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HORSEMEN IN FORTS OR PEASANTS IN VILLAGES? REMARKS ON THE ARCHAEOLOGY OF WARFARE IN THE 6TH TO 7TH C. BALKANS

Florin Curta

Abstract

Conspicuously absent from 6th to early 7th c. fortified sites in the Balkans are stirrups and other elements of equipment signalling the presence of cavalry troops. Hoards of iron implements containing stirrups have been wrongly dated to Late Antiquity; they are in fact of a much later date (9th–11th c. A.D.). Those hoards which can be dated to the 6th c. with some degree of certainty lack agricultural tools associated with large-scale cultivation of fields. As most such hoards found in Early Byzantine hill-forts typically include tools for the garden-type cultivation of small plots of land, they show that no agricultural occupations could be practised inside or outside 6th c. forts, which could satisfy the needs of the existing population. Those were, therefore, forts, not fortified villages.

‘Now, every year a force of cavalry (στρατιώται ἔφιπποι) from the other cities of Dalmatia used to collect at, and be dispatched from Salona, to the number of a thousand, and they would keep guard on the river Danube, on account of the Avars’. After defeating the Dalmatian cavalry force on their own territory, the Avars:

held the survivors captive and dressed themselves up in their clothes, just as the others had worn them, and then mounting the horses and taking in their hands the standards and the rest of the insignia which the others had brought with them, they all started off in military array and made for Salona. And since they had learnt by enquiry also the time at which the garrison was wont to return from the Danube (which was the Great and Holy Saturday), they themselves arrived on that same day. When they got near, the bulk of the army was placed in concealment, but up to a thousand of them, those who, to play the trick, had acquired the horses and uniforms of the Dalmatians, rode out in front. Those in the city [of Salona], recognising their insignia and dress, and also the day, for upon this day it was customary for them to return, opened the gates and received them with delight. But they, as soon as they were inside, seized the gates and signalising their exploit to the army, gave it the cue to run in and enter with them. And so they put to the sword all in the city, and thereafter made themselves masters of all the country of Dalmatia and settled down in it. (Const. Porph. DAI 30.18–58, trans. in Moravcsik and Jenkins (1967) 141 and 143).
Thus did Emperor Constantine Porphyrogenitus explain in the mid-10th c. the fall of Salona, an event of the early 7th c. There are many reasons for not taking this story literally: the tale has long been recognised as a rehashing of that in chapter 29 of the *De administrando imperio* (itself based on information obtained probably from local sources in Split), with Avars replacing Slavs. Moreover, ever since J. B. Bury, scholars have regarded the story in chapter 30 as a later addition, perhaps even following the death of Emperor Constantine Porphyrogenitus. The numismatic evidence shows that the destruction of Salona could not have possibly taken place as described by Constantine Porphyrogenitus, since in the early 630s Salona had still not been deserted. At no point during its long history did the Roman province of Dalmatia expand as far to the north or north-east as the Danube. Despite claims to the contrary, no evidence exists so far of an Avar settlement in Dalmatia. One might suppose, therefore, that the episode of the Avar conquest of Salona in the *De administrando imperio* is a strategy its author adopted to explain both the reduction of the Roman population of Dalmatia to the ‘townships on the coast’ and the subsequent conquest of the interior by Croats.

But not everything in this episode is made up. An independent cavalry corps recruited from among inhabitants of Dalmatia was known since the 3rd c., and there are good grounds to believe that some remnants of that survived into the early 7th c. Some are ready to take Constantine Porphyrogenitus’ testimony at face value and argue that the ‘force of cavalry’ recruited in the early 600s from the cities of Dalmatia and dispatched to Salona was an urban militia. Others maintain that that force was indeed the reinforcements, which in the early 580s were expected to relieve Sirmium from the Avar siege. Either way, the point about Emperor

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2 Bury (1906) 52.
4 Advocates of an Avar presence in Dalmatia were both historians (Klaić (1990) 13–14) and archaeologists (Kovačević (1966)). For far more skeptical treatments of sources, see Pohl (1988) 282 and (1995); Rapanić (2001).
6 Ferluga (1978) 73.
7 Pillon (2005) 55–56 citing Menander the Guardsman. There is, however, no mention of cavalry units from Dalmatia in any of the surviving fragments from Menander’s work—see Blockley (1985).
Constantine’s story of how the Avars conquered Salona was that the military equipment of the Dalmatian horsemen was radically different from that of the Avars: it was only by disguising themselves as Dalmatian horsemen that barbarians could enter the city. The unexpected loss of Dalmatia to the barbarians was brought about by Avar travestiers.

