

La numismatique pour passion

**Études d'histoire monétaire offertes à Suzanne Frey-Kupper par
quelques-uns de ses amis à l'occasion de son anniversaire 2013**

réunies par
Simon FREY



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The Electrum Coinage of the Sardinian Rebellion of 241-238 B.C.*

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In 1974 E. Acquaro linked a group of Punic issues in gold (actually fine electrum), bronze, and billon, with a bull standing r. on the reverse, to a 'vast political scheme' promoted by 'the Barcid family' in connection with the uprising against Rome led by Hampsicoras in 216 B.C. He asserted that the bull type on these coins, generally believed to be of Sardinian mintage, recalled a similar iconography on the earliest coins of Ebusus and on the Italic *aes signatum* and *aes grave*, while the beardless and diademed male head on the obverse of the billon was related to that on Barcid 3-shekels struck at Carthago Nova before the Second Punic War¹. According to Acquaro, this image of the bull was tied to Sardinian religious tradition (an idea already put forth by L. Forteleoni and followed by G. K. Jenkins and R. B. Lewis²) and expressed 'the new political impetus and far-reaching Mediterranean strategy that the Barcae brought to the renewed conflict with Rome'³. Other scholars have echoed his opinions⁴.

* It is a joy to hail the scholarly achievements of Suzanne Frey-Kupper, a long-time friend and colleague whose brilliant work enhances our understanding of the use of coinage in the Punic world. Research for this essay was facilitated by a Margo Tytus Fellowship at the University of Cincinnati in 2011, for which I am grateful to Getzel M. Cohen and the University of Cincinnati's Department of Classics. I also wish to thank Richard Ashton, J. Donal Bateson, Frédérique Duyrat, Bernhard Weisser, and Rick Witschonke, for contributing data, images, and feedback.

¹ ACQUARO 1974, p. 106-107; see also ACQUARO 1985.

² FORTELEONI 1961, p. 62; JENKINS – LEWIS 1963, p. 51. CASTALDI 1976, p. 441-454, has argued that a bull cult did not exist in Sardinia before the Roman conquest.

³ ACQUARO 1988, p. 225; cf. ACQUARO 1980, p. 250-251 and ACQUARO 1984, p. 155.

⁴ See MOSCATI 1986, p. 206, MANFREDI 1987, p. 24; MANFREDI 1997, p. 220 and 372-375; ZUCCA 1988, p. 39; UGAS – PADERI 1990, p. 483.

However, in the notes to the 1989 catalogue of the coins from the Morgantina excavations, and in a 1992 essay, I pointed out that there were close affinities in fabric, weight, style, and control marks between the Sardinian bull-type bronzes and other Sardinian bronzes, bearing three corn ears on the reverse. Jenkins had dated these corn ears issues to the years between 241-238 B.C., when the mercenaries who garrisoned Sardinia rebelled against Carthage (*SNG Cop., North Africa 246-252*). I also showed that the Sardinian bull type resembles the reverse of bronze coins struck in North Africa by the Libyans during their revolt against Carthage in the same years (*Fig. 1*)⁵. Thus, I suggested, the Sardinian bull coinage probably had nothing to do with the uprising of 216 B.C.: it ought to be assigned instead to the revolt of the mercenaries in Sardinia at the end of the First Punic War. Leading Sardinian specialists have subsequently accepted the back-dating of the bull-type issues⁶, even though its historical implications have not yet been addressed. No consensus has been reached about their chronology, pending a full study of minting activity in Sardinia in 241-238 B.C.⁷

This contribution re-examines the rare electrum coins of the Sardinian bull-type (comprising Jenkins and Lewis' Group XVII) and aims to clarify their relationship to contemporary Carthaginian and Libyan issues.

Known by only six specimens, four of which are illustrated here (*Fig. 2-5*)⁸, these are half shekels bearing the head of a Carthaginian goddess on the obverse, and a bull r. with an 8-ray star and a crescent and pellet symbol on the reverse. They were struck by a pair of obverse dies and a single reverse die, and include two varieties. In the second variety, a new obverse die was

⁵ BUTTREY – ERIM – GROVES – HOLLOWAY 1989, p. 151, no. 410-411; VISONÀ 1992, p. 125-126.

