatial element in the choice of metal used for minting the first Celtic coins.

North of an imaginary line joining the Alps and the Gironde estuary, in the area called 'the Gold Belt' by D. F. Allen (1980, p. 18), gold was the first metal used for coinage. However, several individual areas emerge from this great continental arc extending from Brittany to the Carpathians. In the northern half of Gaul (and a little beyond), staters with types of Philip II of Macedonia were the common prototype used for the earliest issues. Near the Channel and the Somme Valley, some types were directly inspired by a Tarantine stater with Hera's head on the obverse and the Dioscuri on the reverse (Sillon *et al.* 2012, p. 119). In the west of Central Europe, Alexander III's staters depicting Nike and in the east, Philip II's silver tetradrachms served as the earliest prototypes.

In contrast to this northern zone, a monetary region exclusively based on silver – and, apparently, impervious to gold bullion – seems to develop south of the Alps-Gironde estuary line ('the Silver Belt'; Allen 1980, p. 9). Two main areas of influence can be distinguished here: on the one hand, the axis Aude-Garonne, where the imitations of drachms from *Rhoda* and *Emporion* circulate; on the other hand, an area between Languedoc and Cisalpine Gaul, where drachms and obols from Marseille served as prototypes. Discoveries of gold coins are almost non-existent to the south of the line connecting the Garonne and the Alps (Hiriart *et al.* 2018).

The wider area of south-eastern Europe is associated with the production of silver coins closely tied to silver tetradrachms of Philip II, Alexander III of Macedonia, and Audoleon. The coinage was linked with two weights standards – one of approximately 14.4 g based on the weight of tetradrachms of Philip II and in the south of the region the second of approximately 17.2 g based on the weight of tetradrachms of Alexander III. The mountain range of the Carpathians marks the northern and north-western border of this 'silver' region.

Schematic maps: a limited approach

This use of maps enables us to sketch clearly the main Europe-wide trends and to reflect on broad cultural complexes. However, this approach also illustrates the incomplete state of knowledge. Such a scheme is not relevant when it comes to understanding the socio-economic dynamics in fine detail. The major trends convey a rigid view of historical realities that very much needs to be nuanced. This also illustrates our fragmentary knowledge of these early European coins, the territorial and political implications of which are often misunderstood.

Indeed, a detailed examination highlights the existence of numerous local specificities and mixtures of influences. In fact, some 'hybrid' imitations borrowed their iconography from various Greek coinages, thus giving rise to remarkable mixtures (Callegarin *et al.* 2013a; Hiriart 2019a; Nieto-Pelletier, Olivier 2016, p. 191-192; Nieto-Pelletier to be published). In Central Europe, for example, the Athena Alkidemos staters (**fig. 1, n°15**) borrowed their obverse from a stater of Alexander III of Macedonia and their reverse from a tetradrachm of Antigonus II Gonatas (Militký 2011, p. 144; Smělý 2017a). Another case of hybridization is highlighted by the silver drachms unearthed at the Gaulish settlement of Eysses (Villeneuve-sur-Lot, F; **fig. 1, n°25**), the obverse of which imitates drachms of *Emporion*, while the reverse reproduces the legend ΦΙΛΙΠΠΟΥ (Callegarin *et al.* 2013b). We should also mention, for north-east Gaul, the Lysimachus and Essey series, which respectively associate the image of Lysimachus (Alexander the Great deified with the horn of Amun) and the Campano-Tarentine didrachm on the obverse, and Philip II's chariot on the reverse (Scheers 1978; Barrandon *et al.* 1994).

In order to understand the modes of circulation of the issues of these first coins and to reflect on their use, it seems necessary to free ourselves from the main trends, such as are described above, and instead to focus our thinking on the available data. This seems all the more necessary as no global study based on an inventory and mapping of early discoveries has yet been conducted on a European scale.

For a reflection based on an inventory of finds and on cartographical studies

In order to lay the groundwork for spatial reflection, this work seeks to compare the dynamics of circulation of some of the coinages dated to the 3rd and the beginning of the 2nd century BC. This approach does not claim to be exhaustive: only the main monetary groups from this period were chosen. The cartographic study we present in this section is based on the inventory of more than 4,300 isolated coins and 74 hoards dated to the 3rd and the beginning of the 2nd century BC.

Imitations of the staters with types of Philip II of Macedonia (S. Nieto-Pelletier)

The complexity and diversity of early gold issues, the difficulty we currently have in advancing any definite dating, and the small number of unquestionable findings call for caution when attempting to define the corpus.

During LT B2-C1, the Gauls adopted gold coins by faithfully imitating – at first – the staters bearing the types of Philip II of Macedonia, which were minted in workshops in Macedonia (Pella

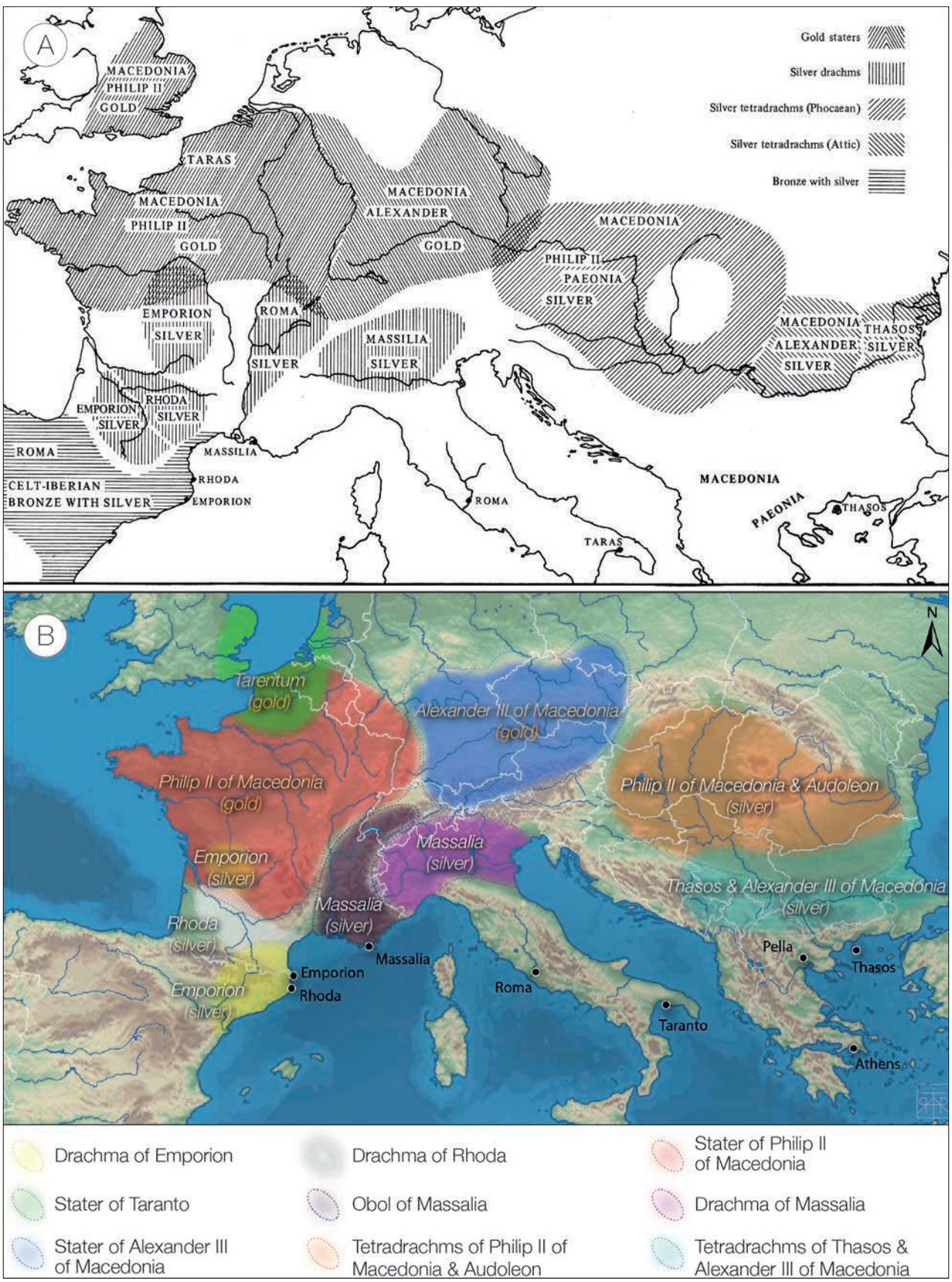


Fig. 4. The main influences of Greek prototypes on the first mints of the Celtic Europe (A- Allen 1980, 8; B- after Hiriart 2019b).

and Amphipolis) and Asia Minor (especially in Lampsacus and Abydos). Reproducing the iconography, the weight (8.60 g Attic standard), and the precious metal content of Greek-Macedonian staters, the coins are quite faithful copies. On the obverse they depict a laurel-wreathed head of Apollo, facing right (**fig. 1, n°2**). On the reverse there is a chariot, also facing right, the legend ΦΙΛΙΠΠΟΥ, and the symbols and monograms depicted under the horses of the prototypes (trident, kantharos, thunderbolt, AP, etc.) (*cf*. especially Scheers, Barandon 1994). From the first issues, fractions were also produced (half and quarter staters) – this is particularly the case of the so-called Montmorot series (AP, cereal ear, and lightning) – which demonstrates the need for lower value pieces. At a later stage, production evolves and the coins depart significantly from the prototype originally copied.

Although the stater bearing the types of Philip II of Macedonia was the most widely imitated prototype in Gaul, it was not the only one. Imitations of coins minted in Taranto and Neapolis have also been recorded, particularly in northern Gaul, and reference to the stater of the diadochus Lysimachus – for the obverse – have been found in the central-eastern region. Relatively more modest, these series nevertheless testify to the plurality of models that inspired the Gauls to initiate and to develop the production of their own gold coinage. Thus, the Gaulish coins that have come down to us show influences from the western Mediterranean and the northern Aegean (Nieto-Pelletier, Olivier 2016).

Therefore, we will consider here the imitations – in the strict sense of the term – that faithfully copy the Greek-Macedonian issues, as well as the specimens regarded as first forms of appropriation (*i.e.* with a significant typological and stylistic evolution, even if the imitated prototype is still identifiable), the production of which, we assume, falls within the period late 3rd-early 2nd century BC. These specimens were discovered in isolation – most often single pieces – or in deposits. No concentration is apparent on sites (**fig. 5**).

The sites on which the coins presented here were discovered highlight two major trends. Some of the issues appear to have enjoyed limited circulation. This is the case, for example, with the so-called Pons/St-Eanne series which seem to have circulated in a narrow area of the Atlantic coast – or with the Lysimachus series in the central-eastern region. Others, however, had wider areas of circulation, as dispersed as the northern half of Gaul – the kantharos series, for instance, or the complex and abundant series bearing the monogram AP, a cereal ear and a thunderbolt (Nieto-Pelletier to be published).

Imitations of the drachms of Rhoda *(E. Hiriart)*

The imitations of *Rhoda* are silver pieces that are modelled after drachms issued by the Greek colony from the late 4th / early 3rd century BC to the 240s BC (**fig. 1, n°7**; Villaronga 2000, 179; Campo 2006, p. 582-583). Their obverse depicts a female head (facing left) inspired by the original portrait on the coins from *Rhoda*. On the reverse is a more or less schematic rose seen from below, (**fig. 1, n°8**). Recent classification work has led to the recognition of several series within this group (Villaronga 2000; Hiriart 2014, p. 233). They are distinguished by the different stylistic treatment of the face on the obverse and of the rose on the reverse.

The metrology of the imitations of the drachma of *Rhoda* ranges widely between 4.7 g and 2.5 g. This variability is indicative of devaluations that are certainly synchronous with successive periods. The heavy imitations of *Rhoda* have a weight of around 4.7 g, close to the standard of 4.8 g in effect at *Rhoda* and *Emporion*. They were probably issued during the second third of the 3rd century BC. The issue of intermediate weight drachms (around 4 g), such as those discovered at Lacoste in a stratigraphic context, could be placed between the end of the 3rd and the beginning of the 2nd century BC. Finally, there was a production of coins weighing 2.8-2.9 g, specimens of which are found on a limited number of sites, mainly in Lacoste (Mouliets-et-Villemartin, FR) and La Peyrouse (Saint-Félix-de-Villadeix, FR). Their production could date to the second third of the 2nd century BC.

All the *Rhoda* drachma imitations were discovered to the north of the Pyrenees; no such specimens were found on Hispanic soil, around the Greek city, which confirms Gaulish minting. The distribution area of these coins is mainly centred on the Aude-Garonne axis, between the Mediterranean coast and the lower valley of the Dordogne. The highest concentrations are evident on a limited number of sites (**fig. 6**): Eysses, La Peyrouse, and Lacoste. In all cases, these are open settlements occupied as early as the 3rd century BC which extend over several hectares and where intense craft activities developed.

The presence of *Rhoda* imitations on two sites located several hundred kilometres north of Lacoste raises many questions. In addition to the 8 specimens recovered from the sanctuary at Allonnes (France; Soutou 1968 and K. Gruel info), some 30 have been uncovered on the site of Bordeaux-Saint-Clair, close to the Channel (Guihard 2012, p. 322-323; Delestrée, Pilon 2011, p. 36). These northern concentrations could be a testimony to the trade traffic related to the tin road.

Imitations of the drachms of Emporion *(E. Hiriart)*

Like the drachms of *Rhoda*, those of *Emporion* gave rise to numerous imitations. Drachms depicting a standing horse are the type from *Emporion* most copied in Gaul.[13] Their imitations show a female head turned to the right or to the left on the obverse. On the reverse there is a standing horse crowned by an ever more stylized Nike, to the point where it becomes two circles together forming a 'figure of 8' (**fig. 1, n°6**). The mass of *Emporion* imitations falls between 4.8 g and 4.7 g, which indicates the intention to scrupulously align them to the standard of Emporitan drachms[14] (which also weigh between 4.8 g and

[13] As for the Pegasus imitations, they circulated mainly in the north-east of the Iberian Peninsula.

[14] The Bridiers-type coinages, which are imitation derivatives rather than imitations in the true sense of the term, have a lighter weight of between 4.4 g and 4.3 g. These coins circulated in the centre-west of France between the late 3rd century and the beginning of the 2nd century BC.

