

The Lower City of Olbia Pontike Occupation and Abandonment in the 2nd Century BC

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Olbia Pontike in the 2nd century BC is rarely portrayed in very positive light. Accounts tend to highlight the abandonment of low-lying areas of the urban zone around the middle of the 2nd century. The epigraphic record is filled with deeds of euergetism responding to the latest crisis. Attacks, control by foreign rulers, and the presence of foreign garrisons dominate the historical narrative. Often such desperate times for a city are a boon for archaeologists. The sack of Athens by the Persians and the Italian sites of Pompeii and Herculaneum are among the best known examples.

In the case of 2nd century Olbia, however, there is no specific event and hence no specific date that can be assigned to the abandonment of the area under consideration in this paper: the Lower City, northern sector (NGS from here on) (Fig. 1). Without a specific historical event linked to the abandonment of NGS, we are dependent on the archaeological evidence for writing the story of this sector. In the past, the abandonment of NGS has been placed in the middle of the 2nd century.¹ In this paper we largely agree with this basic picture, but we add numerous refinements to this narrative. In brief, the evidence of independently datable material shows plentiful material dating to the 140s, and



Fig. 1 Plan of the Olbia Lower City (NGS) excavations (courtesy of the Olbia excavations).

later 2nd century finds provide a *terminus post quem* ca. 100 BC for the cleanup and leveling of the area. The latest datable objects point to a very late date for the abandonment of the sector, but did life continue as normal all the way up to that point? After the opening survey of the independently datable finds from the mid to late 2nd century, we attempt to answer this question with reference to patterns in the overall late Hellenistic assemblage, patterns in chronologies of abandonment elsewhere, and the archaeological contexts of these latest finds.

Datable artefacts

Classes of artefacts whose dates may be derived from sources independent of the record at Olbia itself provide the primary evidence for the history of occupation and abandonment of NGS. The most precisely datable of these artefacts are the Rhodian stamped amphorae and the coins. Other more generally datable artefacts include the amphorae without stamps, the mouldmade bowls, the imported black-gloss and West Slope decorated pottery, and the lamps.

The fragments most securely dated to the later 2nd century are the Rhodian handles with eponym stamps.² The graph (Fig. 2) shows the numbers of eponyms assignable using Gérard Finkielsztein's chronology to each decade of the 2nd century (there are none assigned to the last decade hence its absence from this graph). Two points of particular importance are the peak in the 150s and the rapid decline through the 140s and 130s to an absence of eponyms assignable to the 120s. The recent publication of finds from the Temenos area

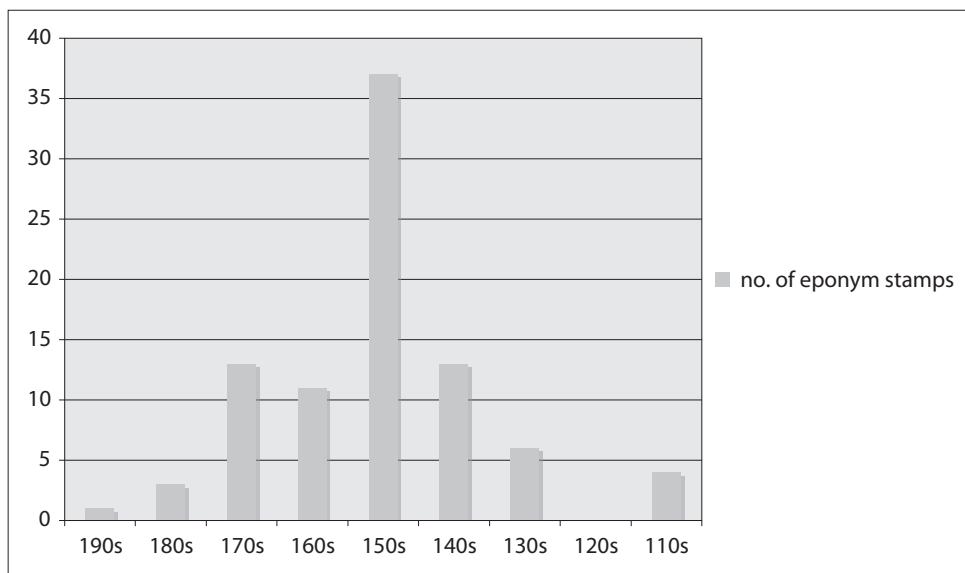


Fig. 2 The chronological distribution of Rhodian eponyms from NGS.