⁶ GUIDO 1995, p. 27-30 (misquoting VISONÀ 1992, p. 126-127). Guido's assertion (*ibidem*, p. 29) that this bronze coinage 'apparirebbe come respinta dalla società sardo-punica' does not seem to be supported by the archaeological evidence. Cf. MANFREDI – FRANCISI 1996, p. 44; GUIDO 1997a, p. 568, n. 4; GUIDO 1997b; GUIDO 2000, p. 42; FARISELLI 2002, p. 115-116; ZUCCA 2003, p. 89; MASTINO 2005, p. 75-76.

⁷ See the remarks by PAVONI 2009, p. 872. BALDUS 2004, p. 311, nos. 76-77, and VIOLA 2010, p. 377-381, no. 377, have retained the later dating of the Sardinian bull-type issues, while Guido has dated the Sardinian bronzes with three corn ears on the reverse to c. 241-215 B.C.: GUIDO 1995, p. 30-31, p. 85-88, nos. 291-329; GUIDO 2000, p. 66-69, nos. 152-173. Manfredi believes that the latter were minted under the authority of Carthage: see MANFREDI 2002, p. 250-252.

⁸ Only two of the five examples of these coins known to Jenkins and Lewis are illustrated in their monograph: see JENKINS – LEWIS 1963, p. 121, nos. 494-1 and 495-1. A new specimen in Berlin's Staatliche Museen (illustrated in *Fig. 5*) was described as a half shekel by BALDUS 2004, p. 311, no. 76.

used and the Punic letters *mem* and *gimel* were added to the reverse die⁹; its half shekels are lighter in weight and have a lower gold content.

L. Müller attributed them to Sardinia because he was aware of Sardinian finds of bronze and billon issues with a similar reverse type¹⁰. Yet neither G. Spano (Müller's principal source of information on finds of Punic coins in Sardinia), nor other Sardinian scholars, could document their provenience¹¹. Jenkins and Lewis, whose study of these electrum coins is still the most authoritative, also assigned them to Sardinia and dated them to the uprising of 216 B.C. As Müller had already noted, the presence of the letters *mem* and *gimel* on these half shekels supports an attribution to a mint in Sardinia, since the same pair of letters is found on billon shekels bearing a bull r. on the reverse ('a parallel issue of silver', according to Jenkins and Lewis), and on the bronze coins with three corn ears on the reverse, both of Sardinian mintage¹². Furthermore, Jenkins and Lewis pointed out that 'although the Punic Tanit head is retained as the obverse type, it is of a most peculiar style, which together with the uncertain quality of the metal and the inaccuracy of the die-alignment are signs of local make'¹³. The gold content of the heavier variety, though, approaches that of the electrum half shekels without mintmarks minted in North Africa in the first phase of the Libyan revolt (Jenkins and Lewis' Group XI)¹⁴. This suggests that the heavier and finer Sardinian half shekels were struck in the early stages of the mercenary revolt and may have been intended to circulate alongside the electrum fractions that were already in use in North Africa.

⁹ Even though Jenkins and Lewis stated that a single pair of dies was used for this issue, the lighter half shekels were struck with a new obverse die, featuring a different earring.

¹⁰ MÜLLER 1861, p. 146-147, no. 7.

¹¹ According to Spano the Sardinian bull type 'si trova solo in bronzo': see SPANO 1858, p. 102, no. 36; cf. BORNEMANN 1900, p. 117-118, and BIROCCHI 1935, p. 147-149. There is no evidence that a half shekel similar to those in Jenkins and Lewis' Group XVII was found 'at Tharros (?)', *pace* ZUCCA 1988, p. 38, n. 19.

¹² MÜLLER 1861, p. 147; cf. ACQUARO 1974a, p. 64-66, nos. 1067-1144; *SNG Cop., North Africa* 385-386. At least three pairs of letters were used for the Sardinian bull-type billon shekels: see MANFREDI 1997, p. 375, nos. 106-108. Examples of these coins have been found in Sardinia at Abbasanta and Tharros: MANFREDI – FRANCISI 1996, p. 63-64; GUIDO 2000, p. 43.

¹³ JENKINS – LEWIS 1963, p. 51.

¹⁴ JENKINS – LEWIS 1963, p. 43 and 115, nos. 452-453; for the fineness of both groups of half shekels, cf. *ibidem*, p. 115 and p. 121. For the dating of the North African half shekels see BALDUS 2008, p. 132; cf. CARRADICE – LA NIECE 1988, p. 49, n. 42, and ROBINSON 1953, p. 32.