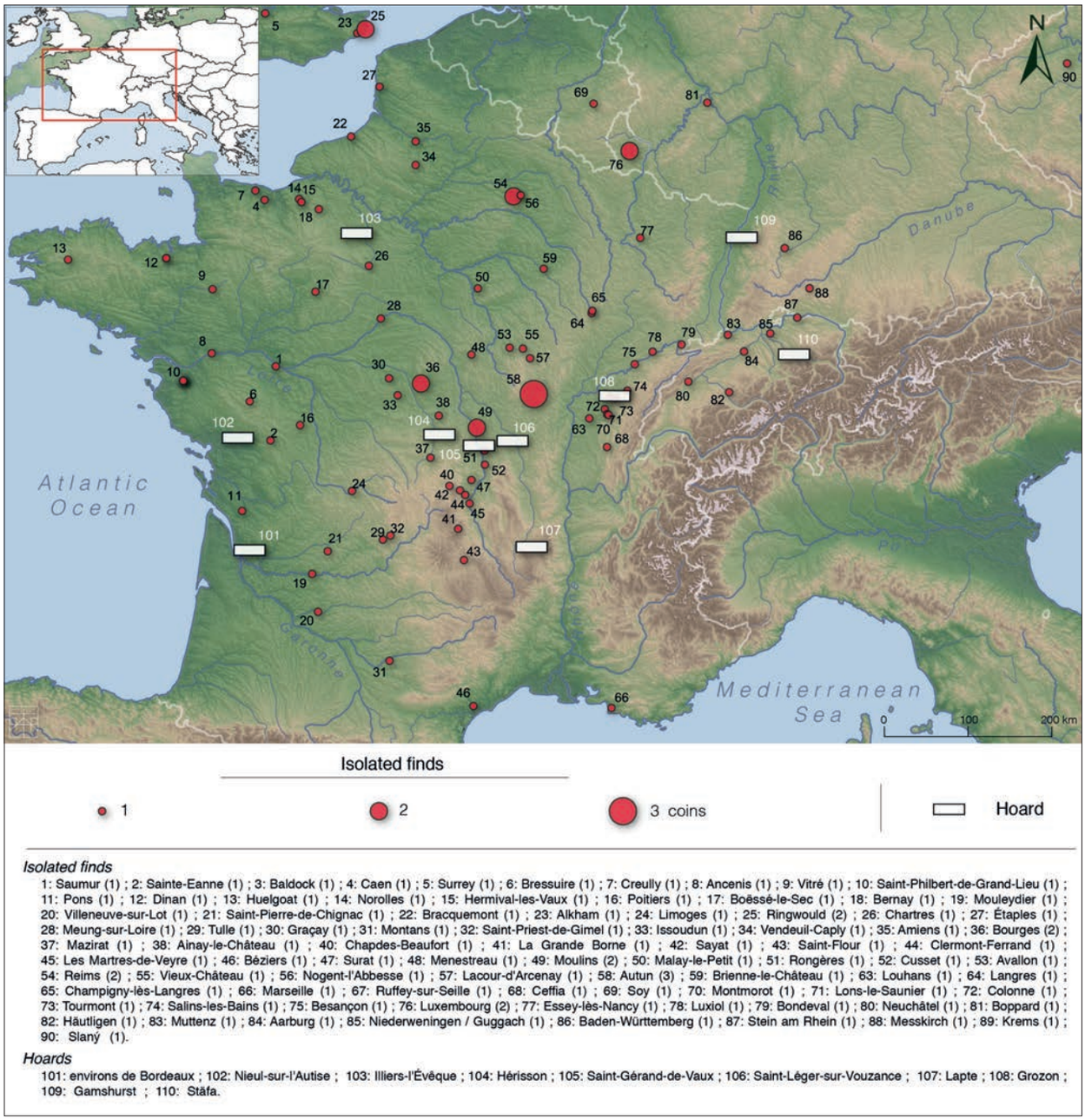


Fig. 5. Circulation of the first Celtic gold coins: imitations of staters with types of Philip II of Macedonia and the first Celtic adaptations, all denominations and series included (3rd century-beginning of 2nd century BC; maps: E. Hiriart; sources: Nieto-Pelletier 2016).

4.7 g). The geographical distribution of the *Emporion* imitations with the standing horse very clearly indicates that their circulation covers Narbonnais, Corbières, and the immediate surroundings of the Aude Valley (fig. 7). It is in this area that the production of heavy imitations faithfully reproducing the Emporitan type is to be located. It should also be noted that the imitations are not found in the environs of *Emporion*, or more generally to the south of the Pyrenees.

The drachms of Cisalpine Gaul (Celts of Northern Italy) (K. Gruel)

Archaeological evidence shows that the Celts crossed the Alps from the 6th century BC to settle in Cisalpine Gaul in the north of Italy. This region is bounded by the Alps to the west and north, by Dalmatia and Pannonia to the east, and by the rivers Rubicon and Arno to the south. This territory thus includes the north-western part of Piedmont, the Aosta Valley, Lombardy, the Verona region in Veneto, the Po plain, Emilia and Liguria. In a first stage

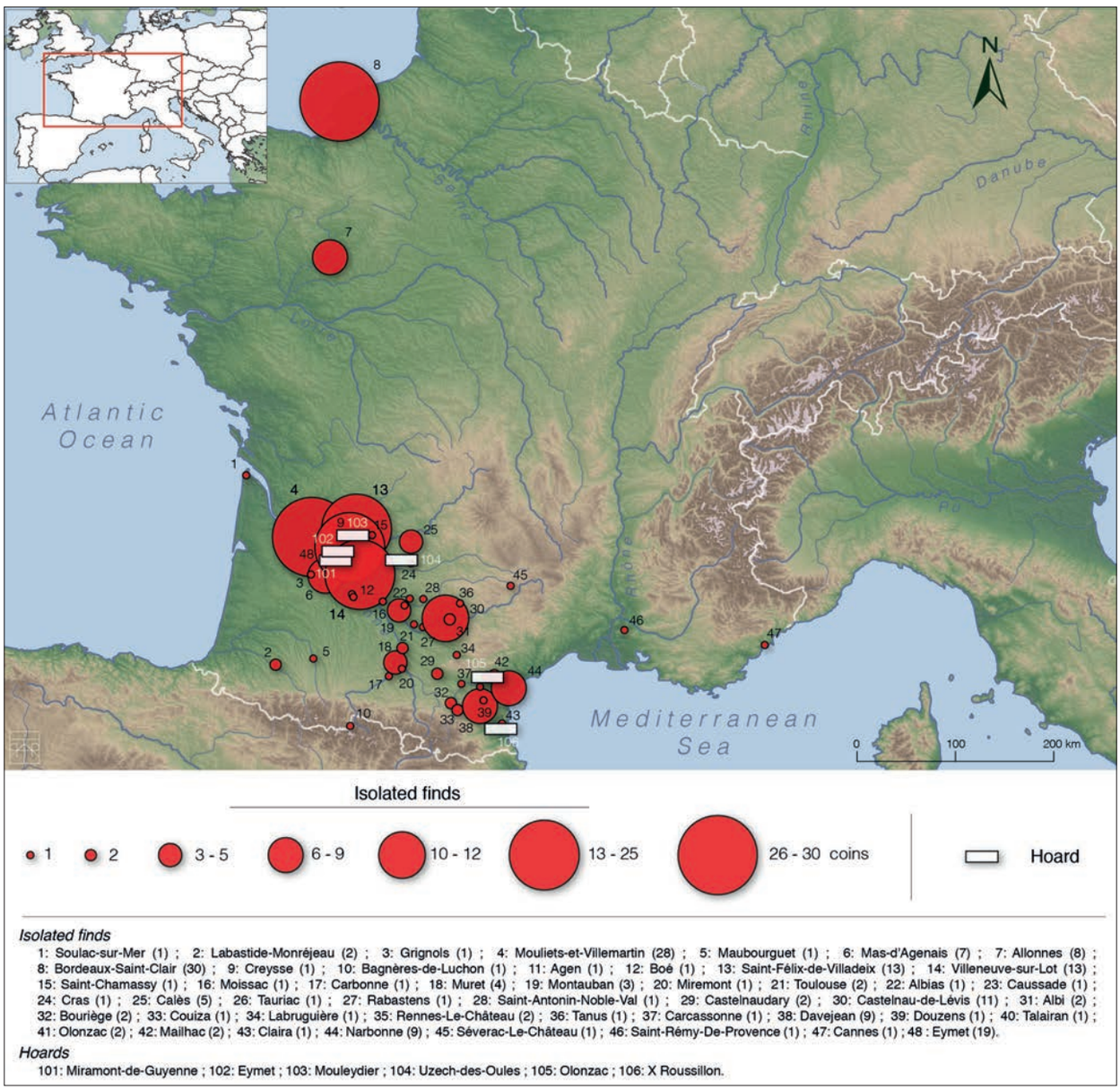


Fig. 6. Circulation of the imitations of the drachma of *Rhoda*, all series included (maps: E. Hiriart; sources: Hiriart 2014).

of their occupation (6th-4th century BC), these Celtic communities were concentrated around settlements. From the 4th century BC, a new organization appeared in Cisalpine Gaul. It was characterized by the development of existing clustered habitats, while other smaller centres – networking with these large urban centres – were created.

The first coins from Cisalpine Gaul are silver issues, based on and contemporary with the heavy drachma struck by Marseille in the 4th century BC (**fig. 1, n°9**). They show the head of Artemis on the obverse and a (more or less stylized) walking lion on the reverse, together with the legends **MAΣΣA**, then **ΣAΣΣA** (**fig. 1, n°10**). These first coins are based on the metrology of the heavy Marseille drachma, with an average weight of 3.74 g. The first owl issues bear an Etruscan legend on the reverse, 'Seghedu'. Later drachma imitations are the so-called naturalist lion and the 'scorpion lion' types.

From the 4th century BC onwards, diobols were issued with a head (male or female) on the obverse and a standing, forward-facing quadruped on the reverse. The oldest diobols, probably the heaviest, were aligned with the drachma standard, and can be dated to the 4th and the beginning of the 3rd century BC. Stylistically, the drachms and diobols worked together. This is also the case for the first heavy series of the so-called 'naturalist' and 'scorpion lions', etc. At the end of the 3rd century BC, drachms with a 'lion-wolf' on the reverse appear. At the same time, the iconography of some series tends towards an increased

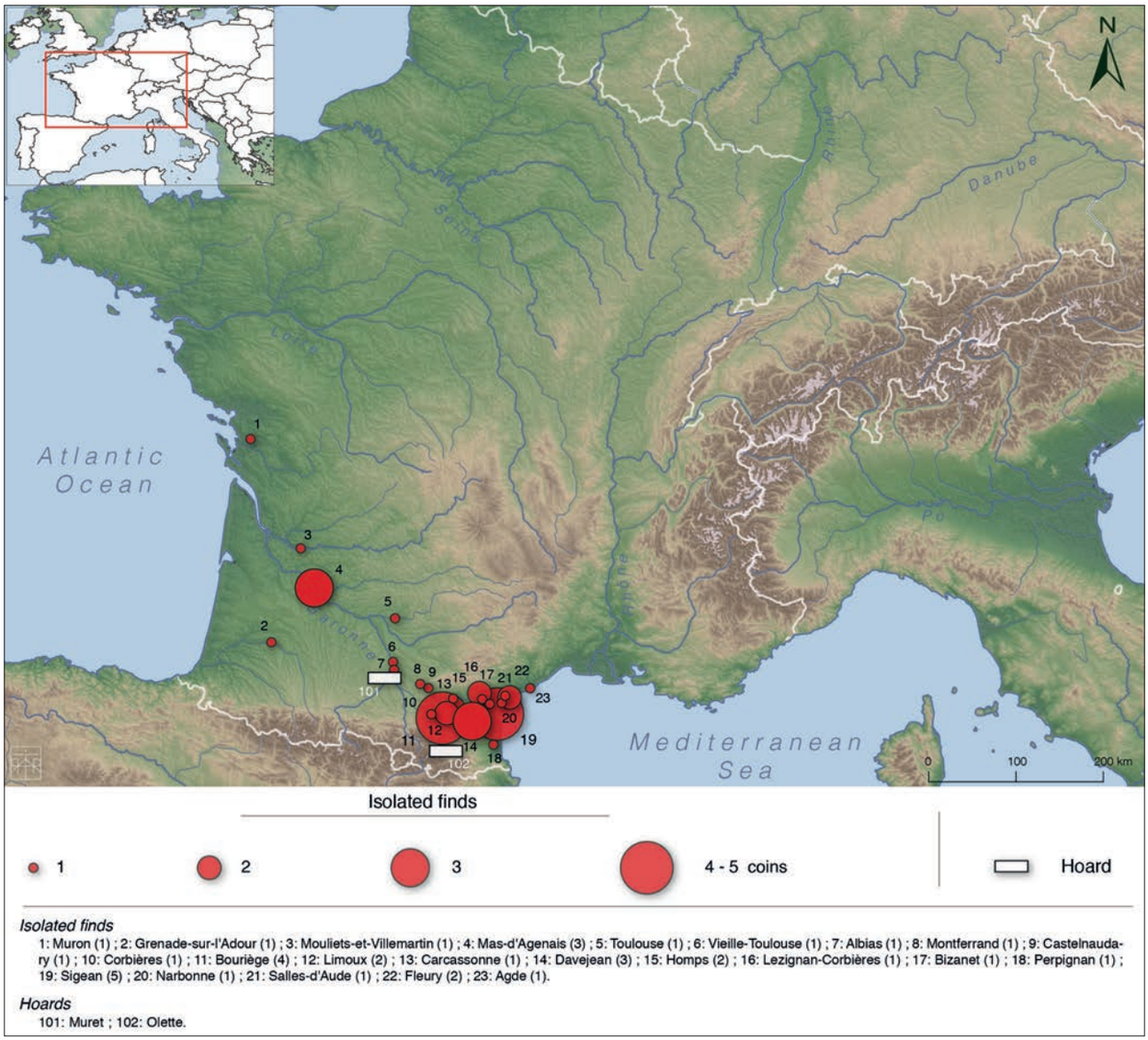


Fig. 7. Circulation of the imitations of the drachma of *Emporion*, Horse-Nike type, all series included (maps: E. Hiriart; sources: Hiriart 2014).

stylization of the obverse, while the lion on the reverse acquires a strongly curved back. Archaeological contexts needed to establish these chronologies are still lacking.

