Plotting a course through the ‘Arab Spring’: restudying the Sabratha amphitheatre in the context of those of Africa Proconsularis

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As G. Montali describes in the Introduction (xvii), the origins of his academic association with the Sabratha amphitheatre took shape in 2009 over a convivial meal following a day of excavation at Gortina (Crete), when A. Di Vita suggested that he should consider taking on the study of the amphitheatre at Sabratha, hitherto virtually unpublished except for some brief references in guidebooks to the city. In the 1960s, Di Vita, in collaboration with the Libyan Department of Antiquities and the Università di Macerata, had founded an archaeological mission in Libya, and between 2009 (a preliminary visit) and 2012 Montali, as a member of this mission, carried out a comprehensive survey of the amphitheatre’s remains, using both manual surveying techniques as well as a 3-D laser survey, to produce a set of plans, sections and reconstructions; he also undertook three limited sondages (“Saggi 1-3”). The book provides a full visual documentation of the remains through hundreds of clear photographs (some in colour) and a full description of each of the component parts. A metrological survey provided data for a reconstruction of the geometrical method of laying out the monument as well as for use of the Punic cubit (here 51.48 cm) in its construction, based upon a module of 6 cubits. Despite the monument’s poor state of preservation, only the ima cavea was well preserved, the entire upper portions having been completely robbed out, but Montali has utilised a variety of techniques to produce a credible reconstruction of the whole. The second volume (Tavole) contains the architectural plans, sections and reconstructions (tavv. I-XX). The first volume (text and figures) has two parts: I (pp. 1-320) describes, analyses and reconstructs the Sabratha amphitheatre, while II (321-559) is a catalogue of comparative data for 58 sites within the province of Africa Proconsularis according to its boundaries from the time of Trajan down to the reforms of Diocletian, a total of 40 amphitheatres, as well as other sites where amphitheatres have been proposed but no structural evidence exists.

Chapter 1 in Part I collates texts for the initial rediscovery, exploration and archaeological investigation of Sabratha.1 R. Bartoccini began the first partial excavations of the amphitheatre in 1924-26 and Montali makes use of extracts from Bartoccini’s day notes (Appendice 1 on 311-20). He records further campaigns by Di Vita: in 1964-65, to restore the piers around the SE periphery; in 1966, to clear the main E entrance; in 1967, to conserve and repair this zone; and in 1969, to clear the main W entrance.

Montali himself spent three years (2010-12) working on the amphitheatre. The first campaign comprised a manual survey, analyses of the structures, and Saggi 1 and 2 made along the SE periphery of the structure. Following the overthrow of Qaddafi and the ensuing civil war, he was unable to continue the survey of the structure, so in 2011 he chose instead to visit some 70 sites in Tunisia, where he verified the existence of 40 amphitheatres, plus 5 more no longer visible. At this time, Tunisia was undergoing its first elections since the overthrow of Ben Alì in early 2011, the start of the ‘Arab Spring’. This was the basis for his Catalogue (Part II) of 58 entries,2 which included sites where amphitheatres have been postulated but where there is insufficient evidence to prove the existence

1 Through extensive research, Montali (2-4) securely identifies Sabratha with the location of “Tripoli Vecchio” on early cartographic references.
2 Thysdrus has 3 entries: 2 for two phases of the small amphitheatre (nos. 47 and 48) and 1 for the “Colosseum” (no. 49). Carthage has two entries: one for the hypothetical amphitheatrum castrense (no. 10) and a second for the extant amphitheatre (no. 9). Utica has two: one for the suspected Republican amphitheatre (no. 56) and another for the extant amphitheatre (no. 55).
of one. Sadly, towards the end of 2011, Di Vita, Montali’s beloved mentor and supervisor, died, and N. Bonacasa (Palermo University) was appointed as the supervisor of the doctoral dissertation. By the end of 2011, the borders of Libya were re-opened and Montali returned to Sabratha. In the spring of 2012, his team completed the architectural survey and opened another, larger sondage (Saggio 3) in the same part of the periphery of the amphitheatre. The doctoral dissertation, completed at Macerata in 2012 under G. M. Fabrini and Bonacasa, formed the basis for the monograph. Indeed, the text is largely that of the thesis with additions and corrections.

Chapter II details the two types of survey undertaken: a 3D laser scan of the entire structure, and a manual survey of those parts which have survived in enough detail. The decision was taken to produce plans that combined both these types of survey, leaving the collapsed rubble as 3D laser ‘clouds of points’, with existing architectural elements as manually surveyed data.

Chapter III (39-137) is an extensive description of the actual remains and an analysis by structural zones. Beginning with a brief resumé of the foundation and development of Sabratha, the author traces the earliest structures (second half of the 4th c. B.C.) near the sea and the expansion towards the interior beyond the coastal highway in the 2nd and 1st c. B.C., then the Augustan/Julio-Claudian systematization of the forum area. After a postulated earthquake (c.65-70), a major Flavian era expansion, quite possibly related to the grant of municipium status, took shape to the east of the city. The 2nd c. A.D. saw the town’s promotion to colonia alongside construction of the theatre and a new forum area north of the Temple of Hercules. By the Severan era, publicly-funded building projects had come to a halt, although private munificence continued.

