


RESEARCH ARTICLE

## Trade, literacy and documentary histories of the northern Black Sea

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### Abstract

The northern coast of the Black Sea has produced an abundance of documentary texts dating from the sixth through fourth centuries BC. Of great value to the epigraphist and historian are dozens of Greek letters, receipts and curses inscribed on lead and ceramic media. When placed in dialogue with one another, these texts yield new insights into daily life and literacy in communities for which literary sources are scant or absent. They document the bustling trade in saltfish, enslaved persons and textiles, and the web of relations between Greek and non-Greek individuals in north Pontic cities, from marriage to commercial ties with indigenous groups of the Pontic interior. This article demonstrates how trade could drive literacy in non-elite communities of the northern Black Sea. Literacy and mercantile activity were very much entwined, and developed in parallel with one another and with other civic and social institutions within these port communities.

**Keywords:** northern Black Sea; literacy; commerce; social history; letters; curse tablets

### I. Introduction

Around 330 BC in a port on the northern Black Sea, a Greek speaker named Oreos composed a letter to Pythokles, his business associate. Oreos conveyed greetings, then turned to pressing business: Pythokles is to send a *himation* for Oreos' personal use, and two Ionian *himatia* to sell for profit. Along with the clothing, Pythokles must take a slave named Charios and deliver him to Diodoros the helmsman for transport by ship. Oreos bids Pythokles farewell, and begins a second message to a man named Kerkion: space is available on Diodoros' boat, he writes, for saltfish.

Of the merchant Oreos, his associates Pythokles and Kerkion, the enslaved Charios and Diodoros the helmsman, nothing more is known: we have only this snapshot of their lives, preserved on a thin lead tablet from Myrmekion, an ancient port city of Crimea's Bosporan Kingdom (Fig. 1).<sup>1</sup> Yet we know of other persons like them, other slaves and other helmsmen, from this same region. Consider a contemporary lead tablet that emerged in the necropolis of Pantikapaion, some 4 km southwest of Myrmekion. This second text curses a helmsman named Neumenios and the slaves of Xenomenes, all of whom were implicated in a trial in the law courts.<sup>2</sup> Studied together, these tablets provide a glimpse of social and economic life in a small corner of the Bosporan Kingdom, a seascape teeming

<sup>1</sup> Dana (2021) no. 46; Bekhter et al. (2018); Bekhter et al. (2019). On Myrmekion, see Butyagin (2011); Butyagin and Kasparov (2017).

<sup>2</sup> Pharmakowsky (1907) 126–28; Jordan (1985) 195, no. 170 [= SGD 170]; Eidinow (2007) 439–41.



Fig. 1. The Black Sea.

with traders and slaves, with luxury textiles, fish and ships. Here are the organized merchants, adept at record keeping and letter writing, if colloquial in speech; here, too, the wives of merchants, the helmsmen and the enslaved persons trafficked as human cargo.

This article investigates the ways in which early literacy was thoroughly entwined with commerce in Greek communities of the northern Black Sea from the sixth through fourth centuries BC. Analysing different genres of documentary text, especially mercantile letters and curse tablets, it is possible to reconstruct the broader economic and social networks of individuals engaged in commerce in Pontic cities. Not only was literacy driven by commerce, but literacy and commerce are shown to have been very much interwoven, and to have developed in parallel with one another and with civic and social institutions within these port communities. Inscribed letters, commercial texts and curses document similar groups of individuals, persons who often slip through the cracks of historical sources and figure minimally in discussions of regional economies and literacy. Especially in the northern Black Sea, where these texts provide a sizeable data set and illuminate mercantile communities, social and economic histories have much to gain from placing these documents in dialogue with one another. This article demonstrates how regional trade could drive written literacy in non-elite circles of the northern Black Sea, and surely within other Greek settlements whose economies were grounded in commerce.

These arguments are advanced in three parts. First, the state of the evidence is assessed and current research introduced, including recent textual editions, forthcoming projects and reports of unpublished inscriptions. Second, the study calls for north Pontic letters and receipts to be analysed together with curse tablets; these regional corpora engage the same groups of individuals, and illuminate a particular social world grounded in commerce. Indeed, Shelomo Goitein noted over 50 years ago that ‘social and economic history, especially of the middle and lower classes, can hardly be studied without the aid of documents such as letters, deeds, or accounts that actually emanated from people belonging to these classes’.<sup>3</sup> Growing numbers of lead and ceramic inscriptions

<sup>3</sup> Goitein (1967) 1, as discussed by Wilson (1997–1998) 29.

from the northern Black Sea help fill these historical lacunae, casting light upon the persons from whom they emanated and populating communities on the edges of the Greek *oikoumenē*. Finally, this article uses these texts to assess literacy and epigraphic habits in non-elite circles, with a focus on traditions of so-called mercantile literacy. These inscriptions document communities of striking economic sophistication, where commerce connected Greeks to other Greek and non-Greek persons across the Black Sea and beyond. Merchants and members of their households (wives, children, slaves) inhabited a world in which written communication was deeply beneficial, if not required, for regional and long-distance commerce.

## II. Private letters and correspondence

In the diverse communities of the northern Black Sea, network dynamics galvanized connectivity and interactions of various kinds, from commerce to marriage. A Pontic ‘cultural *koinē*’ has been identified as emerging from these interconnections, and the exchanges captured in letters, curses, receipts and other commercial documents (see, for example, the slave tag of Phaulles below) bear witness to social and economic life in these frontier *apoikiai*.<sup>4</sup> The majority of published documentary texts from the Black Sea littoral come from the northern coast, an area that for our purposes encompassed the Greek cities between Histria (Istros) in the west and Gorgippia in the east, including those of the Bosphoran Kingdom in eastern Crimea and on the Taman Peninsula (Fig. 1). At the time of writing, some 36 commercial letters dating from 550–300 BC are known from this stretch of coast. The total number is surely higher than this, however; the proliferation in recent years of metal-detector wielding ‘treasure hunters’ has catalysed the illicit removal of many lead tablets, most of which are neither reported nor published.<sup>5</sup> These texts document communications along local, regional and long-distance networks; most include orders, instructions and pleas for intervention between two or more persons. Commercial conflicts are well represented in these texts, several of which describe the transport and seizure of commodities, both persons and goods. One of the oldest such letters comes from the island of Berezan (ancient Borysthene, ca. 530 BC) and claims that the sender himself has been wrongfully seized and enslaved by a certain *Ματασος*, a man with a non-Greek name seemingly embroiled in a feud with the letter’s addressee.<sup>6</sup> Written in the present tense throughout, the text conveys urgency in pressing the recipients to clarify the sender’s status: Achillodoros is a free man, not a slave, and accordingly not liable to confiscation:<sup>7</sup>

<sup>4</sup> However, the letters and curse tablets themselves served as assertions of Hellenic identity in this frontier region, as texts composed by Greeks, in Greek, and implicated in Greek-initiated commerce and litigation. Pontic cultural *koinē*: Bresson and Ivantchik (2007). The colonial ‘middle ground’, north Pontic ‘small worlds’, colonization: Malkin (2011); Donnellan et al. (2016).

<sup>5</sup> As noted in Dana (2021) 89–90, no. 19, for example, purportedly recovered from the Greek settlement of Tyras. Systematic excavations have also recovered letters and curses in recent years: Bekhter et al. (2018); Brujako et al. (2018); Zavojkina and Pavličenko (2016); Belousov and Fedoseev (2016). For the 36 letters: Dana (2021) nos 19–54, updating previous counts in, for example, Dana (2007), Eidinow and Taylor (2010), Ceccarelli (2013).

<sup>6</sup> The lingering legacy of Finley’s status-driven economic model (Finley (1965), 11–35; (1973)) must shudder at such discoveries, which reveal the centrality and sophistication of trade in the Archaic Greek world; such texts show commerce to have ranged in scope and volume, and the driving agents, with their webs of relations and written competency, were organized, literate orchestrators of trade over non-trivial distances.

<sup>7</sup> Dana (2021) no. 25, *SEG* 26.845; Hermitage Inv. B.70.322. Translation adapted from Ceccarelli (2013) 336, no. A1. See also Vinogradov (1971); Dubois (1996) 50–55, no. 23. Translations are my own unless otherwise noted.

Exterior:

Achillodoros' lead, to his son and Anaxagoras.

Interior:

Protagoras, your father sends instructions to you: He is being wronged by Matasus, for he is enslaving him (δολῶται) and has deprived him of his cargo. Go to Anaxagoras and tell him the story, for he [Matasus] says that he [Achillodoros] is the slave of Anaxagoras, claiming: 'Anaxagoras has my property, slaves, both male and female, and houses'. But he [Achillodoros] disputes it and denies that there is anything between him and Matasus and says that he is free and that there is nothing between him and Matasus. But what there is between him and Anaxagoras, they alone know. Tell this to Anaxagoras and his wife. Besides, he sends you these other instructions: take [your] mother and brothers, who are among the Arbinatai, to the city. Euneoros himself, having come to him, will go down to Thyora.

Inscribed on lead, the text suggests that Matasus' distressing seizure of Achillodoros, the letter's composer, was retaliatory. At some prior time, Matasus' own property, male and female slaves and houses (δόλος καὶ δόλας κοικίας), had been seized by Anaxagoras. Matasus apparently thought that Achillodoros was a slave of Anaxagoras, a confusion which perhaps stemmed from the fact that Achillodoros' family, if not Achillodoros himself, resided in the hinterland among the Ἀρβιναται, a regional indigenous group. Achillodoros' letter documents both the prominence and precariousness of north Pontic commerce, in addition to the private forms of redress adopted by merchants embroiled in commercial disputes in the late sixth century. Enslaved persons, estates, moveable property and even free merchants could be seized without warning, in this case in response to a previous seizure of goods and property, part of an extrajudicial undertaking known as *sula/sulē* (reprisal by seizure).<sup>8</sup>

Other letters connected Greek merchants to agents in the field; such texts document the commodities, persons and payments implicated in north Pontic commerce. Thus, in a letter from Patraeus (Patrasys), Pistos asks a merchant named Aristonymos to exact a gold stater and slave (ἀνδράποδον) from a (Thracian?) man named Σαπασις, while another from Gorgippia orders that an axe (πέλεκκος) be given to a slave in connection with agricultural work.<sup>9</sup> A lead letter from the Olbian hinterland directs a horse to be delivered from the *chōra* to the letter's sender in the *astu*; already the horse had been given to Zopyrion by one Kophanas, to whom τὰ γράμματα, some sort of written documents, were then to be given.<sup>10</sup> In a text from sixth-century Olbia, Apatourios tells Leanax that the total value of goods seized, at least some of which included enslaved persons, is 27 staters; he implores Leanax to send records (διφθέρια) in order to save the cargo.<sup>11</sup> An ostrakon recently found in Nikonion is addressed 'to those at home' by a man named Dionysios; it communicates information concerning the emptying of sand out of a boat, large quantities of barley (nine *medimnoi*) in the keeping of one Possikrates and the procurement (κ[ό]μισαι) of a half-stater from the Thoapsoi (παρὰ τῶν Θοαψῶν), seemingly an indigenous inland group, in exchange for a *himation*. Strikingly, editors point out that once the letter switches to the singular (from ll. 2–3), its primary addressee is female.<sup>12</sup>

Additional examples can be brought to bear, but the picture is clear enough: this private correspondence documents business dealings with fine-grained detail: the exchange of

<sup>8</sup> Lintott (2004); Dana (2021) 388–91.