However, the impression one gets from examining sources chronologically closer to the events narrated in the De administrando imperio is that the military travesty actually worked in the opposite direction. When the author of a late 6th or early 7th c. military treatise known as the Strategikon made recommendations as to the organisation and equipment of Roman cavalry troops, he left no doubt as to the source of inspiration for his advice:

The horses, especially those of the officers and the other special troops, in particular those in the front ranks of the battle line, should have protective pieces of iron armor about their heads and breast plates of iron or felt, or else breast and neck coverings such as the Avars use (κατὰ τὸ σχῆμα τῶν Ἀβάρων). The saddles should have large and thick cloths; the bridle should be of good quality; attached to the saddles should be two iron stirrups, a lasso with thong, hobble, a saddle bag large enough to hold three or four days’ rations for the soldier when needed. There should be four tassels on the back strap, one on top of the head, and one under the chin. The men’s clothing, especially their tunics, whether made of linen, goat’s hair, or rough wool, should be broad and full, cut according to the Avar pattern (κατὰ τὸ σχῆμα τῶν Ἀβάρων), so they can be fastened to cover the knees while riding and give a neat appearance.\(^8\) (Strategikon 1.2.35–49, trans. Dennis (1984) 13).

Even though stirrups are not specifically attributed to the Avars, they are mentioned here in a passage marked twice and with the same words by reference to Avar practices. This is in fact a chapter of the Strategikon in which its author insists that Roman cavalrymen employ a number of devices, all said to be of Avar origin: cavalry lances, ‘with leather thongs in the middle of the shaft and with pennons’; round neck pieces ‘with linen fringes outside and wool inside’; horse armor; long and broad tunics; and tents, ‘which combine practicality with good appearance’.\(^9\) In this context, the mention of pairs of stirrups to be attached to saddles must also be interpreted as a hint to Avar practices. After all, cavalry lances, horse armour, and tents are also attributed to the Avars in the chapter

\(^8\) Stirrups are also mentioned, without any reference to the Avars, in Strategikon 2.9.22–28.

dedicated to ‘Scythians, that is Avars, Turks, and others whose way of life resembles that of the Hunnish people’, from which stirrups are nonetheless absent.\textsuperscript{10}

Primarily on the basis of the \textit{Strategikon}, scholars have by now accepted the idea that “contacts with nomadic groups who inhabited or passed through steppe regions north of the Danube and Black Sea made it possible for central Asian or even more easterly military equipment and practices to be transferred to the Balkans”; such is the case of the stirrup, which was adopted by Roman cavalrymen in the late 6th c. from the Avars, “who ultimately brought it from the eastern steppes and China”.\textsuperscript{11} Others, however, refuse to give the Avars any credit for the introduction of the stirrup to Europe, and instead maintain that the earliest Avar stirrups were either imports from, or imitations of specimens originating in the empire.\textsuperscript{12} The ‘stirrup controversy’ has generated a considerable amount of literature, which had very little, if any impact, on studies dedicated to the Late Roman or Early Byzantine army.\textsuperscript{13} There is to date no special study dedicated to the archaeology of the Avar influence on Roman military equipment and tactics.\textsuperscript{14}

Nor has any attempt been made to assess the testimony of the \textit{Strategikon} in the light of the archaeological evidence pertaining to the Early Byzantine period.\textsuperscript{15} Were Roman troops in the 6th c. Balkans equipped and armed as recommended by the author of the \textit{Strategikon}? Were Avar attacks on the Balkan provinces of the empire repelled by means of cavalry troops, or was defence based more on the network of hill-forts that had been built during the long reign of Emperor Justinian? Were such fortified settlements a military response to a particular form of warfare, which was prevalent in the 6th c., or did they serve as refuge for the rural population in their environs? Can weapons and agricultural implement

\textsuperscript{11} Haldon (2002) 66. The case for an Avar influence on Roman or Early Byzantine military equipment was made by Szádeczky-Kardoss (1981). For Avar innovations in military equipment, see Hofer (1996); and Nagy (2005).
\textsuperscript{12} White (1962) 22; Freeden (1991) 624. For a critique of such views, see Schulze-Dörrlamm (2006).
\textsuperscript{14} By contrast, Early Byzantine influence on Avar culture has recently been the object of several studies, most prominently Garam (2001).
\textsuperscript{15} For the archaeology of Early Byzantium, see Rautman (1990); Sodini (1993); Zanini (1994).
finds, especially those from hoard assemblages excavated on Early Byzantine hill-fort sites, help determine whether their primary function was military or civilian?