The oldest drachms, of the 'Seghedu' type, are of similar fineness to the heavy Marseille issues, consisting of almost 96% silver. Weight reduction, together with an increasingly schematic representation of the initial iconography, has made it possible to establish a relative chronology for different issues (Arslan 1990; 2006; 2017; Geiser *et al.* 2012; Gorini 2014; Piana Agostinetti, Gandolfi 1996).

The imitations of drachms of Marseille from Cisalpine Gaul mainly circulated south of the Alps, around the Po Valley (**fig. 8**). Each series has its own specific distribution aligned on the Alpine valleys. The highest concentrations occurred in clustered habitats, which were generally occupied before the 4th century BC and the dynamics of occupation of which differed from that of the settlements that took shape during the 3rd century BC in temperate Europe.

Imitations of the obols of Marseille (J. Genechesi)

Imitations of obols of Marseille remain problematic for several reasons. Firstly, no precise typology defines them and they fulfil only one subjective criterion: that they are iconographically derived from the obols bearing the legend MA dating from the end of the 5th to the middle of the 1st century BC[15] (**fig. 1, n°11**). In addition, the possibility that some issues are actually products of Marseille issues cannot be excluded, since a 'Gallicising' style is not necessarily synonymous with 'native artefact'.

Mostly classified by their module and their metrology, they are numerous and poorly characterized. However, few of them circulated as early as the 3rd century BC. The obols with the AM legend (**fig. 1, n°12**; Feugère, Py 2011: OBP-27/28) are dated to 225 BC, but minting continued until 50 BC. One of the rare

[15] Some authors consider imitations of other, earlier, Marseille obols, but the find contexts remain problematic (see in particular Chevillon 2014).

early contexts to have delivered a specimen is the treasure of Lattes-T1, the burial of which is dated to the end of the 4th century BC (Py 2006, 798, no. 206). For this specific coin, M. Py also takes into consideration a possible error on the part of the engraver in Marseille and does not push the timeline for the imitations further back. Like the Marseille obols, those with the legend AM, are distributed around the Mediterranean basin and along the Rhône axis. A specimen is also recorded from the site at Lacoste.

The case of the obols with a horn is perhaps more significant because their period of issue was shorter (Feugère, Py 2011: OBP-32). However, few specimens are known and they are distributed exclusively in Bouches-du-Rhône and Vaucluse (**fig. 9**). The only relevant context for the coins is from the site of Île de Martigues and is dated to 225-190 BC.

Certain types, such as the crescent-moon obols (Feugère, Py 2011: OBP-31; Genechesi 2012, p. 149) or half obols with a small wheel (Feugère, Py 2011: OBP-8), are dated to the end of the 3rd century BC on stylistic grounds, but given the lack of conclusive stratigraphic contexts this cannot be confirmed.

Many questions about this disparate series of issues and their acceptance in the ancient city of Marseille itself remain unanswered.

'Androkephales Pferd' type (D. Wigg-Wolf)

Although in the 2nd century BC southern Germany was to enjoy close contacts with the west and north-west, the earliest coinages produced here were more closely aligned with those of more eastern areas such as Bohemia and Moravia. Along the German Rhine the earliest local coinages were probably not produced before the second quarter of the 2nd century BC, and the smallest denominations were quarter staters (*e.g.* the Pegasus quarters, Scheers 23 [Sills 2009], or the 'Armoricani émigrés' quarters Scheers 16). In southern Germany, on the other hand, the first coinages were produced earlier, from the late 3rd

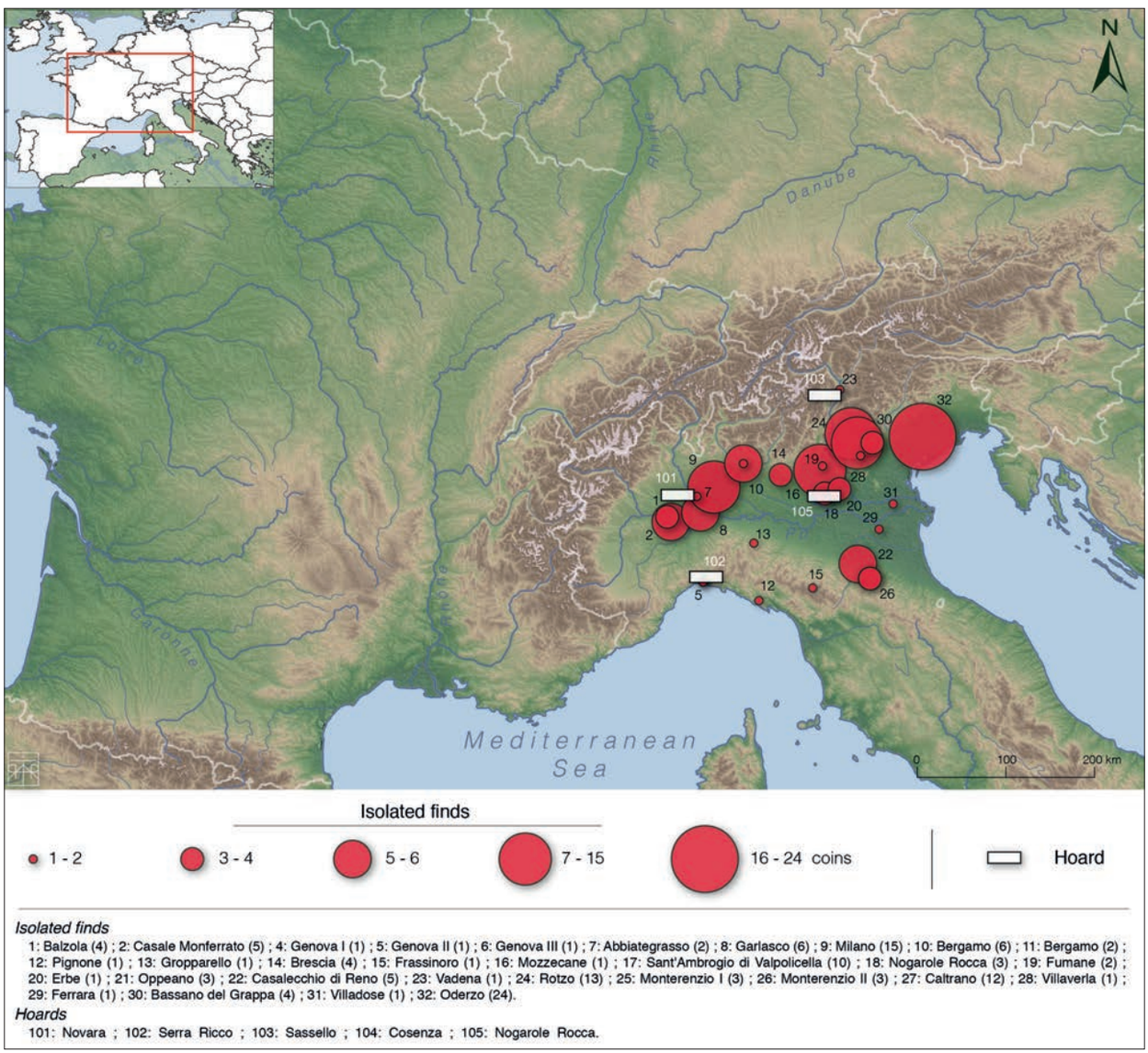


Fig. 8. Circulation of drachmas from Cisalpine Gaul (imitations of the drachma of Marseille), all series included (maps: E. Hiriart; sources: K. Gruel).

century, and smaller denominations were issued that were more closely aligned with the denominational system, for example, of the Amber Road corridor (see below 2.2.9).

Two types of 1/24 staters are known from Bavaria and Swabia in southern Germany. The type 'Androkephales Pferd', otherwise known as the Manching type, is known from 18 examples. The obverse has a head facing right, the reverse a horse facing left with a human head turned back to the right (**fig. 1, n°20**). Two subtypes are distinguished: the twelve examples of type A have an average weight of 0.325 g, the six examples of type B of 0.327 g (Nick 2006, Tab. 51). A punch for producing obverse dies for the type is known from Manching (Bericht RGK 77, 1996, p. 361), which is also the centre of the geographical distribution of the coins (**fig. 10**).

Janus type (1/24 stater) (D. Wigg-Wolf)

The second type shows a double Janus-type head on the obverse and a horse facing right on the reverse (**fig. 1, n°21**). It has a similar distribution to the Manching type. The supposed hoard from Hofoldinger Forst contained least 114 examples, but the authenticity of the find has been called into doubt (**fig. 11**; Wamser 2001). The type is dated by finds in burials from Biel and Giengen to the late 3rd century BC, which would fit the suggestion that the type is possibly derived from Roman litrae struck in 225-212 BC (RRC 28/5; Steffgen, Ziegaus 1994, p. 29). A further example was found in a pit from the early phase of the Manching *oppidum*. The coins from the Hofoldinger Forst hoard have been divided into three variants: 23 of variant A, 90 of variant B and 1 of variant C. Outside of the hoard, only variant B is recorded. Wamser records an average weight for the coins from the hoard of 0.306 g for variant A and 0.309 g for variant B, although the average weight of 10 examples of variant B from finds other than the hoard is 0.338 g. What may well be a 1/72 stater of the Janus type, with a weight of 0.118 g, is known from Manching (Kellner 1990, p. 63).

The fineness of the alloy of the southern German 1/24 staters is lower than than that of their counterparts in Bohemia and Moravia, with levels of 5-15% silver (Steffgen, Ziegaus 1994, p. 31), in one case 20% (Wamser 2001, p. 115).

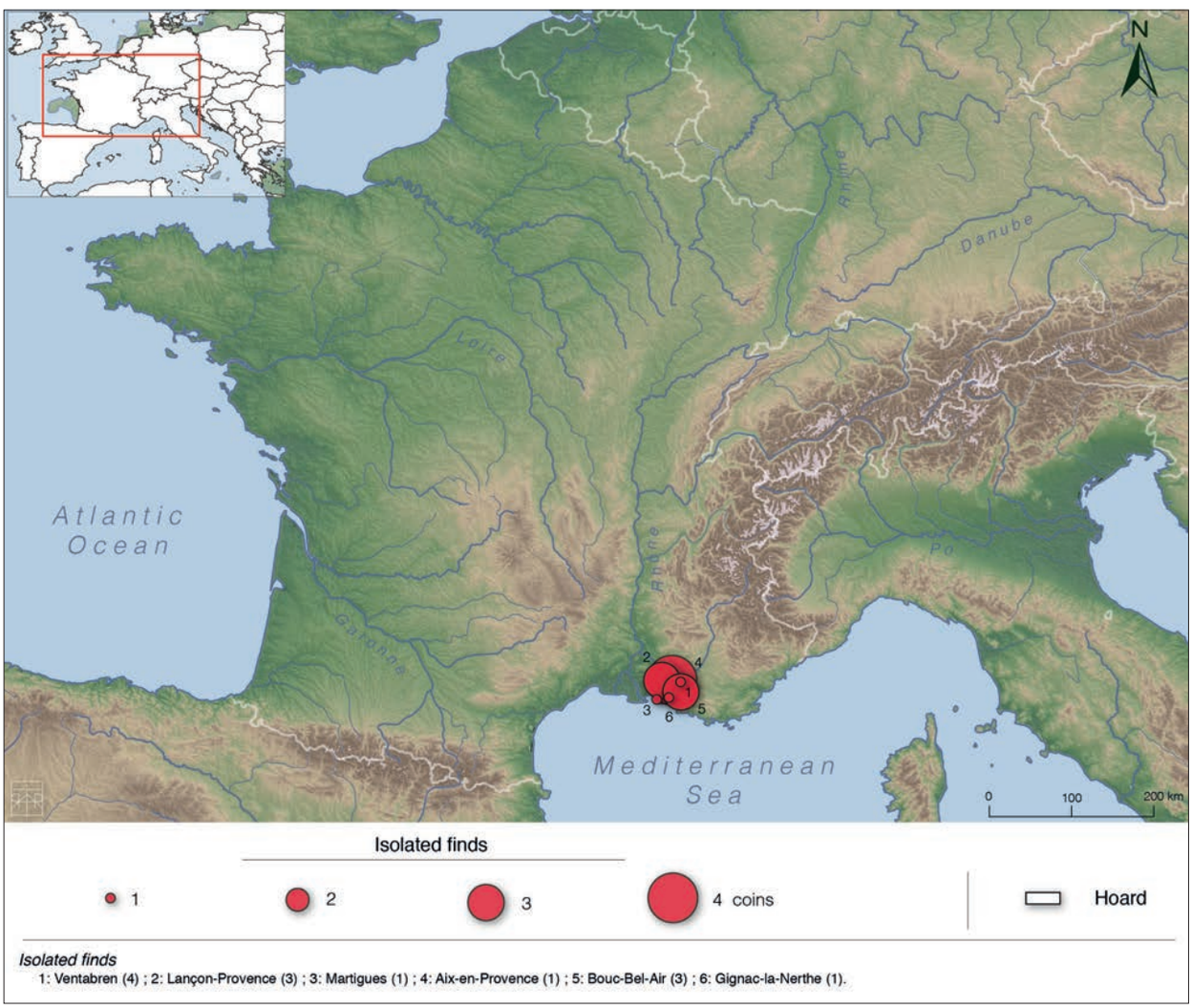


Fig. 9. Circulation of the imitations of the obol of Marseille, all series included (maps: E. Hiriart; sources: J. Genechesi).

Imitations of the staters of Alexander III of Macedonia - Athena-Nike type (T. Smělý)

It is clear that the power elites of Central and Eastern European La Tène societies became acquainted with the functioning of developed mainland Greek states at the latest during their south-eastern expansion in the first quarter of the 3rd century BC. It is, however, likely that contacts had already existed previously. Part of the Celts' experience of the Greek environment was a thorough acquaintance with a monetary economy. Undoubtedly, the conclusion of this experience was the development of their own coinage in native Celtic territories. In the west of Central Europe, the staters of Alexander III of Macedonia and his successors became the models for the oldest Celtic coins. They copied Macedonian staters, not only metrologically but also visually (**fig. 1, n°4**). It is not clear where these coins were struck, but the noticeable variability of the image, considerable weight range (8.2-8.6 g, and huge geographic dispersion of finds in Central Europe and in the Carpathian basin provides evidence for long-term production taking place in different locations across a larger area (**fig. 12**; *cf.* Militký 2018). It is likely that a considerable amount of Athena-Nike type staters were struck in Bohemia, Moravia or the Lower Austrian Danube region. Hypothetically, the production of the earliest Athena-Nike type staters could have started at the turn of the 4th and 3rd centuries BC, at the latest almost certainly at the turn of first and second quarters of the 3rd century BC.