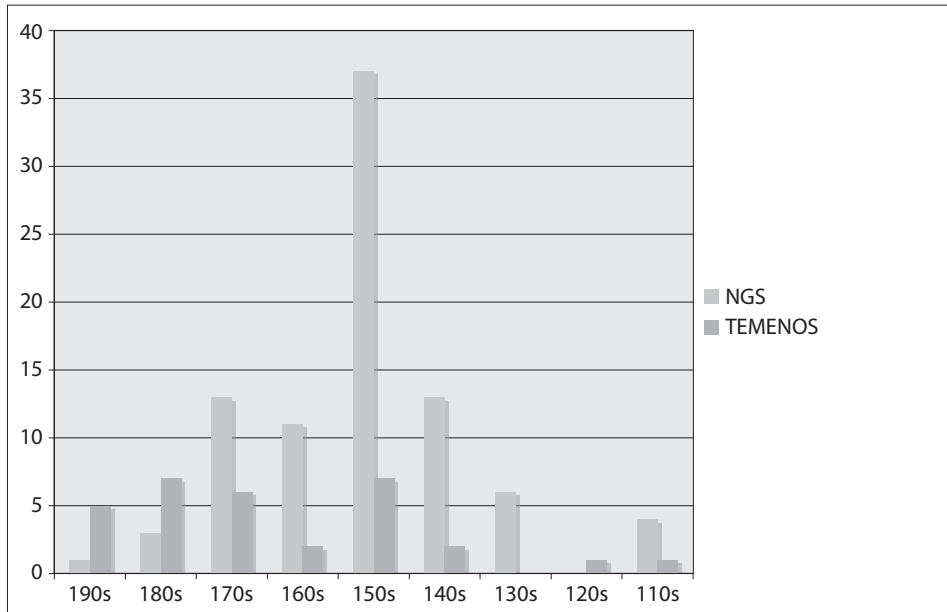


Fig. 3 The chronological distribution of Rhodian eponyms from the Olbia Temenos excavations, as compared with the distribution from NGS (Temenos counts based on Diatroptov 2006).

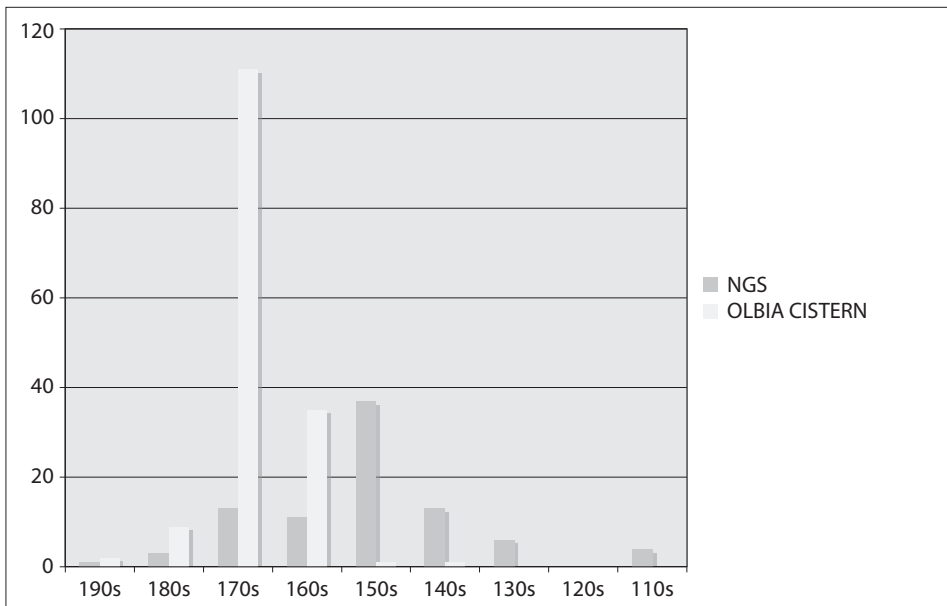


Fig. 4 The chronological distribution of Rhodian eponyms from the Olbia cistern fill, as compared with the distribution from NGS (Cistern counts based on Levi 1964b).

at Olbia includes comparable Rhodian eponym stamps, again with a relatively strong presence in the 150s with far less representation in subsequent decades (Fig. 3).³ The closed deposit of the Cistern from the Temenos area, published by Levi in 1964, has an earlier peak of Rhodian eponyms in the 170s with the latest two names datable to the 150s and 140s respectively (Fig. 4).⁴ Such scarcity cannot be blamed on a drop in Rhodian production in the latter half of the 2nd century, since John Lund's work shows clearly continued production on the island in these decades.⁵ The drop at Olbia also cannot be dismissed as the impact of fewer Rhodian amphorae reaching the Pontic region in general. Niculae Conovici documented the continued, if admittedly reduced, Rhodian presence at various Pontic sites.⁶ Pointing in the same direction are the



Fig. 5. Coins from NGS dating to the late 160s or 150s BC (Photo V. F. Stolba).

Fig. 6 Coin from NGS dating to the 140s BC (Photo V. F. Stolba).

Fig. 7 Coins from NGS dating to the early 1st century BC (Photo V. F. Stolba).



many Rhodian eponyms published by Juri Zajcev from Scythian Neapolis.⁷ The chronological pattern of Rhodian amphora imports at NGS appears best treated as a real, local problem; and consideration of further datable artefacts only reinforces this point.