<sup>9</sup> Dana (2021), nos 48, 54.

<sup>10</sup> Dana (2021), no. 36.

<sup>11</sup> Dana (2021), no. 26.

<sup>12</sup> Dana (2021) no. 21; Ceccarelli (2013) 345; Awianowicz (2011) 237.



Fig. 2. Lead letter of Oreos from Myrmekion: Dana 2021, no. 46. Tablet once kept in the Eastern Crimean Historical and Cultural Museum-Preserve, KM 191604, Inv. 8706. Drawing and photograph courtesy of M. Dana, with kind permission.

goods in money and kind, the movement of persons and property, the dissemination of registers and receipts. It reveals the centrality of written text in commercial ventures, by individuals who might be called traders or merchants. At minimum, these letters required a basic degree of literacy to compose and to read; they suggest that already by the sixth century, some north Pontic traders and those in their circles (wives, children, enslaved persons, field agents) were indeed literate, and reliant upon written communication for their commercial ventures.

These letters are also striking in terms of their form. Many contain language unique to the epistolary genre, such as the application of *χαίρειν* in greeting.<sup>13</sup> So opens a fourth-century letter from Olbia, in which one Artikon sends greetings to those at home: Ἀρτικῶν τοῖς ἐν οἴκῳ χαίρειν. Dionysios writes similarly from Nikonion, as noted above: Διονύσιος τοῖς ἐν οἴκῳ[ι] χαίρειν.<sup>14</sup> These messages contain both prescript and clause, with the body of text expressed in the first person. Such letters might include the sender's name in the nominative with recipient(s) in the dative, as in the letter of Achillodoros (Ἀχιλλοδώρῳ τὸ μολίβδιον παρὰ τόμ παῖδα κάναξαγόρην), or employ *ὑγιαίειν* as a *formula valetudinis* or *ἔρρωσο* in a *formula valedicendi*.<sup>15</sup> Letters from the sixth and fifth century often exhibit only some of these features but, over time, more formal elements were included as literacy spread and the genre became standardized.

Let us look in detail at one such letter, and the light it sheds on economic and social histories of the northern Black Sea, especially the Bosphoran Kingdom: the self-declared letter (ἐπιστολήν) of Oreos with which the article opened.<sup>16</sup> The tablet was recovered in 2017 in the Crimean port city of Myrmekion; it emerged beneath the wall of a later villa alongside ceramic sherds, animal bones and deer antlers in a context dating from 330–320 BC. The letter was found unrolled and open, suggesting that it had been read in antiquity.<sup>17</sup> I provide the edited Greek text in full, as subsequent discussion draws heavily upon the language therein (Fig. 2):<sup>18</sup>

<sup>13</sup> The term *ἐπιστέλλε* is also used to open the correspondence: Ceccarelli (2013) 40–41.

<sup>14</sup> Artikon: Dana (2021) no. 30; Dionysios: Dana (2021) no. 21.

<sup>15</sup> Ceccarelli (2013) 40–41.

<sup>16</sup> Bekhter et al. (2018): Eastern Crimean Historical and Cultural Museum-Preserve, KM 191604, Inv. 8706.

<sup>17</sup> Bekhter et al. (2019) 163.

<sup>18</sup> Adapted from Dana (2021) no. 46 and Bekhter et al. (2018).



## Side A

- 1 Θεός· Τύχη· ρεος Πυθοκλ· χαίρειν· τὸ ἐνθ'  
ἐγένετό μοι ἐν τῷ τραχήλωι, ἀλλὰ χαι-  
νω ἤδη· ἰμάτιόν μοι ἀπόπενψόν μοι, vac.  
πάντως ἰμάτια ἀπόπενψον δύο ἰώνια ἐς  
5 πρήσιν. ἐστὶν γὰρ καὶ ἀνδράποτον λα-  
βεν : παῖδα Χάριον· τὰ καὶ ΟΠΟΝΤΙΝ καὶ φοινί-  
κα δὺο ἢ τρία ἀπόστελον καὶ δοναι vac.

## Side B

- 1 Διοδώρωι τῷ κυβερνήτηι· vac.  
Ἔρρωσο· +ΣΑ(+): ἐπιστολὴν ἐπίθεες μοι.  
Ἔρεος Κερκίωγι χαίρειν· ἐπὶ τῆι γ<ῆ{ι}>  
[-<sup>1-2</sup>-]+I παρέσται σο[ι] ταρίχοις vac.  
5 Ἔρεος ΣΑΙΧΟ+ΙΝΗ χαίρειν vac.

God! Fortune! Oreos sends greetings to Pythokles. I had a problem with my neck then, but now I can open my mouth. Send me a *himation* for my personal use, and above all send me two Ionian *himatia* for sale. There is also a slave to take: the boy Charios; [take] these [goods] and the Pontic one (i.e. the slave) and two or three purple textiles, and give them to Diodoros the helmsman. Farewell! Dispatch the following letter for me. Oreos sends greetings to Kerkion. On the ship [---] is present for you (space) for saltfish. Oreos sends greetings to Saicho[-]ine (?).

Much is remarkable about this tablet, but in many ways the text is also representative of the wider corpus of north Pontic epistles. As the editors note, the Θεός Τύχη heading drew upon inscriptions in the public realm; the formula was common by this time in business correspondence (trade contracts, sales agreements) as it was in civic decrees and votive dedications.<sup>19</sup> Thereafter we find the formulaic language of epistolary genres of communication: the text is now one of the oldest documents to so employ it. Oreos' letter demonstrates that a stable epistolary format was crystallizing by 330 BC, even in private correspondence with decentralized modes of circulation.<sup>20</sup> The text contains the following elements, all of which came in later centuries to exemplify classical genres of letter writing: (1) prescript and greeting formula, which included the name of the sender (nominative), the name of the recipient (dative) and χαίρειν as an expression of greeting, followed by (2) an account of Oreos' health. Here the description is personal, tailored to describe a prior ailment that had since been resolved; such discursion would later be replaced by a *formula valetudinis*, often the stark ὑγιαίνειν. There was then (3) the primary message, issuing instructions for action, followed by (4) the formal closing, Ἔρρωσο.

Perhaps the most unique aspect of Oreos' letter is that the text does not end after the first set of instructions for the assemblage of goods, nor even after the closing farewell. Rather, a *second* letter follows. Sharing the same support as the first, this second epistle begins with instructions to 'transmit (this) letter for me', and is intended for a new recipient, a man named Kerkion. It is probable that the letter's first addressee, Pythokles, would have dispatched the object or its message to the second addressee, whose cargo was to join Pythokles' on Diodoros' ship. Pythokles and Kerkion were, after all, connected by way of both Oreos and Diodoros. Alternatively, the helmsman Diodoros may have been

<sup>19</sup> On Ἀγαθῆ τύχη, θεοί, et al., see Bekhter et al. (2019) 165.

<sup>20</sup> Prior to the discovery of this letter, the oldest text conforming to these epistolary forms was SEG 54.983 from third-century Marseilles: Ceccarelli (2013) 43, 329, no. A29.

responsible for delivering the second message or the tablet itself to Kerkion; Diodoros was a common denominator between the two men, and would have interacted with both as his ship carried goods from each. The final line of text on side B carries no instructions whatsoever, only a greeting to a woman whose non-Greek name may have been Saichoine or something similar.<sup>21</sup> Quite possibly this person had connections with indigenous groups of the Crimean interior, but resided with Kerkion as wife, mother, child or commercial liaison. Oreos undoubtedly knew her well enough to greet her by name, and this direct form of address may suggest that she was a relative (it would otherwise be unusual for a man to mention the name of an unrelated woman in this context). At least one other Pontic letter refers to the wife of the addressee, though not so directly as here with *χαίρειν*.<sup>22</sup> The final line suggests that Oreos was dealing with familiar people; these were cordial business relations, agents with whom Oreos had previously and amiably worked, possibly even relatives.

Oreos' letter thus circulated to several individuals, all within his network and probably based in or near Myrmekion. The individuals to whom the letter was addressed were meant to contribute cargo to Diodoros' ship; it is unclear whether they were paid up front or after the final sale of the products. Oreos was an organized, meticulous merchant who operated with considerable foresight in his transactions. He knew the order in which individuals had to be contacted, and the letter's route of circulation from one agent (Pythokles) to the next (Kerkion). He took care to specify commodities with precision (the number, colour and style of *himatia*,<sup>23</sup> the *ἀνδράποτον* named Charios), and knew just how these goods would fit in Diodoros' ship. Here was a merchant adept at communication between different persons and workshops, and who was fluent in the contours of epistle writing, as required by the nature of his work. Within the parameters of a loosely fixed genre, Oreos wrote clearly but colloquially, in phrases drawn from everyday speech (for example, τὸ ἔνθ' ἐγένετό μοι ἐν τῶι τραχήλῳι). The spelling of some terms was confused, with additional letters inserted (*ἀπόπενψ<ι>ον*, *πάντω<ι>ς*, *χαίρε<ν>ιν*) or words needlessly repeated (*μοι ἀπόπενψόν μοι*), but the text nonetheless displays familiarity and facility with written communication. The object reminds us that ancient literacy, or literacies, might best be framed along a spectrum, with individuals not necessarily 'all in' or otherwise illiterate.<sup>24</sup> Oreos' letter also demonstrates the ways in which commerce drove written literacy in mercantile circles, propelled by communications with kin, field agents, fishermen, craftspeople, helmsmen and artisans over time and space.