The production and use of Athena-Nike staters did not constitute a versatile economic tool. Rather they were used exclusively by the highest social strata for settling large transactions and storing wealth. It is possible that payment in gold staters was preferentially demanded for mercenary services once Celtic mercenaries had acquainted themselves with this practice in the Mediterranean.

The monetary system of Amber Road corridor (T. Smělý)

The creation and operation of the monetary system here were connected with the exercise and organization of power, as well as commercial activities on the part of the elites which, by the middle of the 3rd century BC at the latest, controlled an extensive

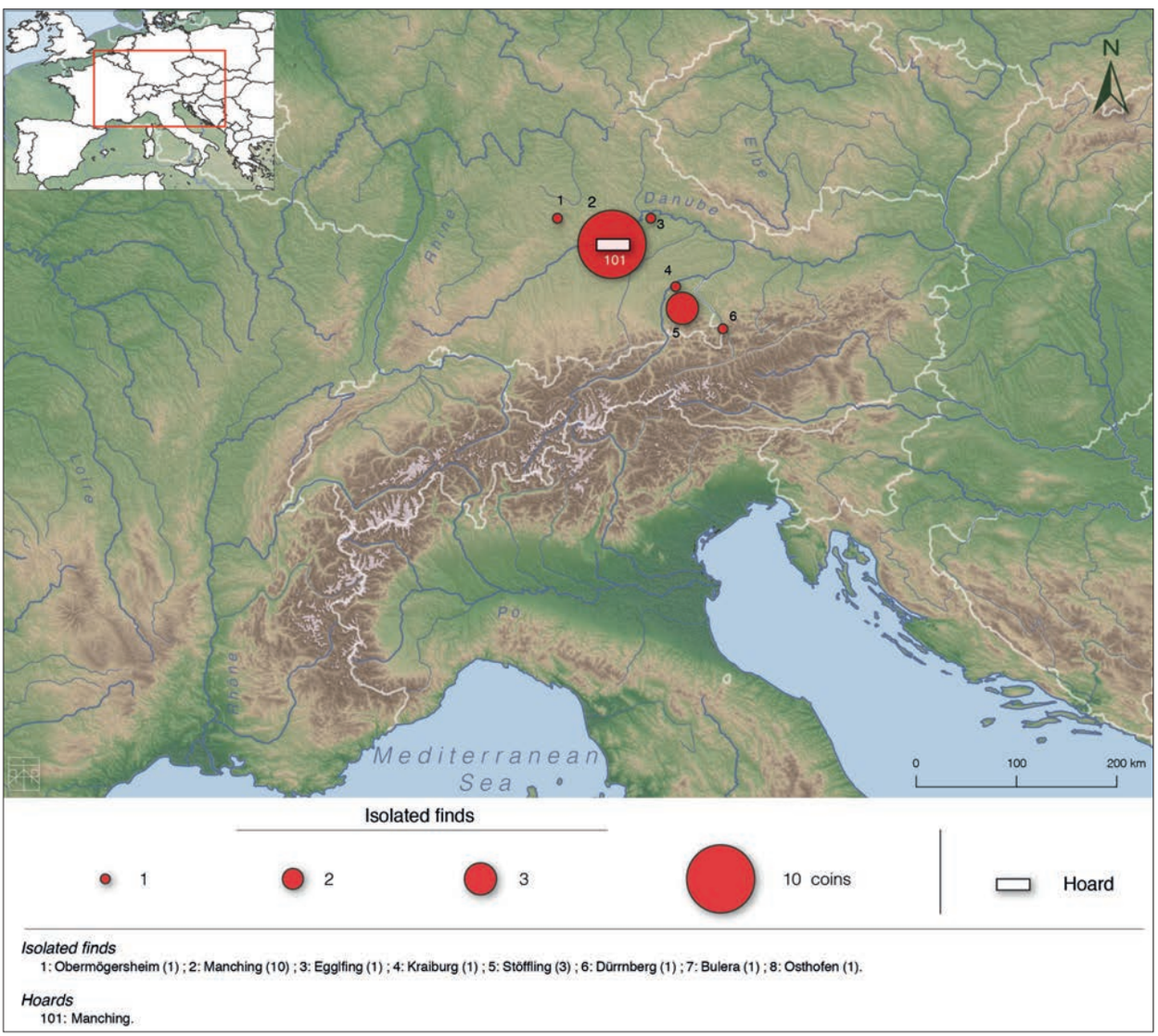


Fig. 10. Circulation of the 'Androkephales Pferd' type (maps: E. Hiriart; sources: Nick 2006).

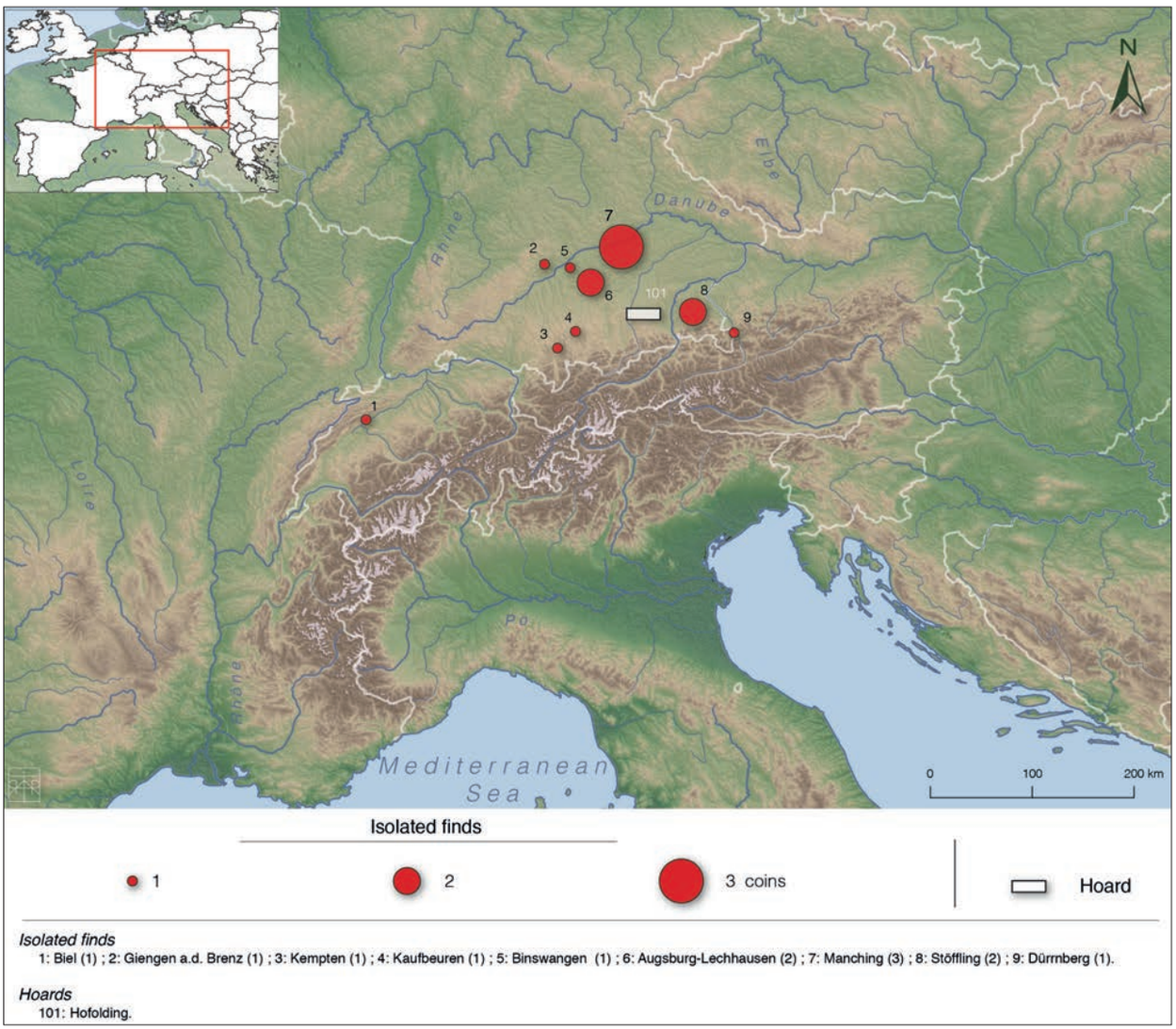


Fig. 11. Circulation of the Janus type (maps: E. Hiriart; sources: Nick 2006).

area between the southernmost regions of Upper Silesia and the Lower Austrian Danube region. The area straddles the crossroads of two strategically important corridors of communication – the one known as the Amber Road running north-south between the Baltic and the Adriatic Sea, and the other west-east between southern Germany and the Carpathian basin. The intensive development of lowland settlement agglomerations with a high level of development of commodity production and trade testifies to the prominence of this region within Central Europe. The most significant settlement centres include Nowa Cerekwia (PL), Němčice nad Hanou (CZ), Roseldorf (A), Stripfing (A), Etzersdorf (A), Haselbach (A) and an unspecified site that has been published only as 'broad area of Krems an der Donau' (A) (Karwowski 2004; Čižmář *et al.* 2008; Holzer, Karwowski 2008; Holzer 2009; Rudnicki 2014; Militký 2016; Venclová 2016; Fichtl, Trebsche 2018). According to current estimates, a minimum of several tens of thousands of coins have been found at these sites, but only a small part of them scientifically documented and curated (**fig. 13** to **15**).

No later than soon after the middle of the 3rd century BC[16], extensive coin production began in the Amber Road region based on a seven-denomination bimetallic coinage system, known as the monetary system of the Amber Road corridor (Smělý 2017a). Lower denominations – obols (identical with 1/4 drachms), hemidrachms, and drachms – were struck from silver, higher – 1/24 staters, 1/8 staters, 1/3 staters and staters – from gold. From the point of view of iconography, gold coinage is represented by the Athena Alkidemos type series (**fig. 1, n°15** to **18**; **fig. 14**), while silver coinage begins with the horse with rosette type series (**fig. 1, n°13** to **14**; **fig. 13**), transitioning later to the Roseldorf/Němčice type series (**fig. 1, n°19**). The presumed strong central authority is reflected in the uniformity of the coinage throughout the region at multiple production sites.

Coin production was bimetallic, but gold enjoyed a highly significant status. However, the mutual ratio of the metals was

[16] According to some authors, around the middle (Militký 2018) or even before the middle (Fröhlich 2016) of the 3rd century BC.

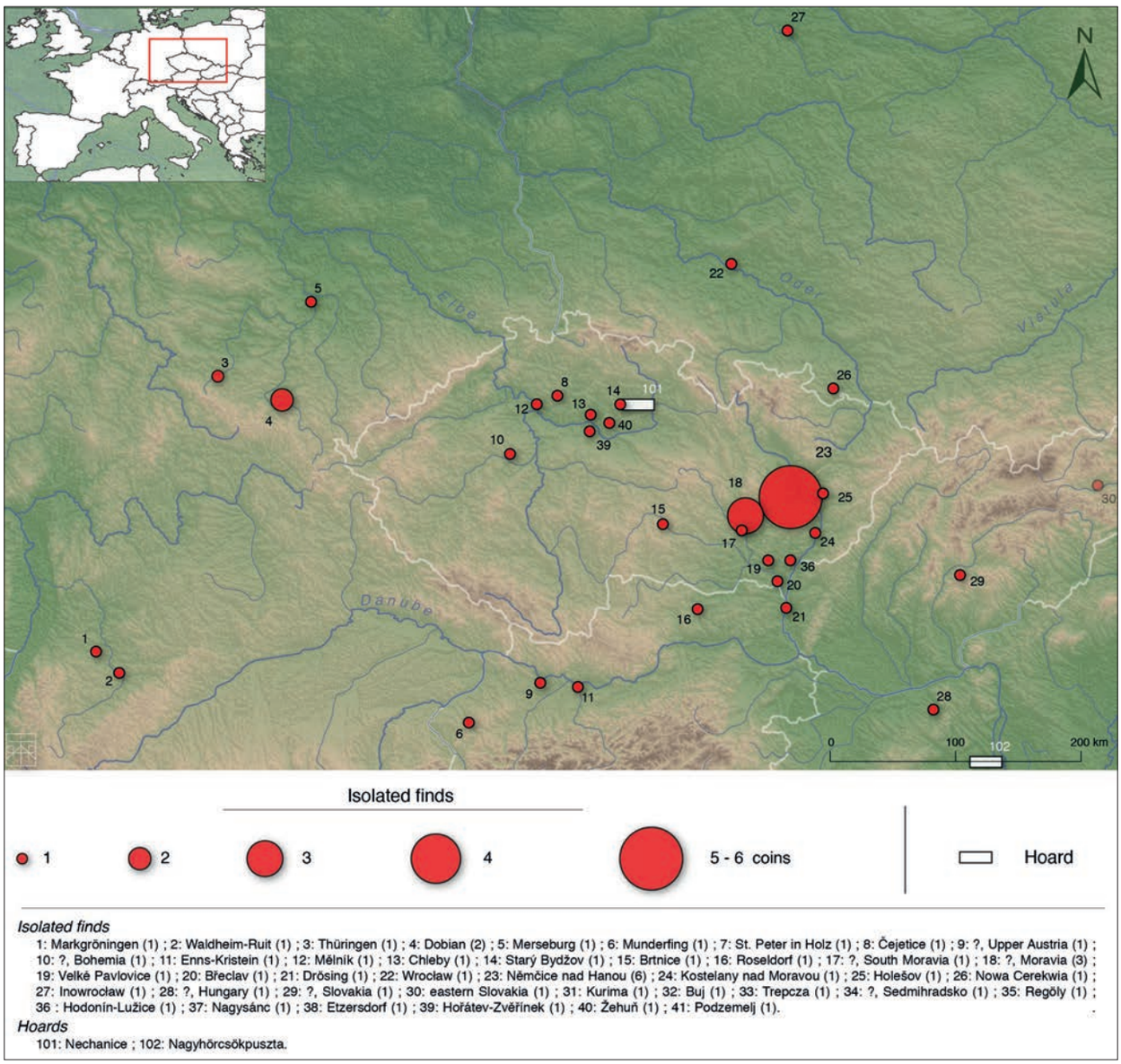


Fig. 12. Circulation of the Athena-Nike type (maps: E. Hiriart; sources: T. Smělý).

not uniform throughout the region, silver was used more in southern parts. Only in centres in the southern part of the Amber Road corridor were drachms and hemidrachms minted. The reason for the dominance of gold is almost certainly to be seen in relatively cheap sources of gold and the long-term availability of sufficient gold resources. Therefore, we can assume that the elite, under whose direction the monetary system was implemented, controlled gold mines in their territories. Generally, the long-term maintenance of a high gold content for coins from Bohemia and Moravia distinguishes the area fundamentally from other regions of La Tène Europe. The easy accessibility of gold predetermined a business model in which gold coins were being struck as a specific kind of goods. The analyses of fineness carried out (Hartmann 1985; Kolníková 2012; Fröhlich 2013; Militký 2018; Smělý to be published) show that throughout the entire La Tène C period gold coins were struck from high-quality alloys, typically with a fineness of 97% or higher. Silver coins were also struck from high-quality alloys.