Montali would prefer to see this amphitheatre classified as a mixed type, rather than Golvin’s assignment to the “remblais compartimentés” type: thus it would be a combination of Golvin’s “structure pleine” for the lowest regions of the cavea and his “structure creuse” for the upper zones. Working from the inside out, Montali starts with the arena and its annexes, the arena floor itself and its subterranean structures. Next come the entrances to the arena, a careful delineation of the major (E and W) entranceways as well as the minor-axis (N and S) entries, the secondary access gates (portae posticae), and the vaulted passageway (ambulacrum) behind the arena wall and beneath the podium itself. Despite its collapsed state, the podium wall receives careful and full documentation, including traces of the 5 successive plaster coats of the arena wall itself5 (fig. 113 on p. 92). The next section examines the seating area (cavea): podium, ima cavea, traces of the media cavea, and substructures of the external part of the monument (foundations and substructures, internal gallery). The chapter concludes with an analysis of the construction techniques, locally-quarried calcarenite6 limestone cut into opus quadratum and joined by mortar. Some more durable limestone was imported for stress-bearing elements (e.g., the cornice blocks [CV1, CV2] with rectangular sockets for the masts of the awning).

Chapter IV examines in detail the recovered architectural elements: those in calcarenite (seating footrests from the podium, seating, moulded consoles, column shafts), those in limestone (cornices with rectangular sockets for masts of the awning), and those sculpted in white marble (a fragment of a hand holding a scroll).

Chapter V presents the results of the three stratigraphic excavations. These sondages along the outer perimeter of the SE sector were to elucidate the best-preserved sectors of the building’s exterior. The earlier excavations were intended to determine the overall extent of this monument as well as the precise nature of its foundations. Although previously investigated by Bartoccini (1924-26), the SE exterior quadrant was re-opened since part had lain beneath Decauville tracks and was archaeologically intact.

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3 See Montali’s own appreciation of Di Vita at JRA 29 (2016) 443-50.
5 92: “Il I e più antico ha un fondo color bianco crema con decorazioni in verde e rosso, è spesso circa 1 cm; il II ha un fondo color bianco crema con labili trace di decorazione in rosso, spessore circa 7 cm; il III ha un fondo color bianco crema con labili trace di decorazione in verde, spessore circa 7 cm; il IV ha un colore bianco crema, apparentemente uniforme, almeno nei lacerti conservati spessore circa 1 cm; il V sembra essere una ripresa del IV, fondo color crema, spessore 7 cm”.
6 Calcarenite is a sub-type of limestone composed of more than 50% detrital (transported) sand-size, carbonate grains.
It provided a clearer understanding of one of the series of external entrances (“Ingresso 21”), an insight into the articulation of the façade arcades, and further light on the foundations of the perimeter wall. The work provided stratified pottery evidence for the date of spoliation (6th c., probably Justinianic) and for the accumulation of post-abandonment material (7th c.). With Saggio 1, it also proved that there was no external ambulacrum and defined the configuration of the substructures of the outermost part of the building, and more generally the typology of the amphitheatre itself. Montali admits that this is a very small stratigraphic sampling, but the security situation in Libya has not yet permitted him to return to undertake more widespread sondages.

Chapter VI is the catalogue of all epigraphic materials, including inscriptions carved on structural elements of the amphitheatre (Latin inscriptions: Catalogue nos. CE 1-19; quarry marks: CE 20-51), inscriptions uncovered during the course of the 1924-26 excavations (CE 52-54), and inscriptions from the city that make reference to the amphitheatre and munera (CE 55-56). Figure 237 on p. 185 gives the location of CE 1-51 on a plan of the amphitheatre; the vast majority occur in the better-preserved SE sector. CE 1-17 are fragmentary Latin inscriptions inscribed on the seats of the amphitheatre; only CE3 allows an interpretation, F (? or E) V p C (or Cl) Credul, which Montali reconstructs as Credul(us) based upon a proposed reconstruction from Dalmatia (CIL III 14787: 1st/2nd c. A.D.). Referring to similar markings on amphitheatre seats at Lambaesis, Theveste, Uthina, Carthage and Lepcis Magna that refer to seating reserved for the voting districts (curiae), he postulates that the Sabratha marks may be of the same type, yet their number far exceeds the 8 known curiae at Sabratha (193 n.433). There are also two painted inscriptions (CE 18-19). For CE 18 he proposes the following reconstruction: Erenium B [---] / munere par X f(aciendum) [---]. The nomen Herennius and its variations are well attested in Italy and N Africa. Montali interprets it as referring to the editio of a munus of 10 pairs of gladiators by one (H)erennius B(...). Yet the odd location of this text, barely visible high on the N wall of the main E entrance into the arena, might indicate that this stone has been re-used as a part of a repair, perhaps following an earthquake. As a parallel, Montali cites (197, n.445) the series of painted inscriptions on the amphitheatre at Uthina.