### III. Trades and industry in north Pontic letters

Oreos' letter sheds precious light on the world of north Pontic merchants, individuals who procured and shipped commodities over sizeable distances, and whose professions demanded proficiency in written correspondence. Of great value to the historian, this document also illuminates the cargo of one Greek trading vessel that plied the busy straits between the Sea of Azov and the Black Sea during the fourth century BC. Here Oreos asks Pythokles to prepare several items for shipment, including textiles, a slave and saltfish; the object's archaeological context also sheds light on the presence in Myrmekion of a bone-carving workshop, the site in which the letter ultimately ended its journey. Many of these commodities appear elsewhere in regional correspondence and, in the case of helmsmen

<sup>21</sup> Dana (2021) no. 46: une salutation à une femme'.

<sup>22</sup> Dana (2021) no. 25, ll. 9–10: ταῦτ' Ἀναξαγόρη λέγειν | καὶ τῇ γυναίκεϊ.

<sup>23</sup> This could suggest that Oreos already had a customer(s) lined up for these expensive garments, which he chose not to buy 'on spec' in larger quantities.

<sup>24</sup> Kolb (2018) 1–12; Thomas (2011); (1992).

and enslaved persons, also in curse tablets. The prominence of these goods yields data on the workings of local economies in the fourth-century Bosporan Kingdom.

### **i. Textiles**

Prominent in Oreos' letter are high-end textiles, if in small quantities. Three *himatia* or 'cloaks' are requested, two of which are distinguished as 'Ionian' in style and destined for sale; the 'two or three' φοινικέα mentioned in lines 6–7, mantles coloured with purple dye, surely refer back to these *himatia*. References to *himatia* and additional items of clothing emerge in other regional letters, including a contemporary missive from Nikonion in which a *himation* is recorded as being used in a monetary deposit or exchange.<sup>25</sup> If these items were indeed manufactured in the region, rather than imported, they may point to a little-known Pontic export which has left no trace in the archaeological record: textiles. Textiles were a form of wealth in Archaic and Classical Greece, and raw wool or flax may have come from the *chōra* of a Crimean polis like Myrmekion. Excavations at Myrmekion and neighbouring Pantikapaion have yielded numerous loom weights, confirming the presence of textile production within these coastal settlements (namely, the weaving of spun thread into clothing and various other textiles, which could have included, for example, sails).<sup>26</sup>

### **ii. Enslaved persons**

Dozens of enslaved persons like the boy Charios are documented in the regional corpus of commercial letters, as the Black Sea was an active feeder of the slave trade by the sixth century BC. Indeed, Polybius would later write that the magnitude of persons enslaved in the region exceeded that of anywhere else (4.38.4–5).<sup>27</sup> Much of the regional traffic in slaves, perhaps including Charios' own journey,<sup>28</sup> would have begun in the steppes of the Scythian interior. From there, enslaved persons were transported down major river systems (in Scythia, the Bug and Dnieper; in Thrace, the Ister/Danube) to settlements on the Pontic coast. Berezan and Olbia were particularly well situated to collect these riverine cargoes, with upstream sites of intense slave trading directly linked to these coastal cities.<sup>29</sup> From such intermediary ports, enslaved persons were trafficked to other parts of the Black Sea, including the cities of the Bosporan Kingdom. A lead tablet from ca. 500 BC, possibly a slave tag, documents part of this passage.<sup>30</sup> Recovered just across the straits from Myrmekion in the city of Phanagoria, the tablet records the sale of a man named Φαύλλης in Borysthenes (Berezan), and his subsequent journey in captivity across the north Pontic coast to the Taman Peninsula:

<sup>25</sup> Dana (2021) no. 21; Awianowicz (2011) 237–39. On whether these were 'Ionian-style' *himatia*, rather than actual products of Ionia, see Bekhter et al. (2019) 167, who also discuss other pieces of clothing mentioned in regional letters, including SEG 48.1011, which refers to black clothing, sheepskin and blue vegetable dye, and probably also includes a χλανίς ([χλ.]ανίδ[α or χλ.]ανίδε[ς]), a fine woollen garment worn on the upper body.

<sup>26</sup> Zinko (2001) 312 with bibliography. Iancu (2019) examined how textile-production technologies, including spinning and weaving skill sets, were disseminated by women throughout north Pontic cities, sometimes by way of intermarriage between Greeks and indigenous groups, and the movements of enslaved females.

<sup>27</sup> See too Parmenter (2020) 60, who notes that the region harboured robust slave markets throughout Venetian and Ottoman times.

<sup>28</sup> Charios or 'Mr Pleasing': did this speaking name signal the desirable qualities of the enslaved person? Cf. the popular slave name Charias documented in Vlassopoulos (2010).

<sup>29</sup> For example, the site of Gelonos/Belskoye may have harboured a small Greek-Scythian population active in the slave trade: Hdt. 4.17.108–09, with discussion of bibliography in Parmenter (2020) 68.

<sup>30</sup> Dana (2021) no. 46.



This slave here has been sold out of Borysthenes, his name is Phaulles. We wish that everything ... be returned.

Christopher Parmenter has argued that the majority of persons enslaved in the north Pontic region were, like Φαύλλης, ‘more likely than not to remain in the Pontus’.<sup>31</sup> Indeed, the northern Black Sea is portrayed by classical writers as teeming with slaves, and Oreos’ letter adds to a sizeable body of documentary evidence supporting such claims, while giving a name to one such individual. It is unknown where Charios’ journey ended, but his captivity aboard Diodoros’ ship, trafficked as another man’s cargo, herded (ἀνδράποτον) alongside fine clothing and saltfish, is surely representative of other such passages along the Pontic coast.

### iii. Saltfish

As noted above, Oreos’ letter carries a second message with an additional addressee: a very uncommon feature of ancient Greek letters. After Pythokles’ instructions concerning the *himatia* and Charios, Oreos greets someone named Kerkion and informs him of the availability of space on (presumably) Diodoros’ ship for dried salted fish. Dried saltfish was another popular north Pontic export, with at least one other regional letter<sup>32</sup> referring to τάριχος; ‘Apatourios to Neomenios: bring home the saltfish’. The northern Black Sea and Sea of Azov were important regions of saltfish production and export during the Classical period; recycled amphoras and large crates or baskets known as σαργάναι were used for the maritime transport of *tarichos*, and Kerkion’s shipment may also have been layered in such containers.<sup>33</sup> Various species were associated with the northern Black Sea, including the anchovy (which could comprise up to 80 per cent of commercial catches in the Sea of Azov), mackerel, mullets, sprats and shads; these were sold according to the degree of salt preservation: lightly salted, semi-salted, etc.<sup>34</sup> Myrmekion and other cities of the Bosporan Kingdom controlled some of the most productive fisheries in the Greek *oikoumenē*. Ephraim Lytle<sup>35</sup> has suggested that fishing rights within these waters were subject to leasing agreements, the purchase of which would have required considerable expenditures of capital. Great quantities of fish bones dating from the sixth through first centuries BC have emerged in excavations of Myrmekion, in significantly higher percentages than found in other Bosporan cities; this suggests that Myrmekion was an especially popular site for the docking and unloading of fishing boats, and the processing, consumption and export of fish.<sup>36</sup> Trade with the Hellenized coast of the northern Black Sea, especially the Bosporan Kingdom, fuelled the demand for saltfish in Athens and other major urban centres (Miletus, Hellespontine cities), and brought great wealth to the Pontic merchants who facilitated these commercial undertakings, some of whom were Scythian elites.<sup>37</sup> It is against this backdrop that Kerkion’s saltfish joined the cargo of Diodoros’ ship, which was

<sup>31</sup> Parmenter (2020) 64.

<sup>32</sup> Dana (2021) no. 38 ll. 1–3, from Kerkinitis.

<sup>33</sup> Cratinus’ *Dionysalexandros*: ‘I shall import Pontic saltfish in baskets’ (ἐν σαργάναις ἄξω τάριχους Ποντικούς, fr. 44 KA; tr. Lytle (2018) 18; Timokles fr. 16, 23 KA. Lytle (2016) 7–8, 16–17). See also Braund (1995) 162–70; Curtis (2005) 31–47; Højte (2005); Bekker-Nielsen (2016). For species like anchovies or mackerel that were pickled or packed in oil, ceramic vessels were instead used for storage and transport.

<sup>34</sup> See Lytle (2016) 10 and (2018) for discussion and bibliography.

<sup>35</sup> Lytle (2016) 20.

<sup>36</sup> Fish-salting facilities are presumed to have existed in Myrmekion by the fourth century BC at the latest: Bekhter et al. (2019) 171.

<sup>37</sup> Lytle (2016); Moreno (2007) 163–64.

but one of many carrying saltfish, textiles, enslaved and free persons, and, of course, large quantities of grain by the fourth century BC.<sup>38</sup>

Two or three *himatia*, one enslaved boy and an unspecified quantity of saltfish: apart from the fish, the quantity of goods exported by Oreos in Diodoros' ship was fairly small. Writing from elsewhere, Oreos knew the vendors operating at Myrmekion, in addition to the markets at which Pythokles' textiles were to be sold. He was also aware of the availability of space on Diodoros' ship for different types of cargo, some of which was small and easily portable but costly (fine textiles, Charios), while others would have been bulkier, smellier and cheaper (saltfish). The careful recording of such information, from registries of trade goods to the agents to whom they were entrusted, is representative of the type of highly functional, mercantile literacy possessed by Oreos and surely other traders in the region.

#### **iv. Bone working**

The context in which the letter emerged sheds further light on its circulation in ancient Myrmekion. The object was recovered in a large pit alongside 17 'bone artefacts with traces of handiwork', including a rounded pyxis lid. The deposit included bone and antler fragments with evidence of 'carving, sawing, and lathing'; this assemblage marks the largest cache of bone-carving waste known to date from Myrmekion, and both the quantity and quality of the worked bone suggests the presence of a bone-carving workshop.<sup>39</sup> Such an atelier could produce small prestige items like statuettes, furniture pieces, combs, weaving implements (needles, spindles), jewellery, musical instruments, fibulae (dress pins) and clothing ornaments, in addition to pyxides. Another such workshop is known from Tyras, pointing to the presence of craftsmen specialized in bone carving across the north Pontic littoral.<sup>40</sup> The inflow of raw materials from the Pontic interior, combined with a high degree of regional and long-distance trade, would have incentivized the concentration of such artisans within these port communities. Oreos' letter appears to have ended its journey in the hands of someone affiliated with fine bone working; possibly Pythokles, Kerkion, Saichoine or even Diodoros bore some connection to this workshop or its products.