While in the case of gold we assume local resources were exploited, most of the silver was probably imported (Smělý 2017). The import of silver, perhaps along the Danube trade route from south-eastern Europe, is probably best evidenced by the character of coin production in the southern part of the Amber Road corridor. Here silver drachms were preferred to the gold 1/24 staters of identical value.

A striking feature of the coins is the decreasing weight, usually accompanied by the more or less continuous deterioration of the coin image. Stylistically fine and perfectly crafted specimens are typical of the heaviest and oldest issues, the exception being staters, of which high quality pieces are completely absent. The various series of silver denominations also experienced gradual deterioration of the coin image over time. Unlike the gold coins, however, new dies for silver coinage with a clear image were

repeatedly produced over time. It is likely that the continuous deterioration of the coin image is at least partly related to the use of hubs, *i.e*. die models with a positive image, for die production (Draganov 2007; Ziegaus 2013). It is not clear, however, why no new hubs with a clear relief were made for the production of dies of the gold coinage. The cause is probably to be sought elsewhere than in ignorance of the necessary technology – the dies for the silver obols were continually renewed.

The average weights of the earliest variants of the 1/8 staters, 1/3 staters and staters exceeded the stater equivalent of 8.3 g, approaching in heavier specimens 8.4 g. Taking into account possible weight loss for at least some specimens, and the existence of a larger number of specimens weighing more than 8.4 g in stater equivalent, it can be assumed that the initial stater standard of the oldest variants of these denominations was around 8.4 g. This value, however, does not correspond to the average weight of the earliest variants of 1/24 stater, which correspond to a stater of 8.44 g, and in heavier specimens exceeds 8.6 g. An initial stater standard of around 8.5 g for the earliest 1/24 stater variants can, therefore, be proposed. We can hypothetically assume that the production of 1/24 staters started in advance of the other gold denominations.

The average weight of the earliest drachma variants exceeds 4.10 g, and heavier pieces weigh more than 4.20 g. The average weight of the earliest hemidrachms and obols is slightly lower. Taking into account possible weight loss for at least for some specimens, and the existence of a larger number of specimens weighing more than or around 4.2 g in drachm equivalent, it can be assumed that the initial weight standard was represented by didrachms weighing around 8.4 g. Thus, the weight standard for the oldest gold and silver coins was probably the same. This system was virtually identical to the weight standards of the stater and didrachm of the Macedonian coinage in the 3rd century BC, weighing approximately 8.6 g. The reduction of the Celtic standard very likely reflected the previous development of the weight standard during the production of the Athena-Nike type staters.

The identical weight of the gold stater and the silver didrachm helps us understand the value relationship between the gold and

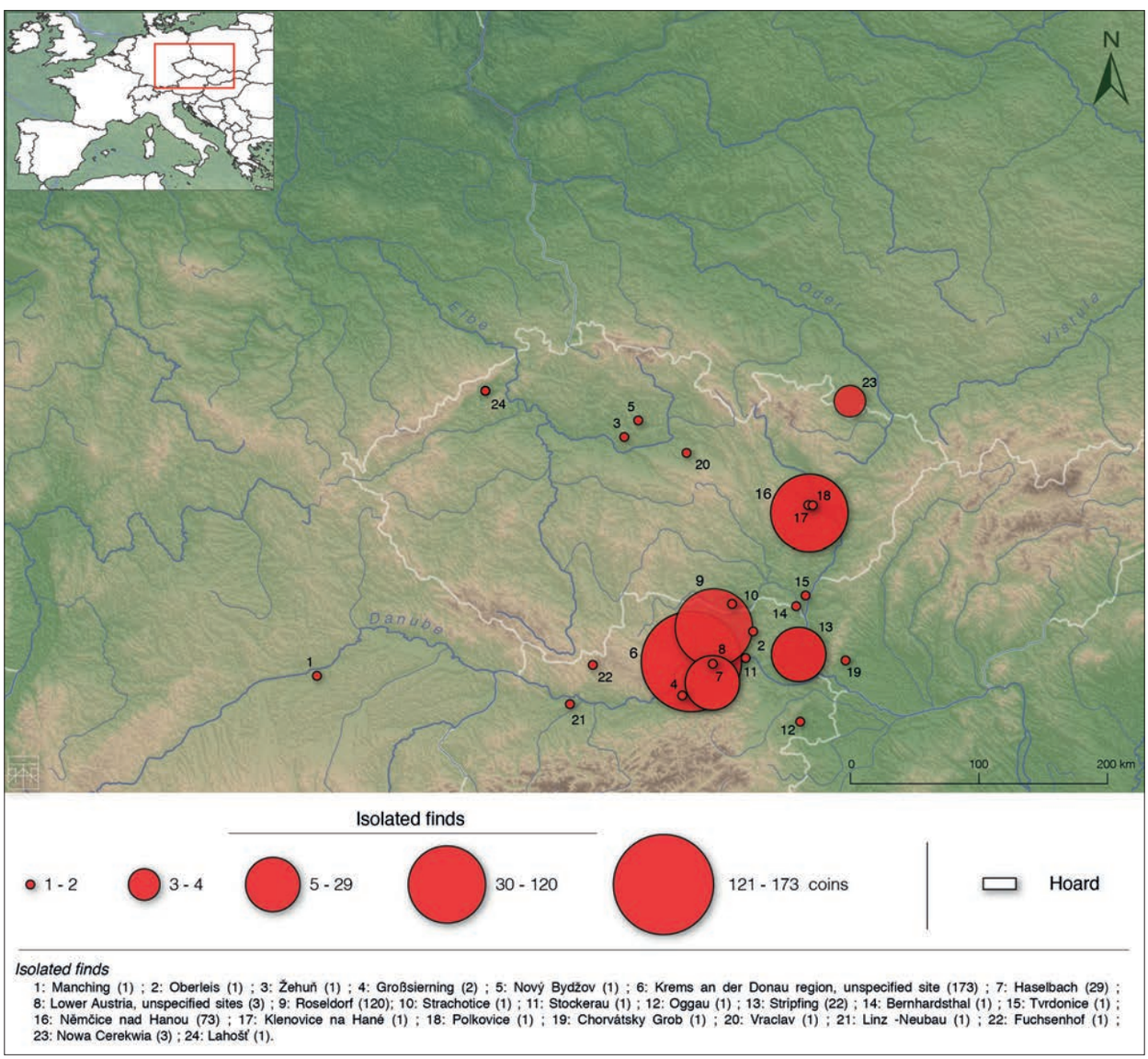
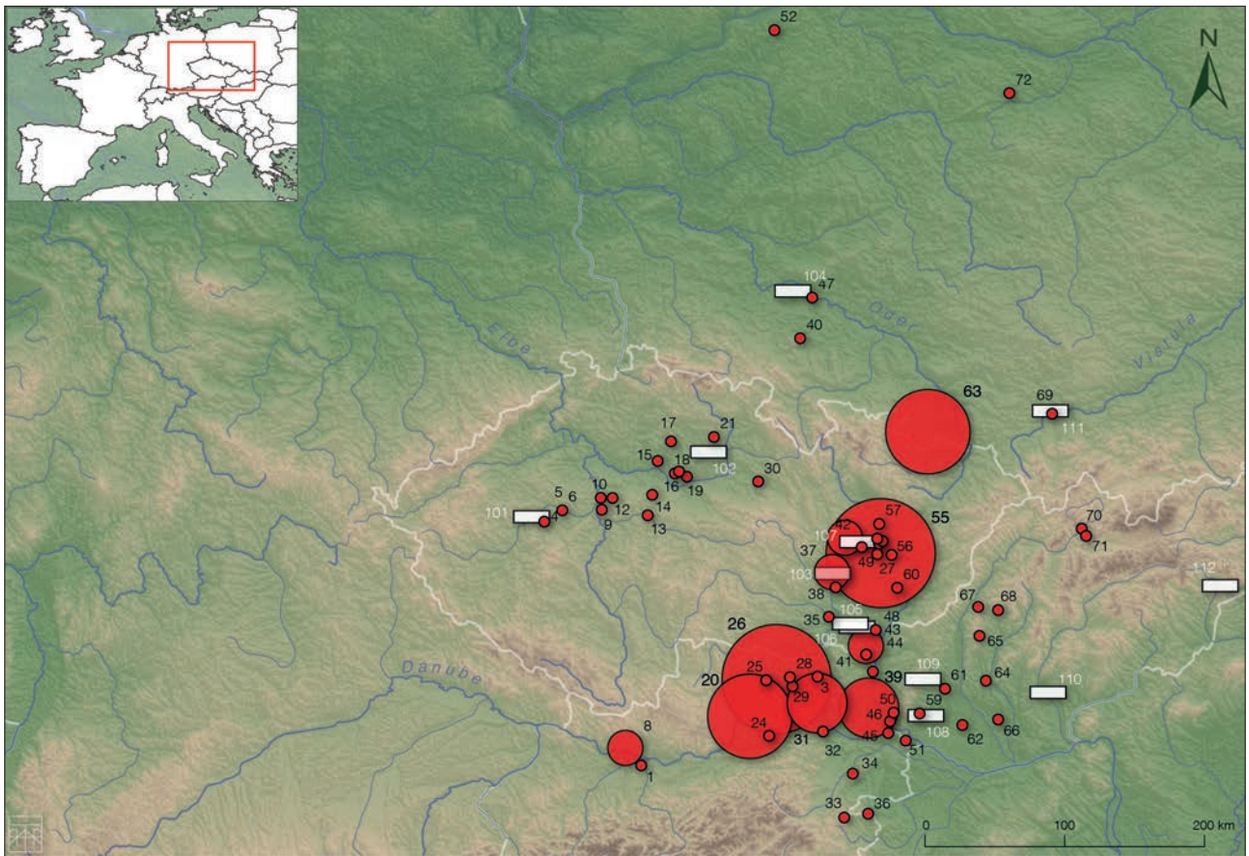


Fig. 13. Circulation of the Horse with rosette type, all denominations and series included (maps: E. Hiriart; sources: T. Smělý).



Isolated finds

1: Enns (1) ; 3: Oberleis (1) ; 4: ?, Bohemia, unspecified sites (4) ; 6: Stradonice u Nižboru (1) ; 8: Linz-Neubau (5) ; 9: Lhota u Dolních Břežan (1) ; 10: Praha area (2) ; 12: Křeslice (1) ; 13: Sázava (1) ; 14: Kouřim (1) ; 15: Chleby (2) ; 16: Sány (1) ; 17: Kopidlno (1) ; 18: Žehuň (2) ; 19: Lipec (1) ; 20: Krems an der Donau region, unspecified site (65) ; 21: Hněvčeves (1) ; 24: Etzersdorf (1) ; 25: Eggenburg, probably Roseldorf (4) ; 26: Roseldorf (172) ; 27: Polkovice (2) ; 28: Grund (1) ; 29: Oberhollabrun, probably Roseldorf (2) ; 30: Vraclav (3) ; 31: Haselbach (36) ; 32: Wien (1) ; 33: Schwarzenbach (1) ; 34: Loretto (1) ; 35: South Moravia, unspecified site (1) ; 36: Harka (1) ; 37: Moravia, unspecified site (9) ; 38: Slatina (1) ; 39: Stripfing (50) ; 40: Świątniki (1) ; 41: Bernhardsthal (2) ; 42: Malé Hradisko (13) ; 43: Břeclav (8) ; 44: Ringelsdorf (1) ; 45: Hainburg an der Donau (1) ; 46: Devínská Nová Ves (1) ; 47: Wrocław (1) ; 48: Josefov (1) ; 49: Myslejovice (1) ; 50: Stupava (1) ; 51: Bratislava-Jarovce (1) ; 52: Pruchnowo (1) ; 53: Viceměřice (1) ; 54: Hrubčice (1) ; 55: Němčice nad Hanou (219) ; 56: Klenovice na Hané (3) ; 57: Kožušany (1) ; 58: Ivaň (2) ; 59: Chorvátsky Grob (1) ; 60: Buchlovice (1) ; 61: Trnava (1) ; 62: Vozokany (1) ; 63: Nowa Cerekwia (62) ; 64: Zbehy (1) ; 65: Podhradie (1) ; 66: Tvrdošovce (1) ; 67: Soblahov (1) ; 68: Udrina (1) ; 69: Oswiecim (1) ; 70: Dolný Kubín (1) ; 71: Vyšný Kubín (1) ; 72: Wojszyce (1).

Hoards

101: Podmokly ; 102: Nechanice ; 103: Moravia, unspecified site ; 104: Brzezinka Średszka ; 105: Němčičky nebo Velké Pavlovice ; 106: Velké Pavlovice ; 107: Plumlov ; 108: Veľký Biel ; 109: Horné Orešany – Majdán ; 110: Levice ; 111: Gorzów ; 112: Hrhov.

Fig. 14. Circulation of the Athena Alkidemos type, all denominations and series included (maps: E. Hiriart; sources: T. Smělý).