CE 20-51 are a series of signs, symbols and letters of the Punic alphabet on individual stones. Referring to similar marks on the theatre at Sabratha and the amphitheatre at Lepcis Magna, Montali sensibly interprets them as quarry-marks. The use of Punic on such a wide scale fits nicely with the use of the Punic cubit for the metrology of this monument. CE 52-54 are inscriptions discovered by Bartoccini. CE52 (http://inslib.kcl.ac.uk/irt2009/IRT085.html) is a 3rd/4th-c. dedication (based on paleography) to an emperor. Montali (210 n.459) has identified this inscription with the fragment found in 1925 by Bartoccini in the S branch of the arena’s subterranean structures. CE 53 (http://inslib.kcl.ac.uk/irt2009/IRT186.html: 4th c. based on palaeography) was carved on the reverse of the above. The nomen Dulcitius is attested (211-12) on two 4th-c. statue bases at Lepcis Magna and elsewhere in the Greek-speaking East. The fragmentary CE 54 (http://inslib.kcl.ac.uk/irt2009/IRT185.html: 4th c. based on palaeography) was also found in the S branch of the subterranean arena structures (212 n.483). CE 55-56, found elsewhere in the city, have a direct bearing upon the amphitheatre or its spectacles: CE 55 (http://inslib.kcl.ac.uk/irt2009/IRT117.html: 2nd/3rd c. based on palaeography) is the long marble inscription commemorating the beneficence of C. Flavius Pudens, with him being the first to give a 5-day-long series of munera; as a result of his donations, the town council voted a 4-horse chariot statue, which Pudens paid for himself. Montali’s discussion of all relevant aspects of this inscription (213-19) is exemplary. He concludes that it should be dated to between 120 and 160 and therefore provides a terminus ante quem for the construction of the building. CE 56 (http://inslib.kcl.ac.uk/irt2009/IRT142.html: 2nd/3rd c. based on palaeography) is fragmentary, but the phrase [--- editio munere [---] is legible.

Chapter VII is a wide-ranging analysis of the geometric layout of the structure, a hypothetical reconstruction of its architecture, a detailed estimation of the seating capacity and the implications for

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7 Augusta (IRT 118), Caelestis (IRT 119), Faustina (IRT 120), Hadriana (IRT 121), Iovis (IRT 132), Mercuri (IRT 123), Neptuni (IRT 124) and another not legible (IRT 125).
8 Tripolitania is known to have experienced several major earthquakes, one between A.D. 65 and 75, one between 306 and 310, and one in 365 (dates based on Di Vita [supra n.3]).
9 These references are to the 2009 website of King’s College, London, The inscriptions of Roman Tripolitania (http://inslib.kcl.ac.uk/irt2009/), which contains the latest updated readings and details, including photographs. This is now the best source for citing this material.
population estimates, an analysis of the circulatory systems of spectator access, assessment of the date of construction and financing and its subsequent phases. The detailed surveys allowed Montali to reconstruct the module (6 Punic cubits = 3.0888 m; 1 Punic cubit = 51.48 cm) and the laying-out method based upon Pythagorean triangles of dimensions 3 units, 4 units and 5 units\(^\text{10}\) used to construct this monument (figs. 1-2 in colour on p. 869). The overall dimensions are: major axis = 129.73 m (252 cubits); minor axis = 117.37 m (228 cubits); arena’s major axis = 61.776 m (120 cubits); arena’s minor axis = 49.42 m (96 cubits). Other architectural elements conform to this modular construction — e.g., the gallery beneath the podium (c. 3.08 m = 1 unit = 6 cubits wide); the heights and widths of the podium, ima cavea, media cavea, summa cavea and porticus in summa cavea also fit into this modular pattern.\(^\text{11}\)

Section VII.2, starting from an analysis of the proportions of the Sabratha amphitheatre in relation to others studied by J.-Cl. Golvin,\(^\text{12}\) gives a series of hypothetical reconstructions for all sectors of the monument, beginning with the arena and its ancillary structures and working outwards to the façade. In addition to

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\(^{10}\) As detailed by M. Wilson Jones, "Designing amphitheatres," RömMitt 100 (1993) 404 fig. 13.

\(^{11}\) Widths are, respectively, podium (9 cubits), ima cavea (12 cubits), media cavea (15 cubits), summa cavea (18 cubits), porticus in summa cavea (12 cubits); see pp. 221-28, 262-64, and figs. 337-38.

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Montali includes comparative details from other amphitheatres such as Carthage, Tébessa, Lepcis Magna, Oudhna and El-Jem, as well as the theatre at Sabratha itself. He proposes that the small chamber in the W wall near the inner end of the minor-axis N entrance may have been the spoliarium (where the bodies of the dead were stripped of their armaments and prepared for burial) (fig. 3). This idea is reinforced by the cemeteries and mausolea lying north and east of the amphitheatre. He proposes that only humans used the ramps and spiral stairway of the minor-axis S entrance to reach the subterranean galleries, whereas the animals were loaded into the hypogaeae by means of hoist mechanisms that later brought them up into the arena during the spectacle. They also entered the arena from the 4 smaller hatches (portae posticae) at the midpoints of the arena wall’s quadrants (fig. 4). Montali interprets the large niche in the N wall of the main-axis E entrance as a shrine to Nemesis (fig. 5).

On the basis of the collapsed remains as well as comparative examples (El Jem, Lepcis Magna, Theveste, Uthina), Montali attempts a hypothetical reconstruction of the podium (fig. 6). As the best-preserved sector, only the ima cavea can be reconstructed with certainty (figs. 7-8). The media and summa caveae have instead been reconstructed hypothetically using the principles of modular proportionality and the comparison with sections of the amphitheatres listed above. Montali proposes a crowning colonnaded portico atop the cavea itself (fig. 2). He proceeds to reconstruct the structures beneath the seating of the media and summa cavea: the system of 28 entryways through the façade to the interior, interior annular galleries (ambulacra), and tunnels leading to the seating itself (vomitoria), including

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13 Such Nemesea are quite common in amphitheatres: Golvin ibid. 337-40; M. B. Hornum, Nemesis, the Roman games and the state (Leiden 1993); see now T. Wittenberg, Kult bei der Arena. Nemesis-Heiligtümer im Kontext römischer Amphitheater (BAR S2615; Oxford 2014).