Oreos' letter provides a glimpse of vibrant commercial life in fourth-century Myrmekion, documenting the commodities and persons that drove regional trade and brought wealth to these bustling port cities, from bone-carving workshops to textile production to the sale of fish and enslaved persons. The tablet also demonstrates how a documentary text can shed new light on local social and economic histories, while raising broader questions about the nature and significance of the epistolary genre itself in the northern Black Sea. Beginning in the sixth century BC, communications like that of Oreos were not uncommon in this part of the Greek world: far from it. The recovery of some 36 letters from this region is significant, and exceeds that of all other areas; in fact, more letters are known from Berezan and Olbia during these years than from all of Attica, despite Attica's greater size and population, and the fact that Attica benefits from a higher degree of systematic excavation (not to mention a robust epigraphic habit).<sup>41</sup> What conclusions might be drawn from these data? Were Greek speakers of the northern Black

<sup>38</sup> On Bosporan grain: Moreno (2007) 144–210. On Pontic trade more broadly: Archibald (2022).

<sup>39</sup> Bekhter et al. (2019) 163.

<sup>40</sup> Samoylova (2007) 444.

<sup>41</sup> Eleven private letters are known from Attica (Dana (2021) nos 1–11), including two inscribed on amphorae, a corpus slimmer than the 15 letters known from Berezan-Olbia alone (Dana (2021) nos 22–36), including those from the broader Olbian hinterland). Second only to the north Pontic corpus (36 letters) is that from the wider Massalian Gulf in the western Mediterranean (between Antipolis and Emporion), which includes 14 private letters (Dana (2021) nos 57–70), the majority of which come from Emporion (4) and Lattara (3). This strengthens the assertion that intensive trade activity was the primary driver of written literacy with regard to these communications and localities.

Sea exceptionally literate, or particularly prone to committing their communications to writing? At least one clue lies in the fact that this region hosted high levels of local, regional and long-distance trade. Merchants needed to communicate with field agents, business associates, helmsmen and family members, sometimes over great distances, with regard to dealings that often required substantial capital investment;<sup>42</sup> such persons required, and were capable of, strikingly precise communication, record keeping and commercial organization, and their professions were well served by the technology of writing. The robustness of local (inland agricultural, pastoral, maritime), regional and long-distance commerce, combined with the density of Greek port cities along the north Pontic coast, helps account for the abundance of regional letters. Indeed, these documents were the means through which trade could occur.

Furthermore, sailing in general was risky in the ancient world, and seaborne commerce especially so. Trade in goods like grain or saltfish not only exposed merchants to the uncertainties of shipping over great distances, but also the volatility of seasonal harvests and catch variability.<sup>43</sup> Written communications conveyed information precisely, and could reach persons and places that the sender himself could not. In multilingual communities like Myrmekion, a fixed text might be consulted multiple times by different individuals in separate locations, as the letter of Oreos neatly demonstrates. Written text also created accountability for those to whom such messages were delivered, and served as proof of transaction; in Demosthenes' *Against Phormio*, for example, Phormio is accused of intentionally withholding ἐπιστολάς entrusted to Chrysippos' slave and business associate in the Bosporean Kingdom (34.8). Again, written communication and commerce were very much interwoven for Greeks in Pontic frontier cities.

#### IV. North Pontic curse tablets

Let us now turn to a second group of private texts that were committed to lead and ceramic media in the northern Black Sea: curse tablets. By the fourth century BC, Pontic curse tablets also illuminate a world populated by merchants, helmsmen and slaves, providing another body of texts through which regional histories (or microhistories) might be advanced. Whereas the oldest Pontic letters emerge around 550 BC, the earliest curse tablets appear soon after 400 BC, but in higher volumes: the *poleis* between Istros and Gorgippia have yielded some 75–80 inscribed curses.<sup>44</sup> This estimate is derived from combining curse tablets from regional corpora with recent 'one-off' publications from Pontic sites, and then factoring in tablets that have been unearthed but not yet unrolled or published, and curse tablets that are known to have been illicitly removed by metal detectors from north Pontic sites.<sup>45</sup> Of this loose corpus of curses, most date from the fourth century BC.

<sup>42</sup> For example, Athenian bottomry loans: Lys. 32.6, 13–15; Dem. 34. On routes and distances: Saprykin (2017).

<sup>43</sup> Lytle (2016) 19.

<sup>44</sup> North Pontic curse tablets currently comprise the third largest regional corpus, after those from Attica (where 500+ curse tablets are known, ranging from ca. 415–400 BC through the late Roman period), and from Sicily, where the practice originated around 500 BC. If we restrict our sample to curse tablets from the fourth century, however, the north Pontic corpus is second only to that of Attica, and the popularity of the practice in both regions is connected to the flourishing of the law courts.

<sup>45</sup> Belousov (2016) 41 estimated that 'more than seventy Greek magic inscriptions have been found on the sites of ancient Olbia, Chersonesos, as well as on the island of Berezan and the territories of the Bosporean Kingdom'; this count excludes tablets known from Histria and Nikonion, and those uncovered since 2016. My own estimate is a conservative one, reached over years of discussions with epigraphists, historians and archaeologists active at Pontic sites; particularly helpful in this regard were M. Dana, I. Polinskaya and especially A. Belousov. A total of ca. 75–80 curse tablets have been assessed in the following way: Belousov (2020, *Defolb*) collected 24 in his corpus of Olbian curse tablets; some 10–15 unrolled and unpublished lead curse tablets are in the Olbian Archaeological

The majority of Pontic curse tablets with recorded provenience come from graves;<sup>46</sup> at least four fourth-century Olbian curses (both inscribed lead tablets and a painted ceramic lid) have also emerged in a shrine or cult site located at the edge of the necropolis,<sup>47</sup> suggesting that depositional practices in the Black Sea mirrored those of other Greek *poleis*. All tablets for which the circumstances of composition are known are judicial in nature, occasioned by trials or legal disputes. These texts illuminate the regional importance of law courts, robust institutions about which little is otherwise known, and reveal that in the northern Black Sea, curse tablets found first (and frequent) use in litigation contexts. This is unsurprising, as the needs of the commercial port encouraged not only the development of written documentation, demonstrated by the abundance of north Pontic letters, but also judicial institutions, required to regulate commerce and adjudicate the conflicts that arose from regional trade and industry. The violent and costly methods of pursuing private redress in the mid-sixth century, evident in the extrajudicial seizure of Achillodoros,<sup>48</sup> for example, must have driven the development of centralized legal institutions within these commercial havens during the fifth and fourth centuries BC. The region's many judicial curse tablets probably reflect this evolution, and the prominence of litigation in daily life. Consider, for example, one of the oldest Pontic curses, unearthed in the necropolis of Olbia in 1912. Inscribed on ceramic, the early fourth-century text 'bind[s] down the tongues of the court opponents and witnesses', *καταδέω γλώσσας ἀντιδίκων καὶ μαρτύρων* (*DefOlb* 18 = *IGDolbia* 105). A slightly later lead curse from Olbia carries a list of nominative names on one side and, on the other, seemingly targets *μ[αρτυρίας καὶ δι]κας* (*DefOlb* 17 = *IGDolbia* 107). Curse-writing rituals were used in these Pontic cities by Greek speakers in legal contexts, markers of 'Greekness' employed in quintessentially Greek institutions, the law courts.

Finally, while the majority of north Pontic curse tablets were inscribed on lead, several were written on terracotta sherds and bowls; this mirrors broader epigraphic preferences in the region, attested in the corpus of commercial correspondences (many of which were also incised on ceramic).<sup>49</sup> The fact that individuals were committing private text to lead as early as the mid-sixth century demonstrates that written literacy and social conventions for incising text (that is, a form of epigraphic preference) were established for well over a century when curse practice first emerged in the region.<sup>50</sup> This helps to explain why ritualized cursing took root so seamlessly across the northern Black Sea, becoming widespread by the fourth century. Many Pontic Greeks, especially persons involved in commerce, possessed some degree of written literacy, and were long accustomed to writing private texts on lead and ceramic objects.

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Museum, overseen by the Institute of Archaeology of Ukraine (Kiev). In the years since this article was accepted, Polinskaya (2021) arrived at a similar count of some 40 curse tablets from Olbia. To these can be added at least ten unpublished tablets recovered by private individuals with metal detectors in the Ukrainian coastal sites of Olbia, Nikonion and Tyras (ten is probably far too low an estimate). Two tablets from Chersonesos were published in 2016 (see below), and another 15–20 have emerged from sites in the Bosporan Kingdom (some 11 of which have been published: Belousov (2016)); included in this group are curses from Pantikapaion, Nymphaion and Phanagoria. Histria has yielded no fewer than eight curse tablets, which were acquired in piecemeal fashion on the antiquities market in the early 2000s by collector Ionel Matei out of Bucharest. According to the information provided by the collectors, these were removed from the area of the tumular necropolis: Avram et al. (2007) 389. On efforts to publish a single corpus of north Pontic magic inscriptions as an edited collection with commentary, see Belousov (2016) 41; (2012).

<sup>46</sup> Olbia: *DT* 92, *SGD* 171–73, *NGCT* 116, 118–21; Pantikapaion: *SGD* 170, Belousov and Fedoseev (2014); Histria (eight curse tablets purportedly from the necropolis): Avram et al. (2007) nos 1–8.

<sup>47</sup> At the time of writing, the three curse tablets remain unpublished, but on the ceramic-lid curse, see now the discussion in Polinskaya (2021) C4.

<sup>48</sup> *Sula/sulē*, as found in Dana (2021) no. 25.

<sup>49</sup> For the Olbian propensity for rounded curse supports: Belousov (2016) 42.

<sup>50</sup> Vinogradov (1998) 154–57 nn.1–3; *IGDOP* 25 = Dubois (1996) 63–66, no. 25.

Of the 75–80 curse tablets known from the northern coast of the Black Sea, the majority, some 36–40 inscriptions, come from the city and *chōra* of Olbia. Founded by Milesian settlers on the southern coast of modern Ukraine, Olbia has also yielded the region's oldest curse tablets, which date from the early fourth century BC. While such claims to age and corpus size may reflect nothing more than Olbia's long history of excavation relative to other Pontic sites, it is clear that Olbia was particularly abreast of cultural trends in the broader Greek world, from Orphic rites to didactic exercises in the *Ilias parva* (the latter may preserve the oldest recorded version of a circulating literary text, composed by a schoolboy, no less).<sup>51</sup> Alexey Belousov's new edition of Olbian *defixiones* (*DefOlb*) includes 25 curse inscriptions, all of which were previously published; the majority of these comprise lists of names (12 curses) and elaborations thereon. Another early Olbian curse is *DefOlb* 14 (*IGDolbia* 101), composed soon after 400 BC. The text was incised on a rectangular lead sheet, folded once and deposited in a grave in Olbia's necropolis.<sup>52</sup>

Eoboulos son of Moiragores, Dorieos son of Nymphodoros, Apollonides son of Timotheos, Apatourios son of Hypanichos, Ietrodoros the son of Hekatokles and all those who go along with him [Eoboulos].