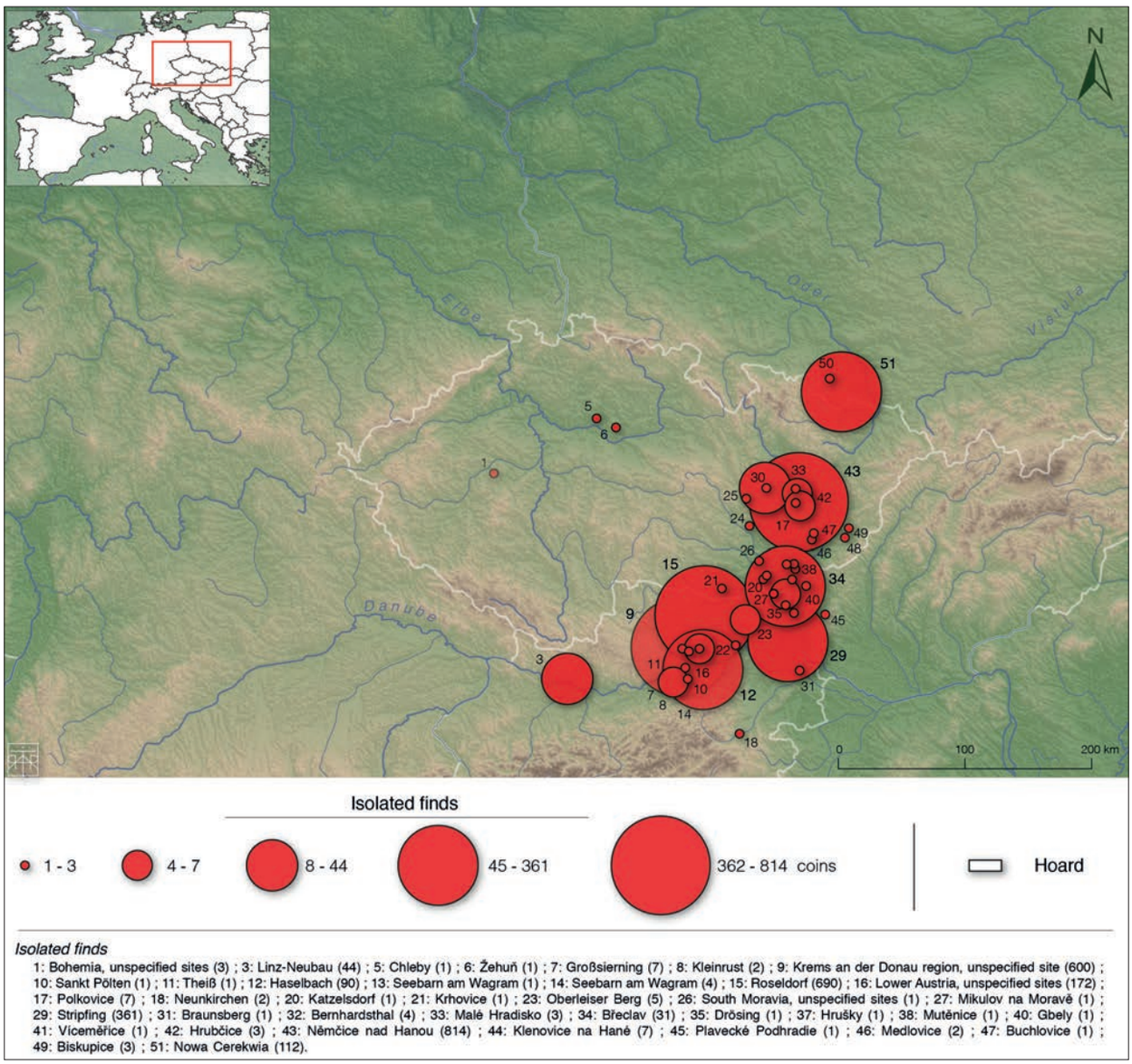


Fig. 15. Circulation of the Roseldorf/Němčice type, all series included (maps: E. Hiriart; sources: T. Smělý).

the silver coins. At a hypothetical ratio of gold to silver of 1:12, one drachma was equal to just 1/24 stater. Such a ratio cannot be unambiguously proved, but it seems very likely with regard to the necessary practical convertibility between silver and gold coins. The more rapid weight decrease of silver coins over time compared to gold may reflect a gradual increase of silver prices. Such a hypothetical price development could be related to the end of the production of drachms and hemidrachms with time, possibly motivated by a preference for using silver for the smallest denominations, which could not, for practical reasons, be minted in gold. The gradual decrease in the weight of gold coins over time to a stater equivalent of approximately 8.0 g, and the simultaneous decrease in the weight of obols in drachma equivalent to approximately 3.3 g corresponds to a hypothetical change in the value ratio between gold and silver to 1:10[17].

A very distinct fragmentation of the coinage of the Amber Road corridor related to the production of new local types sometime during LT C2, probably around the middle of the 2nd century BC, signals the breakdown in the power structure and economic functioning of the whole area. These changes were associated with the gradual decline, marginalization or abandonment of most of the prosperous central settlements and, in general, with changes in the settlement structure.

[17] A ratio of about 1:10-1:12 roughly corresponds to the range proposed for the ancient Mediterranean.

*The monetary system of Bohemia in the pre-*oppida *period (T. Smělý)*

New finds of coins with a reliable find context have allowed the identification of the coins of the so-called Boian parallel series, known as the 'Nebenreihen' (Castelin 1965) and iconographically very different from the production of the Amber Road corridor, as the coinage of Bohemia in the pre-*oppida* period. Coins minted in Bohemia and labelled recently as 'Bohemian local issues' have been newly classified (Militký 2018). Several dozens of type series have to date been documented (for instance **fig. 1, n°22-23**), and more than ten such series consist of several denominations. Clearly the vast majority of the type series were minted only over a short period of time. In contrast with the uniformity of the coinage in the territory of the Amber Road, the coinage in Bohemia is remarkably varied.

Coinage in Bohemia was based on a multi-denominational bimetallic coinage system. The silver obol was the lowest denomination. At present there is no evidence for the production of silver drachmas and hemidrachms. 1/24 staters, 1/8 staters, 1/3 staters, and staters were minted from gold. However, in the early period 1/4 staters were also minted, probably inspired by the coinage of Gaul or of Greece. The question of when the coinage of the Bohemian local types started is difficult to answer. It is clear that extensive coin production in the Amber Road corridor, and perhaps also in south-western Europe, was a strong impulse for development of coinage in Bohemia. However, it is not clear how soon and with what intensity the Bohemian elites responded to these stimuli. The weight of gold coins that were certainly minted in Bohemia does not, as a rule, exceed 8.1-8.2 g in a stater equivalent. These values are noticeably lower than the values for the oldest issues of Athena Alkidemos type series minted in Amber Road corridor. The difference is even more significant for silver obols. Lower weights provide clear evidence for later production. Yet several types of coins minted in Bohemia in one only denomination, in particular 1/4 staters, reach a weight of about 8.3-8.4 g. All these 'heavy' coins are extremely rare. This is a testimony to the small scale of production in the initial period of Bohemian local issues. Intensive development of coinage took place in Bohemia later than in the Amber Road corridor, during the last third of 3rd century, or at the latest at the turn of the 3rd and 2nd centuries BC. However, there seems to have been a significant difference in the extent of coin production between Bohemia (**fig. 16-17**) and the Amber Road corridor during the whole LT C1 period.

A striking feature of the type series produced over an extended period is the decreasing weight accompanied by a more or less continuous deterioration of the coin image. At the end of the pre-*oppida* period, at the beginning of the last third of the 2nd century BC, the average weight of gold coins of the latest types ranges from approximately 7.2 to 7.4 g as stater equivalents. Gold coins were initially struck from high-quality alloy, typically with a fineness of about 95-99%. The fineness of the latest issues decreased in some cases to less than 80%. At present this phenomenon cannot be adequately explained, but is probably related to the economic and social development of society in Bohemia in LT C2 (*cf*. Smělý to be published).

Gold coinages versus Silver coinages (3rd century – beginning of 2nd century BC)

The data collected in this article only provide an overview of the coin series circulating during the 3rd and the beginning of the 2nd century BC. However, it does highlight some trends that are based on empirical evidence. The map of coin finds classified by metal which was developed from our inventory of early issues illustrates the pattern of gold/silver distribution presented above (**fig. 18, A**). Gold circulated to the north of the Alps, while silver was mainly distributed in Cisalpine Gaul, in the Garonne Valley, and partially in Central Europe. The two latter regions, located as they are on both sides of Celtic Europe, are unlikely parallels, and represent areas of interface between gold and silver (**fig. 18, B-C**). The same two areas are home to the main settlements that have produced numerous coinages from the periods that interest us.

It is important to note, however, that the vast majority of discoveries in Central Europe are made by means of metal detectors, which has significantly influenced the quantities of finds.

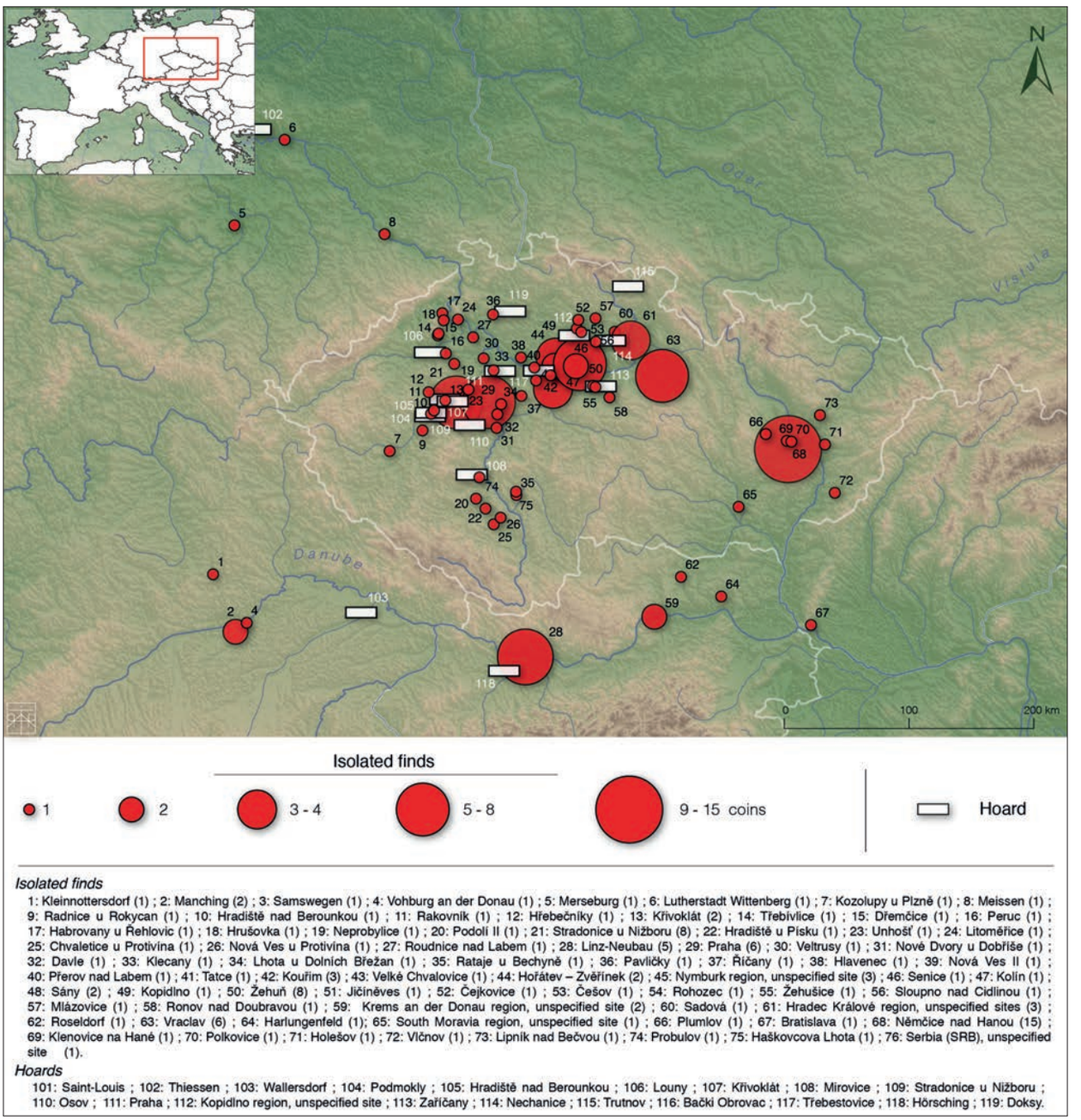
Based on the distribution maps, we can reflect in more detail on the different uses of these early coinages.

Monetary uses in the 3rd century BC and at the beginning of the 2nd century BC

Preliminary points

Increasingly, numismatic approaches are taking into account archaeological data and the socio-economic context of Celtic societies. However, to understand the factors that led to the appearance of the first coins in Celtic Europe, some of the theories that have been advanced on a regular basis must be moderated, even disputed. On the one hand, most of the work is based on the assumption that a specific coin was introduced by mercenaries. However, as far as Gaul is concerned, recent studies have relativized the importance of mercenaries in this phenomenon (Baray 2014; Nieto-Pelletier, Olivier 2016). On the other hand, it is sometimes thought that monetary and economic development was limited before the middle of the 2nd century BC. The use of coins will have been occasional and not related to trade. Here too, the data suggest that some rethinking of established models is necessary (Salač 2005; Gruel, Haselgrove 2006; Venclová, Militký 2014, p. 388).

