

## Where to find out more; a list of important books and articles about Roman artillery.

The most up to date information on most aspects of Roman artillery can be found in the editor's new book *Roman Imperial Artillery* (order form below). It contains an extensive bibliography. The problem is that much of the published evidence in books or journals is only available in specialist libraries. The most important books are:

Marsden E.W. 1969: *Greek and Roman artillery. Historical Development*. Oxford. Reprinted by Sandpiper, 1999. Indispensable, masterly survey of the historical background and defensive systems.

Marsden E.W. 1971: *Greek and Roman artillery. Technical Treatises*. Oxford. Reprinted by Sandpiper, 1999. Excellent editions, with English translations and discussion, of the Greek texts of Heron and Philon. Marsden's early death prevented his intended revision of the sections on Vitruvius and the *Cheiroballistra*.

Schramm E. 1918: *Die antiken Geschütze der Saalburg*. Reprinted 1980 with an introduction by D. Baatz. Saalburg Museum. An indispensable classic from one of the great exponents of experimental archaeology.

They are out of print, but available in many libraries. Unfortunately second hand bookshops charge astronomical prices for them.

The following books are either still in print or readily accessible in second hand bookshops:

Campbell D.B. 2003: *Greek and Roman Artillery 399 BC – AD 363*. Osprey.

Campbell D.B. 2006: *Besieged*. Osprey. Detailed accounts of Roman siege warfare.

Birley A. 2002: *Garrison Life at Vindolanda*. Tempus, 114-116 for the account mentioning *sinew*.

Bishop M.C. and Coulston J.C.N. : *Roman Military Equipment*. Batsford. Many illustrations and references to artillery. Second Edition 2006, Oxbow Books.

Jones R. H. 2011: *Roman Camps in Scotland*. Society of Antiquaries of Scotland. 154 – 156 on the Burnswark camps.

Schalles H-J *et al* 2010: *Die Frühkaiserzeitliche Manuballista Aus Xanten-Wardt*. Xanten Berichte Band 18. Verlag Philipp von Zabern. A detailed account of the discovery of the Xanten-Wardt scorpion and the painstaking efforts to conserve this highly important archaeological find. The description of the catapult as a *manuballista* is erroneous. The interpretation as a hand-held, hand-spanned weapon is unconvincing.

Sim D. and Ridge I. 2002: *Iron for the Eagles. The iron industry of Roman Britain*. Tempus. 2<sup>nd</sup> Edition 2012. Sim's authoritative experiments on the manufacture of weapons.

Stefan A. S. and Chew H. 2015: *La Colonne Trajane*. Picard Paris. Reproduces at large scale the original photographs of the Napoleon III casts of the Column. Pricy, but a must for those interested in the Column and the Roman Army.

The following articles are in journals usually available in university libraries:

### Published in *Britannia*:

Baatz D. 1978: 'Recent finds of ancient artillery', *Britannia* 9, 1-17. The publication of the Hatra, Gornea and Orşova finds.

Campbell D.B. 2003: 'The Roman Siege of Burnswark', *Britannia* 34, 19-33.

Campbell D.B. 1984: 'Ballistaria in first to mid-third century Britain', *Britannia* 15, 75-84. Discussion on the identification of artillery emplacements in forts at Hod Hill, High Rochester etc..

**Published in the *Journal of Roman Military Equipment Studies*:**

- Brouquier-Reddé V. 1999: 'L'équipement militaire d'Alésia d'après les nouvelles recherches', *JRMES* **8**, 277-88.
- Burns M. 2004: 'Pompeii under siege: a missile assemblage from the Social War', *JRMES* **14/15**, 1 - 9
- Iriarte A. 2000: 'Pseudo-Heron's *cheiromballistra* a(nother) reconstruction: I. Theoretics', *JRMES* **11**, 47-75. Reconstruction as a hand held, hand spanned weapon, based on the ms reading of 11/3 dactyls (25mm) for the rope-spring diameter.
- Vicente J.D. *et al* 1997: 'La catapulta tardo-republicana...de 'La Caridad' (Caminreal, Teruel)'. *JRMES* **8**, 167-199.
- Wilkins A. 1995: 'Reconstructing the *cheiromballistra*', *JRMES* **6**, 5-59. Text, translation and reconstruction as a winched bolt-shooter.
- Wilkins A. 2000: '*Scorpio* and *cheiromballistra*', *JRMES* **11**, 77-101. *Scorpio* reconstructed from revised Vitruvius text and finds of parts. Update on the *cheiromballistra*.
- Wilkins A. and Morgan L. 2018: 'A suggested reconstruction of Vitruvius' Stone-thrower: *de Architectura* X, 11, 4-9', *JRMES* **18**.
- Wilkins A. 2011: *The Xanten-Wardt Roman catapult, and catapult parts from Carlisle*. pdf on RMRS website 2011, forthcoming in *JRMES* Volume **20**.