14 In Amphitheater in Provincia et Italia. Architektur und Nutzung römischer Amphitheater von Augusta Raurica bis Puteoli (Forschungen in Augst Bd. 43/1-3; 2009) 209 f., T. Hufschmid has speculated that the staircases which connect the arena with the podium might serve the purpose of allowing victorious gladiators to receive their reward on the pulpitum from the officiating benefactor. This idea appeals on two levels: first, the elevation of the gladiator at the moment of his victory; second, the unlikelihood that the benefactor descended into the arena.

15 Fragments of columns scattered on site led Montali to propose a column made up of an Ionic-Attic base seated on a plinth, a shaft of individual drums, and a Doric capital with neck, for an overall height of c.3.6 m (7 cubits).
the various types of cut-stone vaulting for each (fig. 9). The façade consists of the 28 entries plus the 4 major- and minor-axis entrances, for a total of 32 arches. Again utilising modular proportionality and comparative examples, Montali hypothesises a façade of two tiers of arches and a crowning attic with square fenestrations above them. Montali notes that the only other amphitheatre to have 32 external arches is Terni (Interamna Nahars),\(^\text{16}\) whose date is traditionally taken to be A.D. 32 on the assumption that CIL XI 4170 is its dedicatory inscription, but G. L. Gregori argues that the inscription should belong to an altar dedicated to Providentia Augusta, and assigns the amphitheatre a date of the first decades of the 1st c. A.D. on the basis of its construction techniques.\(^\text{17}\)

\(^{16}\) Golvin (supra n.12) 167-68, no. 144.

\(^{17}\) See G. L. Gregori, “Amphitheatralia I,” MEFRA 96 (1984) 980-85, and id., Ludi e munera. 25 anni de ricerche sugli spettacoli d’età romana (Milan 2011) 79-82, where he argues that this dedicatory inscription should not be associated with the amphitheatre itself, but rather with an altar dedicated to Providentia Augusta. He notes that J.-P. Martin (Providentia deorum. Recherches sur certains aspects religieux du pouvoir impérial romain [CollEFR 61, 1982] 115-20) thinks this inscription (CIL XI 4170 = ILS 157; cf. EAOR, II, p. 17) is a simple honorific dedication. Gregori (ibid. 2011) 61 and n.21 also thinks that the amphitheatre, with its façade of bichrome opus reticulatum, should be dated to the
Fig. 9. Section and horizontal reconstruction plans for each horizontal zone (*maenianum*) of the Sabratha amphitheatre (= Tav. XVIII *fuori testo*).
Montali compares the Sabrathan system for the velarium and two storeys of arcades and attic with its fenestrations to the façade of the Pula amphitheatre (fig. 10). According to him, there was no paved plaza surrounding the façade of the Sabratha amphitheatre. However, outside the N side of this monument there was a kind of platea formed by a regularization of the rocky bank into which the arena and lower seating were cut. Here it is necessary to insert a caveat concerning the methodology used for the hypothetical reconstruction of the façade at Sabratha. Given the circumstances, Montali had to adopt the principles of modular proportionality and make use of comparisons, but detailed study of the relatively well-preserved SE sector of the periphery shows a good deal of irregularity in the lay-out of the arcades (Ingressi 15-21) and their intervening wall-spaces (Setti XVII-XXIV) (Tabellae 4-5 on p. 273) (fig. 11). This means that a rigid scheme of modular proportionality and a regularised layout of spaces was not adhered to.

Section VII.3 is a fascinating excursus on the various methods used to estimate the seating capacity of theatres and amphitheatres. Starting with the attempts to establish the average width of a single spectator’s seat (locus), Montali decides that the best approach is to adopt three different values for a seat: 40 cm, 45 cm and 50 cm, or a minimum, average and maximum. He then applies (279-89) G. Forni’s two methods of calculating seating capacity\(^\text{18}\) to arrive at a series of estimates for each: for the linear method, from 18,824 to 23,530; for the surface area method, from 18,822 to 23,528. He then turns to Golvin’s more generalised method\(^\text{19}\) which produces an estimated seating capacity of 21,586. Finally, he applies M. Spanu’s methodology\(^\text{20}\) based upon a detailed analysis of each row of each wedge (cuneus) of each tier (podium, ina, media, summa cavea) of seating. This most analytical of methods produces results that range from 14,532 to 18,148 spectators, which means that this “calculus” method produces

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\(^{18}\) G. Forni, “L’indagine demografica e gli anfiteatri in Dacia,” *Apulum* 13 (1975) 150-52: the first method of estimation involves a calculation of the total linear dimension of the seating and assigning a value for the allocation per spectator; the second method involves a calculation of the total surface area of the seating and assigning a value per spectator in m\(^2\).