The distribution maps presented in the previous section reveal the existence of circulation differentiated according to the monetary groups. Although there are many nuances and each individual case is unique, two broad categories seem to emerge. Some coins (for example, the Athena-Nike series in Central Europe and the imitations of Philip II in Gaul) are discovered on an *ad hoc* basis. They circulated sparsely, in small quantities. On the other hand, others coins (notably the imitations of *Rhoda*, the Athena Alkidemos series and the Roseldorf/Němčice series) are found in large numbers in open settlements and are rarely hoarded (Venclová, Militký 2014, p. 399). These contrasts seem to reflect



Isolated finds

1: Kleinnottersdorf (1) ; 2: Manching (2) ; 3: Samswegen (1) ; 4: Vohburg an der Donau (1) ; 5: Merseburg (1) ; 6: Lutherstadt Wittenberg (1) ; 7: Kozolupy u Plzně (1) ; 8: Meissen (1) ; 9: Radnice u Rokycan (1) ; 10: Hradiště nad Berounkou (1) ; 11: Rakovník (1) ; 12: Třebečníky (1) ; 13: Křivoklát (2) ; 14: Třebívlice (1) ; 15: Dřemčice (1) ; 16: Peruc (1) ; 17: Habrovany u Řehlovic (1) ; 18: Hrušovka (1) ; 19: Neprobylice (1) ; 20: Podolí II (1) ; 21: Stradonice u Nižboru (8) ; 22: Hradiště u Písku (1) ; 23: Unhošť (1) ; 24: Litoměřice (1) ; 25: Chvaletice u Protivína (1) ; 26: Nová Ves u Protivína (1) ; 27: Roudnice nad Labem (1) ; 28: Linz-Neubau (5) ; 29: Praha (6) ; 30: Veltrusy (1) ; 31: Nové Dvory u Dobříše (1) ; 32: Davle (1) ; 33: Klecany (1) ; 34: Lhota u Dolních Břežan (1) ; 35: Rataje u Bechyně (1) ; 36: Pavličky (1) ; 37: Říčany (1) ; 38: Hlavenec (1) ; 39: Nová Ves II (1) ; 40: Přerov nad Labem (1) ; 41: Tatce (1) ; 42: Kouřim (3) ; 43: Velké Chvalovice (1) ; 44: Hořátev – Zvěřínek (2) ; 45: Nymburk region, unspecified site (3) ; 46: Senice (1) ; 47: Kolín (1) ; 48: Sány (2) ; 49: Kopidlno (1) ; 50: Žehuň (8) ; 51: Jičíněves (1) ; 52: Čejkovice (1) ; 53: Češov (1) ; 54: Rohozec (1) ; 55: Žehušice (1) ; 56: Sloupno nad Cidlinou (1) ; 57: Mlázovice (1) ; 58: Ronov nad Doubravou (1) ; 59: Krems an der Donau region, unspecified site (2) ; 60: Sadová (1) ; 61: Hradec Králové region, unspecified sites (3) ; 62: Roseldorf (1) ; 63: Vraclav (6) ; 64: Harlungenfeld (1); 65: South Moravia region, unspecified site (1) ; 66: Plumlov (1) ; 67: Bratislava (1) ; 68: Němčice nad Hanou (15) ; 69: Klenovice na Hané (1) ; 70: Polkovice (1) ; 71: Holešov (1) ; 72: Vlčnov (1) ; 73: Lipník nad Bečvou (1) ; 74: Probulov (1) ; 75: Haškovcova Lhota (1) ; 76: Serbia (SRB), unspecified site (1).

Hoards

101: Saint-Louis ; 102: Thiessen ; 103: Wallersdorf ; 104: Podmokly ; 105: Hradiště nad Berounkou ; 106: Louny ; 107: Křivoklát ; 108: Mirovice ; 109: Stradonice u Nižboru ; 110: Osov ; 111: Praha ; 112: Kopidlno region, unspecified site ; 113: Zaříčany ; 114: Nechanice ; 115: Trutnov ; 116: Bački Obrovac ; 117: Třebestovice ; 118: Hörsching ; 119: Doksy.

Fig. 16. Circulation of the Bohemian gold coins in the pre-*oppida* period, all denominations and series included (maps: E. Hiriart; sources: T. Smělý).

monetary practices which can be differentiated by region and probably by period and by metal. In Central Europe, gold and silver seem to have similar circulations, unlike in Gaul, where a clear north/south partition is drawn between gold and silver. The value of silver coins (mainly small fractions in Central Europe) was considerably lower than the value of gold coins (which also explains the scarcity of the latter compared to the former).

The delicate question of uses and functions

In recent years, several works have focused on the functions and uses of the first issues in Gaulish gold. The hypotheses, sometimes divergent, highlight the complexity of the phenomenon (*cf.* especially Wigg-Wolf 2011; Pion 2012; Baray 2014, p. 139-164; Martin 2015, p. 347-350; Nieto-Pelletier to be published).

Understanding the reasons behind the minting of these first issues and the functions and uses they actually had is not easy

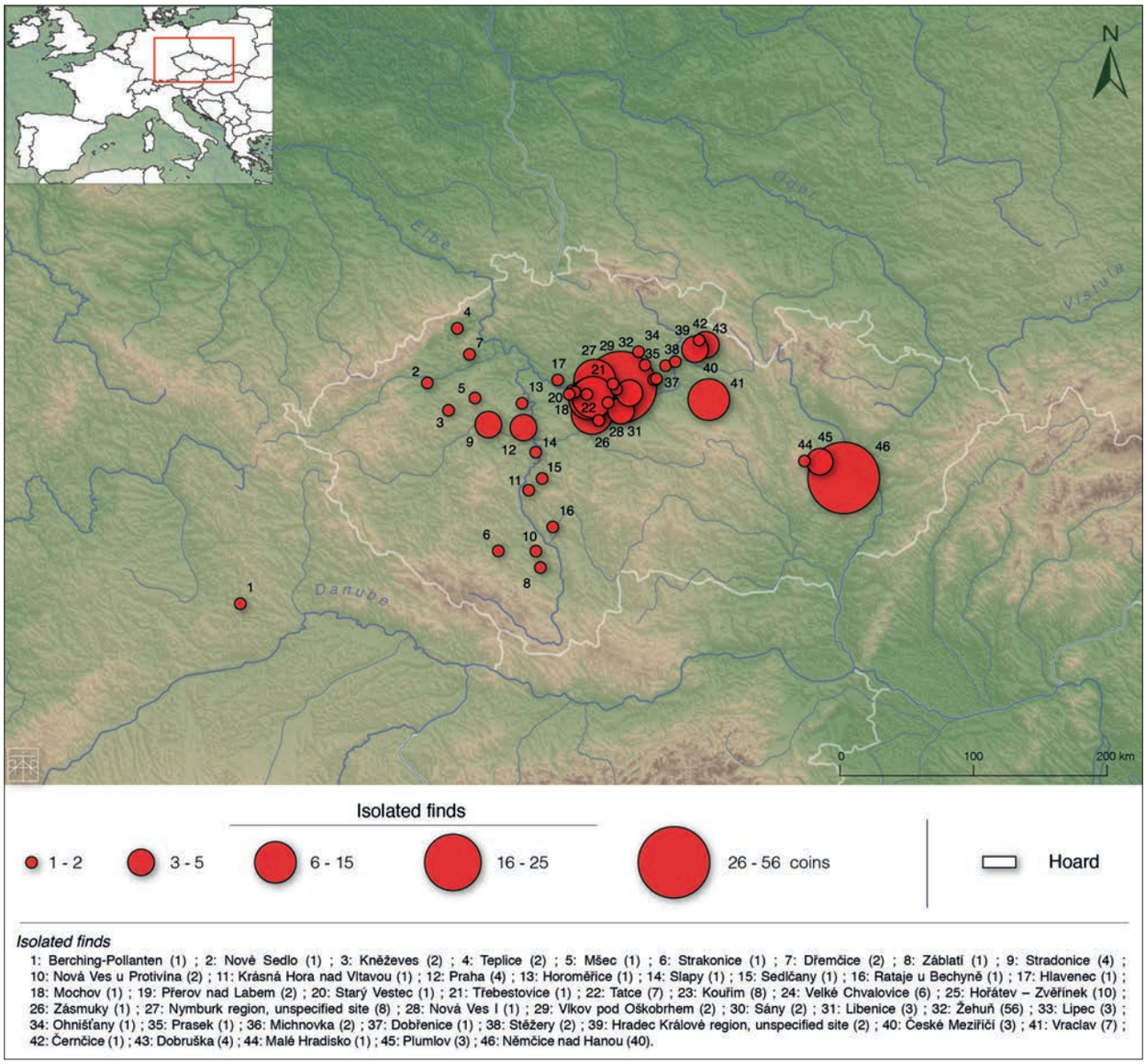


Fig. 17. Circulation of the Bohemian silver coins in the pre-*oppida* period, all denominations and series included (maps: E. Hiriart; sources: T. Smělý).

given our current state of knowledge. According to P. Pion, the first gold coins cannot be considered genuine money in the full sense of the term: they were rather used as valuables, as prestige goods that did not enter the economic sphere (Pion 2012). These first issues could have had a military purpose and would have made it possible to finance conflicts during the Belgic and Germanic invasions of the 3rd century (Sills 2003; Pion 2012; Guihard 2012). The integration of these coinages into wider social practices (diplomatic exchanges, tribute or dowry payments) should also be considered (Wigg-Wolf 2011; Martin 2015). L. Baray proposes a more economic approach, and suggests that their creation should be regarded as a response to 'the economic demands born of new social relationships' (Baray 2014, p. 162).

The introduction of coinage should very likely be reattributed to the intrinsic socio-economic dynamics related to the consolidation of power by the aristocratic elites ruling the territories that were undergoing restructuring, and whose building of sanctuaries is one of the major traits of the beginning of our period (Buchsenschutz *et al.* 2012; Nieto-Pelletier, Olivier 2016; Marion 2018). Ultimately, it is not certain that the data currently available are sufficiently robust and substantial to identify the uses of these first coinages in Celtic Europe in undisputed terms. Perhaps we should consider a plurality of uses to varying degrees, related to the diplomatic, military, economic, but also religious domains (Sills 2003; Howgego 2013; Nieto-Pelletier to be published).

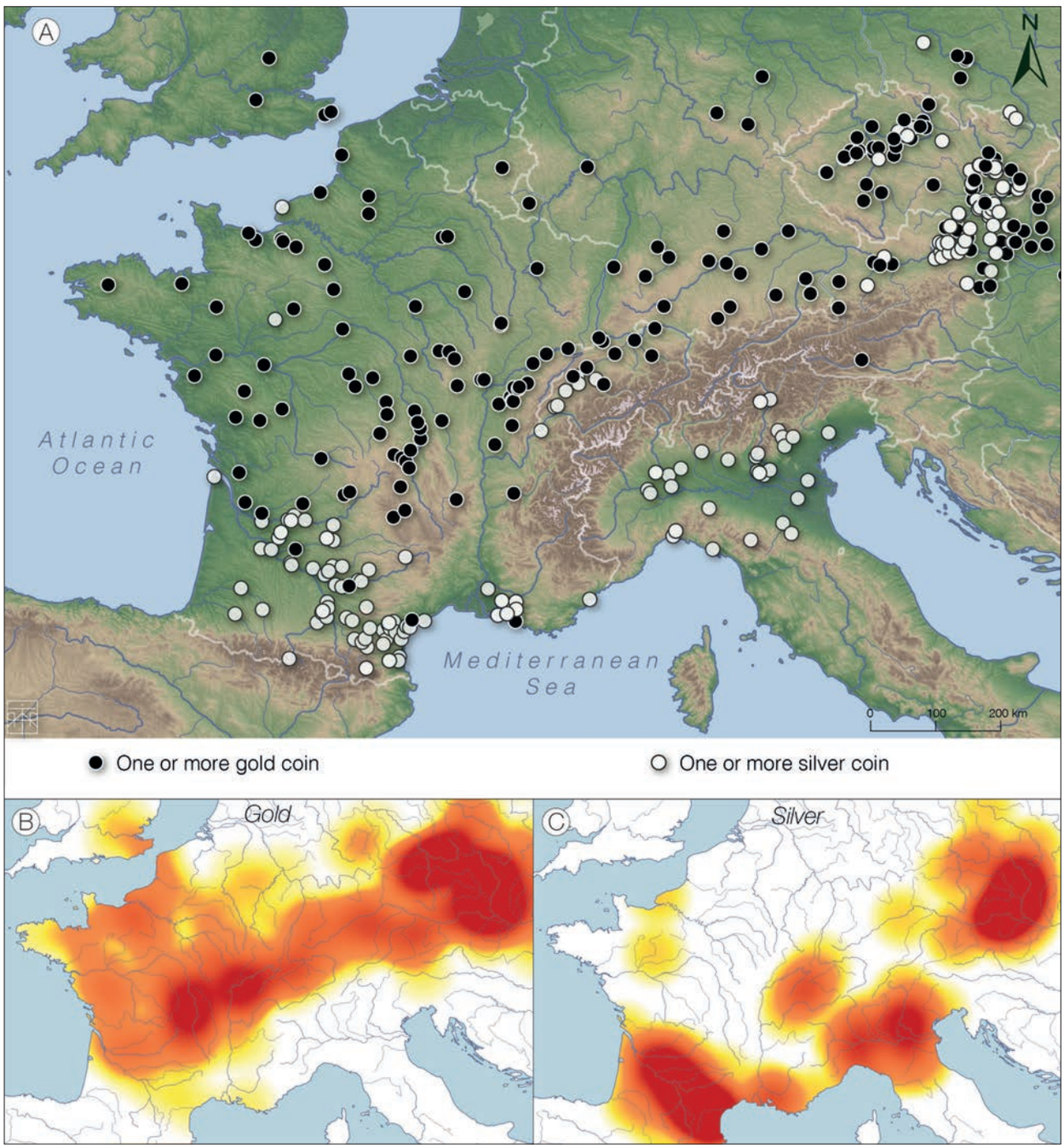


Fig. 18. **A**. Circulation of gold and silver according to the coins recorded in this study (3rd century to the beginning of the 2nd century BC); **B**. Density of gold coins, heatmap; **C**. Density of silver coins, heatmap (maps: E. Hiriart).

The beginning of a monetarized economy in Celtic Europe?

Along with these compartmentalized uses of coinages, we also see an increased complexity of trade during the 3rd century BC. Thus, on both sides of Celtic Europe, during the 3rd and the early 2nd century BC, important concentrations of coins are found on certain sites like Lacoste (F), Eysses (F), La Peyrouse (F), Roseldorf (A), Němčice (CZ) or Nowa Cerekwia (PL).[18] All these sites have the same profile: they are open settlements (not fortified), covering large areas (more than 20 ha) and they emerge during the 3rd century BC. Some of them show a high level of 'urban planning', a likely sign that an administrative power was in place (Fichtl 2013). These sites enjoyed a strategic position that allowed them to control intermediate transhipment points at the crossroads of terrestrial and fluvial communication routes (Salač 2012, p. 330). These settlements, where archaeology reveals the existence of intense commercial and especially artisanal activities, assert themselves as centres of production, import, and redistribution of manufactured objects. From Gaul to Central Europe, these similarities reaffirm the existence of converging socio-economic phenomena on a European scale.