Coins offer a second class of evidence narrowly datable within the 2nd and 1st centuries. Twenty-seven of 39 coins studied from NGS are datable to the late 160s or 150s BC (Fig. 5). Only nine examples date to the 140s and there are no coins datable to the 130s or 120s (Fig. 6). This gap in the numismatic record continues until the first quarter of the 1st century, the period of Mithridates VI; three coins are assigned to this period (Fig. 7).⁸

Three different imported amphora classes bring further independent evidence for mid 2nd century activity. First, a form that was produced across the northern coast of the Peloponnesos (Fig. 8) closely resembles amphorae of Brindisi; however, their fabric tends to be much browner and coarser, and there are minor differences in the forms of the rim and arrangement of the handles. While some examples may date as early as the middle decades of the 2nd century, jars of this type are most often encountered in deposits closed at the end of the 2nd century or slightly later.⁹ Second, the Punic Maña type C2 amphorae from NGS show the typical short, widely flaring neck, elaborately modeled rim, long tubular body, vertical handles, and a long, hollow stem toe (Fig. 9).¹⁰ Despite variation in form and fabric, all examples from NGS are well-paralleled at the pre-146 BC houses on the Byrsa at Carthage.¹¹ Finally, two groups of late Hellenistic/Republican amphorae from Italy are present, neither in any great numbers. First, a group in volcanic sand-tempered Campa-

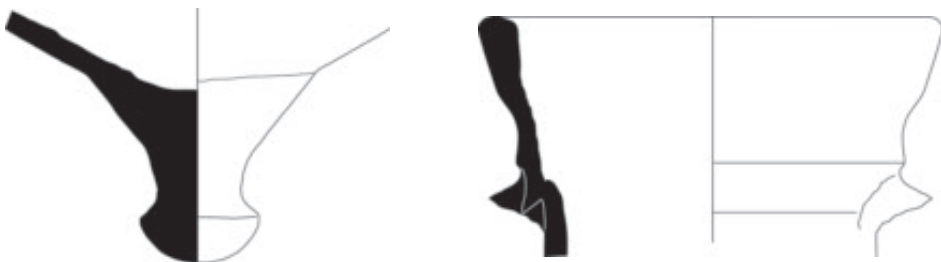
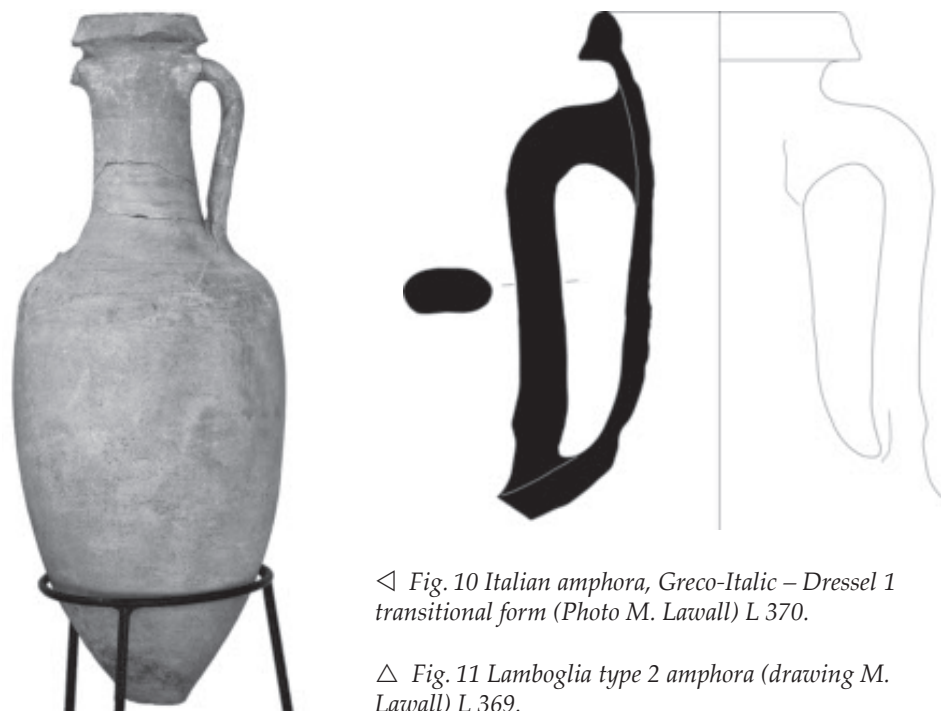


Fig. 8 Northern Peloponnesian amphora (drawing M. Lawall) – L-365 and L-364



Fig. 9 Punic Maña type C2 amphora fragments (drawing M. Lawall) – L308 and L366.

nian fabric represent a transitional phase from the latest ‘Greco-Italic’ form to the earliest Dressel form I (Fig. 10).¹² The necks are not quite as tall as is commonly seen in the various, fully developed Dressel I variants. The NGS



◁ Fig. 10 Italian amphora, Greco-Italic – Dressel 1 transitional form (Photo M. Lawall) L 370.