This Olbian curse carries a list of five male names in the nominative, all of which are accompanied by a patronymic; most of these individuals bear characteristically Ionian names (Μοιραγόρες, Απατόριος, Ήτρόδωρος, Έκατοκλέος).<sup>53</sup> The judicial nature of the curse is revealed by the concluding phrase τὸς αὐτῶι συνιόντας πάντας, 'and all those who go along with him'. The precise meaning of συνιέναι is unclear, but probably signifies the supporters and witnesses of the opposing litigant at trial.<sup>54</sup> The phrase finds a parallel in a contemporary judicial curse from Histria, which registers a group of men with patronymics, and then proceeds to curse those 'going together with Diogenes', καὶ τῶν συνεπιόντων μετὰ Διογένη[ος], surely Diogenes' witnesses, co-advocates and supporters at trial.<sup>55</sup> The presence of συνεπιόντων and συνιόντας in these two curses probably captures a regional colloquialism, used in reference to one's law court entourage. As observed in the letter of Oreos, mercantile groups could adopt and spread colloquial language, and texts composed by such persons often exhibit cross-linguistic features like idioms and use of the vernacular.

The world of north Pontic merchants is again illuminated in a fourth-century curse tablet from the necropolis of Pantikapaion, another Milesian *apoikia* sited just 4 km southwest of Myrmekion:<sup>56</sup>

<sup>51</sup> Excavations began at Olbia in the early 20th century, and had been ongoing until the Russian invasion of Ukraine in February 2022. On fifth-century Orphic sects: West (1982) 17–29 (*SEG* 28.659–661); schoolboy exercises on ostraca preserving the opening of the *Ilias parva* as given by pseudo-Herodotus: *SEG* 40.612 no. 26 (*fr.* 28 Bernabé = 1 Davies), with Obbink (2011) 45–46 (who cites another Olbian sherd incised with *Hom. Od.* 9.39). On Olbia more broadly, see Braund and Kryzhitskiy (2007).

<sup>52</sup> Archaeological Museum of Odessa (Ukraine), Inv. 44409. The tomb was situated near the artificial mound or hill (*kourgan*) of Zeus: Chkorpil (1908) 69–70; Yailenko (1980) 86–87.

<sup>53</sup> Curbera (2014).

<sup>54</sup> Chaniotis (1992) 73 suggests 'it might be supposed that support of any kind (testimonies in court, supporting speeches, etc.) was intended ... "Those who go with" the litigant might have been persons engaged by him to attend the trial and, by their reactions or simply their presence, influence the judges'.

<sup>55</sup> Avram et al. (2007) 395.

<sup>56</sup> Kerch Historical-Archaeological Museum. Text from Packard Humanities Institute (PHI, Searchable Greek Inscriptions): Pharmakowsky (1907) 126; *SGD* 170 (Jordan 1985); Eidinow (2007) 439–41.



## Side A, Col. I

1 κατορύσσω Νευμήνιον  
καὶ Δήμαρχον καὶ Χαρίξενον  
καὶ Μοιρικῶντα καὶ Νευμήνιον  
τὸν κυβερνήτην κ[αί] Ἀρίσταρχον  
5 παρ' Ἑρμᾶν (χ)θόνιον καὶ  
Ἐκάτα[v] χθονία[v]  
καὶ παρὰ Πλούτωνα χθόνιον  
καὶ παρὰ Λευκ(ο)θέαν χθονίαν  
καὶ παρὰ Φερσεφόναν χθονίαν  
καὶ παρὰ Ἀρτέμιδα στροφαίαν

## Side A, Col. II

1 καὶ παρὰ Δήμη-  
τρα χθονίαν καὶ  
παρ' ἥρωας χθονίους  
τούτων μηδεί[ς] θεῶν  
5 λύσιν ποιήσαιτο μη-  
  
δὲ δαίμονας  
τούτων μήτε μαϊήτας  
παραιτήσαιτο  
μηδὲ μηρία τιθ(έ)ντες

## Side A, Col. III

Text  
destroyed

## Side B, Col. I

1 κατορύσ(σ)ω Ξενομένην  
καὶ τὰ ἔργα Ξενομένου  
καὶ παίδων τῶν Ξενομένου  
περὶ Ἑρμᾶν (χ)θόνιον καὶ παρ' Ἑρ-  
5 μᾶν (χ)θόνιον καὶ παρὰ Πλουτοδό-  
ταν χθόνιον καὶ παρὰ Πραξιδί-  
καν χθονίαν καὶ πα(ρὰ) Φερσεφόναν  
χθονίαν· τούτων μὴ λύσιν γενέσθαι  
Ξενομένη μὴ αὐτῷ μὴ τέκνοις μὴ  
10 γυναικί.

## Side B, Col. II

1 [— — — — —]  
[— — — — —]  
[— — — — —]  
παρὰ ἥρωας  
5 χθονίους καὶ παρὰ  
Δήμητρα χθονίαν  
[— — — — —]

## Side B, Col. III

Text  
destroyed

A

Col. I: I bury down (κατορύσσω) Neumenios, and Demarchos, and Charixenos, and Moirikon, and Neumenios the helmsman, and Aristarchos in the presence of Hermes Chthonios and Hekate Chthonia, and in the presence of Pluto Chthonios and Leukothea Chthonia, and in the presence of Persephone Chthonia, and in the presence of Artemis Strophaiia.

Col. II: Also in the presence of Demeter Chthonia and the Chthonic Heroes: May none of these gods release (this curse), nor the *daimones*, not even if Maietas asks this as a favour, nor if they set up (offerings of) thigh bones!

Col. III: —————

B

Col. I: I bury down Xenomenes, and the works of Xenomenes, and the slaves of Xenomenes, near Hermes Chthonios, and in the presence of Hermes Chthonios, and in the presence of Ploutodotos Chthonios, in the presence of Praxidika Chthonia, and in the presence of Persephone Chthonia. From these gods let there be no release for Xenomenes, not for him, nor for his children, nor for his wife.

Col. II: ... in the presence of the Chthonic Heroes and Demeter Chthonia

Col. III: —————

Like the letter of Oreos, this tablet captures a vignette of social and commercial relations in the Bosporean Kingdom during the fourth century BC. Though Pantikapaion was a Milesian (Ionian) colony, the text exhibits some Doric features (Ἑρμᾶν, Ἐκάτα[v], A.I.5). That a bustling port like Pantikapaion hosted Greek speakers of different dialects is not surprising; nor is the presence of a helmsmen like Neumenios unexpected in this seaside city. In addition to a ship's captain, the reference to the slaves of Xenomenes (B.I.3) suggests that this curse concerned commercial matters, probably maritime trade and the

property at stake in the cargo, much like Oreos' letter, though from a different perspective. Conflict grounded in maritime commerce would explain the cursing of the helmsman Neumenios, in addition to the works and slaves of Xenomenes; it could also contextualize the invocation of the sea goddess Leukothea, a popular deity in the port cities of the Black Sea.<sup>57</sup> The presence of the goddess who aided sailors in distress in a text citing a helmsman and slaves, deposited in the commercial hub of Pantikapaion, suggests a conflict based in shipping and the transport of cargo. Greek law played a role in enslaving persons in the northern Black Sea, with law courts regulating (and legitimizing) the processes through which the slave trade could operate.<sup>58</sup> Commercial conflicts involving enslaved persons and other sea-bound cargoes would have been adjudicated in the law courts, important social and administrative institutions in these outlying Greek communities. Commercial transactions, especially those involving lucrative cargoes, could give rise to conflict over ownership claims, debts and seizures of property. Clashes such as these are captured over the centuries in private letters from the northern Black Sea and, as the above curse suggests, could often result in trial in the law courts. I suspect that the prominent place of trade in north Pontic cities, and the role of the law courts in adjudicating commercial disputes by the early fourth century, helps account for the region's many judicial curses, as it does for the abundance of private letters, and that many curse tablets stemmed from commercial conflicts in the courts. *SGD 170*, discussed above, is one discursive example.

## V. Documentary texts and microhistories

As scholars have previously noted, several formal elements of commercial letters and curse tablets invite comparison.<sup>59</sup> Both were inscribed on lead and ceramic supports; both document exchanges between private individuals and request services. Both follow genre-determined formats, whether prescripts and formalized greetings in letters, or the binding down of tongues in curses. The prominence of kin groups in both corpora also reveals the centrality of the family to trade and exchange in these communities. Furthermore, these texts exhibit parallels in terms of composition and emotional content: many were written in moments of perceived crisis, as noted by Esther Eidinow and Claire Taylor.<sup>60</sup>

Yet more can be done with these corpora in terms of fine-grained regional histories, from the study of onomastics to legal institutions, especially in the northern Black Sea, where these documents provide a sizeable data set and feature non-elite groups (enslaved persons, helmsmen, women, merchants and individuals associated with non-Greek indigenous groups). The common themes that emerge can then be contextualized against broader historical backdrops, and used to emphasize the small group unit and how individuals functioned in the day-to-day, thus approaching a 'microhistorical' line of inquiry.<sup>61</sup> Indeed, recurring figures and themes emerge across the corpora, and the remainder of the article calls attention to four of these in turn: onomastics and prosopography, enslaved persons, local law courts and traditions of mercantile literacy. Several of these points were addressed in discussions above, but are here thematically engaged to show how the two corpora can advance regional histories of Pontic communities.

<sup>57</sup> See the funerary epigram of Saitta, priestess of Leukothea, from Sinope: *SEG* 47.1692. On Leukothea in the Bosphoran Kingdom: Ustinova (1998) 92–93.

<sup>58</sup> Parmenter (2020).

<sup>59</sup> Dana (2021) 326–40, 353–54, 381–87, Eidinow and Taylor (2010) and Ceccarelli (2013) 47–53 have all discussed parallels between these two groups of texts in terms of common language and formulae, epistolary style, written conventions and literacy.

<sup>60</sup> See Eidinow and Taylor (2010) 38–39, 43.

<sup>61</sup> Levi (1991), especially 107; Ginzburg (1993); (2005).

