Papers of the British School at Rome **88** (2020), pp. 67–118 © British School at Rome
doi:10.1017/S0068246219000199

A PREVIOUSLY UNKNOWN SIEGE OF BOTROMAGNO/SILVIUM: THE EVIDENCE OF SLINGSHOTS FROM GRAVINA IN PUGLIA (PROVINCIA DI BARI, PUGLIA)

by Giuseppe Schinco and Alastair M. Small

This article is in two parts. The first part, in Italian, by Giuseppe Schinco, is a study of the typology and technical characteristics of a group of 225 lead slingshots found rather more than twenty years ago by a private metal detectorist on the hill of Botromagno near Gravina in Puglia. The second part, in English, by Alastair Small, is a review of the archaeological evidence for a possible siege of the site within the time frame suggested by the typological study of the slingshots. Since the site, which can be identified with the ancient Silvium, can be shown to have been abandoned around the end of the first quarter of the first century BC within that time frame, we conclude that the siege most probably took place during the slave war of 73–70 BC associated with Spartacus.

Il contributo si articola in due parti. La prima, in italiano, opera di Giuseppe Schinco, è uno studio della tipologia e delle caratteristiche tecniche di un gruppo di 225 fionde di piombo rinvenute sulla collina di Botromagno vicino a Gravina in Puglia più di vent'anni fa, a seguito di indagini private condotte con l'uso del metal detector. *La seconda parte, in inglese, opera di Alastair Small, è invece un riesame della documentazione archeologica, utile per tentare di riconoscere un possibile assedio del sito nel periodo a cui risalgono le fionde analizzate nella prima parte del contributo. Essendo possibile dimostrare che l'abbandono del sito, identificabile con l'antica* Silvium, *è avvenuto attorno alla fine del primo quarto del primo secolo a.C., si conclude che l'assedio ha avuto luogo verosimilmente durante il* bellum servile *del 73–70 a.C., associato alla vicenda di Spartacus.*

LE *GLANDES PLUMBEAE* DELL'APPORTO FLORIDO PRESSO IL CENTRO OPERATIVO DI GRAVINA IN PUGLIA[1]

di Giuseppe Schinco

Presso il Centro Operativo di Gravina si conserva un numero imprecisato di cartoni contenenti materiali provenienti dalle zone archeologiche di Gravina raccolte da un appassionato ricercatore locale, Antonio Florido, con l'uso di un

[1] Mi preme ringraziare i proff. Alastair e Carola Small che mi hanno seguito in questa ricerca; il prof. Luigi La Rocca e la dott.ssa Maria Rosaria Depalo della Soprintendenza Archeologica per la Città Metropolitana di Bari per le autorizzazioni di rito; il personale tutto del Centro Operativo di Gravina in Puglia; Mauro Barnaba e Giuseppe Ardito il primo per le riprese fotografiche, il secondo per la elaborazione delle immagini.

cercametalli del tipo Spectrum XLT.[2] Tra tutto il materiale dell'*apporto Florido* notevole è il numero di *glandes plumbeae*: trattasi di 225 pezzi tutti rinvenuti sparsi su un pianoro situato sulla vetta della collina di Botromagno in uno strato di terreno che varia tra la superficie ed una profondità massima di circa 10 cm. L'area di ritrovamento risulta notevolmente estesa: parte, infatti, dal cosiddetto terreno Iannetti, dove si trovava la maggiore concentrazione, e arriva fino al torrente Gravina che scorre in un profondo burrone che separa il sito archeologico di Botromagno dall'abitato e che dà nome alla città di Gravina (Fig. 1). Non essendo stato il sito sistematicamente controllato, è da ritenere, allora, che sia possibile ritrovare, operando in modo più sistematico, altre ghiande nell'area.

Risultando solo 15 ghiande contrassegnate dalla Soprintendenza,[3] per una prima analisi del materiale, è stato necessario catalogarle numerandole partendo da 1 (Fig. 2). Così numerate sono state fotografate, pesate con bilancia elettronica e misurate con calibro rilevando le tre dimensioni dell'oggetto: lunghezza, diametro massimo e diametro minimo.

A seguire, sono state elaborate delle tavole con intervalli che rispettassero il più possibile dimensione e peso delle ghiande rapportato al loro numero. Per consentire una ricerca più articolata nella catalogazione, si è ritenuto opportuno scegliere degli intervalli minimi.

Nella Tabella 1 si riportano i dati relativi al peso delle singole ghiande considerando un intervallo di cinque grammi. Così, le frequenze più numerose si attestano negli intervalli 28–32 grammi con 61 ghiande (il 27,11%), 33–37 grammi con 50 ghiande (il 22,23%), 23–27 grammi con 40 ghiande (il 17,78%), 38–42 grammi con 32 ghiande (il 14,22%); a seguire gli intervalli 43–47 grammi con 18 ghiande (l'8,00%), superiore a 52 grammi con 14 ghiande (il 6,22%); in fine gli intervalli 18–22 grammi e 48–52 grammi con 5 ghiande cadauno (il 6,22%) (Graf. 1).

Dalla Tabella 2, riportante la lunghezza delle singole ghiande con un intervallo di 5 mm, si rilevano le frequenze più numerose negli intervalli mm 30–34 con 90 ghiande (il 40,00%); mm 35–39 con 79 ghiande (il 35,11%); a seguire mm 25–29 con 24 ghiande (il 10,67%); mm 40–44 con 14 ghiande (il 6,22%); e oltre mm 49 con 10 ghiande (il 4,44%); conclude l'intervallo mm. 45–49 con 8 ghiande (il 3,56%) (Graf. 2).

Considerando un intervallo di mm 3, nell'analisi relativa al diametro minimo, come dalla Tabella 3, un elevato numero di ghiande, 148 (il 65,78%) si attesta

[2] Nelle sue "spedizioni" il Florido non si limitava al recupero di materiale individuato dal suo strumento (ferro, rame, bronzo, piombo), ma raccoglieva anche tutto quello che riteneva utile allo studio del sito. Così, nei depositi delle Soprintendenze di Puglia e Basilicata si ritrovano oggetti anche in oro e argento, insieme a pesi per telai, frammenti di vasi e centinaia di monete di varia natura e epoca tutto riportato in catalogo *apporto Florido*.

[3] Trattasi di una ghianda contrassegnata con la sigla E606 riportata nel nostro catalogo al numero 212; 5 ghiande contenute in un sacchetto riportante il numero 9001 e rinumerate da noi con l'intervallo 221–224: una ghianda riportante il numero 9032 e da noi riportata con il numero 211; infine 8 ghiande riportate dalla Soprintendenza nell'intervallo 9067–9074 e da noi riportate nell'intervallo 213–220.

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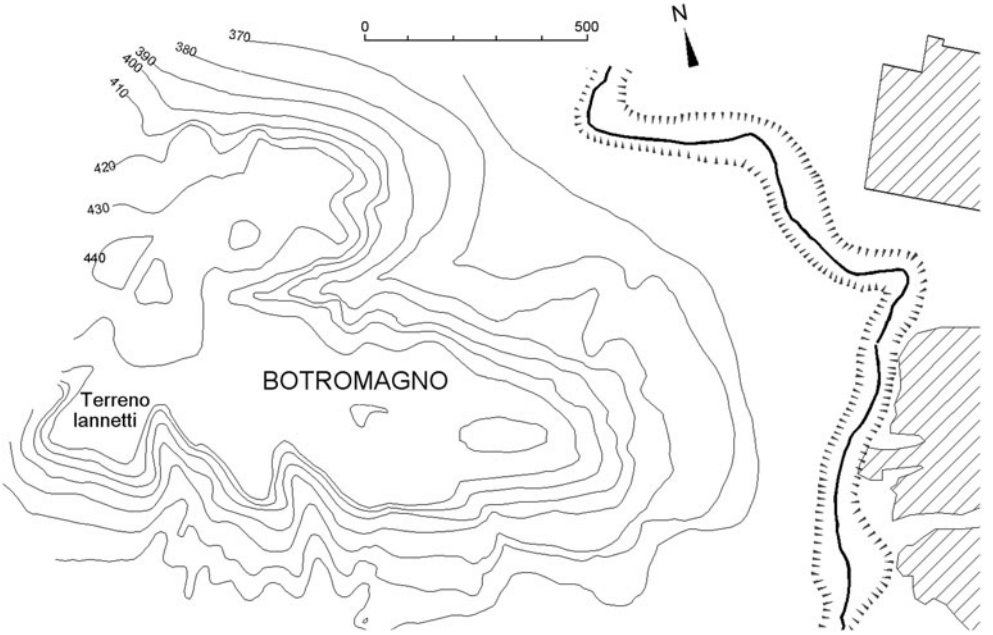

Fig. 1. La collina di Botromagno, il burrone del Torrente Gravina, e i margini occidentali della città di Gravina in Puglia.

Fig. 2. Alcune ghiande dell'*apporto Florido*.

tra mm 12 e mm 14; delle restanti, 49 (il 21,78%) si ritrovano tra mm 15 e mm 17; 26 (l'11,55%) tra mm 9 e mm 11; e solo 2 (lo 0,89%) tra mm 19 e mm 21 (Graf. 3).

Rispetto al diametro massimo, sempre mantenendo l'intervallo di mm 3, come da Tabella 4 un elevato numero di ghiande, 143 (il 63,56%) si attesta tra 15 e 17 mm, 50 (il 22,22%) tra 12 e 14 mm; 28 (il 12,44%) tra 18 e 20 mm; e tra 21 e 23 mm solo 4 (l'1,78%) (Graf. 4).

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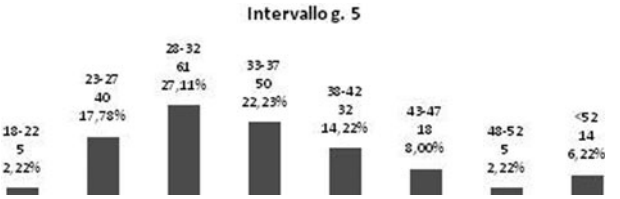
Tabella 1. Le ghiande per peso.

Intervallo (grammi)	Dati Ass.	Dati %
18–22	5	2,22
23–27	40	17,78
28–32	61	27,11
33–37	50	22,23
38–42	32	14,22
43–47	18	8,00
48–52	5	2,22
Oltre 52	14	6,22
Totale	**225**	



Graf. 1. Le ghiande per peso.

Tabella 2. Le ghiande per dimensione: lunghezza.

Intervallo (mm)	Dati Ass.	Dati %
25–29	24	10,67
30–34	90	40,00
35–39	79	35,11
40–44	14	6,22
45–49	8	3,56
Oltre 49	10	4,44
Totale	**225**	

Tutte le *glandes plumbeae* in uso erano il prodotto di fusioni per la produzione delle quali veniva quasi sempre utilizzata una matrice consistente generalmente in una lastra di argilla cotta al sole: al centro della lastra, nell'argilla ancora umida, si incavava un solco, lungo il quale, simmetricamente disposti, si incavavano altri solchi più piccoli che terminavano in forme negative di ghiande. Rarissimi sono i ritrovamenti di matrici: Parigi presso rue Saint-Martin, Panagorea sul Bosforo, Olinto Calcidica. L'esemplare di Parigi consiste in una placca in terracotta con impressi tre alveoli di forma ellittica; uno di essi presenta una iscrizione incisa prima della cottura (Poux e Guyard, 1999; Borrini *et al.*, 2012: 40, n.16).

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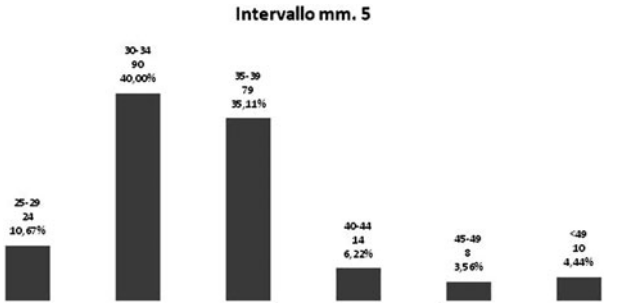
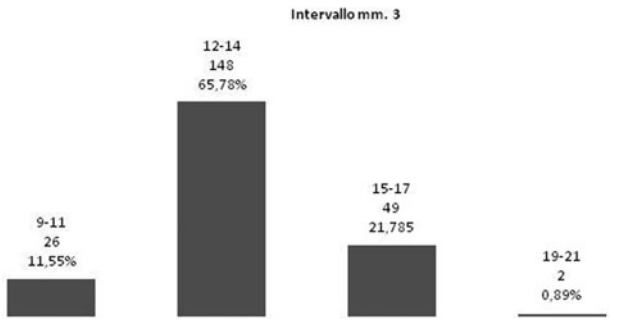


Graf. 2. Le ghiande per dimensione: lunghezza.

Tabella 3. Le ghiande per dimensione: diametro minimo.

Intervallo (mm)	Dati Ass.	Dati %
9–11	26	11,55
12–14	148	65,78
15–17	49	21,78
19–21	2	0,89
Totale	**225**	



Graf. 3. Le ghiande per dimensione: diametro minimo.

Le matrici potevano essere del tipo ad un unico stampo,[4] o a stampo plurimo (Fig. 4), con il vantaggio, nel secondo caso, di ottenere contemporaneamente un maggiore numero di esemplari. L'evidente peduncolo non eliminato dall'operatore della ghianda di Fig. 3 induce a ritenerla frutto di una matrice multipla; mentre l'assenza di una qualsiasi propaggine della ghianda di Fig. 4

[4] Probabilmente si utilizzava questo tipo di matrice per ottenere celermente un prodotto finito.

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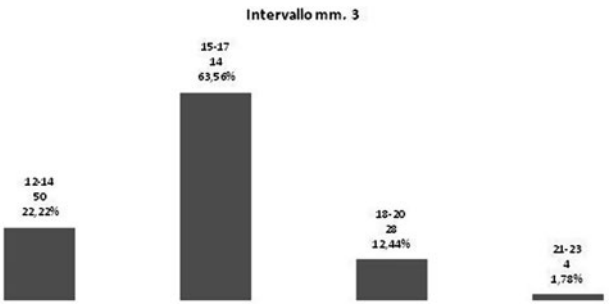
Tabella 4. Le ghiande per dimensione: diametro massimo.