In this essay I argue that answers to those questions, although implicit in the abundant literature on the archaeology of the 6th and early-7th c. Balkans, constitute a compelling basis for rejecting the current interpretation of the military infrastructure of the region during the last century of Roman rule. My discussion of the partial conclusions drawn from the analysis of Avar-age stirrups and hoards of iron implements and weapons found on Early Byzantine hilltop sites is intended as a reminder that one cannot simply use the archaeological evidence as an illustration of what is already known from written sources.

**Stirrups**

No stirrups have so far been found that could be dated, with any degree of certainty, before the Avar conquest, in the late 560s, of the Carpathian Basin. The earliest stirrups that could safely be attributed to the Avar age are apple-shaped, cast specimens with elongated suspension loops and flat treads slightly curved inwards, such as that found in a sacrificial pit in Baja (fig. 1/1).

Equally early are the stirrups with circular bow and eyelet-like suspension loop. Apple-shaped stirrups with elongated suspension loops do not appear after ca. A.D. 630, but those with circular bow and eyelet-like suspension loops remained in use throughout the 7th c., and can be even found in assemblages dated to the early 8th c. Two stirrups with elongated suspension loops have been found in association with Byzantine gold coins struck for Justin II (at Szentendre) and Maurice

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16 Ambroz (1973) 91; Bálint (1993) 210. The year 568 is traditionally viewed as the beginning of the Avar age, primarily because that is when, according to the written sources, the Avars defeated the Gepids and forced the Lombards to migrate to Italy. However, there is so far no solid argument against dating the earliest Avar-age assemblages to before 568, see Stadler (2005) 128. ‘Early Avar’ is a technical term referring to the first stage of the chronological model of Avar archaeology, which was established by Ilona Kovrig (1963) on the basis of her analysis of the Alattyán cemetery and recently refined by Peter Stadler on the basis of calibrated radiocarbon and dendrochronological dates, see Stadler (2008) 47–59.

Fig. 1 Early Avar, apple-shaped cast stirrups with elongated suspension loop: 1—Baja, sacrifijicial pit; 2—unknown location in northeastern Bulgaria; 3—Pernik, Early Byzantine hill-fort; 4—Nevolino, grave 122; 5—Strezhevo, hoard of iron implements. (After Hampel (1905); Iotov (2004); Goldina and Vodolago (1990); and Janakievski (1980).)
(at Nyíregyháza-Kertgazdaság). Neither one of these could be dated to the 6th c., but such a date could nonetheless be advanced for other, similar specimens found both within and outside the area of the Carpathian Basin, which was controlled ca. 600 by the Avars. Several apple-shaped stirrups with elongated attachment loops found in Hungary (Mikebuda, Bicske, and Szeged-Óthalom) were richly decorated with a damascened ornament, which is most typical for artefacts found in assemblages firmly dated to ca. 630.

Elsewhere in eastern Europe, the evidence for pre-7th c. stirrups is equally ambiguous (fig. 2).

Three stirrups with circular bow and eyelet-like suspension loop have been found in two separate burial chambers of the Klin Iar cemetery near Kislovodsk in the northern Caucasus region. Because the two burial chambers also produced solidi struck for emperors Maurice and Heraclius, respectively, the stirrups are regarded as among the earliest, if not the earliest specimens of their kind in the entire Caucasus region. Another stirrup of an unknown type was associated with a drachma struck in 545 for the Sassanian King Khusro I in a burial assemblage of a large cemetery excavated in the 1980s in Verkhniaia Saia, at the foot of the Ural Mountains. An apple-shaped specimen with elongated attachment loop

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18 Hampel (1905) 343–45; Csallány (1958) 49–50 and 66–68. The coin found together with the Szentendre stirrup was a tremissis struck for Justin II in Constantinople between 565 and 578, while that found together with the Nyíregyháza stirrup was a light (23 carat-) solidus struck for Emperor Maurice in Constantinople between 584 and 602. See Somogyi (1997) 67 and 87.