FIGURE 1: New York, American Numismatic Society, inv. 1979.189.21; AE 5.423 g, 20.7 mm; 180° (= VISONÀ 1992, Pl. 28, 12). Size 2:1.



FIGURE 2: Glasgow, Hunterian Museum. 3.76 g; 16 mm; 0°
(= JENKINS – LEWIS 1963, p. 121, no. 494-2).
Incomplete (?) test or perforation holes on both sides. Size 2:1.



FIGURE 3 : Paris, Cabinet des Médailles 175. 3.75 g; 16 mm; 0°
(= JENKINS – LEWIS 1963, p. 121, no. 494-3). Size 2:1.



FIGURE 4: Paris, Cabinet des Médailles 174. 3.08 g, 15 mm; 0°
(= JENKINS – LEWIS 1963, p. 121, no. 495-2). Size 2:1.



FIGURE 5: Berlin, Staatliche Museen – Münzkabinett. 2.96 g; 15 mm; 0° (= BALDUS 2004, p. 311, no. 76). Holed. Size 2:1.

While no apparent connection exists between the Sardinian mercenaries and the iconography of the bull type in their coinage, there is evidence that the image of the bull had ideological importance for the Libyans, whose economy depended upon farming and animal husbandry¹⁵. Cattle was a major resource for them, as may be inferred from Orosius' mention of the capture of 20,000 head of cattle by the Carthaginians in a reprisal against the indigenous Africans who had supported Regulus c. 256 B.C.¹⁶. This coin type also fits well within a repertoire of 'agricultural' reverse designs (including the plough and the corn ears) used in North Africa during the Libyan revolt¹⁷. Therefore the bull could be regarded as a signifier of Libyan cultural identity. The significance of the bull type in Sardinia, on the other hand, is less clear.

Since the soldiers who revolted in Sardinia in 241 B.C. are said to have been inspired by the rebellion of their comrades in North Africa¹⁸, which

¹⁵ The evidence for cattle grazing in North Africa in the Punic period is still very incomplete: see FENTRESS – DOCTER 2008, p. 111, 113-114, 120-127. Cf. BRETT – FENTRESS 1996, p. 58, 77, 203-205. Economic considerations are lacking in the analysis of Libyan coin types by FARISELLI 2002, p. 101-21.

¹⁶ Orosius 4.9.6: *Hamilcar dux Poenorum cum exercitu in Numidiam Mauretiamque missus postquam hostiliter cruentere in universos egit, cur Regulum libenter suscepisse dicerentur: mille argenti talentis et viginti milibus boum reliquos condemnavit; principes autem omnium populorum patibulo suffixit*. I owe this reference to CAMPS 1960, p. 117. Orosius (who wrote the most complete account of the First Punic War according to FABBRINI 1979, p. 228) is the only textual source about this episode: see ARNAUD-LINDET 1991, p. 34, n. 4.

¹⁷ Cf. CARRADICE – LA NIECE 1988, p. 51; MANGANARO 1992, p. 101; ZIMMERMANN 2001, p. 238-240. A ubiquitous feature in North African rock art since the Epipaleolithic period, bovid images have been linked to representations of a Berber deity in historical contexts: see CASTIGLIONI – CASTIGLIONI – NEGRO 1986, p. 204-207, and the review by VISONÀ 1988. The type of Zeus on the obverse of Libyan billon double shekels (ALEXANDROPOULOS 2007, p. 374, no. 52) may evoke Baal as Zeus Ammon and the Libyan bull god Gurzil, son of Ammon, according to BABELON 1957, p. 29.

¹⁸ POLYBIUS 1. 79. 1.