Intervallo (mm)	Dati Ass.	Dati %
12–14	50	22,22
15–17	143	63,56
18–20	28	12,44
21–23	4	1,78
Totale	**225**	



Graf. 4. Le ghiande per dimensione: diametro massimo.

Fig. 3. Cat. 205 da matrice di argilla per fusione multipla bifacciale.

presuppone una matrice a produzione singola. È ipotizzabile anche che, in assenza di matrici, si facesse uso di un semplice incavo nel terreno rivestito di ghiaia: nella ghianda di Fig. 5 il piombo fuso, raffreddandosi, ha incorporato pezzi di ghiaia che rivestiva il fondo dell'incavo.

Esistevano in Italia officine specializzate che fornivano ghiande missili agli eserciti (Benedetti, 2012: 34); ma, spesso, venivano prodotte sul luogo della battaglia dallo stesso fromboliere (Poux e Guyard, 1999: 29). La fusione del piombo, infatti, non necessitando di una temperatura elevata (327,46°C), poteva avvenire in semplici focolari durante una sosta. Dopo la fusione, con il materiale non del tutto raffreddato, l'addetto, reggendo la ghianda con una

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Fig. 4. Cat. 220 da matrice di argilla per fusione singola monofacciale.

Fig. 5. Cat. 103 da matrice in terra per fusione monofacciale.

Fig. 6. Cat. 109. Lo stampo a losanga è stato probabilmente prodotto dalla punta della pinza che reggeva la ghianda per gli interventi sulle punte.

pinza avente le estremità a forma di losanga (Fig. 6) o di un triangolo equilatero, la rendeva acuminata (Fig. 7).

Come da Tabella 5, 162 ghiande, il 72,00%, presentano interventi per acuminare una o ambedue le estremità: trattasi per alcune di evidenti tagli netti, per altre del semplice arrotondamento delle punte mediante speciali pinze (Fig. 7). L'intervento per acuminare le punte percentualmente prevale tra le ghiande deformate, l'89,47% con 34 unità. Seguono con 72 unità, il 72,73%, le bifacciali, e le monofacciali con 56 unità, il 63,64%.

Inoltre, per dare al proiettile maggiore aerodinamicità, l'operatore era solito ripulire la ghianda da protuberanze derivanti dalla fusione. Eliminava possibili

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Fig. 7. Cat. 33. Intervento per acuminare le punte.

Tabella 5. Intervento sulla ghianda per acuminare la punta.

Tipo	Monofacciale	Bifacciale	Deformato	Totale
Dati assoluti	56	72	34	162
Dati %	63,64	72,73	89,47	72,00

dislivelli determinati dallo sfasamento delle due matrici (Fig. 8). Ripuliva dalla bava di fusione (Fig. 9). Tagliava il peduncolo nel caso di fusione multipla (Fig. 10).

Come tutte le altre, le *glandes plumbeae* dell'apporto Florido sono il frutto di fusione di piombo i cui prodotti, come risulta dall'analisi dei singoli pezzi, potevano essere del tipo *bifacciale*[5] o *monofacciale*:[6] per il primo tipo si faceva uso di una matrice doppia; il secondo, invece, veniva prodotto utilizzando una matrice singola. Un terzo tipo di ghianda, il *deformato*, era il frutto di una errata fusione o di un non corretto intervento sulla ghianda da parte dell'operatore (Tab. 6; Graf. 5). Tra le 225 ghiande dell'apporto Florido (v. Tab. 6)

[5] Rispetto alle *ghiande monofacciali* le *bifacciali* avevano la prerogativa di possedere un maggiore potenziale aerodinamico. Come è ben noto, la viscosità dell'aria esercita una forza in direzione parallela ma con verso opposto rispetto alla direzione del corpo in movimento. Questa forza contraria procura una resistenza al volo che varia, insieme ad altri elementi, anche a secondo della forma dell'oggetto, *resistenza di forma*. In particolare, la resistenza all'aria di un corpo affusolato (*ghiande bifacciali*) è di 0,04, mentre per un semi-corpo affusolato (*ghiande monofacciali*) è pari a 0,09 (da: "https//it.wikipedia.org//windex.php?title=coefficiente di resistenza aerodinamica). Applicando a questi parametri la formula per il calcolo della *potenza dissipata* si ottiene, tra le *ghiande monofacciali* e quelle *bifacciali*, una differenza di 3,4 (indice di *potenza dissipata* 6,1 per le prime e 2,7 per le seconde). Dai dati su riportati si ricava che il fromboliere per colpire un obbiettivo situato alla stessa distanza, con una *ghianda monofacciale* avrebbe dovuto applicare una forza 2,5 superiore a quella che avrebbe impegnato utilizzando una *ghianda bifacciale*.

[6] È probabile si praticasse tale processo di fusione per accelerare la produzione e, al tempo stesso, risparmiare piombo.

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Fig. 8. Cat. 102. Dislivello dallo sfasamento delle due matrici.

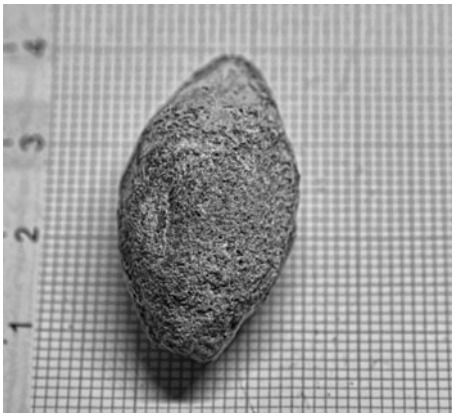

Fig. 9. Cat. 215. Bava di fusione.

Fig. 10. Cat. 23. Peduncolo di matrice plurima.

prevalgono le *bifacciali*, 99 (44,00%); a seguire quelle *monofacciali*, 88 (39,11%) e le *deformate* con 38 pezzi (16,89%).

Le ghiande *bifacciali* si presentano, ad eccezione dell'ogivale, con due coni aventi la base comune e con entrambe le estremità acuminate. Queste per la loro forma, possono suddividersi in quattro gruppi:

– Biconica;
– Fusiforme;
– Amigdale;
– Ogivale.

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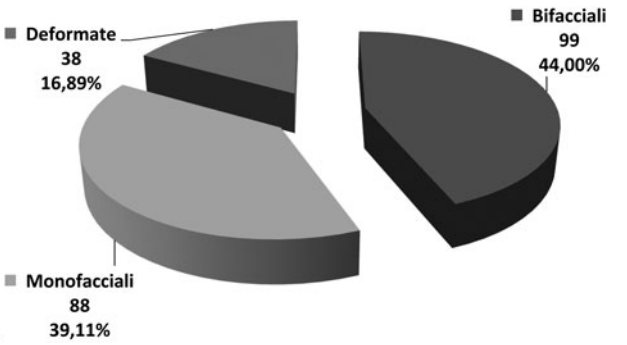
Tabella 6. Le ghiande per tipo.

Tipo	Dati Ass.	Dati %
Bifacciali	99	44,00
Monofacciali	88	39,11
Deformate	38	16,89
Totale	**225**	



Graf. 5. Le ghiande per tipo.

La ghianda biconica, è caratterizzata dal rapporto costante di 1:2 tra l'altezza del cono e il diametro della base (Fig. 11). La ghianda fusiforme, pur conservando la comune forma biconica, presenta due coni notevolmente affusolati (Fig. 12). La ghianda amigdale è il risultato del prolungamento di uno solo dei coni facendo, così, assumere alla ghianda la forma di una mandorla (Fig. 13). La ghianda ogivale è caratterizzata dal taglio retto o obliquo di parte di uno dei due coni (Fig. 14).

Come dalla Tabella 7 (Graf. 6), per forma tra le *bifacciali*, prevalgono le ghiande biconiche con 38 pezzi (38,39%). A seguire, le fusiformi 35 pezzi (35,35%), le amigdale 18 (18,18%) e le ogivali 8 (8,08%).

Frutto della fusione di una unica matrice la ghianda *monofacciale*, con 88 pezzi (39,11%) sul totale di 225 ghiande, si presenta con un versante del tutto piatto mentre quello opposto ha forma ellittica.

Per la loro forma le ghiande *monofacciali* dell'apporto Florido possono suddividersi in quattro gruppi:

– A navetta;
– Ellittica;
– Carenata;
– Semi-carenata.

Nella forma a navetta la ghianda assume il profilo di una barchetta con le due punte acuminate (Fig. 15). La ghianda ellittica, pur conservando la comune forma della ghianda a navetta, presenta le due estremità notevolmente

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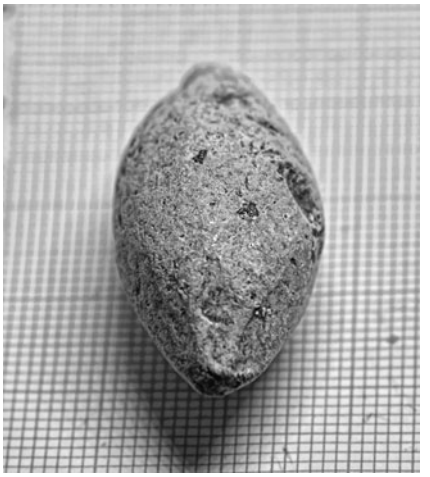

Fig. 11. Cat. 33. Bifacciale biconica.

Fig. 12. Cat. 162. Bifacciale fusiforme.

affusolate (Fig. 16). La ghianda carenata, priva di punte acuminate, presenta le estremità a forma di una carena di barca (Fig. 17). La ghianda semi-carenata è un derivato dalla ghianda carenata alla quale l'operatore ha acuminato una delle due estremità (Fig. 18).

Come dalla Tabella 8 (Graf. 7) tra le ghiande *monofacciali* prevalgono con 43 ghiande e il 48,86% quelle avente forma a navetta. A seguire le ellittiche con 18 unità e il 20,45%, le semi-carenate con 18 unità e il 20,46% e, in fine, le carenate con 9 unità e il 10,23%.

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Fig. 13. Cat. 57. Bifacciale amigdale.

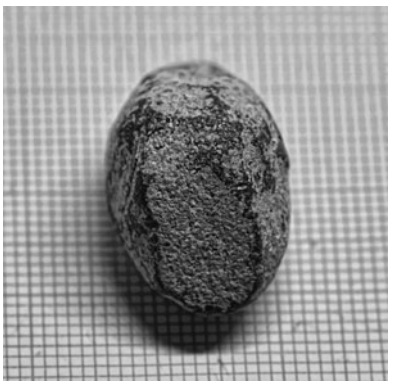

Fig. 14. Cat. 35. Bifacciale ogivale.

Tabella 7. Le ghiande bifacciali per forma.

Forma	Dati Ass.	Dati %
Biconica	38	38,39
Fusiforme	35	35,35
Amigdale	18	18,18
Ogivale	8	8,08
Totale	**99**	

Le *ghiande deformate*, 38 pezzi (il 16,89%) sul totale di 225 ghiande, sono il prodotto di una errata fusione o di non idoneo intervento dell'operatore. È evidente la derivazione da matrici singole o doppie, ma nel complesso risultano molto difformi dalle relative ghiande tipo (Fig. 19).

Con l'intento di intimorire i nemici, a materiale ancora caldo, l'addetto alla fusione era solito operare degli interventi che consentivano alla ghianda di produrre in volo un terrificante sibilo. Era, infatti, consuetudine tra i Romani,

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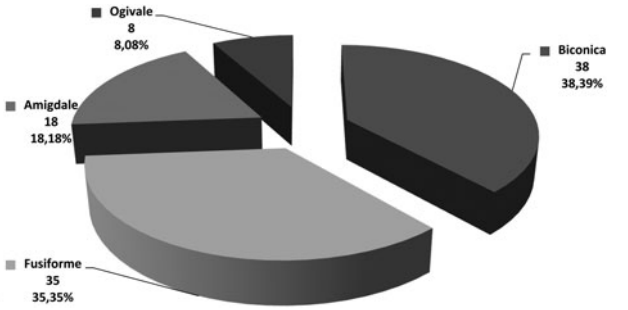

Graf. 6. Le ghiande bifacciali per forma.

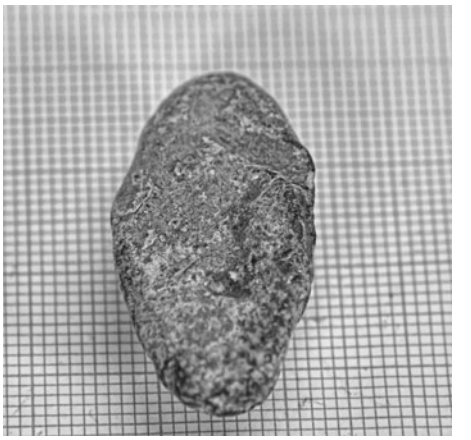

Fig. 15. Cat. 61. Monofacciale a navetta.

come del resto in tutto il mondo antico, lanciare, prima e durante lo scontro armato, potenti grida di guerra, e le ghiande con loro sibilo in volo avevano l'obiettivo di provocare panico tra le fila nemiche. Così, vi si operavano degli interventi che, accrescendo l'attrito con l'aria, non solo producevano un pauroso fischio ma rendevano anche i proiettili incandescenti. Riporta Publio Ovidio Nasone nelle *Metamorphoses*, II, 726–29 *obstipuit forma Iove natus et aethere pendens / non secus exarsit, quam cum Balearica plumbum / funda iacit: volat illud et incandescit eundo / et, quos non habuit, sub nubibus invenit ignes*. (Abbagliato da tanta bellezza il figlio di Giove, sospeso nell'aria prese fuoco come il piombo scagliato da una fionda delle Baleari, che vola e nel suo volo si fa incandescente, trovando sotto le nuvole quel fuoco che prima non aveva). Tito Lucrezio Caro, *De rerum natura*, VI, 177–79: … *ut omnia motu / percalefacta vides ardescere, plumbea vero / glans etiam longo cursu volvenda liquescit*. (… così vedi ogni cosa per il moto scaldarsi molto e ardere e in vero una ghianda di piombo turbinando in lunga corsa persino si fonde). E Lucio Anneo Seneca, *Naturalae Quaestiones*, II, 57.2: … *non miraris, puto, si aera aut*

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Fig. 16. Cat. 78. Monofacciale ellittica.