19 Curta (2008a) 306–207.


21 Härke and Belinskii (2000) 201–202. Two stirrups have been found beside a male skeleton in burial chamber 341, together with pressed silver belt mounts. Two solidi struck for Maurice (582–602), one freshly minted, the other worn, were found with the neighboring skeleton. Stirrups and solidi are therefore not necessarily contemporary. A fragmentary stirrup (most likely another specimen with eyelet-like suspension loop) came from burial chamber 363, together with two skeletons, a male and a female. A pendant made of a solidus struck for Heraclius of 634–41 was found next to the skull of the female skeleton. Again, the association of stirrup and coin is not warranted. I am grateful to Heinrich Härke for the details of his unpublished excavations in Klin Iar, including the complete illustration of the grave goods found in burial chambers 341, 360, and 363.

22 Grave 19: Goldina and Vodolago (1990) 29–30. Another stirrup was found in grave 45 of that same cemetery together with a Soghdian imitation of a Sassanian drachma of Varakhran V (421–39), see Goldina and Vodolago (1990) 31. Such imitations are known as ‘Bukharkhudat’ coins because they were struck in Bukhara, but they are notoriously difficult to date; no agreement exists on their exact chronology and historical circumstances surrounding their production. The coin from grave 45 could have just as well been minted in the 6th as in the 7th c.
Fig. 2  Distribution of late 6th to 7th c. stirrups in south-eastern Europe. The cluster in the Carpathian Basin is of Early Avar, apple-shaped cast stirrups with elongated suspension loop and flat tread slightly bent inwards. Smallest circle, thereafter up to 2, 3, and 7 specimens, respectively.
(Data after Stadler (2005), with additions.)
is known from a burial assemblage from Burakovo in Tatarstan, found with a double-edged sword and belt mounts with open-work decoration known as ‘Martynovka mounts’, dated to the second half of the 6th or to the early 7th c.\textsuperscript{23} Several stirrups with circular bow and eyelet-like suspension loop from the Ural region and the steppe lands north of the Black Sea were also found in association with such typically 6th c. artefacts as belt mounts with open work decoration, foil mounts with pressed ornament, or shoe buckles with rectangular plates.\textsuperscript{24} Grave 122 in Nevolino produced an apple-shaped stirrup with elongated suspension loop (fig. 1/4); unfortunately, there were no coins and no chronologically sensitive artefacts among the grave goods from that burial assemblage.\textsuperscript{25} A comparable stirrup was in the fill of a robbed inhumation grave from the Birsk cemetery in Bashkortostan; the grave produced a Khwarazmian coin struck between 750 and 760—which must be regarded as a stern warning against hastily assuming early dates for all stirrups with elongated attachment loops.\textsuperscript{26}

Nonetheless, where available, the archaeological evidence points unmistakably to a 7th c. date. Such is the case of the stirrup of an unknown type, found together with a solidus struck between 661 and 663 for Emperor Constans II, in a barrow of the Romanovskaia cemetery on the Lower Don River.\textsuperscript{27} Likewise for the apple-shaped stirrup from the rich burial assemblage from Malo Pereshchepyne in Left-Bank Ukraine, which was attributed to Kubrat, the Bulgar ruler allied with Emperor Heraclius.

\textsuperscript{23} Izmailov (1990) 64 and 79 fig. 2. For Martynovka mounts, see Somogyi (1987); Bálint (1992); Gavritukhin and Oblomskii (1996) 25–28. Such mounts were produced by means of two-piece moulds, such as that found in a workshop in Caričin Grad: Bavant (1990) 221–23.

\textsuperscript{24} Belt mounts with open work decoration: Goldina and Vodolago (1990) 30 (grave 28 in Verkhniaia Saia) and 51 (grave 95 in Nevolino). Foil mounts with pressed ornament: Semenov (1988) 97–99 and 100 fig. 2.3.4 (grave 17 in Novohryhorivka). Shoe buckles with rectangular plate: Goldina and Vodolago (1990) 124 pl. 27.43 and 146 pl. 49.11 (grave 140 in Brody); Rashev (2000) 24 (Portove, barrow 12, grave 5). For 6th and 7th c. assemblages in the steppe lands north of the Black Sea, see also Curta (2008b).