quickly became an all-out war of the Libyan people against Carthage, it is conceivable that they may have adopted the Libyan bull type for their coins because of its anti-Carthaginian connotations. However, a standing bull type is found only on a rare bronze issue belonging to the second phase in the coinage of the Libyan revolt. In this phase, which began c. 240-239 B.C. according to H. R. Baldus¹⁹, the Libyan rebels minted coins bearing non-Carthaginian types with the legend ΛΙΒΥΩΝ, including three billon and bronze issues with a charging bull on the reverse²⁰. But the mercenaries in Sardinia probably struck coins from the start of their rebellion, given the affinities between the Sardinian electrum half shekels of the heavier variety and those minted in North Africa c. 241 B.C. Consequently, the bull type on the Sardinian electrum ought to predate that on the Libyan bronze. That the head of the bull on the Sardinian electrum is in profile view, whereas that on the Libyan bronze is facing frontally, also indicates that the Sardinian type was derived from a different model. Yet another distinctive feature of the bull type on the Sardinian electrum is what Jenkins and Lewis described as 'the curious triangular shape which appears on the bull's flank'. They interpreted it as a 'triangular-shaped ornament', 'possibly ... to be regarded as a brand-mark', even though G. Macdonald had suggested in his catalogue of the Hunterian coin collection that it may be a Greek alphabetical letter²¹. A re-examination of the half shekel in Glasgow (*Fig. 2*), whose reverse is the least worn of the 6 extant specimens, has shown that this feature does indeed resemble a Greek letter, possibly an *alpha* rather than a *delta*, as Macdonald proposed. The presence of an *alpha* would also invite comparison with the coinage of the Libyan revolt, since this letter (with a broken cross-bar) is found on billon issues of the Libyans²². But the evidence is inconclusive, and it is baffling that a letter or control mark would be placed upon the body of the bull instead of being in the field on the reverse, as on the Libyan issues. In view of these considerations, it is unlikely that the iconography of the Sardinian electrum was influenced by that of Libyan coins.

¹⁹ BALDUS 2008, p. 135.

²⁰ MANGANARO 1992, p. 93-94, issues B, E-F; ZIMMERMANN 2001, p. 237-241, issues 1, 5, 7. An unprovenanced Libyan bronze coin with Heracles or Melqart / Charging bull is in the collection of Sassari's Museo Archeologico: *SNG Italia, Sassari*, 677.

²¹ JENKINS – LEWIS 1963, p. 51, no. 4; MACDONALD 1905, p. 492, no. 130.

²² ROBINSON 1956, p. 12-13; cf. MANGANARO 1992, p. 93-94 (issues A, B, D); ZIMMERMANN 2001, p. 238, nos. 1-4; ALEXANDROPOULOS 2007, p. 373-374, nos. 50, 52a, 52c, 53 var., 54.

A situation of emergency in Sardinia could have been the most immediate cause for the minting of electrum: according to Polybius, a new contingent of troops was sent by the Carthaginians to regain control of the island, and ended up joining the rebels²³. F. Guido has suggested that the issue of half shekels may in fact be related to this defection²⁴. If so, ironically, the rebellious mercenaries could have struck these coins to pay off incoming mercenaries — although total output does not appear to have been substantial. The half shekels of reduced weight and fineness bearing the letters *mem* and *gimel* may have been minted shortly after those of the heavier and finer variety, to which they are die-linked.

Bibliography

- ACQUARO 1974a: E. ACQUARO, 'Il tipo del toro nelle monete puniche di Sardegna e la politica Barcide in Occidente', *RStFen* 2, 1974, p. 105-107.
- ACQUARO 1974b: E. ACQUARO, *Le monete puniche del Museo Nazionale di Cagliari. Catalogo*, Rome, 1974.
- ACQUARO 1980: E. ACQUARO, 'La monetazione di Cartagine: un tema di opposizione e di alternativa politica', in *Atti 2° Convegno sulla Preistoria – Protostoria – Storia della Daunia, San Severo, 28-30 novembre 1980*, San Severo, 1980, p. 247-252.
- ACQUARO 1984: E. ACQUARO, *Arte e Cultura Punica in Sardegna*, Sassari, 1984.
- ACQUARO 1985: E. ACQUARO, 'Su i "ritratti barcidi" delle monete puniche', *RStorAnt* 13-14, 1983-1984 (1985), p. 83-86.
- ACQUARO 1988: E. ACQUARO, 'Appendix. Coins in the History of Punic Sardinia', in S. MOSCATI (ed.), *The Phoenicians*, New York, 1988.
- ALEXANDROPOULOS 2007: J. ALEXANDROPOULOS, *Les monnaies de l'Afrique Antique. 400 av. J.-C. – 40 ap. J.-C.*, 2nd ed., Toulouse, 2007.
- ARNAUD-LINDET 1991: M.-P. ARNAUD-LINDET, *Orose, Histoires (contre les Païens), tome II: Livres IV-VI*, Paris, 1991.
- BABELON 1957: J. BABELON, 'Observations sur quelques monnaies de Libye', in *Actes du soixante-dix-neuvième congrès national des sociétés savants, Alger 1954, section d'archéologie*, Paris, 1957, p. 23-30.
- BALDUS 2004: H. R. BALDUS, 'Karthagische Münzen', in *Hannibal ad portas. Macht und Reichtum Karthagos* hrsg. vom Badischen Landesmuseum Karlsruhe, Stuttgart, 2004, p. 294-313.