△ Fig. 11 Lamboglia type 2 amphora (drawing M. Lawall) L 369.



Fig. 12 Mouldmade bowls from House III-3 basement 368 (Photos P. Guldager Bilde) F25 and F79.



examples show taller proportions and more upright, taller rims as compared with examples from Carthage.¹³ Instead, the NGS examples are better matched in the mid to late 2nd century 'interim period' deposit at Corinth,¹⁴ where I.B. Romano has suggested a date in the 130s for the Italian amphorae. Slightly later than these are the Adriatic Italian jars referred to as Lamboglia type 2 (Fig. 11). These may date as early as the first half of the 2nd century; however, in the eastern Mediterranean they are most commonly found in contexts dating very late in that century or the early decades of the first century BC.¹⁵

Mouldmade bowls also provide external chronological evidence. Approximately two-thirds of those studied were imported from Ephesos,¹⁶ so the chronological evidence surveyed by Christine Rogl is directly relevant here



Fig. 13 Pendant Semi-circle bowl NGS 2002-650.



Fig. 14 Long-petal bowl – F87.



Fig. 15 Roulette-decorated bowl – F133.



Fig. 16 Net-pattern bowl – F88.

too.¹⁷ Examples from a deep fill in House III-3 typify the mid-century bowls (Fig. 12).¹⁸ Alongside rare Attic, Knidian, and occasional Pergamene products, most belong to Rogl's first two chronological groups, the South Gate workshop (first half of the 2nd century BC) and early pieces from the ΠΑΡ monogram workshop (c. 166 BC-100 BC), such as the large part of a bowl with an acanthus-vine scroll left, a lower body fragment also of this workshop with rounded, imbricate petals, and a minute fragment of a Pendent Semi-Circle (PSC) bowl of the second quarter of the 2nd century. The fill also includes two fragmentary bowls in all likelihood from Kirbeis' workshop. The Kirbeis group bowls, very commonly encountered in the Pontic region but produced at Kyme,¹⁹ provide complementary chronological evidence since their dates in the second and early third quarter of the 2nd century are derived from datable sequences of motifs and styles among the Aegean producers, especially Pergamon²⁰ and Kyme.²¹ A very well-preserved PSC bowl best illustrates the mouldmade bowls datable within the third quarter of the 2nd century (Fig. 13).²² Similar or slightly later dates are indicated by the long-petal bowl

fragments (Fig. 14).²³ It should be noted, however, that very few of these are found in discrete 2nd century BC contexts.

Late 2nd and early 1st century roulette-decorated Knidian bowls are the latest datable imported pieces (Fig. 15).²⁴ A large fragment of a net-pattern bowl (Fig. 16), with joining fragments from widely separated excavation contexts, may belong to the latest Ephesian workshops.²⁵

Two other distinct groups of imported table wares, Italian Campana A group (Fig. 17) and the so-called Hellenistic colour-coated ware A (Fig. 18), provide further chronological evidence for strata of the 2nd century. The Campana A ware, the more narrowly datable of the two groups, consists mostly of bowls and plates, but some fragments of jugs have also been found.²⁶ Four plates are decorated with a stamped tulip motif.²⁷ This motif developed from having very clearly marked and separated leaves in earlier examples to later stereotyped and rudimentary versions. The earlier types have been found at Carthage and hence date before 146 BC.²⁸ A lower date for bowls bearing this stamp is provided by a destruction layer at Scythian Neapolis dated to 135/131 BC.²⁹

Krzysztof Domżalski has recently drawn attention to the extensive distribution of colour-coated ware in the Black Sea region including Olbia, where the best examples come from the mid 2nd century Temenos Cistern fill.³⁰ The ware is currently regarded as Rhodian. Domżalski has noted that the identification and precise chronology of this ware is still difficult, but he has suggested that much of this material was Rhodian in origin, with reference to visual and chemical comparison to the clay fabric of Rhodian amphora.³¹ Possibly rates of production and certainly the intensity of exports were in decline during

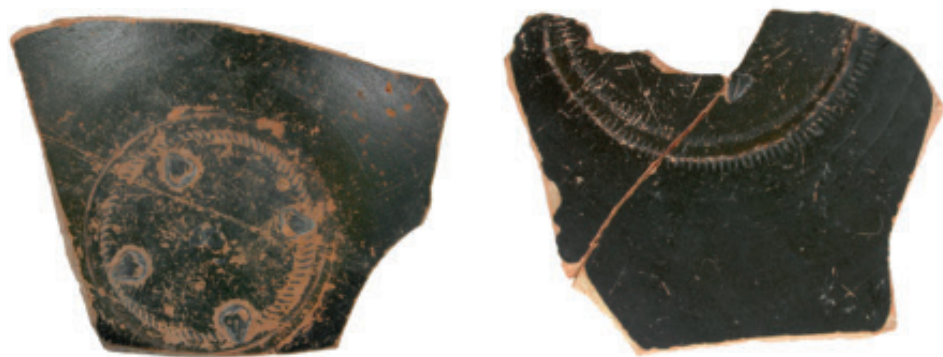


Fig. 17 Campana A plate fragments – Da 575 and Da 578.