Fig. 17. Cat. 1. Monofacciale carenata.

motus extenuat aut extenuatio incendit: sic liquescit excussa glans funda et attritu aeris velut igne destillat… (… non ti stupisci, credo, se il movimento rarefà l'aria o la rarefazione le fa prendere fuoco: così si liquefa la palla di piombo scagliata dalla fionda e cade a gocce per l'attrito con l'aria come farebbe per effetto del fuoco…).

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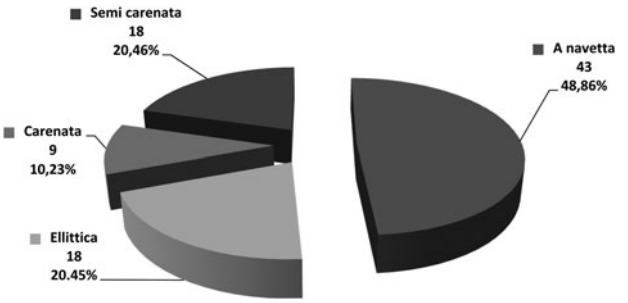
Fig. 18. Cat. 83. Monofacciale semi-carenata.

Tabella 8. Ghiande monofacciali.

Forma	Dati Ass.	Dati %
A navetta	43	48,86
Ellittica	18	20,45
Carenata	9	10,23
Semi-carenata	18	20,46
Totale	**88**	



Graf. 7. Ghiande monofacciali per forma.

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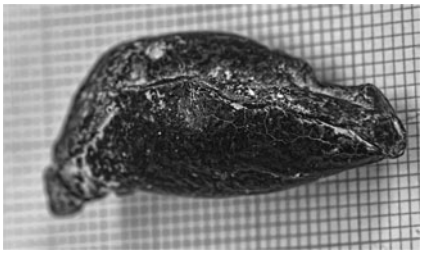

Fig. 19. Cat. 25. Deformata.

Fig. 20. Cat. 70. Slabbro.

Gli interventi rilevati sulle ghiande dell'apporto Florido sono del tipo: *slabbro* (Fig. 20), *incavo lineare* (Fig. 21), *avvallamento* (Fig. 22). Lo *slabbro* si presenta come un taglio trasversale rispetto al piano della ghianda che fa spesso sollevare parte del piombo. Come da Tabella 9 lo si ritrova su 139 ghiande (61,78%) delle quali 59 (67,04%) sono del tipo monofacciale, 55 (55,56%) del tipo bifacciale e, in fine, 25 (65,79%) del tipo deformato. Spesso, come riportato in Tabella 9, si rilevano fino a 5 slabbri sulla stessa ghianda, forse per accentuare gli effetti dell'intervento.

L'*incavo lineare* si presenta con un taglio netto perpendicolare rispetto al piano della ghianda. Come da Tabella 10 l'incavo lineare lo si ritrova su 85 (37,78%) ghiande, di cui 34 (38,64%) sono del tipo monofacciale, 35 (35,36%) sono del tipo bifacciale e 16 (42,11%) del tipo deformato. Anche l'*incavo lineare* risulta multiplo, fino a tre interventi, su alcune ghiande. In alcuni casi l'incavo lineare

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Fig. 21. Cat. 120. Incavo lineare.

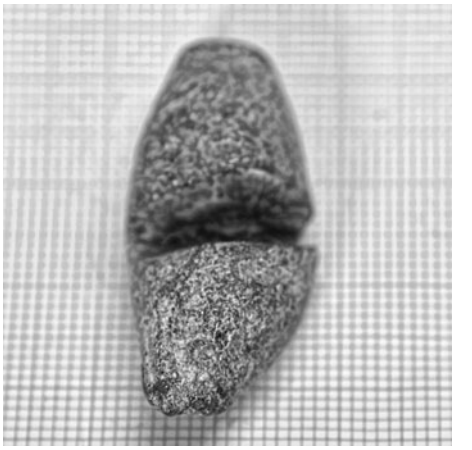

Fig. 22. Cat. 21. Avvallamento.

diventa profondo e largo fino a creare un *avvallamento*. Come da Tabella 11, solo 8 (3,56%) ghiande presentano tale intervento: di queste 6 (6,06%) sono del tipo bifacciale e 2 (3,56%) del tipo deformato. Sempre con l'intento di far sibilare il proiettile *slabbro* (Fig. 23) o *incavo lineare* (Fig. 24) si ritrovano interventi sulle punte di alcune ghiande. Alcune, poi, presentano, sempre sulla punta, un piccolo foro; una sola ghianda di forma *ogivale* presenta un ampio foro nella parte posteriore (Fig. 25).

Molte *glandes plumbeae* presentano iscrizioni a rilievo ottenute con l'impiego di matrici incise, e riportano nomi del condottiero dell'esercito, della legione a cui il fromboliere appartiene, della città o dell'artigiano che aveva realizzato i proiettili stessi, o numeri, spesso relativi alla legione di appartenenza, ma anche raccomandazioni o incitamenti rivolti al proiettile stesso a non fallire il

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Tabella 9. Intervento sulla ghianda: *slabbro*.

Tipo	Monofacciale		Bifacciale		Deformato		Totale ghiande
N. interv. su 1 ghianda	N. Interv.	N. Ghian.	N. Interv.	N. Ghian.	N. Interv.	N. Ghian.	
1 Intervento	34	34	22	22	9	9	
2 Interventi	28	14	28	14	10	5	
3 Interventi	27	9	36	12	24	8	
4 Interventi	8	2	20	5	12	3	
5 Interventi	0	0	10	2	0	0	
Dati assoluti	97	59	116	55	55	25	139
Dati %	//	67,04	//	55,56	//	65,79	61,78

bersaglio o invettive nei riguardi del nemico. Le ghiande possono riportare, talvolta in associazione alle iscrizioni già viste, anche raffigurazioni di carattere erotico o esaltanti le proprietà micidiali dell'oggetto.[7]

Le nostre purtroppo sono tutte anepigrafe, anche se alcune riportano dei segni iconici che andrebbero adeguatamente interpretati: una **C** (Fig. 26); una **T** (Fig. 27); una **V** (Fig. 28); una **Y** (Fig. 29). Potrebbero essere ritenuti un fortuito incrocio di segni ma quando come ad esempio la **V** la si ritrova su 15 ghiande e sempre riportata con un incavo lineare che incontra uno slabbro, non sembrano essere casuali.

Come dalla Tabella 12, tra le ghiande dell'apporto Florido con 18 segni riportati su 15 ghiande prevale il segno iconico della V. A seguire la lettera T con 3 presenze e, in fine, la Y e la C con 2. La lettera Y, non presente nell'alfabeto latino, pone il problema della sua presenza tra ghiande che dovrebbero essere romane. Che il segno possa essere una deviazione di altre lettere non è da considerare perché la iconografia è evidente; è ipotizzabile, allora, che trattasi o di un casuale incontro di due linee o, come più probabile, che sia un riferimento di un milite o gruppo di militi grecofoni presenti tra le fila degli assalitori.

Il sito archeologico di Gravina, interessato dalla presenza di ghiande, si ritrova sulla sommità di un colle (Fig. 30) che, per la sua ripidezza risulta di difficile accesso per cavalleria e militi con pesanti armature, ma, idoneo per i frombolieri. È ben noto che nell'antichità i frombolieri (*funditores*) formavano una divisione di soldati appiedati utilizzati in combattimento per arrestare l'avanzata dei nemici, per dare inizio ad un combattimento, per difendere il proprio esercito in ritirata, ma, prevalentemente, negli attacchi di città fortificate o arroccate su area di difficile accesso quale la nostra Botromagno. Riporta Livio (38.20–21) che, nella battaglia di Monte Olimpo del 189 a.C., i Galli, ritenendo che l'asprezza della via di accesso al loro accampamento non avrebbe consentito ai Romani di conquistarlo, si armarono di grossi massi da

[7] Per i vari tipi di iscrizioni e simboli utilizzati sulle *glandes plumbeae*, vedi Zangemeister, 1885: XV–XVII; Henry, 1970–1: vol. II parte 2.

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Tabella 10. Intervento sulla ghianda: *incavo lineare*.

Tipo	Monofacciale		Bifacciale		Deformato		
N. interv. su 1 ghianda	N Interv.	N. Ghian.	N Interv.	N. Ghian.	N Interv.	N. Ghian.	Totale ghiande
1 Interv.	23	23	24	24	14	14	
2 Interv.	16	8	14	7	2	1	
3 Interv.	9	3	12	4	3	1	
Dati assoluti	48	34	50	35	19	16	85
Dati %	//	38,64	//	35,36	//	42,11	37,78

Tabella 11. Intervento sulla ghianda: *avvallamento*.

Tipo	Monofacciale	Bifacciale	Deformato	Totale ghiande
Dati assoluti	0	6	2	8
Dati %	0	6,06	5,26	3,56

Fig. 23. Cat. 219. Slabbro.

far rotolare lungo l'erto pendio della collina. Ma il console Gneo Manlio, che ben conosceva lo stato reale dei luoghi, raddoppiò il numero dei manipoli armati alla leggera, distribuendo loro dardi, e, soprattutto, ghiande. I frombolieri, con le loro armi uccisero ben quarantamila militi avversari, costringendo i Galli alla resa nonostante la loro strenua difesa, poiché, contro la gran tempesta di ghiande, era impossibile a chiunque di trovare salvezza e scampo.

Un'ultima considerazione. La zona di recupero del materiale plumbeo del Florido si ritrova su una fascia di territorio di Botromagno che, partendo dalla estremità sud, attraversa in direzione opposta tutta la sommità della collina. Più numeroso è stato il ritrovamento in un'area al centro dell'acropoli: trattasi di un piccolo rialzo sul pianoro della collina esteso per circa 2 ettari. La conformazione fisica dell'area in esame e la sua estensione fa presupporre che tra i contendenti si sia sviluppata una lotta a distanza ravvicinata. Considerato che tra le ghiande dell'apporto Florido solo 16 superano i 49 grammi (il 7,11%) è da ritenere che in battaglie similari i soldati utilizzassero prevalentemente proiettili di medie e piccole dimensioni. È ben noto che anche le ghiande di medie dimensioni (peso medio grammi 36,52) potrebbero

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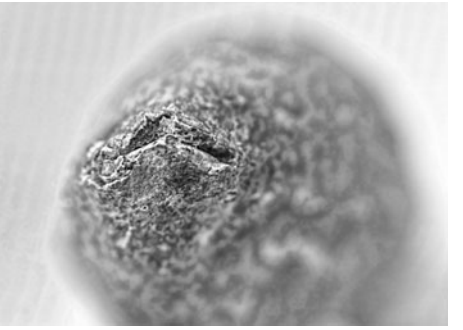

Fig. 24. Cat. 75. Incavo lineare a V.

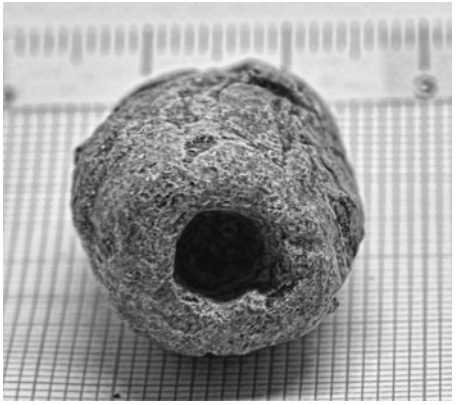

Fig. 25. Cat. 209. Foro.

raggiungere bersagli fino 200 m (Baatz, 1990; Benedetti, 2012: 33), ma, raffrontando le ghiande dell'apporto Florido con quelle ritrovate durante gli scavi del 2004 a Populonia (trattasi di 462 esemplari), queste ultime risultano tutte di peso compreso tra i 50 e 79 grammi (Coccoluto, 2006). Secondo la Coccoluto queste ghiande rimanderebbero ai drammatici eventi della guerra civile quando la città, filo-mariana, si organizzò per difendersi dagli assalti della fazione avversa in una battaglia, quindi, che avrebbe visto i contendenti combattersi a notevole distanza. In assenza di riferimenti classici, rapportato anche alla natura del luogo di ritrovamento, si può ipotizzare che la battaglia sulla collina di Botromagno si sia sviluppata tra contendenti che si lottavano a breve distanza di cui, probabilmente, uno dei due, in fuga, offriva all'avversario le spalle o risultava privo di difese. Elemento che conforta la ipotesi è l'elevato numero di ghiande monofacciali, il 39,11%, che, come su riportato (Coccoluto, 2006: n.4), non potevano percorrere lunghe distanze.

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Fig. 26. Cat. 62. Segno iconico C.

Fig. 27. Cat. 27. Segno iconico T.

THE HISTORICAL CONTEXT OF THE LEAD SLINGSHOTS (*GLANDES*) FROM BOTROMAGNO

by Alastair M. Small

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Fig. 28. Cat. 22. Segno iconico V.

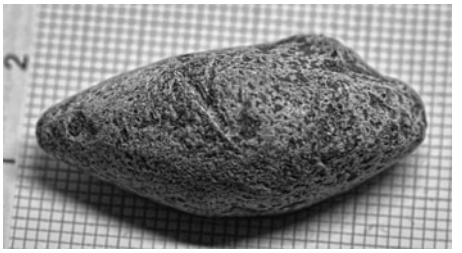

Fig. 29. Cat. 193. Segno iconico Y?

Tabella 12. Segni iconici sulle ghiande.