\textsuperscript{25} Grave 122: Goldina and Vodolago (1990) 53 and 146 pl. 49.10. The grave also produced a bridle bit, an iron buckle and a handmade bowl. On the other hand, grave 122 was situated in the middle of the cemetery, a position strongly suggesting a date earlier than that of graves found on the fringes, which could be dated to the late 7th, 8th, or even 9th c.

\textsuperscript{26} Grave 382: Mazhitov (1990) 261, 264–65, and 263 fig. 2/16. The Khwarazmian coin was perforated, an even stronger indication of a late date. Among other grave goods from that burial assemblage, there was also a so-called pseudo-buckle. The chronology of such belt mounts cannot be pushed beyond A.D. 700, see Garam (2000) and Gavritukhin (2001). The association between stirrup and pseudo-buckle is also attested in grave 202 in Nevolino, for which see Goldina and Vodolago (1990) 59 and 146 pl. 49.12.

\textsuperscript{27} Semenov (1988) 109.
against the Avars. The last coins from that assemblage were 18 light (20 carat) *solidi* struck for Constans II between 642 and 646.28 Most other stirrups from the steppes north of the Black Sea should date to the later 7th c., if not after 700.29

Given the insistence with which the author of the *Strategikon* recommended imitating Avar practices, as well as the abundance of stirrups found in the region adjacent to the northern frontier of the empire, the number of specimens from the Balkans that could be dated to the late 6th or early 7th c. is surprisingly small (fig. 3).

Leaving aside misidentified artefacts and mounting devices occasionally found on Early Byzantine sites, there are so far just two early stirrups known from the Balkans.30 One is an isolated find from Pernik, more likely from the Early Byzantine than from the early medieval occupation phase on that site (fig. 1/3);31 the other, unprovenanced, is said to be from north-eastern Bulgaria (fig. 1/2).32 No stirrup with circular bow and eyelet-like suspension like that from Pergamon has so far been found on any 6th or early 7th c. site in the Balkans.33 Why are there not more stirrup finds from Early Byzantine hill-forts in the Balkans? The presence of cavalry troops in the region is clearly documented for the period during which some of the earliest apple-shaped stirrups with elongated attachment

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28 Aibabin (1974) 32 and 33 fig. 3; Werner (1984) pl. 7.15. The Malo Pereshchepyne stirrup was made of silver, not bronze. For the coins, see Sokolova (1995). All light *solidi* struck for Constans II were perforated, and 9 of them had precious stones set on the obverse. For Kubrat and Malo Pereshchepyne, see Werner (1985); Werner (1992b); L’vova (2000). For a chronological *mise-au-point* of the problem, see Gavritukhin (2006).

29 Novopokrovka: Kukharenko (1952) 36–37 and 39; Hlodosy: Smilenko (1965); Zachepilovki: Smilenko (1968); Iasinovo: Aibabin (1985) 191–96 and 192 fig. 1.2; Voznesenka: Grinchenko (1950) pls. 1.1–4 and 6.9 and Ambroz (1982). The stirrup found in grave 204 of the large cemetery excavated in Shokshino (north-western Mordovia) may also be of 7th c., although no other grave goods are known from that assemblage. See Cirkin (1972) 163 and 162 fig. 2.21. Seventh century stirrups are also known from cemeteries excavated in the present-day Kaliningrad *oblast* of Russia, not far from the Baltic Sea shore, see Kleemann (1956) 115 and pl. 31a.

30 Misidentified artefacts: Herrmann (1992) 175. I owe a debt of gratitude to Kristina Rauh for clarifying the identification of the iron artefact from Rupkite as definitely *not* a stirrup. See Werner (1984b) for mounting devices, whose function was probably not unlike that of the stirrups Early Byzantine corpsmen attached to the front and back of their saddles in order to transport the wounded on horseback (*Strategikon* 2.9.22–28). None of the other stirrups mentioned in Bugarski (2007) 258 can be dated to the 6th or 7th c.


Fig. 3  Distribution of 6th and 7th c. stirrups in Eastern Europe.
loops were deposited in Early Avar burials. Moreover, the presence of at least some horses on Early Byzantine sites is betrayed by occasional finds of bridle bits, such as those from Caričin Grad and Pazarište (Ras). But were there any troops stationed in the forts scattered across the Balkans, which employed the equipment of Avar inspiration recommended by the author of the *Strategikon*?