### ***i. Onomastics and prosopography***

With economies grounded in maritime trade and inland agriculture, the coastal communities of the northern Black Sea were sites of frequent interaction between Pontic Greeks, non-Pontic Greeks, Thracians, Scythians, Persians and other indigenous groups of the Euxine interior. Their kaleidoscopic relations are captured in Pontic letters and curses, as various persons with non-Greek names are shown in close proximity to ostensibly Greek individuals. Of course, ‘non-Greek’ names do not *always* signal non-Greek identity and cannot be understood to indicate the origins of their bearers (though sometimes, they surely did); often they do signal, at the very least, some sort of relationship with the designated group or place, however, and in this capacity document exchange and interaction between different communities in the northern Black Sea. Some such names may point to kin associations or ties of friendship, or, as names were regularly passed down within families, may commemorate a non-Greek father or grandfather, for example. We observed in the letter of Oreos how a woman with a non-Greek name was greeted in association with the saltfish exporter Kerkion; Marakates, too, is a person with a non-Greek name shown interacting with Greek speakers in the letter from Nikonion.<sup>62</sup> As noted above, one of the oldest Greek letters from Berezan documents the seizure of Achillodoros by a merchant with the Persian or Indo-Arian name Ματασους.<sup>63</sup> Presumed by Matasus to have been the slave of another, Achillodoros’ own family lived (and perhaps identified) with the Arbinatai in the north Crimean interior; this was the indigenous group into which Achillodoros had apparently married, and with whom he interacted often. A fragmentary curse tablet purportedly from Pantikapaion may document interactions between Bosporean Greeks and Paphlagonians,<sup>64</sup> while a letter from Crimean Kerkinitis refers to a payment made to a community of the Scythian interior, a group with whom the letter’s sender and addressee must have had some contact.<sup>65</sup>

Regional curse tablets also feature individuals with non-Greek names, the targeting of whom probably documents conflicts between Greek and non-Greek residents of the northern Black Sea. Three persons with probable Scythian names, Καφακης, Θατορακος and Αταης, are targeted alongside men with Greek names in a judicial curse tablet from fourth-century Olbia; all of the named victims, Greek and non-Greek alike, opposed the curse writer in a looming trial (*DefOlb* 15). Two curse tablets from the hinterland of Chersonesos target men with the Iranian names Αριακος and Αρσατης.<sup>66</sup> The proper name Μαητας, invoked in *SGD* 170, also has a local flavour, recalling the indigenous group east of the Bosporean straits on the Taman Peninsula, the Maïtai or Maiotai, who shared their name with the sea north of Pantikapaion (in antiquity, ἡ Μαϊωτικὴ λίμνη). The Maïtai are frequently referred to in mid- to late fourth-century dedications from Pantikapaion, which suggests that persons identifying as Maiotian, or who were characterized in the community by interactions with Maiotian groups, formed a recognizable demographic presence within the polis.<sup>67</sup> Considered together, these inscriptions document the interaction and coexistence of Greek and non-Greek persons in cities across the north Pontic littoral. The presence of non-Greek individuals in cities like Olbia has long been known from literary sources (especially Herodotus 4), private votive dedications (the dedication of one Igdampaies to Hermes: *SEG* 30.909; the dedication of Anaperres, a non-Greek Scolotian, to Apollo the Healer: *SEG* 53.788), grave stelai (that of Leoxus, the son of Molpagoras, which depicts a youth clad in Scythian clothes on one side: *SEG* 41.619) and

<sup>62</sup> Awianowicz (2011) 237–39.

<sup>63</sup> Bravo (1974) 155–56. Recently from Phanagoria, Balakhvantsev and Zavoykina (2022).

<sup>64</sup> Saprykin and Fedoseev (2010b) 427.

<sup>65</sup> Dana (2021) no. 38.

<sup>66</sup> Stolba (2016) 263–92.

<sup>67</sup> Rhodes and Osborne (2007) 324–29, no. 65a–e.

other forms of material culture.<sup>68</sup> At least some of the non-Greek names preserved in regional letters and curses reveal the interactions of these individuals with Greek speakers, and the sorts of activities that brought them together, from commerce to kinship to litigation.

Any inquiry into north Pontic communities would also benefit from a rich prosopography, driven by a wealth of epigraphic data. Prosopographical study of recurring names in private letters and curse tablets, especially when combined with other, contemporary epigraphical sources (votive dedications, grave stelai, graffiti, etc.), can advance understandings of interregional mobility and broader networks of communication. Consider for example the individual named Apatourios in a judicial curse from Olbia (Απατόριος Ὑπανίχθ, *DefOlb* 14). In addition to the presence of an Apatourios in a second contemporary Olbian curse tablet (*DefOlb* 16), an individual with this same name occurs in two commercial letters from Olbia and Kerkinitis,<sup>69</sup> the latter of which dates to the same years as the Olbian curses, and involves the transport of saltfish and a payment to the Scythians, commercial and financial dealings that might land in the courts. Some of these inscriptions may document the activities of the same individual, who would come into still sharper focus with the addition of a kylix fragment also inscribed with the name Apato(u)rios from fifth-century Olbia (*SEG* 32.802). Not only could this reveal regional mobility patterns but also, in this instance, the prominence of the cult of Aphrodite Apatouros in the Bosporan Kingdom.<sup>70</sup> A connection with the Panionian Apatouria festival proves difficult to ignore, and the regional popularity of the name may highlight broader assertions of Ionian, especially Milesian, identity.

Prosopographic inquiries can also be made of individuals named Agatharchos in fourth-century Olbia, Dionysios at Olbia (in no fewer than six curse tablets), Nikonion and Chersonese in the late fourth century BC, Neomenios/Neumenios in Kerkinitis and Pantikapaion in the early fourth century BC, Aristokrates in Hermonassa and Olbia in the fourth century BC, Dorieos at Olbia and Chersonesos, and so on.<sup>71</sup> With commerce so important to north Pontic economies, it is possible that some of these texts document the same individuals, whose regional networks can then be analysed. Work in this area has recently been undertaken by Belousov in regard to the prosopography of Olbian magical inscriptions (in Russian), and will be expanded in future years to include that of curse tablets from the Bosporan Kingdom.

## ii. Enslaved persons

The regional traffic in enslaved persons can also be studied by way of north Pontic letters and curse tablets.<sup>72</sup> Phaulles' journey from the Scythian interior to Berezan to Phanagoria documents a distinct type of interaction between Pontic Greeks and non-Greeks: that of

<sup>68</sup> Boardman (1994) 194–214; Minns (1913).

<sup>69</sup> Dana (2021) nos 26, 38.

<sup>70</sup> Hekataios also notes that the gulf itself was called Apatouron, so the name may have held further significance as a toponym. On the Pontic cult of Aphrodite Apatouros at Phanagoria, see Hekataios *FGrH* 1 F211, Strabo 11.2.10, with Braund (2018), especially 195–242.

<sup>71</sup> Agatharchos in Olbia: Tokhtas'ev (2009) 1–3 (curse tablet), Dana (2021) no. 52 (letter); Dionysios at Olbia: *DefOlb* 5, 8, 10, 12, 21, 22; Dionysios at Nikonion and Chersonesos: Dana (2021) nos 20–21, Awianowicz (2011) 237–39; Stolba (2016) no. 1; Neomenios/Neumenios in Kerkinitis and Pantikapaion: Dana (2021) no. 38, *SEG* 37.665 [48.1004], *SGD* 170, Pharmakowsky (1907) 126–28; Aristokrates in Hermonassa and Olbia: *IGDolbia* 109, *SEG* 37.673; Dorieos at Olbia (Δοριεός): *DefOlb* 10, 14; Chersonesos: *LGNP* IV.113. My goal at present is simply to point out the ways in which this material might be fruitfully harvested, rather than to treat these case studies in detail here.

<sup>72</sup> On letters, slavery and patterns of mobility: Parmenter 2020.

enslavement, and the regional circulation of human capital.<sup>73</sup> The forced transport in Diodoros' ship of Charilos, shipped on the order of Oreos around (and perhaps beyond) the Bosphoran Kingdom, speaks to this same phenomenon: the north Pontic trade in enslaved persons. The slaves of Xenomenes (παίδων τῶν Ξενομένου), cursed in *SGD* 170 above, quite probably shared similar journeys in captivity, and similar hardships. Even within a small sample of north Pontic texts, the vocabulary used to refer to enslaved persons is expansive; we encounter the terms δούλος, ἀνδράποδον, ὁ/ἡ παῖς, ἡ παιδίσκη, οἰκητέων ('domestic slaves') and τὸ παιδίον, all of which suggest the regional prominence of the slave trade. Slaves were lucrative exports, sold at both local and regional markets, in addition to those further afield at Byzantion, Miletus and Athens.<sup>74</sup> References to enslaved persons emerge in no fewer than nine north Pontic letters, 25 per cent of the regional corpus, a strikingly large proportion.<sup>75</sup> By contrast, the contemporary corpus of private letters from the Gulf of Massalia, while also sizeable and concerned with commercial matters (citing helmsmen, merchants, ships, cargo (vases, oil), money, weights and measures), contains only one certain (later) letter that refers to slaves (third/second century BC).<sup>76</sup> The traffic in enslaved persons operated on a significant scale in the northern Black Sea from the sixth through fourth centuries BC.

### iii. Law courts

The coordinated study of both corpora also coalesces around the law courts, institutions crucial for adjudicating disputes that arose in relation to the high degree of regional trade and commerce. Citing evidence from private letters, Parmenter has argued that the law courts played an active role in the enslavement of Greek and non-Greek persons in the Black Sea: 'As the letters show, not only were judicial or pseudo-judicial proceedings in Greek colonies an important mechanism for enslavement, but non-Greeks themselves often had access to them as plaintiffs'.<sup>77</sup> If the courts *did* adjudicate conflicts related to the trade in enslaved persons, then it is probable that some of the region's many judicial curses stemmed from such disputes, as discussed above; this would explain the presence of Xenomenes' slaves (παίδων, B.I.3) and Neumenios the helmsman (κυβερνήτην, A.I.3–4) in *SGD* 170 from Pantikapaion. Many crises documented in north Pontic letters may have played out in the law courts, from the seizure of persons and goods by Matasus at Berezan and Herakleides at Olbia to the eviction of Artikon's household at Olbia.<sup>78</sup> A case in point is a lead letter from Pantikapaion, which documents the preparation of enslaved persons, wood, a cable and maybe a coffin.<sup>79</sup> The text refers to monetary transactions on a large scale: sums of money assessed in drachmas and talents are thrice mentioned in the lacunose text, with the references to talents signalling that lucrative dealings were afoot. Should complications emerge in such exchanges, the dispute could move to the courts, a process which could then, in turn, prompt curse-writing. The region's grounding in commerce drove the development of both a centralized judiciary system and private curse rituals. The courts obviated the need for private, vigilante retaliations and confiscations, like that documented in the letter of Achillodoros, which could be violent in nature. Shifting the process of seeking justice from the private to the public realm no doubt improved civic

<sup>73</sup> Dana (2021) no. 49.