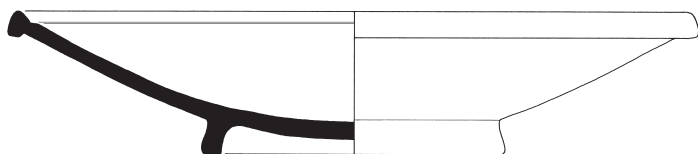


Fig. 18 Colour-coated ware A – Da 404.

the second half of the 2nd century. Hence pieces from NGS are most likely to date near the middle of the 2nd century if not earlier.³²

Black gloss pottery with West Slope style decoration fills out the remainder of the datable imported table ware. Amphora fragments and a kantharos fragment are identifiable as Pergamene production and are datable to the middle or third quarter of the 2nd century with reference to that site (Fig. 19).³³ A large kantharos fragment is only generally datable but may extend later.³⁴ After the middle decades of the century, there is a gap in datable West Slope pieces. At the end of the 2nd century the datable material shifts from an emphasis on amphorae and kantharoi to large kraters or basins and kantharoi. Hence, the latest three fragments of West Slope kantharoi find their best parallels in late 2nd or early 1st century pieces from Pergamon and Athens.³⁵ Three fragments of West Slope amphorae and two krater or basin rims may be roughly contemporary or even datable to the earliest part of the 1st century (Fig. 20).³⁶

The final category of datable imports is the wheelmade and mouldmade lamps. The wheelmade imports are rare by this time, but there are five examples of Howland types 33 and 34 dated to the period 220 to 140 BC (Fig. 21).³⁷ After a gap in the datable imports between 140 and 120 BC, there are two Howland type 37A lamps dated 120-90 BC and two Howland type 35 of the late 2nd to early 1st century BC (Fig. 22).³⁸ Apart from a few Pergamene mouldmade lamps, which are generally datable from ca. 175 – 100 BC (Fig. 23),³⁹ the majority of the mouldmade imports could, on account of the micaceous grey clay, come from Ephesos, where lamp production started around 150 BC (Fig. 24). Even if these are not Ephesian products, their forms seem generally datable within the second half of the 2nd century.⁴⁰

To sum up the patterning in the datable artefacts thus far, the gap surrounding the 120s, most precisely visible in the Rhodian amphora stamps and datable coins, remains unfilled. On either side of this gap there are other datable 2nd century ceramic types, with most of the finds datable to the 150s through 130s. At the end of the century the datable material is generally

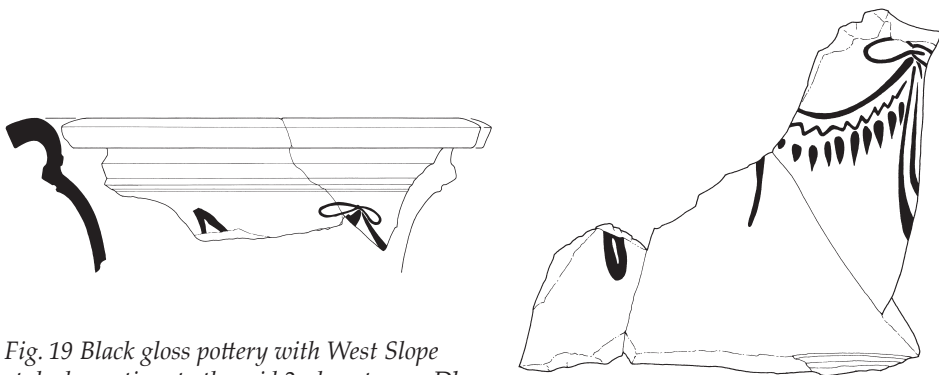


Fig. 19 Black gloss pottery with West Slope style decoration, to the mid 2nd century – Db 324.



Fig. 20 Black gloss pottery with West Slope style decoration, late 2nd to early 1st century BC – Db 370.



Fig. 21 Wheelmade lamp, Howland types 33 and 34 NGS 2001-892



Fig. 22 Wheelmade lamp, Howland type 37A and 35 – O-71.



Fig. 23 Pergamene? mouldmade lamp – O-93.



Fig. 24 Ephesian (?) mouldmade lamp – O-101.

less common, but the end of the 2nd century is consistently found in various classes of artefact.