Besides ‘Avar’, three-edged arrow heads and battle axes, there is some evidence of armour and composite bows. Missing, however, are lance-heads such as those found together with Early Avar stirrups. It has recently been noted that in Hungary, Early Avar stirrups appear more often with lance-heads than with any other kind of weapon. Lance-heads appear

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34 Cavalry troops accompanying Tatimer to Constantinople in 593: Theoph. Sim. 6.7.13. During the attack on the 600 Sclavenes returning from a raid in the region of Zaldapa, Aquis, and Scopi (594), the barbarians were throwing javelins at the horses of the Roman cavalrymen: Theoph. Sim. 7.1.7. Those were clearly cavalymen, but were they members of the local garrisons or troops from the field armies moved into the region? In the case of the 593 episode, the answer is very simple: Tatimer had been sent by Priscus (the general in command of the field army operating north of the Danube) to Emperor Maurice in Constantinope with the prisoners captured after the attack on Ardagastus’ territory. Tatimer was ambushed by Sclavenes and escaped only when infantry troops stationed in the area intervened, an indication that there were no cavalry troops available. Similarly, the episode of 594 involved the advanced guard of the field army under Peter (Emperor Maurice’s brother). The Romans who dismounted and approached the wagon circle were soldiers in the field army, not members of local garrisons. There is no indication that the Armenian troops mentioned by Sebeos (History 15, in Thomson (1999) 31) were about to move permanently to the Balkans. There is no mention of cavalrymen in Sebeos, but assuming that troops included cavalry units, then it is significant that horsemen needed to be brought from outside. Therefore, the idea that the cavalry troops occasionally mentioned in relation to military events in the Balkans “are likely to have been drawn from those units stationed in the Balkans” has absolutely no support in the existing evidence.

35 Bavant (1990) 242 fig. 171 and pl. 43.288–90; Popović (1999) 73 and 112 fig. 59.7.

36 Three-edged arrow heads: Stoichev (2005); Dimitrov et al. (1965) 56 fig. 25; Hermann (1992) 17; Uenze (1992) pl. 31.24–25; Janković (1981) 179 fig. 72a; Gabričević (1986) 89 fig. 22.3; 6; Mano-Zisi (1958) 326 fig. 36; and Bavant (1990) pl. 40. 237–42; Jeremić and Milinković (1995) 223 figs. 28g; Milinković (1995) 235 fig. 10 d; Sretenović (1984) 233 fig. 216.1; Popović (1999) 112 fig. 59.4; Mikulčić (2002) 126 fig. 15.1–3; 156 fig. 47.12–13, and 290 fig. 185.7; Milinković (2006) 249 fig. 4. Battle axes: Uenze (1992) pl. 21.2.3; Bavant (1990) pl. 38.216–18; Jeremić (1995) 206, fig. 23b; Sretenović (1984) 233, fig. 216.6. For lamellar armour, see Bugarski (2005). Bone or antler reinforcement plates for composite bows are known both from frontier forts and from sites in the interior; however, not all of them are securely dated to the late 6th or early 7th c., see Petković (1995) 102 and pl. 38.3; Čermanović-Kuzmanović (2004) 241; Ivanišević and Špehar (2005) 147–48 and 148 fig. 9/1; Uenze (1992) pl. 43.4; Milinković (2006) 249 fig. 4. For the reconstruction of the composite bow on the basis of the archaeological record of early Avar-age burial assemblages, see Fábián and Ricz (1991); Ricz and Fábián (1993). For the archaeological evidence of Avar lamellar armour, see Csallány (1958–1959), (1969–71) and (1982).