<sup>74</sup> Heinen (2001).

<sup>75</sup> Dana (2021) no. 20 (παῖς), no. 23 (παῖδα), no. 25 (δοῦλται, δόλος, δόλας), no. 26 (οἰκητέων), no. 28 (οἱ δούλοι), no. 46 (ἀνδράποτον, παῖδα), no. 48 (ἀνδράποδον), no. 49 (παῖς), no. 54 (παιδίω). Possibly also Dana (2021) no. 43 (ἀνδ[ράποδον?]).

<sup>76</sup> Dana (2021) no. 58 (σωματίων). Possibly also Dana (2021) no. 63b (παιδίσ[κας?]).

<sup>77</sup> Parmenter (2020) 74.

<sup>78</sup> Dana (2021) nos 25, 26, 30.

<sup>79</sup> Dana (2021) no. 44; Saprykin and Fedoseev (2010a) 50–58; Ceccarelli (2013) 341 A1.9.



life within these frontier *poleis*, even if there were still private interventions by way of curse-writing rituals. Indeed, the regional abundance of judicial curse tablets points to the prominence of the courts as adjudicators of conflict by the fourth century.

#### iv. Epigraphic habits and mercantile literacy

Private letters and curse tablets document the interaction and mobility of persons, goods and information within and across the north Pontic *poleis*. Let us conclude by reflecting on written literacy and the so-called epigraphic habit in the northern Black Sea during the sixth through fourth centuries BC. In one description of long-distance maritime commerce, letter writing is portrayed as crucial for the transmission of time-sensitive information related to lucrative trade dealings. The Demosthenic speech *Against Dionysodorus* demonstrates how merchants were able to communicate over long distances using letters; these written texts facilitated commerce, and helped maximize profits for Athenian traders ([Dem.] 56.8):

Those then who stayed here were sending letters (ἔπεμπον γράμματα) to those abroad advising them of the prevailing prices, so that if grain was costly in your market, they might bring it here, and if the price should fall, they might put in to some other port. This was the chief reason, men of the jury, why the price of grain increased; it was on account of such letters (ἐπιστολῶν) and collusions.

The development of mercantile literacy is well documented from the sixth through fourth centuries, and was linked to long-distance commerce and the need to give business communications, receipts and contracts a static but motile form. As demonstrated by Jean-Paul Wilson for traders of the Archaic period in sites as disparate as Pech Maho (Aude, France) and Corcyra, commercial demands required that merchants be able to read and write, however basically (or at least, merchants who had mastered these skills enjoyed significant trade advantages).<sup>80</sup> Indeed, some of the oldest Pontic letters make reference to the written records used by merchants and their agents in the field; Apatourios orders Leanax to send διφθέρια, records probably written on leather, as proof of ownership for seized property around 500 BC.<sup>81</sup> These διφθέρια likely included receipts of goods and services, replete with numbers and measures like those found in letters from Olbia ('27 staters', 'drachmas', 'talents') and Nikonion ('nine *medimnoi* of barley', 'a half-stater'). Dating from the fourth century BC, a letter from the hinterland of Olbia refers to documents, τὰ γράμματα, destined for a certain Zopyrion: καὶ δότω [αὐ]τῷ τὰ γρά<μ>ματα, 'and give the documents to him'.<sup>82</sup> These were exchanges in which written text was common. Such literacy did not require polished grammar or syntax, or the ability to read or compose verse or literary prose. Rather, it made use of calculations and colloquialisms, and exhibits great numerical competence. Information was clearly conveyed. Many Pontic letters, receipts and curses have a practical starkness to them, and were composed without the use of articles or semantic elaboration; these texts were created and read by persons possessing functional levels of literacy, whose livelihoods had frequent need for written communication.<sup>83</sup>

<sup>80</sup> Wilson (1997–1998).

<sup>81</sup> Dana (2021) no. 25. Διφθέρια: probably leather sheets (though papyrus records are also possible): Hdt. 5.58, with Dana (2004) 8–9. Diod. Sic. 2.32 refers to the Achaemenid documents utilized by Ktesias as διφθέρια.

<sup>82</sup> Dana (2021) no. 36.

<sup>83</sup> Further examples can be seen in a lead financial document from fourth-century Pantikapaion, which carries columnar prices assessed in drachmas, obols and *tetrachalkoi* for two commodities, one of which was the filtered salt required for fish processing: Belousov (2013) 269–76.

Recent scholarship in the field of sociolinguistics has shown that mercantile communities, among which Olbia, Myrmekion, Pantikapaion and other north Pontic cities can be included, are often important loci of linguistic change and innovation. Such populations possessed degrees of ‘mercantile’ or ‘pragmatic literacy’, and contributed to what Rosalind Thomas has called a ‘literate environment’.<sup>84</sup> In these commercial havens, change was continuously driven by fluid, progressive language policies, which stemmed from multilingual communities and large interconnected networks; in the northern Black Sea, this included interactions within and across *apoikiai*, *metropoleis* and native inland communities. Professionals with the greatest geographic mobility, such as the merchant Oreos and the helmsmen Diodoros and Neumenios, also tended to have the widest social networks. These groups could adopt and spread certain types of literacy along with innovative linguistic forms. Mercantile texts exhibit cross-linguistic features, from language mixing to use of the vernacular to code-switching (the use of more than one linguistic variety in a manner consistent with the syntax and phonology of each variety), and we have seen aspects of these in the documents above.<sup>85</sup> In north Pontic letters and curse tablets, such hallmarks of mercantile literacy could include idiomatic expressions and colloquialisms (τὸ ἐνθ’ ἐγένετό μοι ἐν τῷ τραχήλῳ, ‘something happened into my neck/throat’; καὶ τὸς ἀπὸ τῶν συνιόντας πάντας, ‘and all those who go along with him’; Μα]τάσ(υ) δὲ τί ἀπὸ τῶν κἀναξαγόρη αὐτοὶ οἶδασι κατὰ σφᾶς αὐτῶς, ‘what there is between Matasus and Anaxagoras, they alone know’) and various dialectal forms (the Doricisms in SGD 170 and SEG 55.859). One Olbian curse tablet may also bear evidence of code-switching.<sup>86</sup> The regional prominence of commerce cultivated a broad range of functional literacy within a subset of the population that was also highly mobile. This further propelled the diffusion of written communication and literacy among these groups.

In the study of Greek history, merchants like Oreos and helmsmen such as Diodoros and Neumenios often remain nameless to us, their lives confined to the background of more dramatic historical narratives. Yet trade was the lynchpin of many historical processes in the ancient Greek world: commerce propelled new ideas and technologies across time and space, sometimes over vast distances, as it did persons and objects. In the northern Black Sea, these movements and interactions are documented by private letters and curse tablets, both of which were inscribed on sheets of lead and, occasionally, on ostraca or bowls. In this article I have endeavoured to survey and synthesize these bodies of documentary text, providing overviews of both corpora along with recent editions. Considered in tandem, private letters and curse tablets document the ways in which commerce could galvanize broader social and economic developments within Greek port communities, from written literacy to judicial institutions. Together, these texts advance studies of onomastics, prosopography, regional economies, trade, law and literacy across the northern Black Sea. They illuminate agents and interactions that often pass unmentioned in ancient source material and modern discussions of Greek history.

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<sup>84</sup> Thomas (2011); Jucker and Kopaczyk (2013) 2; Wagner and Beinhoff (2017) 3–18.

<sup>85</sup> Wagner and Beinhoff (2017) 3–4. On code-switching: Gardner-Chloros (2009); Muysken (1995) 177–98.

<sup>86</sup> DefOlbia 13 = IGDolbia 108 (SEG 3.595), with Belousov (2014) 63–67: ΤΑΜΠΑΡΜΗ, possible evidence for code-switching.