²³ POLYBIUS I. 79. 3.

²⁴ GUIDO 1995, p. 30.

- BALDUS 2008: H. R. BALDUS, 'Der punische Münzschatzfund von Bulla Regia' *Chiron* 38, 2008, p. 117-156.
- BIROCCHI 1935: E. BIROCCHI, 'La monetazione punico-sarda', *Studi Sardi* 2, 1935, p. 64-164.
- BORNEMANN 1900: V. BORNEMANN, 'Beiträge zur Kenntniss der sardo-punischen Münzen', *Blätter für Münzfreunde* 35, nos. 6/7, 1900, p. 117-121.
- BRETT – FENTRESS 1996: M. BRETT – E. FENTRESS, *The Berbers*, Oxford, 1996.
- BUTTREY – ERIM – GROVES – HOLLOWAY 1989: T. V. BUTTREY – K. T. ERIM – T. D. GROVES – R. R. HOLLOWAY, *The Coins (Morgantina Studies 2)*, Princeton, 1989.
- CAMPS 1960: G. CAMPS, *Aux origines de la Berbérie. Massinissa ou les débuts de l'histoire (Libya 8)*, 1960.
- CARRADICE – LA NIECE 1988: I. A. CARRADICE – S. LA NIECE, 'The Libyan War and Coinage: a New Hoard and the Evidence of Metal Analysis', *NC* 148, 1988, p. 33-52.
- CASTALDI 1976: E. CASTALDI, 'Il "culto del toro" nella preistoria della Sardegna ed il problema delle tre cavità sull'alto dei prospetti delle tombe dei giganti', *Archivio per l'Antropologia e l'Etnologia* 106, 1976, p. 439-458.
- CASTIGLIONI – CASTIGLIONI – NEGRO 1986: A. CASTIGLIONI – A. CASTIGLIONI – G. NEGRO, *Fiumi di pietra. Archivio della preistoria sahariana*, Varese, 1986.
- FABBRINI 1979: F. FABBRINI, *Paolo Orosio. Uno storico*, Rome, 1979.
- FARISELLI 2002: A. C. FARISELLI, *I mercenari di Cartagine*, La Spezia, 2002.
- FENTRESS – DOCTER 2008: E. FENTRESS – R. F. DOCTER, 'North Africal Rural Settlement and Agricultural Production', in P. VAN DOMMELEN – C. GÓMEZ BELLARD (eds.), *Rural Landscapes of the Punic World*, London – Oakville, 2008.
- FORTELEONI 1961: L. FORTELEONI, *Le emissioni monetali della Sardegna punica*, Sassari, 1961.
- GUIDO 1995: F. GUIDO, *Catalogo critico di una collezione di monete puniche della Sardegna*, Milan, 1995.
- GUIDO 1997a: F. GUIDO, 'Note in margine a "Osservazioni sulla storia e sul territorio di Cornus" di R. Zucca', *Annotazioni Numismatiche* 7, ser. 2, no. 25, 1997, p. 567-569.
- GUIDO 1997b: F. GUIDO, 'Florinas (Sassari), località "Giorrè". Rinvenimento monetale', *Annotazioni Numismatiche* 7, ser. 2, no. 26, 1997, p. 581-583.
- GUIDO 2000: F. GUIDO, *Nuove monete dalla Sardegna: venti secoli di storia. Parte I. Monete puniche, romane repubblicane ed imperiali*, Milan, 2000.
- JENKINS – LEWIS 1963: G. K. JENKINS – R. B. LEWIS, *Carthaginian Gold and Electrum Coins (Royal Numismatic Society Spec. Publ. 2)*, London, 1963.