Despite the fact that some artefacts do date to the end of the 2nd century, there does not appear to have been a continuing, significant level of activity in the area after the 130s. There are simply too many expectable classes of late 2nd century artefacts that are too rare. Not all rarities are related solely to the chronology of activity in NGS per se. For example, Knidian amphora stamps, so typical of late 2nd century deposits in Athens and Delos, are extremely rare at Olbia.⁴¹ But Knidian amphorae were exported westwards especially towards Delos and Athens;⁴² they are often rare along the coast of Asia Minor and into the Pontic region. Eastern Sigillata A, another hallmark of late Hellenistic sites in the Aegean and Eastern Mediterranean, also may not be very helpful as a significant absence. Such a rarity is typical of Pontic sites.⁴³ More noteworthy is the extreme rarity of white ground lagynoi. A few fragments were found in NGS, but none appeared in the nearly 500 discrete contexts studied as part of our research. The Olbian necropolis does provide a few very nice, museum quality examples.⁴⁴ The mouldmade bowl repertoire, despite its richness at the site, is strikingly different from better-known assemblages that continue through the latter half of the 2nd century. Few bowls in Sector NGS show the long-petal decoration (2.3 %), contrasting with ca. 9.7 % in the Magnesia Gate deposits and 10 % in the Delos collection. This motif continued much longer than the period best represented at NGS. Similarly scarce are fragments belonging to Rogl's latest Ephesian phases of the first half of the 1st century BC. Roulette bowls, too, although present are perhaps not as numerous as might be expected. Finally, the numismatic record shows a clear absence of either local or foreign coins datable to the last three decades of the 2nd century.

Patterns of accumulation and discard

If we can, by combining what is present and what is absent, exclude a continuation of this assemblage into the last decades of the 2nd century, the question then becomes, at what point should we place the cut-off date? At what point are there too few datable pieces, and at what point should we expect to see more of what is absent? Some guidance is provided by consideration of accumulation and discard patterns elsewhere.

At other sites and in various other contexts, some decline in datable objects is often noted in the decades before the actual end of accumulation. For example, the large dumped accumulation of Rhodian amphorae downslope from Palace V on the Pergamene acropolis is dominated by Rhodian stamps of the 180s and 170s even though the actual cessation of accumulation did not occur until close to 160 or even later.⁴⁵

Well or cistern deposits with distinct episodes of filling often show a similar decline in datable pieces before the latest objects. For example, the filling of the

Public Well on Thasos shows the same drop-off in advance of the closing of the deposit as at the Pergamon deposit even though the span of time in question is shorter.⁴⁶ From the even broader perspective of a site overall, Gérald Finkielsztein found a very similar pattern of the bulk of the well-preserved amphorae at Maresha dating well before the site's abandonment near the end of the 2nd century.⁴⁷

It seems reasonable to suppose, on the basis of such examples, that debris often would accumulate in various discard piles around a city over the years and then at some point that debris would be collected and dumped as needed for landfilling operations. While some of the debris filling the NGS houses may have accumulated in situ (or even clearly did so), another portion, perhaps the bulk of the above-floor fills would have been carted in – from where we do not know – and dumped over the site as needed. Older garbage had a better chance of entering the debris piles than newer garbage, and the very latest material would be the least common.

The general patterns of discarded, datable material and dates of abandonment just described encourage the view that the land filling and leveling of the Lower City of Olbia did not occur until the last decade or so of the 2nd century, but the piles of garbage contributing the filling material ceased significant accumulation in the 130s. The process of abandonment and later leveling envisioned here is somewhat elucidated by turning to the houses of NGS and their latest Hellenistic phases.

The material dating into the 140/130s BC appears in numerous contexts across NGS; however, the nature of these find spots is not the same in all cases. In the central section of NGS, house blocks III and IV, most buildings preserve evidence for Classical or Early Hellenistic construction followed by continued Hellenistic occupation and modifications. Here, in each of the likely house blocks at least one room's deep late Hellenistic abandonment fill includes material datable near or even after ca. 140 BC. Such late material is even found on the late Hellenistic occupation floor levels in all but one of the house blocks.⁴⁸

By far the best example of such an assemblage is found in Basement 253 in the northwestern corner of block IV.⁴⁹ A heavily repaired pithos and six nearly complete amphorae were all abandoned in this room at floor level. In terms of securely datable artefacts, we can highlight a Rhodian jar preserving the fabricant stamp of Imas, active in the mid 2nd century,⁵⁰ and a mouldmade bowl representing the early work of the ΠΑΡ monogram workshop ca. 140 BC.⁵¹ Above this floor level deposit, as was typical of these two central blocks, was roughly two meters of late Hellenistic fill, at times with multiple fragments of the same vessel though rarely complete vessels.

The most securely dated, latest objects in the deep fills in these areas are the Rhodian stamp of Archibios, ca. 115 BC, in House IV-4, and the Rhodian stamp of Euanor, ca. 119 BC, in House III-3.⁵² These same rooms also contain very late fragments of West Slope decorated pottery; in House III-3 two late

West Slope amphora fragments were found in the same fill as the handle of Euanor.⁵³

House blocks II and VI, by contrast, show much more sporadic and isolated late Hellenistic material. In House block II, the best-studied houses II-5 and II-6 were already abandoned by ca. 200 BC and late Hellenistic levels are limited to rubble-paved areas, never within the defined rooms themselves. The only especially late piece from this area may be a northern Peloponnesian toe from fill over the large room 390 in House II-5,⁵⁴ but many other finds over and amongst the stones of these pavements tend to date to the middle decades of the century just as was the case in the deep house fills in blocks III and IV.