It seems essential to understand the framework in which the coins were used in these settlements, sometimes separated by several hundreds of kilometres. Were they already used in trade from the 3rd century BC? Several elements seem to confirm the early monetarisation of transactions. Firstly, the discovery of coins by the dozen, or even hundred[19] does not support the idea of a practice that was isolated or exceptional. The quantity of finds suggests sustained monetary usage. Secondly, there is a wide range of fractions and submultiples that argues for a monetarisation that was already developed and adapted to regular use. The Athena Alkidemos series represents the paradigm of such divisional systems, made up of staters (**fig. 1, n°15**), 1/3 (**fig. 1, n°16**), 1/8 (**fig. 1, n°17**) and 1/24 staters (**fig. 1, n°18**). The diameter of the latter does not exceed 6 mm and their weight clusters around 0.34 g. As far as silver is concerned, its use around the Amber Road corridor is mainly limited to the small fractions of the Roseldorf/Němčice series, which have a low nominal value (741 specimens attested in Němčice; Kolníková 2012). On the sites of south-western Gaul, numerous silver fractions (including Marseille obols and horse fractions; **fig. 1, n°24**) are also attested and circulate parallel to drachms. These small silver coins had to be adapted to the payment of small sums and certainly constituted a tool for regular commercial exchanges. Thirdly, the gradual weight loss of coins (and therefore the decrease in their real value) is a typical feature of currency used for current payments. This phenomenon is very well documented for the European Middle Ages. Finally, one of the most interesting information is provided by the few archaeological contexts available, which make it possible to re-asses the context of coin finds. At Lacoste, most of the coins were unearthed over a vast expanse, free of any structures, and located along the main road. According to Chr. Sireix, it could have been a vast public square, comparable to an agora or a marketplace (Sireix 2013, p. 114). A similar trait can be observed in Roseldorf, where most of the coins also come from areas with no structures, located on the edge of the street and interpreted as marketplaces (Holzer 2009, p. 13). In addition to the marketplaces, whose existence seems to be supported by corresponding archaeological observations, other practices can also explain the presence of large numbers of coins. Cult must also be considered as a possibility. In some cases, monetary discoveries could be linked to ritual practices, perhaps within sanctuaries or other cult spaces that have yet to be recognized (see Čižmář *et al.* 2008 for Němčice; Haselgrove, Webley 2016 for Manching).

Conclusion

The socio-economic realities of the Celtic world allow for many nuances that this article does not claim to explain in their entirety. However, in spite of the regional differences, this archaeological, numismatic, and cartographic approach offers new research perspectives concerning the introduction of coins in temperate Europe.

Since their emergence in the 3rd century BC, coins have essentially taken on social functions. Coinage likely created, maintained, and reorganized relationships between people or communities (Graeber 2011): dowries, rites of passage, diplomatic gifts, fines, ostentation, honorary symbols, blood money, etc. Moreover, these coins certainly played a role in religious and military practices.

However, very soon after the appearance of the first coins, at least from the middle of the 3rd century BC onwards, a turning point occurs in some places where a monetarisation of trade begins (Hiriart 2019a; Hiriart 2019b). In a number of open settlements, coinage is introduced into current transactions (and is sometimes intensely used, see Venclová, Militký 2014, p. 400; Smělý 2017a; Militký 2018). This impetus is primarily due to a structural change in a part of Celtic society and to an increasing complexity of economic and productive practices on a European scale. In the 3rd century BC, the emergence of open settlements implies a renewal of territorial organization and reflects a structural change in socio-economic relations within indigenous societies (Venclová 2016). The archaeology clearly shows a specialization and standardization of production, with a rational management of the organization of tasks. Production is no longer just about satisfying the community's demands, but now focuses primarily on exports and trade. The large volume of waste documented on these sites indicates the existence of mass manufacturing which was aimed at generating added value. All these factors reveal a greater complexity of the economy (Venclová 2016). In this context, coinage opens up new economic prospects: it becomes a unit of account and a means of payment, and it unifies the debt system (Théret 2008, p. 20-21; Smělý 2017b). One could now

[18] These are mainly silver coins, but there are also significant concentrations of small gold denominations (notably 1/24 staters) in the agglomerations of Central Europe.

[19] It is estimated that around 20,000 to 30,000 coins were found in Němčice, the majority of which are undocumented (Smělý 2017a).

repay a debt by returning the equivalent, in coins, of what had been received. There is a gradual 'depersonalization' of trade. This decisive phenomenon ultimately translates into a profound change in societies (Hiriart 2019b).

The appropriation of coinages does not ensue from a Mediterranean influence alone. It is crucial to understanding the importance of endogenous changes, specific to Celtic societies.

Acknowledgements

The authors would like to express their gratitude to V. Geneviève, E. Paris and C. Sireix who permitted publication of unpublished data from their recent excavations.

AREA		DATING [approx.]	Value of metals to amount of currencies ratio	TYPOLOGY AND METROLOGY [main types]								ORIGIN [main influences]	
Coinage and circulation	Main sites			Type	Denomination	Metal	Change of fineness over time [trend]	Weight [g in equivalent]	Weight [g; approx.]	Change of weight over time [trend]	Chronology [approx.]	Metrology	Iconography
Coinage of Athena-Niké staters													
Bohemia Moravia Austria Hungary (?) Balcan (?) many production places (Fig. 12)	?	320/300 - 270/250	-	Athene-Nike	stater	AV	?	8.60-8.20	8.60-8.20	?	320/300-270/250	Macedonia	Macedonia
Monetary system of the Amber Road corridor													
S of Silesia Moravia N-E of Austria many production places (Fig. 13-15)	Nowa Cerekwia, PL Němčice, CZ Roseldorf, A Stripfing, A Haselbach, A Etzersdorf, A Krems (unspecified site in region), A	250/230-160/140	AV>AR	Athena Alkidemos	stater	AV	↔	8.40-8.00	8.40-8.00	↓	250/230-160/140	Macedonia	Macedonia
					1/3-stater			8.40-8.00	2.80-2.67				
					1/8-stater			8.40-8.00	1.05-1.00				
					1/24-stater			8.50-7.80	0.35-0.33				
				Horse with rosette	drachm	AR		4.20-3.80	4.20-3.80		250/230-210/200		Macedonia (?), S Italy (?), Paeonia (?)
					hemidrachm			4.20-3.90	2.10-1.95				
				Horse with rosette Roseldorf / Němčice I Roseldorf / Němčice II	obol			4.20-3.20	1.05-0.80		250/230-160/140		
Monetary system of pre-oppida time in Bohemia													
Bohemia many production places (?) (Fig. 16-17)	Žehuň (don't exist large sites?)	230/200-130/120	AV>AR	More then 40 different types (but only 11 types with more of denominations)	stater	AV	↓	8.15-7.40	8.15-7.40	↓	220/200-140/120 (individual types were struck shorter time)	Amber Road corridor	Amber Road corridor, local motifs, Greece (?), Gaul (?)
					1/3-stater			8.10-7.20	2.70-2.40				
					1/8-stater			8.24-7.20	1.03-0.90				
					1/24-stater			8.16-7.20	0.34-0.30				
					obol	AR	↓	-	0.95-0.60				
				Approx. 3-5 types (but only 1 type serie with 1/4-stater denomination)	1/4-stater	AV	↔	8.40-7.80	2.10-1.95	↓	230/210-180/160 (individual types were struck shorter time)	Gaul (?) Greece (?) Amber Road corridor (?)	
Imitations of the staters with types of Philip II of Macedonia and first celtic adaptations													
Central and Northern Gaul	-	320/300-200	-	Types of the staters of Philip II of Macedonia (Obv. : Apollo; Rev.: biga). Sometimes on the obverse, types from different influences	stater	AV	↓	8.60-7.55	8.60-7.55	↓	320/300-200	Macedonia	Macedonia, Northern Asia Minor, types of Lysimachus, Taranto, Neapolis
					1/2 stater			8.44-8.10	4.22-4.05				
					1/4 stater			8.52-7.12	2.13-1.78				
"Androkephales Pferd" type, 1/24 stater													
Southern Germany (Manching)	Manching	230/220-190/180	-	Androkephales Pferd	1/24 stater	AV	↔	8.40-7.92	0.35-0.33	?	230/220-190/180	Amber Road corridor (?)	Local motifs (?)
Janus type, 1/24 stater													
Southern Germany (Manching)	Manching	230/220-190/180	-	Janus type	1/24 stater	AV	↔	8.16-7.20	0.34-0.30	?	230/220-190/180	Amber Road corridor (?)	Rome, local motifs (?)
					1/72 stater			8.40-8.50	0.118				
Imitations of the obols of Marseille													
Mediterranean basin / Rhône valley	Lattes, Roanne, Vallon-Pont-d'Arc, Martigues, Baou-Roux, Lançon	225/50	-	Obole à la légende AM	obol	AR	?	-	0.76-0.23	↓	225/50	Marseille	Marseille
				Obole à la corne	obol	AR	?	-	0.49-0.24	?	225/190-100	Marseille	Marseille

Drachms of Cisalpine Gaul

Northern Italy	Bergamo	390/380-200	-	Seghedu type	drachm	AR	↔	3.80-3.60	3.80-3.60	↔	390/380-360/350	Marseille	Marseille
	Brescia, Bergamo, Genova, Como, Monterenzio, Milano, Modena, Sasselo, Oderzo, Balzola, Biandrate, Alessendria			"Naturalistic lion" and "scorpion lion" types (several different mints ; series with specific circulation areas)	drachm	AR	↓	3.80-3.60	3.80-3.60	↓	350-300		
								3.80-3.60	3.80-3.60				
	Between Piedmont and Lombardy regions			Wolf lion type	drachm	AR	↓	2.90-2.20	2.90-2.20	↓	220/210-140/130		
	Milan, Rho-Lucernate, Garlasco			Spotted panther type	triobol or diobol	AR	?	-	2.27-1.30	↓	350-200		
	Casalecchio di Reno, Genova			Obole à la roue	obol	AR	?	-	0.40-0.23	?	350-200		

Imitations of the drachms of Rhoda

S-W Gaul Aude-Garonne corridor	Lacoste, La Peyrouse, Eysses, Eymet, Castelnau-de-Lévis, Montlaurès	250/230-160/140	-	More than 20 different series (several different mints ; series with specific circulation areas)	drachm	AR	↓	-	4.8-4.7	↓	270/250-230/210	Rhoda / Emporion	Rhoda
								-	4.2-3.8		230/210-190/180	Marseille (?)	
								-	2.9-2.8		190/180-160/140	?	

Imitations of the drachms of Emporion

Western Languedoc	Bouriège, Sigean	270/250-200/180	-	Standing horse types	drachm	AR	?	-	4.8-4.7	↓	270/250-230/220	Rhoda / Emporion	Emporion
Mid-west of France	?			Bridiers types	drachm	AR	?	-	4.4-4.2		220/210-200/180	Marseille (?)	Emporion, local motifs (?)

Silver fractions of S-W Gaul

Western Languedoc	Montaurès, Pech Maho	260/240-190/170	-	"Bucranium" type obol	obol	AR	?	4.2-3.0	0.7-0.5	?	260/240-190/170	Marseille	Marseille
Western Languedoc	Montaurès, Pech Maho			Horse turning his head	obol	AR	?	4.2-3.0	0.7-0.5		260/240-190/170	Marseille	Emporion, local motifs (?)
Western Languedoc	Lacoste, La Peyrouse, Eymet			Horse type	obol	AR	?	4.2-3.0	0.7-0.5		260/240-190/170	Marseille	Marseille (?), local motifs (?)
Mid-west of France	Lacoste			Wolf type	obol	AR	?	4.2-3.0	0.7-0.5		260/240-190/170	Marseille	Marseille, local motifs (?)

Monnaies à la croix of S-W Gaul

S-W Gaul Languedoc and Aude-Garonne corridor	Eysses, Aiguillon, Lattes, Toulouse region…	240/230-50	-	Early types	drachm	AR	?	-	3.7-3.5	↓	240/230-190/170	Marseille (?)	various influences : Emporion, Rhoda, Massalia, Central Gaul, local motifs…
					obol	AR	?	-	0.45-0.40		240/230-190/170	Marseille (?)	
	Several sites of S-W Gaul			6 different types	drachm (?)	AR	?	-	3.5-3.2		190/170-120/110	Marseille or Rome (?)	Local motifs

↔	stable over time
↕	variation over time
↓	decreasing over time
x > y	value of x is higher
x >> y	value of x is significantly higher
x ≈ y	value of x and y is similar

Fig. 19. Summary chart: Main characteristics of early Celtic coins (3rd century to the beginning of the 2nd century BC).

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Abstract

In the Celtic world, numismatic research has mainly focused on the *oppida* civilization (late 2nd - 1st centuries BC), a period during which monetarisation of societies was important, data is abundant and archaeological contexts are plenty. Focusing on the 3rd century and the beginning of the 2nd century BC, this article deals with earlier realities, less commonly studied. Until now, the normal tendencies have been to study particular coinages in isolation, or to focus on localised regions. The main thrust of our approach is to understand the phenomenon of the appearance of coinage at the scale of Celtic Europe, and to lay the groundwork for a shared approach.

In order to sketch an overview extending from Gaul to Central Europe, our approach is structured in three parts: 1- Chronology. We will tackle the difficulty of dating the oldest Celtic coins by using new archaeological data and recent studies. 2- Circulation. Initial mapping at the European scale is carried out to ask questions about the circulation of the initial Celtic coinages. 3- Uses. It is suggested that the gradual development in the monetarisation of the Celtic economy, the prevailing model that is often proposed, may be too simplistic.

Résumé

Monnayages et pratiques économiques entre le III^e^ s. et le début du II^e^ s. av. n. è. en Europe tempérée. Dans le monde celtique, les recherches numismatiques ont surtout porté sur la civilisation des *oppida* (fin II^e^-I^er^ siècle av. n. è.), période pour laquelle la monétarisation des sociétés est importante, les données nombreuses et les contextes archéologiques abondants. En se centrant sur le III^e^ siècle et le début du II^e^ siècle av. n. è., cet article s'intéresse à des réalités précoces, moins communément étudiées et vise à poser les jalons d'une réflexion commune. Jusqu'ici, la plupart des approches se sont centrées soit sur des monnayages précis étudiés isolément, soit sur des régions ciblées. La nouveauté de notre démarche consiste à appréhender le phénomène d'apparition de la monnaie à l'échelle de l'Europe celtique.

Afin d'esquisser une vision transversale entre la Gaule et l'Europe centrale, l'article s'articule autour de trois parties : 1- La chronologie. On s'intéressera à la datation, difficile, des plus anciennes monnaies celtiques à partir des nouvelles données archéologiques et des études récentes. 2- La circulation. On se livrera à une première approche cartographique à l'échelle européenne pour s'interroger sur la circulation des premiers monnayages celtiques. 3- Les usages. Il conviendra de se demander si le développement graduel de la monétarisation de l'économie celtique, souvent proposé, n'est pas un modèle trop simpliste.