Tipo	Monofacciali		Bifacciali		Deformate		Totale	
Segno iconico	Ghiande N.	Segni N.	Ghiande N.	Segni N.	Ghiande N.	Segni N.	Ghiande N.	Segni N.
V	6	7	8	10	1	1	15	18
C	0	0	2	2	0	0	2	2
Y	0	0	2	2	0	0	2	2
T	3	3	0	0	0	0	3	3

1. INTRODUCTORY REMARKS

Two points need to be borne in mind in attempting to establish the historical context of the slingshots, and therefore of the siege of Botromagno to which they must belong. The first is that they were found in the plough-soil by a private metal detectorist who kept no written record of his discoveries. Although he appears to have a fairly good memory of where he found them more than twenty years ago, it is impossible to locate the find-spots exactly, or, therefore, to be certain of how they were used in the attack upon or defence of the settlement. The second is that, except for fifteen pieces inscribed with a single letter which give rise to problems of interpretation discussed below, they have no inscriptions to date them. The only way to establish their chronology is

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Fig. 30. Veduta panoramica nord-ovest della collina di Botromagno.

by typological analysis of the slingshots. As Giuseppe Schinco has argued in the first part of this article, it is probable that they were made on site during a siege and no doubt in conditions of emergency so that the quality of the casting and the resultant shapes vary considerably.

The drawings shown in Figure 31 illustrate the two main types: Schinco's *bifacciali*, usually cast in clusters, in closed bivalve moulds, and his *monofacciali*, also cast in clusters, but in open univalve moulds. Both types can be subdivided into several variants, as Schinco has shown. A few pieces may have been cast directly in impressions made in sand or earth.

2. COMPARANDA AND CHRONOLOGY

There is no systematic recent account of the development and use of slingshots in Italy. B.M. Henry's study of 1970–1 is now seriously out of date, and a new thoroughly revised typology and chronology are badly needed. Such a project would go far beyond the scope of this article. My aim here is to offer an outline of the main stages of development, especially in the southern part of the Italian peninsula, and to illustrate it with selected examples with which the slingshots from Botromagno may be compared.

The use of lead slingshots in battle is attested in Greece as early as the fifth century BC (Pritchett, 1991: 44–7). The numerous examples found at Olynthus

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and published by Robinson (1941) show the normal types in use in Greece at the time of the siege of 348 BC. They are olive- or plump-almond-shaped (or a compromise between the two) and represent types that continued to be made at least into the second century BC. They provide the models for the earliest slingshots used in Italy.

Early Hellenistic slingshots in Etruria

It is generally supposed, probably rightly, that the earliest lead slingshots in Italy were used in Etruria, perhaps as early as the fourth century BC. Henry (1970–1: 94–108) lists a considerable number with Etruscan inscriptions, but almost all come from private collections or other unstratified contexts and cannot be dated reliably. Most are said to be olive-shaped, though a few are spherical or fusiform. Other more recent discoveries help to clarify the picture, especially a large group of slingshots in both terracotta and lead from the sanctuary at Pyrgi (Falconi Amorelli, 1970: 263, 441 nos. 1–6 and fig. 338; 585–6 and fig. 435; 647 and fig. 492). They were found in the latest Etruscan contexts and are likely to derive from a siege of the sanctuary by the Romans in *c.* 270 BC (Colonna, 1988–9). Some are of the plump-almond-shaped type used at Olynthus in the siege of 348 BC, though others are rather more tapered (Fig. 32.1). They may have been made for use by Etruscan slingers defending the sanctuary. A similar group found in the sanctuary at Gravisca, together with a mould for their manufacture (Colivicchi, 2004: 63 and tav. 10, no. 203), is likely to date to *c.* 280 BC, when the sanctuary was attacked and destroyed by the Romans.

Hellenistic slingshots in South Italy (Fig. 33)

Another important group of early lead slingshots, rather closer to Botromagno both in terms of distance and in terms of cultural connections, comes from the Salentine peninsula, but the published examples are all from unstratified contexts and are difficult to date. They include a notable group from Muro Leccese near the southern end of the peninsula which have been deposited at various times in the Museo Castromediano at Lecce. Many were collected in the latter half of the nineteenth century and early decades of the twentieth (L. Maggiulli and Castromediano, 1871: 62–3; Vacca, 1935: 9–10; P. Maggiulli, 1937: 57). They have never been adequately published, but are perhaps included in a group of 59 slingshots from the site illustrated by A.L. Tempesta (2016: 132), in a recent publication of the archaeology of the site (Fig. 32.2). F. Meo (2016: 67) has argued that they are most likely to derive from the *bellum Sallentinum* of 267–266 BC in which the Messapian/Salentine city appears to have been destroyed. But the walls of the city were reconstructed after that event, only to be destroyed again, finally, near the end of the third century BC, presumably in the Second Punic War (Lamboley, 1996: 216), so the slingshots might in fact date to either event. The illustrated examples are of the same plump-almond-shaped type as most of the pieces from Pyrgi.

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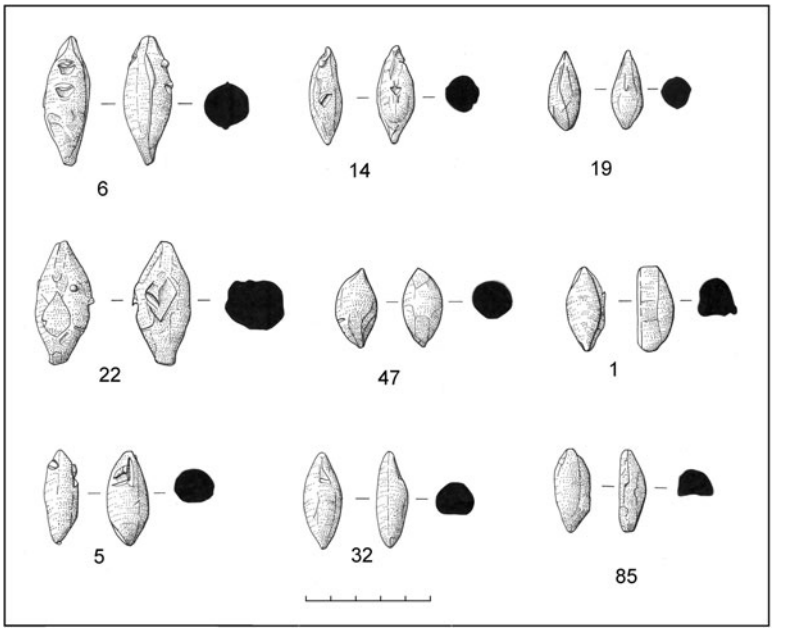

Fig. 31. Botromagno slingshots from bivalve moulds (nos. 6, 14, 19, 22, 47) and univalve moulds (nos. 1, 5, 32, 85). Drawn by Sally Cann.

Other, unpublished, lead slingshots have been found on at least two other sites in Salento. One is Valesio, where according to Boersma and Yntema (1987: 20), stone balls and lead bullets show that the city did not escape being attacked in the Hellenistic period.[8] The other is Muro Tenente where Gert-Jan Burgers informs me that numerous lead slingshots, currently being studied by a graduate student, were found by the Dutch team in their field survey on the site. The date of these pieces is at present uncertain.

Slingshots in the Second Punic War

It is well known that Balearic slingers were an important component of the Carthaginian army. Hannibal recruited 870 of them at the beginning of the war to assist in the defence of Africa (Livy 21.21.12),[9] and he used others with great effect in the battles of the Trebia (Livy 21.55.2, 6, 9), Trasimene (Livy 22.4.3) and Cannae (Livy 22.46.1) where a slinger who may have been one of their number brought down the consul Aemilius Paullus (Livy 22.49). But the

[8] Professor Douwe Yntema informs me that these are pieces collected by the owner of a piece of land in the very heart of the site of Valesio, *avvocato* Marzano, who was honorary director of the Brindisi museum during the 1960s and frequently displayed them along with other artefacts from the site in the Valesio room in the museum (email, 14 December 2018).

[9] Abbreviations of Roman primary sources follow the guidelines of *The Oxford Classical Dictionary*, ed. S. Hornblower, A. Spawforth and E. Eidinow (Oxford University Press, 4th edition, 2012, and online).

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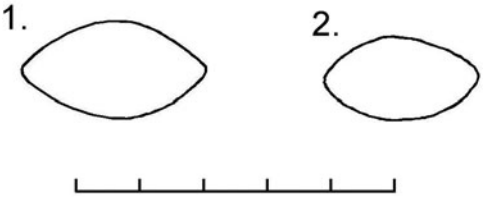

Fig. 32. Early Hellenistic slingshots from Italy. (1) Pyrgi, *c.* 270 BC, after Falconi Amorelli, 1970: fig. 492.2. (2) Muro Leccese, 267/266 BC (?), after Tempesta, 2016: 132; 3.

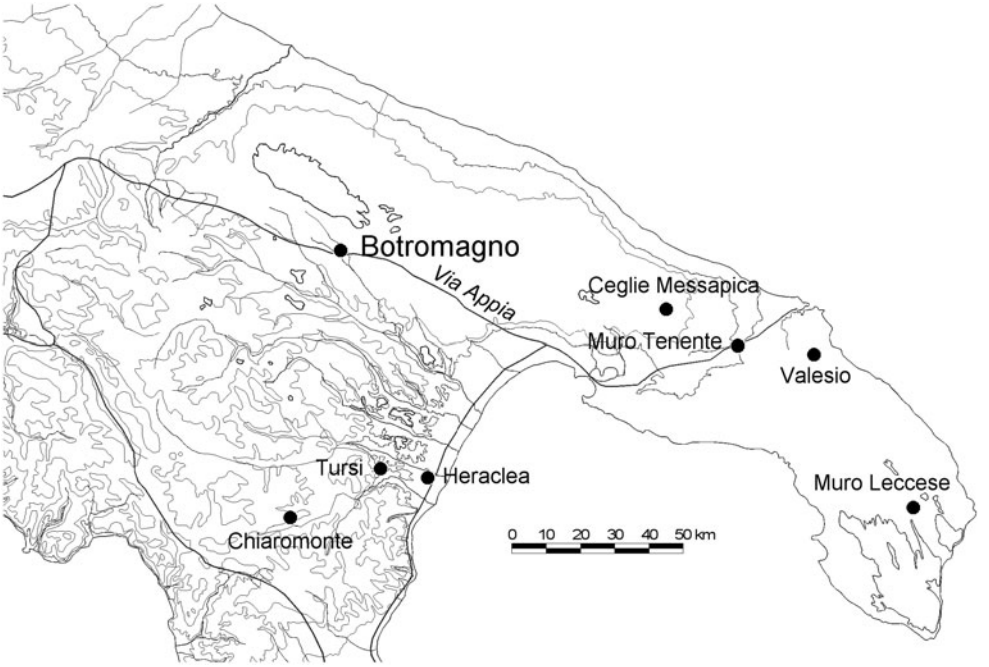

Fig. 33. Find-spots of lead slingshots in South Italy.

Baliares probably used stone slingshots as they had been trained to do from childhood (Diod. 5.18; Daly, 2002: 107–8), and there are no lead pieces that can be confidently attributed to them. There is, however, a small group of lead bullets inscribed with Greek names which can be dated with some probability to the Second Punic War. They are pieces without archaeological context and have therefore to be treated with caution.

Prominent among them is a group of plump-almond-shaped slingshots inscribed ΕΥΗΘΙΔΑ, the genitive form of the name *Euethidas*. They include:

(a) Two, which form part of a group of five slingshots given to the British Museum in 1826 by Sir Edward Codrington who believed that they came from Saguntum (Aranegui, 2003). Two others have the name Arnias. The

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Greek slingers who used them have been thought by some to have been fighting as mercenaries of the Carthaginians in the siege of the city by Hannibal in 219 BC (Manganaro, 2000: 128), although it has also been suggested that they were involved as Roman auxiliaries in the recapture of Saguntum by Scipio between 214 and 211 BC (Aranegui, 2003: 51).

(b) A single slingshot found at an unidentified site in Sicily (Manganaro, 1982: 241 taf. 7.11 bis; 2000: 128 and taf. 11 fig. 14).

(c) Fourteen slingshots from Ceglie Messapica in Salento (Zangemeister, 1885: xxiii no. 19; Ribezzo, 1978: 48), part of a larger group of lead bullets from the Messapian city. Zangemeister knew of 47 pieces, mostly in private collections, sixteen of which had Greek inscriptions. Some of these were published more fully by Droop (1905–6: 139–40 fig. 1.5.a-l), but all appear to have been lost, except for five which were donated in 1871 to what is now the Civic Museums of Trieste. They are discussed in some detail by Mainardis (2007). The inscriptions are mostly Greek personal names, probably of commanders of units of slingers fighting in the siege of the city (Xanthos, Esphaneros and Nikobolos (Nikoboulos) as well as Euethidas), but one at least is inscribed ΚΑΙΛΙΝΟ, and another ΚΑΙΛ, which must be the ethnic term for the inhabitants of the city known to the Romans as Caelia, written in Greek in abbreviated form. The presence of this piece in the group suggests that Euethidas and his colleagues were fighting in defence of the city.

(d) A single slingshot found at Tursi in Basilicata. It is first mentioned by Fiorelli (1869: 12 no. 218), who says that it was found in Tursi and was acquired by the museum in 1866. It was listed, but not illustrated, by Zangemeister (1885: xxiii no. 18 and xxvii), who saw it in Naples Museum and was convinced of its authenticity; but Whatmough (1933: 33), who knew of it from Zangemeister, was unable to find it in the museum in 1923. I am grateful to Dott.ssa Laura Forte, *conservatore Sezione epigrafica*, who has located it in the museum deposit, and supplied the photograph reproduced here (Fig. 34). It is a relatively small piece, measuring only 2.5 cm long, and weighing 26 g.

Since there is no proper study of this piece, and its purported find-spot is the closest to Botromagno, it is desirable to look more closely at its provenance. It is recorded in the museum inventory as having been found at Tursi, which is situated between the Agri and Sinni valleys, *c.* 18 km inland from Heraclea (see map, Fig. 33). It is unlikely, however, that it was found in the village itself since there was no settlement of any size there until the early Middle Ages. It is more likely to come from the Lucanian site of Pandosia which lay near Santa Maria di Anglona within the municipal territory of present-day Tursi (Quilici, 1967: 188–201; Bianco, 1993). The find-spot would then have been recorded in the nineteenth century by the name of the *comune* in whose territory it was found. Pandosia was a settlement of some importance in the Early Hellenistic period, mentioned several times in the first Heraclea Tablet of the late fourth century

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Fig. 34. Lead slingshot inscribed ΕΥΗΘΙΔΑ from Tursi in Basilicata, Museo Archeologico Nazionale di Napoli, inv. no. 5908. Length 2.5 cm. Photo Giorgio Albano. Su concessione del Ministero per i Beni e le Attività Culturali — Museo Archeologico Nazionale di Napoli.