In House block VI, there is more of the late material, but again, the finds tend to be limited to insubstantial fills. One such collection of late fragments, including a Rhodian stamp of Aristopolis, ca. 118 BC,⁵⁵ appears in the south-eastern corner of the block. Somewhat more substantial are the late 2nd century fills in a pocket in the bedrock, room 591 and in levels capped by a very late hearth 561 just to the north. Particularly in the case of hearth 561, the plentiful mouldmade bowls, including the large net-patterned fragment joining a smaller fragment from far to the northeast, are often later than those encountered elsewhere in NGS.⁵⁶ This crossmend between two areas of the excavation is a rarity, but no weight should be placed on that fact since we only studied the material after significant selection processes modified the record. The crossmend does point towards the localized accumulation and spreading of this garbage over the sector as part of the abandonment and clean-up process.

The combination of these various ways of looking at the finds from 2nd century NGS results in the following picture. Accumulation of garbage slowed and ceased over the 140s and 130s as the houses in blocks III and IV were abandoned. While we cannot be sure where the mounds of garbage first lay, the already abandoned blocks II and VI to the north and south seem like good candidates; these houses had been filled in by the end of the 3rd century. A period of neglect followed likely all the way to the end of the century; had there been significant life in the sector at this time we would expect much more from those artefact classes now noted as rarities. Near the very end of the 2nd century or even the beginning of the 1st century the central blocks, too, were filled in, and the whole area was generally leveled. Joins found vertically through fills indicate the relatively rapid pace of this process; joins horizontally attest to the breadth of the effort.

Crises and abandonments at Olbia

As we noted in our introduction, the 2nd century B.C. is often seen as a time of crisis at Olbia. Our research adds to this impression. Whatever factors encouraged the abandonment of this sector also encouraged the abandonment of other parts of the city: the cistern in the Temenos was filled in perhaps

slightly earlier; spolia from the central Temenos found in the city's late Hellenistic wall indicate the abandonment of that cult site before the end of the 2nd century; a coin hoard from this mid-century period was found in the Agora. Valentina Krapivina has enumerated these and other symptoms of late Hellenistic decline at Olbia.⁵⁷

These symptoms of crisis are by no means strictly synchronous, yet it would be difficult to argue for radically different causes for each one. And yet, it is impossible to specify one cause for these symptoms. Skiluros is the highest profile, and to some extent the most appealing, scapegoat, but one could endlessly consider other possibilities. Likewise, the specific catalyst for the leveling out operation around 100 BC is unknown, but it may be tempting to link this effort with activity at the site in the time of Mithridates VI.

Have we failed in our initial hope of contributing a fixed point to Hellenistic chronologies using Olbia's tumultuous history in the 2nd century? Almost, but not entirely. We have presented the mix of imported, independently datable ceramic types that define mid-2nd century activity at Olbia. The pattern of presence and absence, commonality and rarity described here can be compared with other sites as a chronological point of reference.

Notes

- 1 E.g. Kryžickij & Lejpunskaja 2010, 23 and esp. note 71.
- 2 The later periods of the Rhodian stamp chronology have not received as intensive consideration as periods Ib-IV; for the later periods, see Finkielsztejn 2000 and 2001.
- 3 Based on Diatropov 2006.
- 4 As compiled from Levi 1964b.
- 5 Lund 1999 and 2011.
- 6 Conovici 2005.
- 7 Zajcev 2005.
- 8 Information on the coins from the Lower City is provided by Vladimir Stolba.
- 9 See Lawall 2005, 33, note 20 with references; Lawall et al. 2010, 396-397, L-306 and L-364-L-365; Opaît 2010.
- 10 Lejpunskaja 1999; Lawall et al. 2010, 397-398 and 404, L-307-L-313 and L-366-L-367.
- 11 Lancel ed. 1979; 1982.
- 12 Lejpunskaja 1999; Lawall et al. 2010, 398 and 404, L-314 – L-316 and L-370.
- 13 Lancel ed. 1979; 1982.
- 14 Romano 1994.
- 15 See Lawall 2006 and Will 1997; for the finds from NGS, see Lejpunskaja 1999 and Lawall et al. 2010, 404, L-368 – L-369.
- 16 Guldager Bilde 2010, 271, Table 1.
- 17 Rogl, this volume.
- 18 Guldager Bilde 2010, 27, cat. nos. F-1, F-3-5, F-8, F-12, F-25, F-36, F-40, F-46, F-55, F-62-63, F-65-66, F-74-75, F-79, F-81-82, F-85, F-89-90, F-98-99, F-101, F-103, F-107 F-110-112, F-121-122.