- MACDONALD 1905: G. MACDONALD, *Catalogue of Greek Coins in the Hunterian Collection University of Glasgow*, vol. III, Glasgow, 1905.
- MANFREDI 1987: L.-I. MANFREDI, *Le monete della Sardegna punica (Sardò 1)*, Sassari, 1987.
- MANFREDI 1997: L.-I. MANFREDI, *Monete puniche. Repertorio epigrafico e numismatico delle leggende puniche (BdN Monografia 6. Rep.)*, Rome, 1997.
- MANFREDI 2002: L.-I. MANFREDI, 'Il grano e l'orzo fra Nord-Africa e Sardegna', *Nuovo Bullettino Archeologico Sardo* 5, 1993-1995 (2002), p. 219-276.
- MANFREDI – FRANCISI 1996: L.-I. MANFREDI – M. T. FRANCISI, 'Le monete puniche in Sardegna: nuovi dati e riletture', in G. PISANO (ed.), *Nuove ricerche puniche in Sardegna (Studia Punica 11)*, Rome, 1996, p. 31-94.
- MANGANARO 1992: G. MANGANARO, 'Per la cronologia delle emissioni a leggenda Λιβύων', in T. HACKENS – G. MOUCHARTE (eds.), *Numismatique et histoire économique phéniciennes et puniques. Actes du Colloque tenu à Louvain-la-Neuve, 13-16 Mai 1987 (Studia Phoenicia 9)*, Wetteren, 1992, p. 93-106.
- MASTINO 2005: A. MASTINO (ed.), *Storia della Sardegna antica*, Nuoro, 2005.
- MOSCATI 1986: S. MOSCATI, *L'arte della Sardegna Punica*, Sesto S. Giovanni, 1986.
- MÜLLER 1861: L. MÜLLER, *Numismatique de l'ancienne Afrique*, II, Copenhagen, 1861.
- PAVONI 2009: M. G. PAVONI, 'Le monete', in J. BONETTO – G. FALEZZA – A. R. GHIOTTO (eds.), *Scavi di Nora I. Nora. Il Foro Romano. Storia di un'area urbana dall'età fenicia alla tarda antichità 1997-2006*, II. 2. *I materiali romani e gli altri reperti*, Noventa Padovana, 2009, p. 871-880.
- ROBINSON 1953: E. S. G. ROBINSON, 'A Hoard of Coins of the Libyans', *NC* 110, 1953, p. 27-32.
- ROBINSON 1956: E. S. G. ROBINSON, 'The Libyan Hoard (1952). Addenda and the Libyan coinage in general', *NC* 113, 1956, p. 9-14.
- SNG Italia, Sassari: F. GUIDO (ed.), *Sylloge Nummorum Graecorum Italia, Sassari, Museo Archeologico 'G. A. Sanna'. Vol. 1, Sicilia – Numidia*, Milan, 1994.
- SPANO 1858: G. SPANO, 'Monete sardo-puniche', *Bullettino Archeologico Sardo* 4, 1858, no. 5, p. 65-68; no. 7, p. 100-105.
- UGAS – PADERI 1990: G. UGAS – M. C. PADERI, 'Persistenze rituali e culturali in età punica e romana nel sacello nuragico del vano e della fortezza di Su Mulinu – Villanovafranca (Cagliari)', *L'Africa romana* 7, Sassari, 1990, p. 475-486.
- VIOLA 2010: M. R. VIOLA, *Corpus Nummorum Punicorum*, Gorgonzola, 2010.
- VISONÀ, 1988: M. B. VISONÀ, review of A. CASTIGLIONI – A. CASTIGLIONI – G. NEGRO, *Fiumi di pietra. Archivio della preistoria sabariana*, Varese, 1986, in *African Arts* 21, no. 4, 1988, p. 85-87, 92.

- VISONÀ 1992: P. VISONÀ, 'Carthaginian Bronze Coinage in Sardinia', in T. HACKENS – G. MOUCHARTE (eds.), *Numismatique et histoire économique phéniciennes et puniques. Actes du Colloque tenu à Louvain-la-Neuve, 15-16 Mai 1987* (*Studia Phoenicia* 9), Wetteren, 1992, p. 121-132.
- ZIMMERMANN 2001: K. ZIMMERMANN, 'Zur Münzprägung "der Libyer" während des Söldnerkrieges', in K. GEUS – K. ZIMMERMANN (eds.), *Punica – Libyca – Ptolemaica, Festschrift für Werner Huss zum 65. Geburtstag dargebracht von Schülern, Freunden und Kollegen (Orientalia Lovaniensia Analecta 104 = Studia Phoenicia 16)*, Louvain-la-Neuve, 2001, p. 235-252.
- ZUCCA 1988: R. ZUCCA, 'Osservazioni sulla storia e sulla topografia di Cornus', in *Ampsicora e il territorio di Cornus. Atti del II Convegno sull'archeologia romana e altomedievale nell'Oristanese (Cuglieri – 22 dicembre 1985)*, Taranto, 1988, p. 31-44.
- ZUCCA 2003: R. ZUCCA, 'Le monete puniche di zecca sarda di Son Salomó, Ciutadella (Minorca) e il riflesso della guerra dei mercenari in Sardegna e nelle Baleari', *Mayurqa* 29, 2003, p. 87-96.