BC as the defining point on a road leading from the city of Heraclea into the interior (*Inscriptiones Graecae* XIV: 645, lines 12, 54, 64, 70, 113). Its commanding position at the edge of the plain was appreciated by Pyrrhus who pitched his camp between Heraclea and Pandosia on the eve of the battle of Heraclea (Plutarch, *Pyrrhus* 16.4). The possibility that the slingshot goes back to the Pyrrhic War must be ruled out since it is difficult to see how Euethidas could then have been involved in a siege of Saguntum in Spain; but it is not unlikely that it was used in an encounter in the Second Punic War. Pandosia is not mentioned by any of the sources on the war, but a unit of slingers may have operated there in 212 BC when Heraclea surrendered to Hannibal out of fear (Appian, *Hannibal* 35). Very little of the ancient settlement of Pandosia has been excavated; but the idea that the site was seriously affected by the war gains some support from a list of coins found there (Quilici, 1967: 196–7) which shows a gap between 217 and 89 BC. The fact that no grey-gloss pottery typical of the second and first centuries is recorded from the site reinforces the idea that the settlement was abandoned or seriously reduced around this time.

The theory that Euethidas was active as a slinger (or more probably as the commander of a unit of slingers) in the Hannibalic war is supported by the wide distribution of the slingshots inscribed with his name, which shows him active in Spain, Sicily, the Salentine peninsula and Lucania, all areas of conflict in that war.

A second slingshot of plump almond shape from Basilicata (Fig. 35) may also be evidence for a siege of a Lucanian settlement in this period, but it is not inscribed and the context is problematic. It was found at Chiaromonte further up the Sinni valley from Santa Maria d'Anglona / Pandosia, together with a group of Iron Age objects scattered outside a grave of the eighth/seventh century BC (Russo Tagliente and Berlingò, 1992: 324–5 fig. 54, and 597 no. 567). The context was evidently not sealed, because the slingshot cannot be of that date. It must relate to a Lucanian site of the fourth century BC, traces of which have been found overlying the earlier burials. It is not yet clear when this settlement was abandoned, but an adjacent sanctuary was frequented

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intensively in the fourth and first half of the third century BC, after which usage of it decreased until it ended altogether in the first century BC (Bianco, 1998: 44).

There is therefore some evidence to show that lead slingshots were used in South Italy during the Second Punic War. They are practically indistinguishable in shape from those in use earlier in the century in Etruria and the Salentine peninsula — and indeed are of the same plump-almond or olive shape that is attested in the Aegean already in the fourth century, notably at Olynthus.

Comparison with the Botromagno slingshots

When the general mass of slingshots from Botromagno is compared with those we have just considered, it can be seen that the vast majority of them are considerably more tapered. They are typologically later, as will be seen. There are, however, two or three pieces in the Florido collection which have the same plump rounded shape as these third-century BC slingshots (nos. 110, 144, 166). The closest is no. 110, shown in Figure 36. These pieces might date to a hypothetical siege of Botromagno in the Second Punic War, which is known to have been a time of crisis in the history of the settlement, or to the Pyrrhic War of the 270s, or even to the historically attested siege of 306 BC; but it is perhaps more likely that they represent an earlier type of slingshot which continued in use after the more tapered forms came in, as Völling's (1990) study of slingshot typology (type 1a) might suggest (see below). The question must be left open.

Later Hellenistic slingshots

In the article just cited, Völling (1990: 48–58) lists Roman slingshots from numerous locations, many of them datable by known historical events. He divides Roman *glandes* into six principal types, each with further subdivision. We are concerned here only with the first three types, which are most likely to be relevant to our material (Fig. 37). Type I is ovoid and was in use in the Greek world from the fifth century BC. It was in use in the Roman army from at least the late second century BC until the second half of the second century AD. In Roman contexts there were three variants, all in use at the same time: Ia with rounded ends, Ib with one rounded and one flattened end, and Ic with one rounded and one more pointed end. Völling's Type II is biconical. It has two variants: a pointed form, Type IIa, which was introduced in the Roman army in the second half of the second century BC, and a more rounded one, Type IIb, which goes back to older Greek forms and was also used by the Roman army in the second century BC. These biconical slingshots continued in use into the Flavian period. Völling's Type III is bi-pyramidal, with straight facets. It is attested on only a few sites and was in use in the first third of the first century BC.[10]

[10] Völling dated slingshots found in the south of Spain, inscribed CN MAG (Gnaeus Pompeius Magnus), to the Sertorian War of the 70s BC, but they were more probably made by Gnaeus

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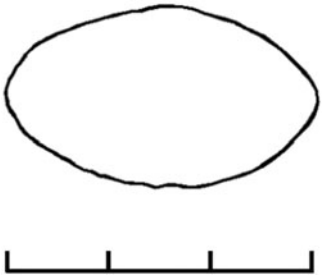

Fig. 35. Slingshot from Chiaromonte in Basilicata, after Russo Tagliente and Berlingò, 1992: fig. 567.

Fig. 36. Slingshot from Botromagno. No. 110. Photo G. Schinco.

It is clear from Völling's study that new forms of slingshots came into use around the middle of the second century BC, when units of slingers began to be regularly employed in the Roman army. Ovoid types continued to be produced, but many of those in use after that period are more slender and more tapered than their predecessors. The only piece in Völling's lists which might support an earlier date for this development is a slingshot with an obscure, perhaps Etruscan, inscription said to have been found at Ossaia near Cortona (Fabretti, 1867: CXIV no. 1061 bis, tav. XXXV; Zangemeister, 1885: xx, no. 8; Henry, 1970–1: 95), which has been thought to have been used in the battle at Lake Trasimene in 217 BC. Völling (1990: 54 no. 127) attributes it to his Type II. It is, however, significantly more tapered than the pieces with the name of Euethidas and may well be later (Fig. 38). These slingshots have no archaeological context and might be better dated to the time of the Social War, or even to an encounter connected with the siege of Perusia in 41/40 BC.

Most of our slingshots conform broadly to Völling's Type IIa, though a significant number with more flattened sides ought to belong to his Type III. His study, however, provides only a rough and ready guide for typing

Pompeius Magnus junior for the campaign of the civil war at Munda in 45 BC: Díaz Ariño, 2005: 227.

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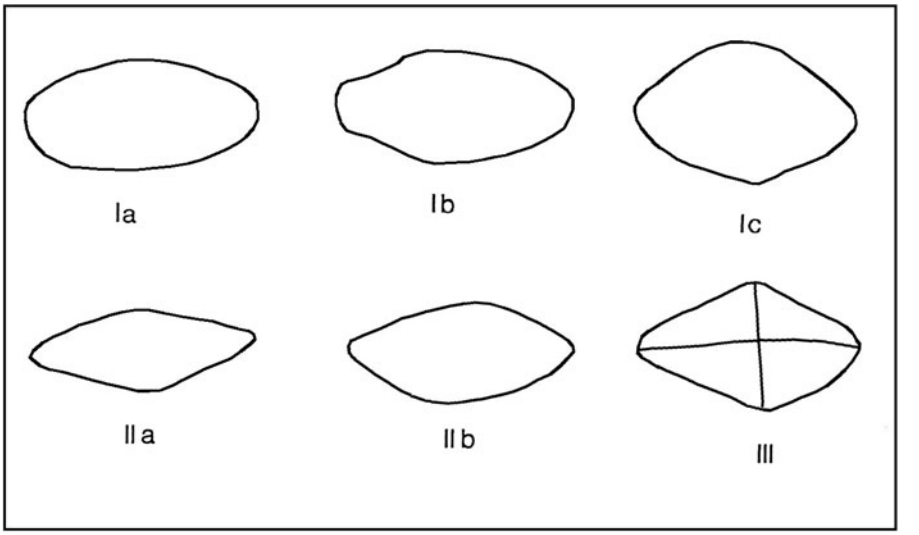

Fig. 37. Slingshots of Types I–III with variants, redrawn from Völling, 1990: fig. 19.

slingshots, and its limitations as a diagnostic tool for classifying the pieces from Botromagno are shown by the fact that the slingshots found on the site do not fit easily into his typology. Both Schinco's biconical (Fig. 11) and his fusiform (Fig. 12) types conform more closely to Völling's Type IIb than to anything else in his classification, which shows the elasticity of this category. On the other hand, no. 109 in Schinco's catalogue (Fig. 6), which is slimmer and has more or less straight facets tapering to a point, corresponds better in proportions to Völling's Type IIa, although the straight facets should put it in his Type III. Schinco's 'almond-shaped' (Fig. 13) and 'ogival' (Fig. 14) types both correspond more closely in overall proportions and in their flattened surfaces to Völling's Type III, though in both of them one end is more rounded, and the other more pointed, with multiple facets tapering towards the tip. The Botromagno slingshots which approximate most closely to the bi-pyramidal model were manipulated with pincers while the lead was still warm so that they had straightened sides tapering to a point.

There are no clear boundaries between Schinco's fusiform, biconical, almond-shaped and ogival types which shade almost imperceptibly into one another. A more precise comparison with some other datable examples published since Völling wrote, or not considered in his article, may, however help to establish the typological/chronological parameters of the Botromagno slingshots more securely.

Fusiform types (biconical)

The earliest is a slingshot found in the Canadian excavations in Carthage Byrsa published by J.P. Thuillier (1982: 178, A 503.39 and fig. 227 no. 39; here Fig. 39) which can be matched with several pieces of Schinco's fusiform type

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Fig. 38. Slingshot from Ossaia. Fabretti, 1867: tav. XXXV no. 1061 bis.

from Botromagno, including Fig. 12 no. 162, although the Byrsa slingshot has protruding flanges marking the line where the plates of the upper and lower moulds joined, not seen on the Botromagno piece. The lengths of the two slingshots are almost identical: 4 cm (Byrsa) and 4.1 cm (Botromagno), and both measure 1.3 cm in diameter at the widest girth. Since the piece from the Byrsa was found in one of the layers of demolition that followed the sack of 146 BC, it confirms the theory that the type was used by slingers in the Roman army around the middle of the second century BC. It can be compared with a group of slingshots inscribed PISO L F / COS found at Enna in Sicily which can be associated with the campaign of the consul L. Calpurnius Piso against the slaves in the First Slave War of 135–131 BC (Zangemeister, 1885: 1 nos. 1–3, tab 1.1–3; Manganaro, 2000: 129). Broadly similar pieces were still being made for the siege of Perugia in 41 BC (Benedetti, 2012: tavv. 8.4, 25.63).

Bi-pyramidal **(tipo amigdale)**

Several other contexts reinforce the idea that after the beginning of the first century BC the makers of slingshots began to flatten their surfaces so as to increase the slingshots' penetrating power by sharpening the points and angles between the facets. This tapering, more or less bi-pyramidal, form can be seen in a *glans* inscribed Q.ME (in ligature) from Azuaga in Spain which must date from the first phase of the Sertorian War, 79–76 BC, when the Roman army was commanded by Q. Caecilius Metellus Pius (Díaz Ariño, 2005: 233, fig. 3 — here Fig. 40.1). It may be compared with Figure 40.2, no. 106 from Botromagno which falls within Schinco's *gruppo amigdale* (cf. also Fig. 10 no. 23). This is a large group with eighteen instances, most of which are comparable with the Spanish piece.

A few of the Botromagno slingshots of Schinco's *gruppo amigdale*, such as no. 167 (Fig. 41.2), are rather shorter and relatively thicker. In this they resemble numerous slingshots used by Julius Caesar's army — most obviously in the siege of Alesia in 52 BC (Martin-Kilcher, 2011: Abb. 8 — here Fig. 41.1). Some of the *glandes* used in the Perusine War of 41 BC were also of this type (e.g. Benedetti, 2012: tav. 7.2), as are a group of slingshots found at Andagoste

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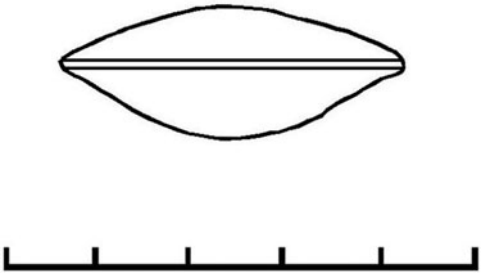

Fig. 39. Slingshot from Carthage, Byrsa, after Thuillier, 1982: fig. 227.39.

in the Cantabrian mountains in Spain, where they can be dated *c.* 36–33 BC (Martin-Kilcher, 2011: Abb. 12).

Single-valve moulds (tipo monofacciale)

Völling (1990: 40, 52 no. 95 and Abb. 27.1) notes that slingshots were sometimes cast in single-valve moulds, and cites an unpublished and undated example from Tauromenium in a private collection in Munich. More useful for our purposes is a group of slingshots from near Seville which derive from the campaign of the civil war between Pompeians and Caesarians that ended in the battle of Munda in 45 BC (Díaz Ariño, 2005: fig. 3; Pina Polo and Zanier, 2006: 32 fig. 1; Martin-Kilcher, 2011: Abb. 11). They are half bi-pyramidal, with faceted sides and relatively flat top (Fig. 42.1). Some are stamped CN MAG, for Cnaeus (Pompeius) Magnus, alluding probably to Pompey's son rather than to Pompey himself. In shape they can be compared with Schinco's no. 90 from Botromagno (Fig. 42.2). Other slingshots cast in univalve moulds have been found at Starigrad above Uned in Slovenia. They are in a group of 46 projectiles, most of them bivalve and fusiform, which Laharnar (2011: 351 and pl. 1: 1–2) dates either to the time of Caesar's consolidation of the eastern border of Cisalpine Gaul, or of Octavian's campaigns in Illyricum in 35–33 BC.