\(^{19}\) Golvin (supra n.12) 381 and 396-401. He adopts a seating width per person (locus) of 40 cm and an average seat depth of 70 cm, resulting in an estimate of 0.28 m\(^2\) per spectator. He also calculates that an average of 10% of the seating area (cavea) was given over to non-seating (circulation) requirements.

results that are c.30% lower than Forni’s and c.20% lower than Golvin’s estimates. Montali settles on a figure of c.16,100 spectators for Sabratha. The last part of this section considers the interrelationship between seating capacities of entertainment structures and the total urban population. Forni suggested a rough linkage between seating capacities of theatre and amphitheatre and civic populations: a factor of between 4 and 5 times the capacity of the theatre, and a factor of between 2 and 3 times the capacity of the amphitheatre, should yield a rough estimate for a community’s total population. As part of this consideration, Montali refers to Sabratha’s rôle as an entrepôt between caravan traffic from the interior and its port. S. Aiosa speculates that the site for numerous caravanserais and encampments as well as markets for traders may have lain on the E edge of Sabratha — thus near the amphitheatre — where there is an oasis. He speculates that the scheduling of games may have been influenced by the seasonal arrivals of caravans and concurrent fairs.

21 Population estimates for Sabratha (Montali 289, n.769) range from 15,000/20,000 to 40,000/60,000. According to Forni’s methods of estimating civic populations, Montali’s estimate of 16,100 spectators for the amphitheatre and Caputo’s of 5,000 spectators for the theatre produces the following: the amphitheatre method would yield estimates ranging from 32,200 to 48,300 inhabitants, while the theatre method yields estimates from 20,000 to 25,000 inhabitants.

Montali also investigates the evidence for associations of beast-hunters (*venatores*). Citing the mosaic showing an elephant disembarking from a ship (c. A.D. 150) in the *statio Sabrathensium* at Ostia, Montali discusses the various interpretations, which range from a symbolic representation of Africa itself to the literal export of elephants to Rome and to a generic symbol of ivory provided by African wild beasts. In nearby Tunisia, the evidence for *sodalitates venatorum* is plentiful, but not at Sabratha or at Lepcis Magna where there are only the frescoes in the latter's Hunting Baths and the figured mosaics depicting *munera* in coastal villas. Montali suggests that the local *curiae* perhaps undertook organisational and administrative duties for the trade in wild beasts and ivory.

Section VII.4 briefly recapitulates the various ways to reach each of the major sectors of the seating, graphically represented (fig. 12 in colour). Montali calculated that a minimum of 220 spectators used each of the *vomitoria* leading to the two lower tiers of seating, while a maximum of 450 spectators used each of the *vomitoria* leading to the three upper tiers.

Section VII.5 considers the date of the monument. Many scholars have assigned a 2nd-c. A.D. date to its construction. My own visit in 1976/77 suggested it was built in two major phases: an early 1st-c. A.D. structure utilising a quarry site for the arena and lower seating zones, and a later 2nd-c. addition of upper tiers supported on cut stone arches. Montali discounts this two-phase hypothesis. He starts out with the dedicatory inscription of C. Flavius Pudens (http://inslib.kcl.ac.uk/irt2009/IRT117.html) mentioning a gladiatorial spectacle lasting 5 days put on for the first time at this city. He rightly considers this a *terminus ante quem*, since such a lavish spectacle should take place in an amphitheatre. Dates assigned to this inscription range from Hadrianic to Antonine. Montali lays out the evidence for two possible construction dates: late Flavian or the reign of Antoninus Pius. On the basis of a close adherence to local construction traditions, use of *opus quadratum* and not concrete, an absence of marble decoration (common from the later 2nd c.), use of the Punic cubit for the building module, the heavy appearance of the façade, and the simplicity of the arena's subterranean structures, Montali proposes (297) a Flavian construction date (contemporary with the town's promotion to *municipium* and the completion under Domitian. This line of argumentation seems to be valid and should be accepted until further data are available. The local theatre he thinks should be Flavian, with a redecoration of the *scaenae frons* under Commodus.

Combining the results of Jouffroy’s 1986 data-base with estimates of the cost of building an amphitheatre (c.300,000-400,000 HS: Wilkins), Montali sensibly suggests (297-99) that, rather than imperial, provincial governor’s or individual funding, the city of Sabratha bore the cost of construction of its amphitheatre.

The final section (VII.7) contains an analysis of the amphitheatre’s life-span, transformations and destruction. Montali thinks that not enough evidence remains or has been recovered by excavation to allow any attempt to distinguish distinct phases of construction. His current state of thought is that this
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Fig. 1. Hypothetical modular lay-out and reconstruction of the plan of the *cavea* of the Sabratha amphitheatre (= fig. 337 on p. 263).

Fig. 2. Hypothetical modular reconstruction of the section through the *cavea* of the Sabratha amphitheatre (= fig. 338 on p. 263).
Fig. 12. Plan of various means of access to the various tiers of seating (= fig. 358 on p. 294).
amphitheatre seems to be the fruit of a unitary project realised in one unique moment. He admits that there is no archaeological evidence for the date at which the amphitheatre was abandoned, but there is epigraphic evidence for its continued use into the late empire, perhaps the 4th c. He thinks it plausible that the earthquake of A.D. 306-310 caused damage and that the one of 365 may have caused the final destruction, particularly the collapse of the podium and those substructures supporting the upper seating tiers. The construction technique (entirely in *opus quadratum*) would have facilitated re-use of its fabric for other local projects, making it an attractive target for stone robbing, with the outermost sectors of the amphitheatre being the easiest to re-use, whereas the lower tiers of seating would have required more effort to remove (and therefore were left largely intact).