**Published in other journals of local and specialist societies: some of these are available online and therefore downloadable:**

- Baatz D. 1980: 'Ein katapult der Legio IV Macedonica aus Cremona', *Römische Mitteilungen* **87**, 283 - 299. The full publication of the Cremona shield, washers etc..
- Baatz D. and Feugère M. 1981: 'Éléments d'une catapulte Romaine trouvée à Lyon', *Gallia* **39**, 201 - 209. The Lyon spring-frame and washers.
- Baatz D. 1985: 'Katapultteile aus dem Schiffswrack von Mahdia (Tunesien)'. *Archäologischer Anzeiger*, 679-691.
- Birley R. 1996: *Vindolanda Research Reports. New Series Volume IV. The Small Finds. Fascicule 1. The Weapons*. The Vindolanda Trust.
- Breeze D. 2011: 'Burnswark: Roman siege or army training ground?' *Archaeological Journal* **168**, 166-180.
- Campbell D.B. 1986: 'Auxiliary Artillery Revisited', *Bonner Jahrbücher* **186**, 117-132. Was artillery ever used by non-legionary troops ? Discussions on Hatra and High Rochester etc..
- Campbell D.B. 2011: 'Ancient catapults. Some hypotheses re-examined', *Hesperia (Journal of the American School of Classical Studies at Athens)* Volume **80**, 677-700. 677-685 contain a valuable analysis of the evidence for the invention of the catapult and the arrival of torsion artillery. He rightly refutes Rihl's suggestion that sling bullets were originally invented for catapult ammunition.
- Gudea N. and Baatz D. 1974: 'Teile spätrömischer ballisten aus Gornea und Orșova', *Saalburg Jahrbuch* **31**, 50-72. The full details of the Gornea and Orșova finds.
- Holley A. E. 1994: 'The Ballista Balls from Masada', *Masada IV: The Yigael Yadin Excavations 1963-1965. Final Reports*. 347-365. Israel Exploration Society. Jerusalem
- Holley A. E. 2014: 'Stone projectiles and the use of artillery in the siege of Gamla', *Gamla III: The Shmarya Gutmann excavations 1976-1989, finds and studies: part 1*, 35-56. Israel Antiquities Authority, Jerusalem.
- Iriarte A. 2003: 'The Inswinging Theory', *Gladius* XXIII, 111-140.
- James S.T. 1983: 'Archaeological evidence for Roman incendiary projectiles', *Saalburg Jahrbuch* **39**, 142-3.
- James S. T. and Taylor J.H. 1997: 'Parts of artillery projectiles from Qasr Ibrim, Egypt', *Saalburg Jahrbuch* **47**, 93-98.

- Jobey G. 1977-8: 'Burnswark Hill', *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society* **53**, 57-104. Excavations on the hillfort and Roman camps, and a summary of the missile finds.
- Kayumov I. and Minchev A. 2010: 'The Kambestrion and other military equipment from Thracia' *Proceedings of the VII Roman Military Equipment Conference, Zagreb* 327-342.
- Miks C. 2001: 'Die XEIPOBAΛΛΙΣΤΡΑ des Heron', *Saalburg Jahrbuch* **51**, 153-233. Reconstruction as hand spanned, following Baatz.
- Reid J.H. 2016: 'Bullets, ballistas and Burnswark', *Current Archaeology* **316**, 20-26.
- Richmond I.A. 1935: 'Trajan's Army on Trajan's Column', *Papers of the British School at Rome* XIII, 3-40. Reprinted with an introduction by Mark Hassall, 1982. *British School at Rome*.
- Schneider R. 1906: 'Herons Cheiromballistra', *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung* **XXI**, 142-168.
- Schramm E. 1917: 'Erläuterung der Geschützbeschreibung bei Vitruvius X 10-12'. *Sitzungsberichte der königlich preussischen Akademie der Wissenschaften, phil.-hist. Klasse*. **LI**, 1917, 718-734.
- Stiebel G.D. and Magness J. 2007: 'The military equipment from Masada'. *Yigael Yadin Excavations 1963-1965 Final reports*. Israel Exploration Society. Jerusalem 2007.
- Tittel K. 1913: Pauly-Wissowa, *Real-Encyclopädie* 1913, 1039-41. Rightly challenges Schneider's strange verdict on the *Cheiromballistra* manuscript.
- Ureche P. 2013: 'The Bow and Arrow during the Roman era'. *Ziridava Studia Archaeologica* **27**, 183-196.