The inscribed letters

The single letters found on 15 slingshots from Botromagno (Schinco table 12 above) should also help to define their context, but they are not easy to interpret. The clearest is the letter C (Fig. 26) which occurs on two slingshots. It appears to have been made with a punch, and this is confirmed by the fact that the dimensions and form of the letter are identical in both cases. But the other letters have all been made by incision with a sharp pointed tool. Are they Greek or Latin? The C and T of Figures 26 and 27 might be in either language, and the letter incised on Figure 28, which is found on eight slingshots (twice on two of them) might be either Latin (V) or Greek (Λ); but the letter on Figure 29, if it is intentional rather than a haphazard intersection of two scratches, can only be Greek — either ϒ or cursive λ. The short line is more lightly incised than the

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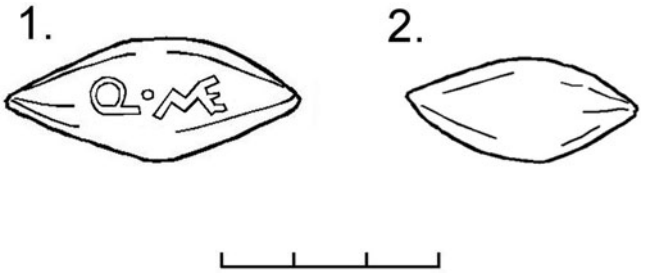

Fig. 40. (1) Slingshot of Metellus Pius from Spain, 79–76 BC, after Díaz Ariño, 2005: 233, fig. 3. (2) Slingshot no. 106 from Botromagno.

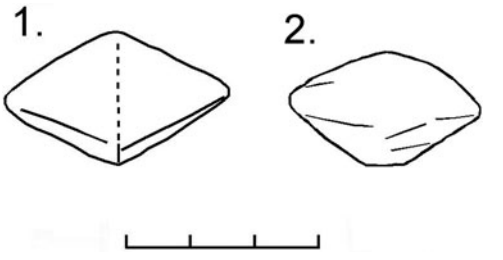

Fig. 41. (1) Slingshot from Alesia, Camp A, 52 BC, after Martin-Kilcher, 2011: Abb. 8. (2) Slingshot no. 167 from Botromagno.

long one, but the fact that they meet precisely and that the symbol recurs on a second *glans* suggests that they are deliberate incisions and that the letter must be Greek. It is probable, therefore, that all four letters are Greek.

As is frequently the case with single letters inscribed on artefacts, it is difficult to know what message these letters conveyed, and the available comparanda only add to the perplexity. The practice of inscribing slingshots developed early, in fourth-century BC Greece. Most inscriptions are names (in full or abbreviated) of generals or (as in the case of Euethidas) of commanders of units of slingers. Some are slogans of the contesting sides. But individual letters occasionally appear, sometimes in conjunction with a name or motif. Vischer (1878) published several such pieces from his own and other collections made in Athens, including a B (Vischer, 1878: no. 20) which he took to be an abbreviation of ΒΟΙΩΤΩΝ — of the Boeotians. That has some plausibility since another piece (his no. 25) has B on one side and OI on the other; but the remaining cases (including A, T and S) are not easily explained. A slingshot from Monte Iato in Sicily has an isolated Θ alongside the name of the commander, Andreas, in Greek (Isler, 1994: 248). Since on other slingshots from the site, the commander's name is accompanied by an ordinal number written in full referring (probably) to the number of the unit he commanded, it is possible that the Θ represents the number 9. The Monte Iato slingshots have been dated on rather slender grounds to the second half of the fourth century

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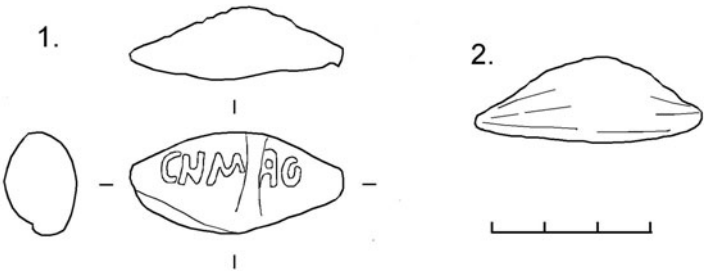

Fig. 42. (1) Slingshot of Gnaeus Pompey, 45 BC, after Pina Polo and Zanier, 2006: 32 fig. 1.11. (2) Slingshot no. 90 from Botromagno.

BC, but the system may have continued in operation for several centuries since a similar combination of single Greek letters with a personal name recurs on some slingshots from Montagna di Marzo in Sicily which were used by the rebel slaves in the Second Slave War of 104–101 BC. Manganaro (2000: 127), who has published them, takes the Greek letters to be acrophonic numerals referring (on the analogy of Monte Iato) to the number of the battalion commanded by the person named, so that Π = πέντε = 5, and Δ = δέκα = 10.

Some of the slingshots from Muro Leccese, mentioned above, were also inscribed. They include six pieces each bearing a single letter which Maggiulli and Castromediano published in rather summary form in a small book on Messapian inscriptions (1871: 62–3). The accompanying illustration is reproduced here as Figure 43. The letters can be identified as Greek: Ϙ (*koppa*), K (*kappa*), Λ (*lambda*, rotated through 90 degrees), ϒ (*upsilon* — shown upside down) and N (*nu* — retrograde). A key to their interpretation may be found in the *koppa*.[11] *Koppa* dropped out of the Greek alphabet in the course of the sixth century BC (Guarducci, 1967: 422), but continued in use as a numerical symbol with the value of 90. That being so, the other letters on the slingshots from Muro Leccese are also likely to represent numbers: K = 11, Λ = 30, N = 50. These high numerical values can hardly have been numbers given to military units. They must therefore have had a different significance from the number inscribed on the slingshot from Monte Iato. One explanation might be that they are tallies, recording the quantities of slingshots produced, but that seems more appropriate for the numbers calculated in tens than it does for K (= 11).

Can the Greek letters incised on the Botromagno slingshots be numerical? They cannot be acrophonic numerals, but they could in theory be alphabetic, which would give them the following values: Λ = 30; C (*sigma*) = 200; T = 300; ϒ = 400 (Guarducci, 1967: 423, 425). If so, they might be tallies indicating the number of slingshots produced by a workshop; but this is far from certain.

Single letters are also sometimes found inscribed on slingshots in the Latin alphabet. Díaz Ariño (2005: 233–5, nos. 91–3 and 95) lists the letters A, D, F,

[11] It is possible, but unlikely, that all the letters are Messapic. *Koppa* was not normally used in the Messapic alphabet, but it appears once on an inscription from Vaste: Ribezzo, 1978: 128.

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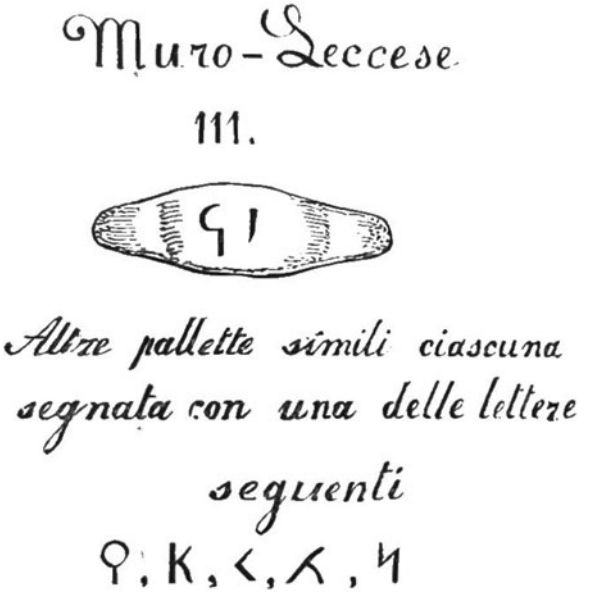

Fig 43. Slingshot(s) inscribed with single letters from Muro Leccese. From Maggiulli and Castromediano, 1871: fold-out illustration.

M and S seen on slingshots found in Spain, all without datable contexts. They cannot be numerical, and must have had some other significance, perhaps as abbreviations of names of the commanders of units of slingers. There is evidently no single explanation that fits all cases of single letters inscribed on slingshots.

In most other cases, the letters inscribed on slingshots were incised in the mould so that they emerged in relief when the shot was cast. The letters on the Botromagno slingshots, however, were cut into the lead after the projectile had been cast (as probably were those from Muro Leccese published by Maggiulli and Castromediano). In this they resemble the inscriptions on a number of *glandes* from Spain which were made in the civil war between Pompeians and Caesarians. They include a group from the north of Spain with the letters XII referring to Caesar's *Legio XII fulminata* which fought in the battle of Ilerda in the early summer of 49 (López Vilar, 2013: 434–5). Another group stamped DD, found at Cerro de las Balas in the province of Seville, has not been deciphered, but probably derives from the battle of Munda fought in 45 BC (Pina Polo and Zanier, 2006: 30). It is noteworthy that all of these pieces were stamped on slingshots cast in univalve moulds, like those of Schinco's second series from Botromagno (Figs 15–18).

The fact that some of the slingshots from Botromagno were inscribed with Greek letters might be interpreted in several ways. The projectiles may have been used by Greek-speaking slingers in a Roman allied unit, or by indigenous Apulians using the Greek system of numerals, or (to anticipate the conclusion of this article) by slingers in a group of Greek-speaking rebel slaves. Those

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communities which achieved municipal status after the end of the Social War had to adopt Latin as the official language of civic life, but Greek continued in use long afterwards in some parts of South Italy, especially in Taranto, Rhegium and Naples (Poccetti, 2005). We have at present no other evidence to indicate what the linguistic state of affairs was in Botromagno/Silvium in this period.

Summary

Lead slingshots were probably already being used in Etruria in the late fourth century, and were certainly current both in Etruria and in the Salentine peninsula in the early third century BC. These early slingshots were of the same plump almond shape as the bullets used in Greece and the Aegean at this time. It is therefore conceivable that a few lead slingshots of this type in the collection from Botromagno could have been used in the siege of Botromagno/Silvium in 306 BC, the only siege of the settlement reported in a historical source. But since the plump almond type continued in use well into the first century BC (and perhaps even later), the more economical solution is to suppose that they too belong to the same later event as the other slingshots in the collection. The great majority of them are of the more slender biconical and bi-pyramidal types (or their univalve equivalents) which should be dated after the middle of the second century BC, and some have features which match those of slingshots in use in the third quarter of the first century BC.

It should not be surprising to find that slingshots of a variety of different forms were in use at the same time. Absolute precision in their manufacture was not necessary, and a broad range of variant forms in use in a single siege has been found on many other sites, notably at Perugia from the siege of 41 BC for which much of the evidence has now been published (Benedetti, 2012). These differences may be due in part to the slingers choosing projectiles of different calibre according to the distance of their intended targets, as Poux (2008: 369) has argued in the case of slingshots found in Gaul; but it may also suggest that there were different traditions among units of slingers, who may have been trained in different regions, and may have had their own moulds for making slingshots in the field. It is better, therefore to suppose that all our pieces belong to a single siege, not mentioned in the historical sources, which took place after the middle of the second century BC, and perhaps as late as the third quarter of the first century BC when univalve pieces similar to ours were being used alongside bivalve pieces.

3. THE END OF THE SETTLEMENT ON BOTROMAGNO

Within these parameters the most probable date for the siege must be established on the basis of the archaeological evidence for the development and decline of the settlement.

The settlement attacked in the siege must have been the *oppidum* (or more probably *vicus*) of the late second and early first centuries BC known to the

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Romans as Silvium, which occupied part of the vast space enclosed by the walls of the former Peucetian city of the Sidini.[12] Large areas of this Late Hellenistic settlement have been exposed by the excavations carried out at various times since 1966 by the British School at Rome, the University of Alberta, the Soprintendenza Archeologica della Puglia and various organizations that participated between 1996 and 1998 in a *Campagna Internazionale di Ricerca, Studio e Valorizzazione dell'Area Sidin* (Figs 44, 45). These uncovered clusters of buildings in nine parts of the hilltop which could be dated to this period by associated material.[13] In all these subsidiary sites the houses of this period were built over the remains of earlier structures, often including rock-cut *grotticella* tombs of the late fourth to mid-second century BC. The buildings are shown in simplified form in the illustration (Fig. 45) in which all structures of other periods have been deleted from the plans.[14]

The predominant type of fine ware found associated with these buildings is grey-gloss pottery, which came into vogue shortly before the middle of the second century BC and began to die out in the third quarter of the first century BC (Hempel, 2001: 113–15; Yntema, 2005: 11). Since the ware comprises a rather small number of simple shapes which remained current for 75 years or more, it is of limited value for dating the end of this period of occupation on Botromagno.

One context, however, can be dated more precisely. In area CA, near the centre of the hill there was an isolated building, rather grander than the others, arranged around three courtyards, with a domestic part to the north and an agricultural part to the south (preliminary reports in Small *et al.*, 1992, 1993, 1994a, 1994b). In a corner of the agricultural part, between the perimeter wall and a drainage channel, there was a pear-shaped pit, Feature 202 (Fig. 46), 1.5 m deep, which had perhaps been dug as a silo. It had been filled at a single moment with organic material and numerous fragments of pottery and other objects derived from the daily life of the inhabitants of the building (Small *et al.*, 1994b). The stratigraphy of the upper part of the pit had been damaged by a recent intrusion, but the surrounding area was filled with stones and tile fragments from the collapse of the building which must originally have covered the pit.

[12] For the problem of the change of name from ?*Sidion* to *Silvium*, see Calderoni-Martini, 1921: 5.

[13] The relevant bibliography is as follows. **Site B**: Macnamara in Ward-Perkins *et al.*, 1969: 144–52; Small, 1992: I, 29–32. **Site CA**: Small, 1992: I, 32–5; Small *et al.* 1992, 1993, 1994a, 1994b. **Site CZ**: Brooks *et al.*, 1966: 139, 147; Small, 1992: I, 35–40. **Site DA**: Small, 1992: I, 40–7; S. Curzio in Ciancio, 1997: 259–62. **Site DB**: Small, 1992: I, 47–54; L. Casavola in Ciancio, 1997: 245–53; Santoriello, 2000: 124. **Site DC**: Small, 1992: I, 54–6; Casavola in Ciancio, 1997: 253–9; Santoriello, 2000: 125–6. **Site H**: Whitehouse *et al.*, 2000. **Site 13**: unpublished. I am grateful to A. Deantoniis, erstwhile director of the Cooperativa Petra Magna, for the plan. **Site 14**: Ricci, 2000. The numbers of the last two sites are those assigned to them by A. Ciancio (1997).