The post-abandonment stratum (US 21) in *Saggio* 3 contained 47 fragments of a Tripolitanian amphora (FV 211/95,) of local manufacture, datable to the end of the 6th or beginning of the 7th c. A thick stratum (US 0) of post-spoliation débris accumulated over US 21 indicates that a long time-span had elapsed since the robbing. Montali proposes a date during the 6th c., perhaps during the Justinianic era, for this systematic spoliation while admitting that it is not possible to exclude a 4th-c. robbing phase that would have been associated with the construction of the city’s first circuit wall in that century. It is also not possible to exclude a phase of spoliation in the Islamic period, although he thinks this unlikely due to the far fewer number of inhabitants at that time. His hypothesis for a Justinianic phase of robbing is based upon two premises: first, the amphitheatre was too far from the civic centre to be incorporated into the Byzantine circuit walls, but, because in its immediate post-abandonment state it still posed a strategic threat to the Byzantine nucleus built around the port, it wasrazed to its lowest seating to deny a fortified position near the civic centre. He does not think that the amphitheatre was ever used as a fortified habitat. He attributes the habitation of the *carceres* of the main east access, as well as the cross-walls closing off this entryway, to a late phase of undefended habitation; likewise to that phase he attributes the linking passageways that allowed access from one adjacent *carcer* to another, the installation of an upper level of wooden flooring in these chambers, and the subdividing walls within the subterranean galleries. D. J. Mattingly, however, proposed a Vandalic-era date for these structures. If this is indeed the case, then Montali’s arguments about a Byzantine razing to the ground of the amphitheatre make more sense. Cross-walls blocking off the E entrance to the arena would have had little purpose if the outer structures of the amphitheatre were not still virtually intact.

Appendix I is a series of annotated photocopied extracts from Bartoccini’s field notebooks of 1924-26.

Part II (pp. 321-549) is the catalogue of amphitheatres within the province of *Africa Proconsularis* (see fig. 13). In 2011 after the death of Qaddafi and the outbreak of civil war curtailed any possibility of fieldwork at Sabratha, Montali decided to conduct a field survey of amphitheatres mainly within the confines of what is now Tunisia, to create a corpus of data for comparative purposes. During the course of intensive field work over two months in 2011, his list grew to include 58 sites. Of these, only 40 proved to have verifiable evidence for the presence of an amphitheatre, but he did discover two previously unknown ones among them: Thizika and *Municipium Aurelium Commodianum*. The choice of this region was appropriate in two ways: following the so-called ‘Jasmine Revolution’ of January 2011 and

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29 186-93, CE 1-17: inscriptions on the seating of the podium and *ima cavea*; 210-12, CE 52-54: inscriptions found in the subterranean galleries of the arena.
30 The SE sector is the best preserved. This may be due to the underlying geological strata: a much more durable layer, sloping upwards from south to north, overlay a much more friable sandstone layer. The more durable stratum should have provided more resistance to earthquake damage (e.g., in the SE sector): Montali 74.
31 But see 304 n.916, where Montali cites D. J. Mattingly, *Tripolitania* (London 1995) 183, who thinks the later walls and habitations were part of a “fortified residence” during the Vandalic era, a reference also cited by A. Leone, *Changing townscapes in North Africa from late antiquity to the Arab conquest* (Bari 2007) 144.
32 Mattingly ibid. 183.
33 Montali’s dissertation, *L’anfiteatro di Sabratha* (Università degli Studi di Macerata, Dipartimento di Studi Umanistici, 2012) contains a second Appendix (383-406), a photographic archive of material relating to the amphitheatre in 1873, the 1920s, Bartoccini’s excavations of 1924-26, and on down to Di Vita’s excavations of 1971.
the driving out of President Zine Ben-Ali, Tunisia was in a fairly orderly state; then, whereas the cultural roots of Lepcis Magna lay with the E Mediterranean/Greek world and Egypt, Sabratha lay within the sphere of the western Phoenician empire of Carthage.34

In the catalogue entries, the exact location is given by GPS coordinates, the site is identified by its ancient and modern names, and a Google satellite image pinpoints the urban location of the amphitheatre.35 Next, Montali summarizes the community’s political status, usually the date at which the site achieved the status of municipium and/or colonia. He then provides a synopsis of early explorers’ and more recent investigators’ accounts and the details they provided about the amphitheatre (in some cases only epigraphic evidence is used to assign the location of an amphitheatre to an individual site, although Montali rejects J.-Cl. Lachaux’s36 assignment of an amphitheatre to sites where references only to

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35 The 2015 monograph, based upon his thesis (cf. supra n.33), added red circles around those monuments that are less conspicuous in their urban contexts — a major improvement.
36 J.-Cl. Lachaux, Théâtres et amphithéâtres d’Afrique Proconsulaire (Aix-en-Provence 1979); Montali,
boxing, athletics and gymnasium occur. A brief survey of the salient characteristics and dimensions of each amphitheatre follows, working outwards from the arena to the façade. Distinctive architectural details are documented with excellent photographs and plans or sections. Finally comes a table of dimensions with the source of the data (many entries include new measurements made on site by the author). The following catalogue entries are particularly full and helpful: 2. Acholla; 5. Bararus; 6. Bulla Regia; 9. Carthage; 20. Lepti Minus; 21. Leptis Magna; 33. Similltus; 34. Sufetula; 35. Thae-

The final section of Part 2 analyses the data accumulated in the catalogue entries under various categories. In N Africa, the amphitheatre was normally located outside the community. However, Carthage and Utica became engulfed within their expanding cities, and Henchir Dalia (no. 16) may — if it is an amphitheatre — be an urban example.