37 Curta (2008a) 310–u. Almost half of all burial assemblages with lances excavated in Hungary and the neighbouring regions are of the Early Avar age, see Szentpéteri (1993) 216.
singly in Early Avar graves, but there are also instances of two or three per burial assemblage, often of different types. The strong correlation between stirrups and lance-heads suggests that stirrups were employed primarily by lancers. Stirrups, on the other hand, were particularly important when the amount of body armour increased and, when wielding multiple weapons, especially when switching from bow to lance in action, they made the rider more top-heavy and susceptible to lose his balance. In other words, stirrups were the hallmark of a class of ‘professional’ mounted warriors, who could afford armour for themselves and for their war horses, a multitude of high-quality weapons, and a special training for a highly versatile form of warfare. Early Avar lances had narrow, short, and solid blades of high-quality steel, designed to pierce armour. These may well have been the κοντάρια, to which the author of the Strategikon refers in relation to the Avars, and which modern commentators translate as either ‘throwing spears’ or ‘stabbing lances’. Some argue that, much like apple-shaped stirrups with elongated attachment loops, such lance-heads were of Byzantine manufacture. If so, their absence from the archaeological record of the 6th to early 7th c. Roman provinces in the Balkans is remarkable. None of the lance- or spearheads found on Early Byzantine hill-fort sites in the region bears any resemblance to the weapons accompanying Avar warriors to their graves.

Equally different from Avar weapons are the swords from Sadovec, Caričin Grad, and Balajnac. Excavations of several Early Byzantine sites produced shield bosses or handles, which are otherwise absent from Early Avar burial assemblages with stirrups. Judging from the existing evidence, the garrisons of 6th to 7th c. Balkan hill-top sites were more likely to have fought as infantry than as cavalry troops. Those were soldiers equipped with spears, swords, battle axes, and shields; some may

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38 Curta (2008a) 312. For switching from bow to lance, see Strategikon 1.12–16; for switching from lances to bows, a particularly Avar speciality, see Strategikon 11.2.24–27.

39 Csiky (2007) 310–11 and 309 fig. 2 (type I/1).

40 Strategikon 1.2.17 (κοντάρια καβαλλαρικά) and 11.2.24 and 26. See also Nagy (2005) 137.


42 For lance- and spear-heads on Early Byzantine hill-fort sites, see Gabričević (1986) 89 fig. 22.5, 7 (Rtkovo); Deroko and Radić (1950) 138 fig. 41; and Bavant (1990) pl. 40.246, 247 (Caričin Grad); Jeremić and Milinković (1995) 223 fig. 28 c-f and 224 fig. 30 c-e (Bregovina); Marušić (1962) pl. 4.1, 2 (Nezakcij); Lazaridis (1965) 327–34 (Nea Anchialos); Romiopoulou (1973–74) 697 (Kitros); Agallopoulou (1975) 239 (Ladochori).


have used composite bows, but, again, they were not mounted archers. While horses may have indeed existed in some forts, there is no sign of the permanent presence of horsemen with equipment of Avar inspiration. If any Roman cavalrymen battled the mounted Avar warriors in the Balkans, they must have been highly mobile troops coming from outside the region. They most certainly were not from units stationed on a longer term in any of the forts excavated so far in the Balkans.

HOARDS

In spite of the incontrovertible testimony of the *Strategikon*, there is very little evidence for the use of stirrups in the late 6th or early 7th c. Balkans. Nonetheless, some scholars have recently claimed that not only were stirrups used during the Early Byzantine period, but they were also produced in the Balkans. Their main support for this is the presence of an apple-shaped specimen with elongated suspension loop among the 15 stirrups found in the Strezhevo hoard (figs. 1/5; 4).

Given that apple-shaped stirrups with elongated suspension loops are typical for Early Avar assemblages in Hungary and the surrounding regions, the conclusion was drawn that the hoard itself must be dated to the same period. A 6th c. date was also advanced for some of the artefacts with which the stirrups were associated in the hoard assemblage, especially two L-shaped keys and a processional cross. Analogies for the keys were found among artefacts from a number of Early Byzantine sites in Serbia (Caričin Grad, Jelica, Gornij Streoc, Bregovina, and Gamzigrad), even though none of them was found in an archaeological context securely dated to the 6th or early 7th c. In fact, L-shaped keys with twisted handles very similar to one of the two Strezhevo keys come from Early Medieval hoard assemblages in Bulgaria and Moravia, some found