[14] I discuss the settlement more fully in Small (forthcoming).

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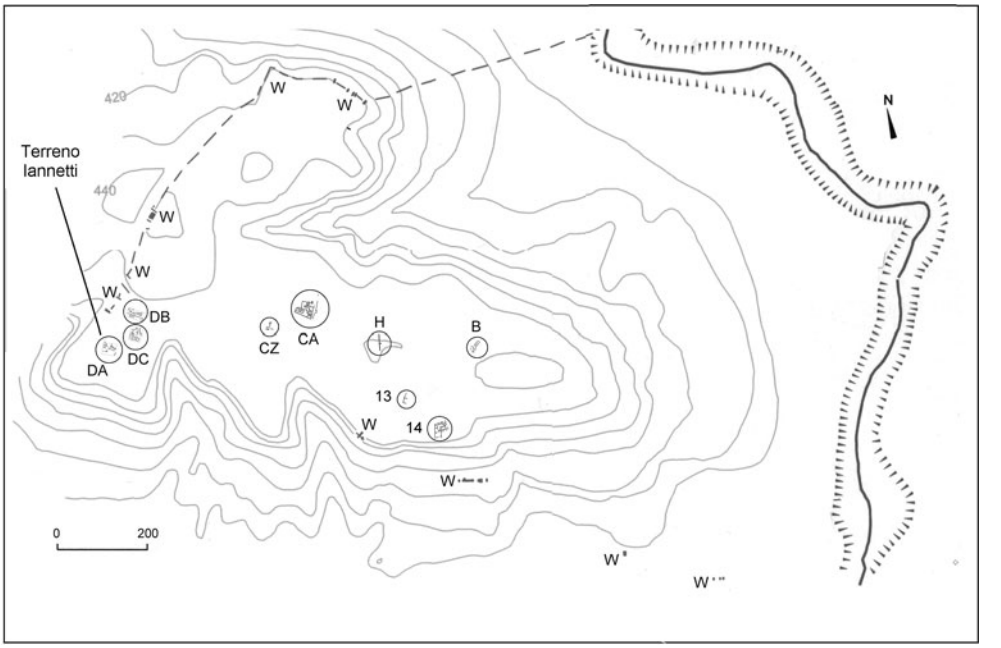

Fig. 44. Botromagno, showing excavated sites of the late second century BC, and traces of the fortification wall of the late fourth century BC (marked W). The ravine of the Torrente di Gravina closes the site of the former Peucetian city on the east side. Note the location of the Terreno Iannetti where many of the slingshots were found.

The most recent material found in the pit should therefore give a *terminus post quem* for the destruction of the building. The grey-gloss, *unguentaria* and other types of pottery studied by Hayes (1994: 206–26) mostly consist of pieces which can only be dated broadly in the late second or early first century BC, but there are also twelve fragments of thin-walled ware (nos. 73–84) and five of 'Pompeian red ware' cooking pans (nos. 85–89) which demonstrate the arrival of new Etrusco-Romano-Campanian types in an area where the material culture was still predominantly Hellenistic. They suggest a date after the onset of full Romanization that followed the Social War of 91–88 BC. A group of seventeen coins found scattered through the pit, studied by G. Guzzetta (1994), allows more precision. They can all be dated to the second century BC or beginning of the first, the latest being a Roman *denarius* of the moneyer L. Iulius Bursio, minted at Rome in 85 BC (Crawford, 1974: I, 78–9, 368). Since the coin shows some signs of wear, it is difficult to suppose that it was deposited in the pit before 80/70 BC. A worn bronze *quadrans*, tentatively dated *c.* 86 BC (Guzzetta, 1994: no. 5), must also have been in circulation for some time before being deposited in the pit.

The destruction which followed the closing of the pit was not the end of the occupation on site CA. A small part of the building in the central part of the site was patched up and continued in use for some time, probably down to

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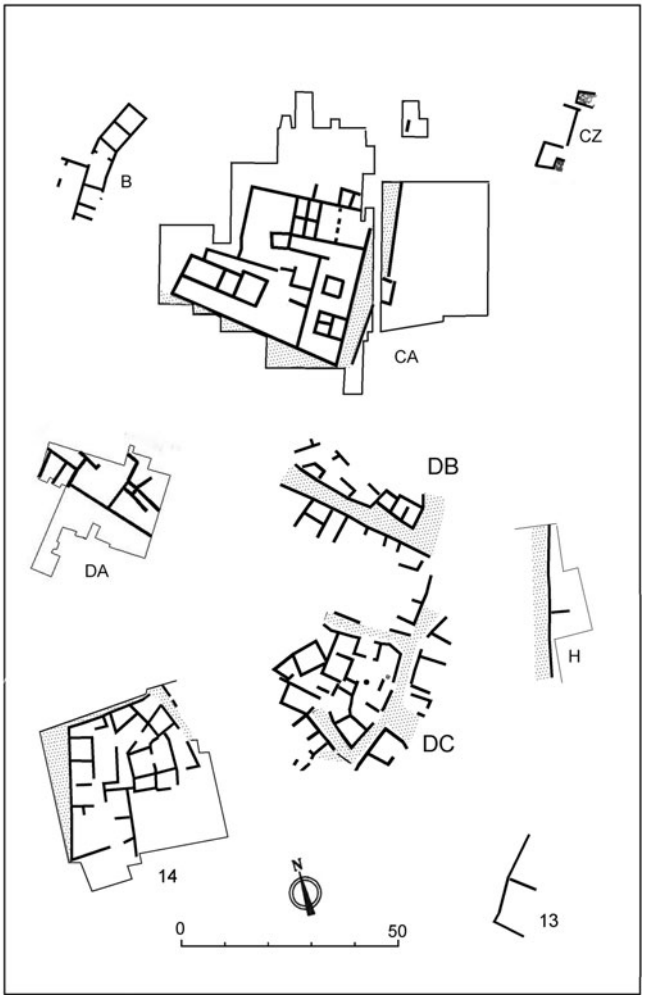

Fig. 45. Excavated sites with buildings of the late second century BC on Botromagno. For the sources, see note 13.

the beginning of the imperial period when it was demolished and replaced by a more solid building (Small *et al.*, 1994a: full publication pending). The excavation of 1993 showed that this latest structure was erected in the Augustan period.

The first phase of this sequence (the destruction of the building of the grey-gloss phase and the fill of pit F202) has a counterpart on site B where the excavations by Ruth Whitehouse and her colleagues showed that a large pit (context 10) destroyed the south wall of the building of this phase (their Building 2) and disturbed the edges of two stone-lined pits associated with it (Whitehouse *et al.*, 2000: 253–8). The authors date the end of the first phase of the building *c.* 80/70 BC on the evidence of the latest material in the associated deposits. It includes inter alia a fragment of Pompeian-red ware (Whitehouse

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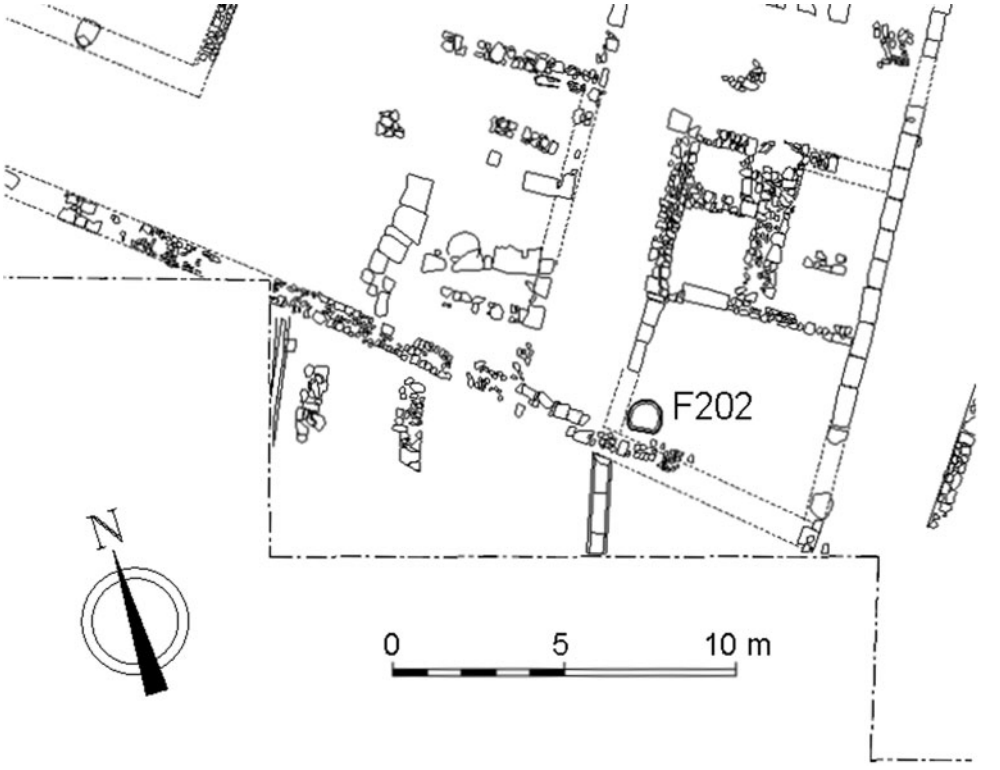

Fig. 46. Plan of the south-east corner of the building on site CA showing the location of pit F202.

et al., 2000: fig. 160.f) exactly comparable to no. 86 in pit F202, and two fragments of thin-walled vessels. After the pit of context 10 had been filled in, a new structure was built on the line of the previous wall, overlapping the area of fill, of which little remained except for two walls and a fragment of a crude mosaic floor consisting of tesserae of tile fragments, tentatively dated by the excavators to the middle of the first century BC.

In the other excavated sites on Botromagno, the latest ceramic finds are predominantly grey-gloss pieces, not distinguishable in form from those found in pit F202 on site CA. There are, however, a few thin-walled and Pompeian-red ware pieces published by M.A. Cotton (in Small, 1992: II, 161–2), which show that occupation on sites DA, DB, CA and CZ is likely to have continued into the early first century BC. To these may be added twelve fragments listed (but not illustrated) in the summary of finds from the *insula* in site 14 excavated by the *Campagna Sidin* (Ricci, 2000: 148–9, 151).

The typology and chronology of Apulian thin-walled pottery needs more study (and more datable contexts), but it can be said tentatively that all the published pieces from Botromagno belong to tall beakers typical of the early phase of thin-walled pottery; that some (Small, 1992: II, no. 1149 from sites DA and DB, and no. 1153 from site DA) have short offset rims comparable to pieces

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found at Taranto in the latter half of the second and first half of the first century BC (cf. Todisco *et al.*, 1992: figs 113, 114); and that cat. 1155 with downward-curving rim from site DB can be matched with a beaker from a tomb at Ordona of the first half of the first century BC (Todisco *et al.*, 1992: fig. 116). A few of the Botromagno fragments, no. 1146 from sites CA and DB, and no. 1151 from site DA, may perhaps be as late as the third quarter of the first century BC since they resemble pieces of that period from other contexts at Ordona (Todisco *et al.*, 1992: 57 fig. 117.1, and 3). On the other hand, the type of relatively shallow and wide two-handled thin-walled cup with rounded belly found in a deposit of the mid-first century BC at Ordona (De Boe and Vanderhoeven, 1979: 115 fig. 127) which marks a new departure in this period is not found in these contexts on Botromagno.

The 'Pompeian red ware' (Small, 1992: II, nos 1156–9) includes two more pieces from site CA and three from site CZ which, like the piece from site H, are indistinguishable from those found in the pit group F202 on site CA. Two others from sites DA and DB with undercut and slightly more in-turned rims are perhaps local derivatives of similar date.

The few coins found on these other sites on Botromagno are less useful for providing a terminal date. Most of them fall within the first half of the second century BC, the latest datable piece being an *as* of 148 BC from site CZ (Small, 1992: II, no. 1856). They all antedate by a considerable time the abandonment of the sites on which they were found.

In short, the published evidence suggests that the occupation of sites B, DA, DB and H, and in the *contrada* Lucatuorto (site 14), came to an end in the same chronological horizon as the fill of pit F202. Occupation was resumed after an interval of uncertain length, on sites CA and H and perhaps on sites B, CZ, DA and DB, but this attempt at resettlement failed, and the only site where habitation continued into the Augustan period is site CA, where a new building was erected overlapping the remains of the Later Hellenistic villa.

There were no extensive burnt layers, no weapons and no human remains found inside the destruction layers in any of these buildings which might indicate that the settlement came to an end in a siege. Nevertheless, there are signs that some of the buildings were abandoned in a hurry. In one room on site DB, numerous metal objects were left on the floor, including two coins, four iron keys, and fragments of an iron chain and rings probably used for cooking; in another there were, inter alia, a whetstone, an iron skewer and spit, and parts of an iron lock plate (Small, 1992: I, 52–3). In one of the buildings on site DA, 37 loom-weights were found, evidently a complete set (Small, 1992: II, 226). In area 34 of site DC there was another set of loom-weights, fallen, perhaps, from a loom on a mezzanine floor (Santoriello, 2000: 125). In the buildings in site 14, more than 100 loom-weights were recovered from the destruction layers (Ricci, 2000: 143). The evidence is consistent with a rapid evacuation of the site, after which most of the buildings were abandoned and collapsed.

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4. THE DATE AND CIRCUMSTANCES OF THE SIEGE

The slingshots are only datable very broadly between the late second century and the third quarter of the first century BC. No historical source refers to a siege of Silvium within that time frame, but that is hardly surprising since no continuous historical narrative survives in unabridged form relevant to the period. A rare reference to Silvium in Plutarch's *Life of Sulla* (27.6) records that the future dictator was met there in 83 BC on his return from Greece by the slave of one Pontius who prophesied his victory in the coming civil war. The settlement was presumably still occupied at that time, before the general abandonment indicated by the archaeological evidence.