Tabella 15 presents the data for the nature of the support for the seating. Most amphitheatres were dug out of the hillside/hilltop or set in a quarry (the cut-and-fill type), with seating adding later; Thys-
drus’ anfiteatro minore (1st phase) (no. 48) had the seating itself dug out of the rocky outcrop. On the other hand, Carthage, Thapsus, Thysdrus and probably Meninx (no. 24) were freestanding, with seating resting upon vaulted substructures.

Tabella 16 compiles the orientation of the minor axes. There is evidently no set rule, the orientation being dependent upon local characteristics of terrain and choice of site. There is little evidence for alignment with civic grids, except in cases where the amphitheatre was notably close to the centre (e.g., Abbir Mauis, Mactaris, Thuburbo Maius, Carthage) or where there were peculiar local circumstances (e.g., Bulla Regia). In some cases, the alignment is demonstrably associated with a local symbolic or cultic element (e.g., at Similltus, where it points toward the Numidian/Saturn sanctuary on Djebel Chemtou, or at Bararus, where it points towards the local forum). Alignment was mostly determined by the location of approach roads to the city, but sometimes rural cadastration grids were the determining factor, as were coastlines, rivers or hills.

Montali admits that any attempt at classification by types is hampered by the nature of the database, which is variable and fragmentary. He suggests two approaches: by overall size and by the method of the support for the seating. For the first, he suggests three categories (Tabella 17): small amphitheatres whose major axes are less than 70 m; medium-sized ones, whose major axes are between 70 and 100 m;
and large ones, whose major axes are larger than 100 m. To the first belong 21 out of the 40 examples in the catalogue; to the second belong 11 out of 40; and to the third 8 out of 40. For seating support he proposes a 5-fold classification (Tabella 18): seating that is completely excavated; supported on substructures of continuous earthworks; supported on substructures of caisson-filled earthworks; supported on substructures of radial sectors of vaulting without an external *ambulacrum*; and supported on substructures of radial sectors of vaulting with an external *ambulacrum*, for which there are just 3 examples: Carthage, Thysdrus (‘Colosseum’) and Uthina.

He concedes that there is no universal definition of construction techniques: one scholar’s *opus incertum* is another’s *opus quasi-reticulatum*. Nonetheless, he distinguishes the following techniques: *opus incertum*; *opus reticulatum*; *opus vittatum regulare* (concrete faced with more regular courses of small, regularly-cut pieces); *opus vittatum irregulare* (concrete faced with somewhat irregular courses); *opus africanum*; and *opus quadratum*. See Tabella 19 for a summary of all the amphitheatres surveyed. Concrete vaulting uses wooden centering or fictile vaulting-tube technology, but sometimes (Lepcis Magna, Sabratha) cut stone in arches (*opus quadratum*). Montali notes that only in the Carthage amphitheatre is *opus reticulatum* used. Seressi, Sufetula and Thignica use *opus africanum* in their construction. *Opus testaceum* (concrete faced with bricks) is not found in any of the structures surveyed. In the context of small and medium amphitheatres (Mactaris, Simithus, Thignica, Thizika, Thuburbo Minus, Thysdrus minore [2nd phase]), *opus quadratum* is used only for decorative features, but in medium and large amphitheatres (Lepcis Magna, Sabratha, Sicca Veneria, Thapsus, Theveste, Thysdrus, Uthina) this technique is used in the overall construction; Thimisua, as a small building, is the exception being built entirely of *opus quadratum*.

Next come Tables on the arena and its annexes (Tabella 20), the *podium* wall (Tabellae 21 to 22), the seating (Tabella 23 and Tabella 24) and a grand summary of dimensions, estimates of the seating capacity, and dating information (Tabella 25). Appendice 2 shows that epigraphic evidence for boxing, athletic contests and gymnasia is not sufficient to determine that there was an amphitheatre at sites where particular inscriptions were found. Appendice 3 (‘*Venatores, venationes, le sodalità africane e la realtà sabrathense*’) addresses the complex topic of the numerous professional organizations of wild-beast hunters (*sodalitates venatorum*) found in *Africa Proconsularis*. Montali deals deftly with the considerable bibliography, especially the seminal contributions by A. Beschaouch, but C. Vismara’s major summary and analysis (cited above, n.22) must be included in any discussion of the troupes of beast-hunters. Based upon Beschaouch’s work, some 27 troupes have been identified (Tabella 26). Each troupe is distinguished by a unique combination of three elements: a special numeral, a particular symbol, and a deity especially associated with the group.