ABSTRACT

The author re-examines an issue of electrum half shekels bearing a standing bull on the reverse. Minted in Sardinia by the mercenaries who rebelled from Carthage at the end of the First Punic War, it is known by two varieties. Since the gold content of the heavier and finer variety approaches that of electrum half shekels minted in North Africa in the first phase of the Libyan revolt of 241-238 B.C., the Sardinian electrum may also have been struck at this time. The bull type on the Sardinian electrum probably was not derived from that on Libyan bronze coins which were minted in the second phase of this revolt.

RÉSUMÉ

L'auteur réexamine une émission de demi-shekels en électrum qui portent un taureau debout sur le revers. Exécutée en Sardaigne par des mercenaires qui s'étaient rebellés contre Carthage vers la fin de la première guerre punique, cette frappe est connue sous deux formes. Comme la teneur en or de la forme plus lourde et plus fine est proche de celle des demi-shekels en électrum frappés en Afrique du Nord au moment de la première phase de la révolte lybienne de 241-238 a. Chr., il est probable que la monnaie de Sardaigne ait été frappée en même temps. Le type de taureau de la monnaie en électrum de Sardaigne ne derive probablement pas de celui qu'on trouve sur les bronzes de Libye frappées dans la deuxième phase de cette révolte.

- p. 265 *Fig. 5* : The warrior with spear at Aitnai.
- p. 266 *Tab. 1* : Metrology of Sets 1 and 2.
- p. 267 *Fig. 6* : Prototype of Set 3: Menaion.
- p. 267 *Fig. 7* : Prototype of Set 4: Termessos.
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- p. 270 *Tab. 3* : Metrology of Set 5.
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- p. 274 *Tab. 6* : Pseudo-mint A, find spots, other than Minturnae.
- p. 275 *Fig. 9* : Pseudo-mint A, prototypes and find spots.
- p. 279 *Pl. 1* : Die-links: groups 1 & 2.
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- p. 287 *Pl. 9* : Die-links: groups 15 & 16.

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- p. 306 *Fig. 1* : New York, American Numismatic Society, inv. 1979.189.21; AE 5.423 g, 20.7 mm; 180° (= VISONÀ 1992, Pl. 28, 12). Size 2:1.
- p. 306 *Fig. 2* : Glasgow, Hunterian Museum. 3.76 g; 16 mm; 0° (= JENKINS-LEWIS 1963, p. 121, no. 494-2). Incomplete (?) test or perforation holes on both sides. Size 2:1.
- p. 306 *Fig. 3* : Paris, Cabinet des Médailles 175. 3.75 g; 16 mm; 0° (= JENKINS-LEWIS 1963, p. 121, no. 494-3). Size 2:1.
- p. 306 *Fig. 4* : Paris, Cabinet des Médailles 174. 3.08 g, 15 mm; 0° (= JENKINS-LEWIS 1963, p. 121, no. 495-2). Size 2:1.
- p. 307 *Fig. 5* : Berlin, Staatliche Museen – Münzkabinet. 2.96 g; 15 mm; 0° (= BALDUS 2004, p. 311, no. 76). Holed. Size 2:1.

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- p. 313 *Abb. 1* : Sizilien, Himera. Pyramidenstumpfförmiges Bronzegegewicht, vor 409 v. Chr., 24,66 g. Busso Peus, Auktion 401, 2010, Nr. 91.
- p. 316 *Abb. 2* : Sizilien, Himera. Astragalförmiges Bronzegegewicht, vor 409 v. Chr., 215,24 g (Fund 1965), heute ausgestellt im Museum von Himera. Detailaufnahme des Stempels mit „Ziegenreiter n. l.“