If the siege was unsuccessful, then it is conceivable that the settlement came under attack in the Social War, and survived for another twenty years or so before most of it was abandoned; but that is unlikely since the war seems to have had little impact on central Apulia where the *Poidikloi* (that is, the Peucetians) surrendered to the Roman general Cosconius within two days when he attacked them in 89 BC (Appian, *Civil Wars* 1.52; see Grelle and Silvestrini, 2013: 231). More probably the siege was connected with the slave rebellion led by Spartacus, which broke out in 73 BC and lasted for two years. The date fits the archaeological evidence for the abandonment of the site. Some of the comparanda for the slingshots might seem to favour a still later date, in the third quarter of the first century BC, but that must be ruled out since there is no historical evidence for warfare in this area at that time, and there was, in any case, no settlement of any consequence left on the hilltop which would have been capable of resisting a siege.

What were the targets of the slingers? It is remarkable that no lead slingshots have been found in any of the controlled excavations. Being small objects of roughly the same colour as the soil surrounding them, it might be thought that they could easily be missed by a team not aware of the possibility of finding them; but that is not an adequate explanation since none was found in the large amounts of soil from the occupation layers on sites B, CA, CZ, DA, DB, DC and Walls 1 sieved by John Watson (Small, 1992: I, 92–120). He was looking primarily for faunal remains, but it is inconceivable that lead slingshots would not have been noticed if they had been found in the sieve. An alternative explanation might be that, although they are said to have been found all over the hilltop, they may in fact have been concentrated in several different areas, not yet excavated. Sig. Florido remembers finding one such group in the Iannetti field (Figs 1, 44), which includes sites DA, DB and DC, and extends beyond them in the direction of the broad neck of land at the western end of the site. There must have been a gate in the walls here in the Peucetian period, which would have been the most obvious target for an assault if the circuit of walls was still defensible. It is possible, too, that the slingshots were concentrated in limited areas because they had been gathered for use by the defenders. But the sling was a favourite weapon of rebel slave armies, as the

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numerous slingshots from the Second Slave War in Sicily published by Manganaro (2000) show.

The place of an assault on Botromagno/Silvium in the war of Spartacus

The literary sources are too scrappy and disjointed for it to be possible to reconstruct a coherent account of the military operations of Spartacus' army in South Italy into which an assault on Botromagno/Silvium might be fitted. There are, however, a few points which are fixed with reasonable certainty.[15] After breaking out of Campania, Spartacus and his incipient rebel army headed for South Italy so that they could recruit support from the numerous slave herdsmen involved in shepherding transhumant sheep in this part of the peninsula (Plutarch, *Crassus* 9.3; Orosius 5.24.2). They evaded the Roman army sent to blockade them in the Paestan plain by taking passes through the mountains above Eboli and descended into the Sele/Tanagro valley at Nares Lucanae on the road from Capua to Rhegium (Sallust, *Histories* 3 fr. 98 Maurenbrecher). There they fell unexpectedly on the *vicus* of Forum Anni where they massacred the inhabitants. They then headed south to the Ionian coast, presumably along the Via Annia. Orosius (5.24) has them enrolling numerous troops at Consentia (Cosenza) and Metapontum still in the year 73. In his brief but telling summary of the war, Florus (2.5) recounts selected episodes of destruction, apparently in their chronological sequence: the slave rebels were not content with devastating villas and villages (*vici*); they ravaged Nola, Nuceria, Thurii and Metapontum with terrible slaughter (*nec villarum atque vicorum vastione contenti, Nolam atque Nuceriam, Thurios atque Metapontum terribili strage populantur*). Spartacus' army is likely, therefore, to have reached the coast at Thurii and over-wintered at Metapontum. At the beginning of the campaign of 72 BC it split, and a detachment of 30,000 men led by Crixus headed northwards to the Gargano peninsula where they were defeated by the Roman army commanded by one of the consuls (Appian, *Civil Wars* 1.117). If Crixus and his army took the shortest route from Metaponto to the Gargano they would have followed the Bradano/Basentello river valley through the Fossa Bradanica, passing close to Botromagno/Silvium. This must be the most probable occasion for an attack on the settlement, though there are others. Spartacus, with his part of the army, moved north to Cisalpine Gaul in 72 BC (Appian, *Civil Wars* 1.117) where they defeated the armies of both consuls. They may have marched north from Metaponto by way of the Fossa Bradanica and Silvium. It is less likely that they attacked the settlement on their march back from the Alps since, according to Appian, they then captured Thurii, presumably for the second time, which would suggest that they followed the Via Annia again. Appian dates their return to 72 BC. They remained in South Italy increasingly hemmed in by Crassus' army, and

[15] For a recent account of the war in Apulia, see Grelle *et al.*, 2017: 20–4; for the episodes in Lucania, Russi, 1996.

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attempted in vain to break out of the peninsula with the help of Cilician pirates first at the Straits of Messina (Plutarch, *Crassus* 10) and then at Brindisi (Appian, *Civil Wars* 1.120) before the final debacle near the headwaters of the Sele river in 71 BC (Orosius 5.24). An attack on Botromagno/Silvium is also conceivable in this final phase of the war.

Other archaeological evidence for the war

It should not be surprising if such a destructive war had left traces in the archaeological record, and in fact various scholars have associated archaeological remains from various sites in South Italy with the war (see Fig. 47). It has been suggested that an accumulation of approximately 50,000 slingshots found overlying the floor of the basilica at Paestum, built in the late second or early first century BC, may have been stockpiled in the expectation of an attack from Spartacus' army moving south from Campania in 73 BC.[16] They were not used because the rebels avoided the trap that had been set for them by following the tracks through the mountains above the plain. When they rejoined the road to Rhegium at Nares Lucanae they were only a short distance from the Vittimose villa near modern Buccino where the excavator Stephen Dyson (1983: 16) has suggested that structures of the first phase may have been destroyed by Spartacus. In (modern) Calabria, the destruction of the settlement of the Tauriani at Mella near Oppido Mamertina early in the first century BC, and the abandonment of settlements in the surrounding countryside around the same time have been connected with either the Social War or the war of Spartacus (Costamagna, 1996–7: 129).

The fact that only fourteen years separated the end of the Social War from the outbreak of the war of Spartacus usually makes it impossible to attribute a destruction context to one or other event even when the evidence points clearly to a military episode. The pottery types most useful for the chronology of that period (principally grey-gloss and thin-walled wares) cannot be dated so precisely. Moreover, some settlements may have been besieged in both wars, confusing the issue. Heraclea is a case in point. The settlement on the high ground to the west of the *collina del Castello* (the principal part of the city) was completely abandoned early in the first century BC, as was the sanctuary of Dionysus and the necropolis to the south (De Siena and Giardino, 1994: 202–3; 2001: 158–9). The preliminary report of a new excavation carried out in 2014 by a Franco-Italian team in the courtyard of a house in zone A in the centre of this area refers to several weapons found on the walking surface sealed below

[16] Greco and Theodorescu, 1980: 17 and fig. 19; Torelli, 1988: 109. Apart from a general photograph of the slingshots *in situ*, the pieces are not illustrated (and so cannot be compared with the Botromagno slingshots), and it is not stated whether they were of lead or terracotta, although the enormous number suggests the latter. Alternatively, the slingshots may have been assembled by Crassus in 71 BC before his attack on a secessionist group of the rebels camped at a Lucanian lake (Plutarch, *Crassus* 11.1), if this has been correctly located near Paestum (Strauss, 2009: 143–4).

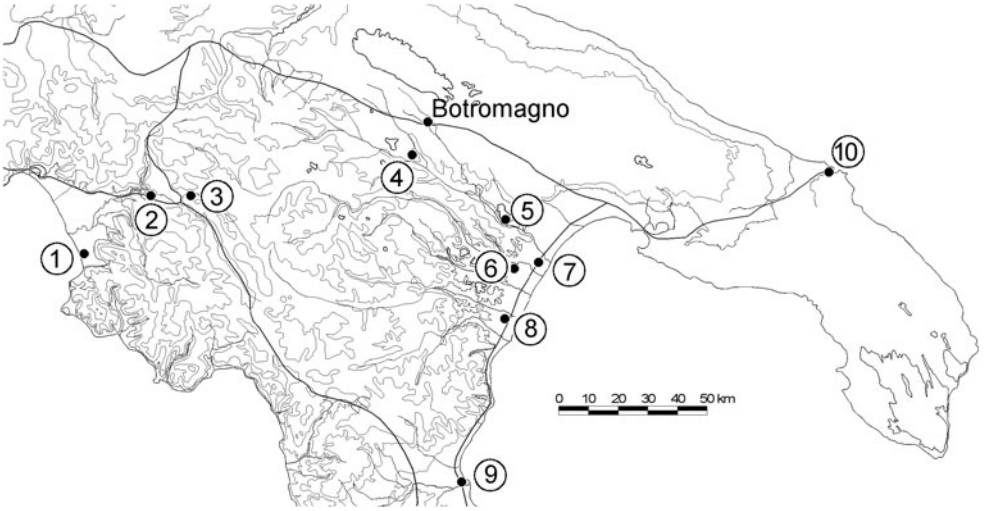

Fig. 47. Map of South Italy showing places mentioned in the text. 1 = Paestum; 2 = Nares Lucanae; 3 = Vittimose villa; 4 = Monte Irsi; 5 = Difesa San Biagio; 6 = Destra Basento villa; 7 = Metaponto; 8 = Heraclea; 9 = Thurii (Copia); 10 = Brindisi.

the collapsed roof. They include a bolt from a siege engine (*scorpio*), two catapult stones, three bronze arrowheads and two *σφόνδυλοι*. These last are not described or illustrated, and it is difficult to know what the word can mean in this context (hardly vertebrae or shellfish) unless they are *σφένδοναι* — slingshots. The latest pottery associated with the layer of collapse is said to date to the last quarter of the second or the first third of the first century BC (Osanna *et al.*, 2016: 217–20). Since we know from Cicero (*In Defence of Archias* 8) that the *tabularium* of the city which would have contained the record of Archias' citizenship was burned in the Social War, there is good reason to suppose that the city was besieged at that time. But a hoard of 534 Roman Republican silver coins and a golden necklace found in a pot inside insula II must be dated to 70 BC or soon afterwards by its latest piece, a *denarius* minted by Q. Crepereius M.f. Rocus in 70 BC (Crawford, 1974: 82, 410, 603). It is likely, therefore, to have been hidden during the latest phase of the war of Spartacus by an inhabitant of the city who hoped to save it from the insurgents but did not live to retrieve it (Siciliano, 1974–5; De Lachanal, 1993).

At Metaponto the shrunken settlement of the second century BC also appears to have been violently destroyed at some time in the first half of the first century BC. The evidence is clearest in the Hellenistic stoa which had been adapted as a public storage area, and which was burned at that time, sealing commercial amphorae and other pottery below the collapsed roof. It was not reoccupied until the Early Imperial period. Although there is no direct proof, the destruction has been connected with either the Social War or the war of Spartacus (Giannotta, 1980: 33, 36; De Siena and Giardino, 1994: 200–1). The

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recently discovered *Destra Basento* villa in the territory of Metaponto was also destroyed by fire early in the first century BC and not rebuilt (Nava, 2003: 673–5; Carter, 2011: 912).

In the Bradano valley, near the edge of the Metapontine plain, the hill-site of Difesa San Biagio which had flourished in the third and second centuries BC came to an end shortly afterwards. The latest material includes grey-gloss pottery and Metapontine amphorae typical of the late second or early first century BC (Roubis, 1996: 243). Further up the valley, near the confluence between the Bradano and Basentello rivers, part of the hilltop of Monte Irsi (site B) was occupied in the late second century BC by a rural villa with a stall for up to eight oxen. It too was abandoned early in the first century BC. There was then a short period of disuse before occupation resumed on a different part of the hill (site A). In the publication of the excavations (Small, 1977: 101) I suggested that the settlement might have been deserted in the Social War of 90–89 BC; but the comparison with the sequence of archaeological events on Botromagno suggests that the slave war of 73–71 BC is a more likely context. Antonio Florido says that he found slingshots on the site which he deposited in the Museum of Matera, but there is no record of them in the museum's inventory of accessions.

Some general remarks

The whole question of the abandonment of settlements in South Italy early in the first century BC needs more study. Generally, archaeologists and historians have tended to look for the causes of drastic changes in settlement patterns in economic or socio-political factors: the impact of Hellenistic farming practices, the development of large estates based on slave labour, the reorganization of settlement hierarchies that resulted from municipalization, etc. The evidence of the slingshots from Botromagno shows that military events must also be taken into account in formulating a convincing explanation of these complex processes. When a community was already experiencing difficulty in adjusting to the changing economic and social conditions, it might not have been able to survive a siege, and if it failed, it might not be in the interests of the ruling class to revive it. That is what happened at Botromagno/Silvium, where the settlement shrank to a single small part of the plateau by the middle of the first century BC. Its rich agricultural land fell into the hands of *latifondisti*, and in due course much of its territory passed into the imperial patrimonium (Small, 2011).

Battlefield archaeology is in its infancy in Italy, but the example of the slingshots from Botromagno gives some idea of the advances in historical knowledge that might be made by a coordinated programme of research using metal detectors in controlled archaeological contexts. That should lead to a better typology and chronology of slingshots in Italy and should provide a control for the main argument put forward in this article.

Acknowledgements
I am grateful to a number of colleagues who have answered questions and helped in various ways while this article was being written, and in particular to Marta Barbato (Soprintendenza Archeologia Belle Arti e Paesaggio della Basilicata), Laura Forte and Andrea Milanese (Museo Archeologico Nazionale di Napoli), Dimitris Roubis (Università della Basilicata), Gert-Jan Burgers and Douwe Yntema (Vrije Universiteit Amsterdam), Josephine Crawley Quinn (Worcester College, Oxford), Lawrence Keppie (University of Glasgow), John Reid (Chair, Trimontium Trust, Melrose), and above all to my friend Giuseppe Schinco with whom I have discussed the slingshots from Botromagno on many occasions. As always, I am grateful to the Soprintendenza Archeologia Belle Arti e Paesaggio per le province di Brindisi, Lecce e Taranto, for its continuing support of my work at Gravina.

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