- 19 Guldager Bilde 2010, 285-287 (erroneously considered Pontic with strong Kymean affinity); and see Žuravlev & Žuravleva this volume.
- 20 De Luca 1968; 1999.
- 21 Bouzek & Jansová 1974, 22, 38.
- 22 NGS 2002-650, noted by Guldager Bilde 2010, 280.
- 23 E.g., Guldager Bilde 2010, cat. nos. F-11, F-87; as well, other fragments are not from discrete late Hellenistic contexts, e.g., inv. nos. 85-75, 88-256, 89-497, and 2001-195. In Athens, long petal bowls do not appear until after the mid 2nd century, see Rotroff 1982, 34-37.
- 24 Four pieces were found, only one (Guldager Bilde 2010, cat. no. F-127) hardly Knidian but a colour-coated imitation from elsewhere, was found in a discrete context (House IV-3, Basement 343). Further three unpublished fragments were found in Houseblock VI in 2000 and 2002: 2000-1175 (Knidian); 2000-1176 (Knidian); 2002-741 (Knidian?). On the dates of this production, see Kögler 2010, 124.
- 25 Guldager Bilde 2010, cat. no. F-88.
- 26 Handberg et al. 2010, 195 and 248-249.
- 27 Handberg et al. 2010, Da-575-Da-578. For a more extensive discussion of the chronology of the stamped motif and Campana in the Black Sea, see also Handberg et al. 2013.
- 28 Morel 1990, 19-20, pl. 1.2.
- 29 Zajcev 2005, fig. 3, 25; 4, 14.
- 30 Domžalski 2007, including extensive bibliographical references.
- 31 Élaigne 2000, 161-163, 165, Fig. 5; Levi 1964b, 253, Fig. 15. For a further plate see Levi 1964a, 169, Fig. 40.2-3. However, it seems that the ware was produced in at least two different clays, since a brown clay version also exists, see Pulak & Townsend 1987, 46; Młynarczyk 2002, 123.
- 32 Handberg et al. 2010, 191, and cat. nos. Da-401, Da-403 – Da-407, Da-410.
- 33 For examples from Pergamon, see Schäfer 1968; for finds from discrete contexts at Olbia NGS, see Højberg Bjerg 2010, cat. nos. Db-324, Db-325, Db-326 and Db-335.
- 34 Højberg Bjerg 2010, Db-181.
- 35 Højberg Bjerg 2010, Db-144, Db-170, and Db-166 dated with reference to Behr 1988, 97-178; Rotroff 1997, 48.; and Rotroff & Oliver 2003, 46, no. 110.
- 36 Amphorae: Db-331, Db-332 (both compared with Lungu 2000-2001, nos. 1-2, suggested date 100-86 BC), and Db-335; kraters: Db-369 and Db-370 (compared with Behr 1988, nos. 66, 69-70).
- 37 Munk Højte 2010, O-70, and four others not from discrete contexts: NGS-93-158, 99-411, 01-729, and 01-892.
- 38 Munk Højte 2010, O-71, and three others not from discrete contexts: NGS-90-189, 92-723, and 02-641.
- 39 Munk Højte 2010, O-93.
- 40 Munk Højte 2010, 435-436.
- 41 Stratified contexts in NGS only contained 17 fragments (including both stamped handles and other diagnostic elements); another 53 fragments come from other contexts in the sector. By contrast 650 Rhodian stamps and other fragments were inventoried from the sector.
- 42 Koehler & Matheson Wallace 1990.
- 43 See Krapivina, this volume; Lund 2005, Fig. 10.4 shows that sites in the Aegean basin show no more than 10 pieces of ESA in the second half of the 2nd century BC.

- 44 Parovič-Pešikan 1974, 98-99. For a lagynos from the Lower City with a komastic graffito, see Vinogradov 1998.
- 45 For dates of eponym stamps in the Pergamon deposit, see Finkielsztejn 2001; on the deposit itself, see Börker & Burow 1998; Lawall 2002; and Badoud, this volume.
- 46 Blondé et al 1991; Garlan 1989.
- 47 Finkielsztejn 2002.
- 48 The following contexts represent floors with mid 2nd century finds: Hearth 329, soace Context 217, room 368, Context 262 basement 315, Contexts 143-151 B 253 amphorae on floor level, Context 270 basement 280, Contexts 294 and 292 basement 302 – only 140s material, Context 312 basement 343 (very near floor level, and there is fairly late material in the corner bin, context 313 too), Contexts 334 and 338 basement 353.
- 49 Lejpunskaja et al. 2010, 69-72, Contexts 143-151.
- 50 L-224
- 51 Guldager Bilde 2010, F-26
- 52 Lawall et al. 2010, L-327 and L-328; the dates follow Finkielsztejn 2001.
- 53 Højberg Bjerg 2010, Db-327 and Db-332.
- 54 Lawall et al. 2010, L-306.
- 55 Lawall et al. 2010, L-165.
- 56 Guldager Bilde 2010, F-88.
- 57 Krapivina 2005.