## Bibliography

- Archibald, Z. (2022) 'Northern Greece and the Black Sea', in S. von Reden (ed.), *Cambridge Companion to the Ancient Greek Economy* (Cambridge) 94–105
- Audollent, A. (1904) *Defixionum tabellae quotquot innotuerunt* (Paris) [DT]
- Avram, A., Chiriac, C. and Matei, I. (2007) 'Defixiones d'Istros', *BCH* 131, 383–420
- Awianowicz, B. (2011) 'A new Hellenistic ostrakon from Nikonion', *ZPE* 178, 237–39
- Balakhvantsev, A. and Zavoykina, N. (2022) 'New Ancient Iranian names from early Phanagoria', *Ancient West & East* 21, 247–54
- Bekhter, A., Butyagin, A. and Dana, M. (2018) 'Свинцовое письмо из Мирмекия', *Вестник древней истории* 78, 931–48
- Bekhter, A., Dana, M. and Butyagin, A. (2019) 'Orthographic lead letter from Myrmekeion', *ZPE* 212, 161–71
- Bekker-Nielsen, T. (2016) 'Ancient harvesting of marine resources from the Black Sea', in T. Bekker-Nielsen and R. Gertwagen, (eds), *The Inland Seas: Towards an Ecohistory of the Mediterranean and the Black Sea* (Stuttgart) 287–309
- Belousov, A. (2012) 'De defixionum tabellis in Olbia Pontica repertis', *Aristeas* 5, 11–20
- (2013) 'Two fragments of lead plaques from Panticapaeum', *Drevnosti Bospora* 17, 269–76
- (2014) 'K novomu izdaniyu odnogo ol'viyskogo magicheskogo ostrakona', in *EAENEIA. Litterulae Chartulaeque ab Amicis et Discipulis ad Helenam Leonidae F. Ermolaeva pro Munere Natalicio Missae* (Saint Petersburg) 63–67
- (2016) 'Some observations on defixiones from Olbia and Bosporus', in M. Manoledakis (ed.), *The Black Sea in the Light of New Archaeological Data and Theoretical Approaches* (Oxford) 41–44
- (2020) *Defixiones Olbiae Ponticae* (Leuven)
- Belousov, A. and Fedoseev, N. (2014) 'A new magical inscription from Panticapaeum's necropolis', *ZPE* 190, 145–48
- (2016) 'A new defixio from ancient Panticapaeum's necropolis', *Ancient Civilizations from Scythia to Siberia* 22, 18–25
- Boardman, J. (1994) *The Diffusion of Classical Art in Antiquity* (Oxford)
- Braund, D. (1995) 'Fish from the Black Sea: Classical Byzantium and the Greekness of trade', in J. Wilkins, M. Dobson and D. Harvey (eds), *Food in Antiquity: Studies in Ancient Society and Culture* (Exeter) 162–70
- (2018) *Greek Religion and Cults in the Black Sea Region: Goddesses in the Bosporan Kingdom from the Archaic Period to the Byzantine Era* (Cambridge)
- Braund, D. and Kryzhitskiy, S. (eds) (2007) *Classical Olbia and the Scythian World: From the Sixth Century BC to the Second Century AD* (Oxford)
- Bravo, B. (1974) 'Une lettre sur plomb de Berezan. Colonisation et modes de contact dans le Pont', *DHA* 1, 110–87
- Bresson, A. and Ivantchik, A. (eds) (2007) *Une koinè pontique. Mémoires* 17 (Bordeaux)
- Brujako, I., Dana, M. and Sekerskaja, N. (2018) 'Lettre sur plombe d'Artemidôros au forgeron Dionysios (Nikonion, estuaire de Tyras)', *ZPE* 206, 113–20
- Butyagin, A. (2011) 'New research in the environs of the acropolis of Myrmekion', in E. Papuci-Władyka, M. Vickers, J. Bodzek and D. Braund (eds), *PONTIKA 2008: Recent Research on the Northern and Eastern Black Sea in Ancient Times* (Oxford) 37–46
- Butyagin, A. and Kasparov, A. (2017) 'Essay on the economy of Myrmekion in pre-Roman times', in G. Tsetschludze and S. Atasoy (eds), *Settlements and Necropoleis of the Black Sea and Its Hinterland in Antiquity* (Oxford) 108–12
- Ceccarelli, P. (2013) *Ancient Greek Letter Writing: A Cultural History (600 BC–150 BC)* (Oxford)
- Chaniotis, A. (1992) 'Watching a lawsuit: a new curse tablet from southern Russia', *GRBS* 33, 69–73
- Chkorpil [Shkorpil], V. (1908) 'Tri svintsovyye plastinki s nadpisyami', *Izvestiya Arheologicheskoy Komissii* 27, 68–74
- Curbera, J. (2014) 'Simple names in Ionia', in R. Parker (ed.), *Personal Names in Ancient Anatolia* (Oxford) 107–43
- Curtis, R. (2005) 'Sources for production and trade of Greek and Roman processed fish', in T. Bekker-Nielsen (ed.), *Ancient Fishing and Fish in the Black Sea Region* (Aarhus) 31–47
- Dana, M. (2004) 'Lettre sur plomb d'Apatorios à Léanax. Un document archaïque d'Olbia du Pont', *ZPE* 148, 1–14
- (2007) 'Lettres grecques dialectales nord-pontiques (sauf IGDOP 23–26)', *REA* 109, 67–97
- (2021) *La correspondance grecque privée sur plomb et sur tesson. Corpus épigraphique et commentaire historique* (Munich)
- Donnellan, L., Nizzo, V. and Burgers, G. (eds) (2016) *Contexts of Early Colonisation* (Rome)
- Dubois, L. (1996) *Inscriptions grecques dialectales d'Olbia du Pont* (Genève) [IGDOP]
- Eidinow, E. (2007) *Oracles, Curses, and Risk among the Ancient Greeks* (Oxford)
- Eidinow, E. and Taylor, C. (2010) 'Lead-letter days: writing, communication and crisis in the ancient Greek world', *CQ* 60, 30–62
- Finley, M. (1965) 'Classical Greece', in M. Finley (ed.), *Second International Conference of Economic History* 1 (New York) 11–35
- (1973) *The Ancient Economy* (London)
- Gardner-Chloros, P. (2009) *Code-Switching* (Cambridge)

- Ginzburg, C. (1993) 'Microhistory: two or three things I know about it', *Critical Inquiry* 20, 10–35
- (2005) 'Latitude, slaves, and the Bible: an experiment in microhistory', *Critical Inquiry* 31, 665–83
- Goitein, S. (1967) *A Mediterranean Society* 1 (Berkeley)
- Heinen, H. (2001) 'Sklaverei im nördlichen Schwarzmeerraum: Zum Stand der Forschung', in H. Bellen and H. Heinen (eds), *Fünfzig Jahre Forschungen zur antiken Sklaverei an der Mainzer Akademie 1950–2000* (Stuttgart) 487–503
- Højte, J. (2005) 'The archaeological evidence for fish processing in the Black Sea region', in T. Bekker-Nielsen (ed.), *Ancient Fishing and Fish in the Black Sea Region* (Aarhus) 133–60
- Iancu, A. (2019) 'Weaving in a foreign land: transmission of textile skills through enslaved women and through intermarriages in the ancient eastern Mediterranean and Pontus', *Fasciculi Archaeologiae Historicae* 31, 69–79
- Jordan, D. (1985) 'A survey of Greek *defixiones* not included in the special corpora', *GRBS* 26, 151–97 [SGD]
- (2000) 'New Greek curse tablets (1985–2000)', *GRBS* 40, 5–46 [NGCT]
- Jucker, A. and Kopaczyk, J. (eds) (2013) *Communities of Practice in the History of English* (Amsterdam)
- Kolb, A. (ed.) (2018) *Literacy in Ancient Everyday Life* (Berlin)
- Levi, G. (1991) 'On microhistory', in P. Burke (ed.), *New Perspectives in Historical Writing* (University Park) 93–113
- Lintott, A. (2004) 'Sula: reprisal by seizure in Greek inter-community relations', *CQ* 54, 340–53
- Lytle, E. (2016) 'Chaerephilus & sons: vertical integration, Classical Athens and the Black Sea fish trade', *AncSoc* 46, 1–27
- (2018) 'The economics of saltfish production in the Aegean during the Classical and Hellenistic periods', *Journal of Maritime Archaeology* 13, 407–18
- Malkin, I. (2011) *A Small Greek World: Networks in the Ancient Mediterranean* (Oxford)
- Minns, E. (1913) *Scythians and Greeks* (Cambridge)
- Moreno, A. (2007) *Feeding the Democracy: The Athenian Grain Supply in the Fifth and Fourth Centuries BC* (Oxford)
- Muysken, P. (1995) 'Code-switching and grammatical theory', in L. Milroy and P. Muysken (eds), *One Speaker, Two Languages* (Cambridge) 177–98
- Obbink, D. (2011) 'Vanishing conjecture: the recovery of lost books from Aristotle to Eco', in D. Obbink and R. Rutherford (eds), *Culture In Pieces: Essays on Ancient Texts in Honour of Peter Parsons* (Oxford) 20–49
- Parmenter, C. (2020) 'Journeys into slavery along the Black Sea coast, c. 550–450 BCE', *CA* 39, 57–94
- Pharmakowsky, B. (1907) 'Archäologische Funde im Jahre 1906: Südrussland', *AA* 126–53
- Polinskaya, I. (2021) 'Inscribed ceramic bowls and other curses from Classical and Hellenistic Olbia', in I. Polinskaya and C. Faraone (eds), *Curses in Context III: Greek Curse Tablets of the Classical and Hellenistic Periods* (Athens) 135–204
- Rhodes, P.J. and Osborne, R. (eds) (2007) *Greek Historical Inscriptions, 404–323 BC* (Oxford)
- Samoylova, T. (2007) 'Tyras: the Greek city on the river Tyras', in D. Grammenos and E. Petropoulos (eds), *Ancient Greek Colonies in the Black Sea 2* (Oxford) 435–70
- Saprykin, S. (2017) 'Ancient sea routes in the Black Sea', in P. de Souza, P. Arnaud and C. Buchet (eds), *The Sea in History: The Ancient World/La mer dans l'histoire. L'antiquité* (Woodbridge) 345–61
- Saprykin, S. and Fedoseev, N. (2010a) 'Fragment Khozjajstvennogo pis'ma na svince iz Pantikapeja', *Vestnik Drevnej Istorii*, 50–58
- (2010b) 'New lead plaques with Greek inscriptions from east Crimea (Bosporos)', in R. Catling and F. Marchand (eds), *Onomatologos: Studies in Greek Personal Names Presented to Elaine Matthews* (Oxbow) 422–34
- Stolba, V. (2016) 'Two Hellenistic *defixiones* from west Crimea', *GRBS* 56, 263–92
- Thomas, R. (1992) *Literacy and Orality in Ancient Greece* (Cambridge)
- (2011) 'Writing, reading, public and private "literacies": functional literacy and democratic literacy in Greece', in W. Johnston and H. Parker (eds), *Ancient Literacies: The Culture of Reading in Greece and Rome* (Oxford) 13–45
- Tokhtas'ev, S. (2009) 'A new curse on a lead plate from the north Pontic region', *Ancient Civilizations from Scythia to Siberia* 15, 1–3
- Ustinova, Y. (1998) *The Supreme Gods of the Bosporan Kingdom: Celestial Aphrodite and the Most High God* (Leiden)
- Vinogradov, Y.G. (1971) 'Drevnejšee grečeskoe pis'mo s ostrova Berezan', *VDI* 74–100
- (1991) 'Die Stele des Leoxos, Molpagores' Sohn, aus Olbia und die Skythisch-Griechischen Beziehungen im frühen 5. Jh. V. Chr.', *AA*, 499–510
- (1998) 'The Greek colonization of the Black Sea region in light of the private lead letters', in G. Tsetschladze (ed.), *The Greek Colonization of the Black Sea Area* (Stuttgart) 153–78
- Vlassopoulos, K. (2010) 'Athenian slave names and Athenian social history', *ZPE* 175, 113–44
- Wagner, E.-M. and Beinhoff, B. (2017) 'Merchants of innovation: the languages of traders', in E.-M. Wagner, B. Beinhoff and B. Outhwaite (eds), *Merchants of Innovation: The Languages of Traders* (Boston) 3–17
- West, M. (1982) 'The Orphics of Olbia', *ZPE* 45, 17–29
- Wilson, J.-P. (1997–1998) 'The illiterate trader?', *BICS* 42, 29–56

- Yailenko, V. (1980) 'Graffiti from Leuke, Berezan and Olbia', *VDI*, 72–99
- Zavojkina, N. and Pavličenko, N (2016) 'Письмо на свинцовой пластине из Патрея', in V. Kuznetsova (ed.), *Фанагория. Т. 4. Результаты археологических исследований* (Moscow) 230–49
- Zinko, V. (2001) 'Summary of results of the five-year rescue excavations in the European Bosphorus, 1989–1993', in G. Tsetskhladze (ed.), *North Pontic Archaeology: Recent Discoveries and Studies* (Leiden) 295–317