Public venues where iconographic evidence for one or more *sodalitates* is found include baths, fora, honorific arches and harbours. Private locales include bath suites connected with private dwellings, funerary inscriptions, and mosaic pavements in private houses. Montali suggests that baths were probably places where these groups met officially and socially, while domestic attestations are perhaps best seen as belonging to members of the groups. The full range of activities engaged in by these groups is still a matter for discussion, including the extent to which they engaged in commercial activities. There is certainly evidence for commercial activity related to the supply not only of beast-hunters but also the beasts themselves. Whether they engaged too in agricultural exports (olive oil, *garum*, wine) too is less certain.48

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42 With on-site measurements for Lepcis Magna, Mactaris, Sabratha, Sufetula, Thapsus, Thignica, Thuburbo Maius, Thysdrus (“Colosseum”), and Uthina.
43 On-site measurements for Agbia, Bulla Regia, Lepcis Magna, Mactaris, Meninx, Pheradi Maius, Sabratha, Simithus, Thapsus, Thignica, Thimisua, Thuburbo Maius, Thysdrus (“Colosseum”), and Uthina.
44 On-site measurements for Lepcis Magna, Mactaris, Municipium Aurelium [C[ommodianum]], Sabratha, Simithus, Thapsus, Thignica, Thimisua, Thuburbo Maius, Thysdrus (“Colosseum”), and Uthina.
45 On-site measurements for Lepcis Magna, Sabratha and Uthina.
46 On-site measurements for Lepcis Magna, and hypothetical reconstructions for Sabratha and Uthina.
47 On-site measurements for Agbia, Bulla Regia, Djobel Moraba, Mactaris, Municipium Aurelium [C[ommodianum]], Pheradi Maius, Sabratha, Simithus, Sufetula, Thapsus, Thignica, Thimisua, Thizika, and Thuburbo Maius.
48 See Vismara (supra n.23) 119.
Discussion

There are some potential areas of disagreement with Montali’s conclusions about the Sabratha amphitheatre.\textsuperscript{49} He thinks there is insufficient evidence for phases of alteration, expansion or repairs, apart from the evidence for robbing, but I find this unlikely, particularly in a seismically active zone. He points out the unique stonework lining the side walls of the major E entrance into the arena, especially the lintels over the entrances to the side chambers where blocks have interlocking toothed notches on the vertical joints (“conci dentati”), and this would seem to me to be evidence for a repair phase, perhaps following an earthquake.

A second area of concern is the methodology used to reconstruct the upper zones of seating and façade. Montali clearly states that his reconstructions are hypothetical and makes his methodology very clear. He depends upon a “modular unit”, the basis of which he postulates as 6 Punic cubits (or 3.0888 m, for a Punic cubit of 51.48 cm). He then uses this module to reconstruct those parts of the amphitheatre which are missing. It may be unwise to assume a structural uniformity dependent upon this module when those parts of the façade, particularly the well-preserved SE sector, which could be directly measured showed marked irregularities in the spacing and dimensions of the arcades (\textit{Tabellae} 4-5 on p. 273).

Montali displays a great breadth of bibliographical research.\textsuperscript{50} In some 600 pages of text and over 2000 footnotes there are remarkably few typographical errors. The archaeological study of the individual sites surveyed, along with their chronological elucidation, is a major strength of the work. The imaginative use of 3D laser-survey, combined with traditional hand mapping, has provided a very clear picture of what remains of the Sabratha amphitheatre. The photographs are of good quality and provide the necessary documentation.\textsuperscript{51} Montali’s style of exposition and argumentation is clear and correlated with the tables, photographs, drawings and sections. He points out clearly which parts of his reconstructions at Sabratha are hypothetical and the exact criteria upon which he builds his arguments. The excellent catalogue of comparative data from \textit{Africa Proconsularis} brings this data-set into the 21st c. with the inclusion of GPS location data and Google satellite images.\textsuperscript{52}

This is a major contribution on N African amphitheatres which I heartily endorse. Because of its hefty price, it will doubtless be acquired mainly by specialist libraries, but it will be of great value to all those who wish to learn about this important regional subset of Roman amphitheatres. It will long remain the ‘gold standard’ for those amphitheatres it surveys, not least in light of the political instabilities that continue to bring conflict and factionalism to the Maghreb and especially Libya, where ISIS tried to establish a caliphate, other militias have established terrorist training-camps, and the black-market trade in refugees bound for Europe has flourished.

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\textsuperscript{49} From my own brief investigation on site I postulated an initial construction with an inner ring of seating, later augmented by the outermost zone and façade. Montali, however, whose knowledge of this structure is of course far more intimate, sees no evidence for two phases of initial construction, which one must now accept. Secondly, I thought I could see evidence for a paved piazza around the exterior of the monument, mistaking the foundations of the robbed outermost zones of seating for a paved piazza.

\textsuperscript{50} There are a few important additions needed to the bibliography, notably Hufschmid (supra n.14); G. Legrottaglie, \textit{Il sistema delle immagini negli anfiteatri romani} (Bari 2008); Wittenberg (supra n.13); and Delattre 1898 (see n.37).

\textsuperscript{51} They are not, however, as well reproduced as the colour photographs in Montali’s dissertation, there being some loss of clarity in the black-and-white versions.

\textsuperscript{52} Additional information is available at the website www.amphi-theatrum.de, a treasure trove of information about individual amphitheatres organised by modern country, compiled by the team of R. Gogräfe, M. Buovac and M. E. Muñoz-Santos, and operated by the Direktion Landesarchäologie Mainz.