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46 Janakievski (1980). The hoard was found during salvage excavations carried out in 1979 next to the basilica with mosaic pavement within the Early Byzantine fort at Kale.
Fig. 4  Hoard of iron implements found in Strezhevo (Macedonia), selected artefacts: L-shaped key, sickle, bridle bit, processional cross, and stirrups.  
(After Janakievski (1980).)
together with precisely-dated artefacts, such as Late Avar strap-ends and belt mounts (which cannot be earlier than \textit{ca.} 750), or Byzantine coins struck for Emperor John Tzimiskes (969–76).\footnote{Coins of John Tzimiskes: Chelopech (Mutafchiev (1914) 264). Late Avar strap ends and belt mounts: Moravský Jan (Bartošková (1986) 35 fig. 12. 3, 5–6, and 8–10; Müller (1996) 370 fig. 5.327). The strap ends and belt mounts from Moravský Jan are specimens of Zábojník’s classes 90, 113, 229, and 253, respectively. Such belt fittings are most typical for the Late Avar III phase (\textit{ca.} 750–\textit{ca.} 780). See Zábojník (1991) 241; Stadler (2008) 59.} Conversely, keys known from assemblages securely dated to the 6th c. are of a completely different kind and bear no resemblance to those from the Strezhevo hoard.\footnote{See, for example, keys from a small hoard of casts found in Drobota Turnu-Severin: Bejan (1976). This hoard must dated to the (late) 6th c., as affirmed by the presence within this of cast fibulae with bent stem—see Curta (2001) 245.} Similarly, the best analogy for the iron processional cross from Strezhevo is the 10th or early 11th c. specimen at Sredishte (Bulgaria), and not the crosses from Carićin Grad, Sadovec, or Gamzigrad, all of which were suspension, and not processional crosses.\footnote{Bugarski (2007) 260. For the processional cross from Sredishte, see Iotov (2004) 83 and 81, fig. 39.546. For iron processional crosses in Bulgaria, all dated after \textit{ca.} 900, see Totev (2002) and (2005).} A late, most likely 10th c. date for the Strezhevo stirrup is also strongly supported by the chronology of the 14 stirrups of Iotov’s class 5A, none datable before \textit{ca.} 900.\footnote{Iotov (2004) 147 and 151–52 and (2007).} 

Tenth and 11th c. stirrups are known from two other hoard assemblages found on Early Byzantine hill-fort sites in the Balkans. One of them was found behind the eastern gate of the Early Byzantine fort in Troianov most near Kladovo, on the right bank of the Danube, in Serbia, together with a bronze censer. The latter bears no resemblance to any of the 6th c. censers known from the Balkans, and despite claims to the contrary, cannot be dated before the 10th c.\footnote{For the hoard, see Garašanin and Vašić (1987) 94, 101 fig. 12, and 102 fig. 13–14. For the dating of the stirrup, see Iotov (2004) 152. Bugarski (2007) 258 wrongly insists on a 7th c. date. For finds of 6th c. censers in the Balkans, see Rendić-Miočević (1952) 202 fig. 1; Čorović-Ljubinković (1954) and (1956); Atanasov (2004) pl. 6.} The Troianov most hoard must therefore be associated with the later, medieval (10th to 12th c.) occupation of the site.\footnote{For the medieval occupation in Troianov most, see Marjanović-Vujović (1987); and Milenković (1997).} Similarly, the hoard found within the Early Byzantine fort in Dolishte, not far from Varna, in Bulgaria, is of a much later date, containing, among other implements, a stirrup with elliptic bow of Iotov’s class 8A, which can only be dated after \textit{ca.} 900, if not 1000.\footnote{Kouzov (2000). For the chronology of stirrups with elliptic bow, see Iotov (2004) 158.}
These are stern reminders that not all assemblages found on sites otherwise known to have been occupied during the 6th and 7th c. should automatically be attributed to the Early Byzantine phase of occupation. More than 20 hoards have so far been found on Early Byzantine fortified sites in the Balkans (see Table 1; fig. 5).

Some of them have been used as an illustration not only of a late antique occupation of those sites, but also of their ‘ruralisation’, given the presence of agricultural tools among items found with such assemblages.55 In at least two cases, the hoards themselves have been dated to the 6th or

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55 Most typical for this approach is Popović (1990) and (1994–95). For the ruralisation of Balkan urban centers in the Balkans between the 5th and the 7th c., see Popović (1982).
7th c. because of being found on Early Byzantine sites. Single or hoard finds of agricultural implements have then been used to determine the function of such sites: in spite of their fortification, they were supposedly not military, but civilian settlements. That besides agricultural tools, some hoards have also produced weapons, does not seem to have been an impediment for such an interpretation, nor was the existence of a medieval occupation phase at many of these hoard sites.

A very different interpretation, however, may be advanced on the basis of a seriation of hoards of iron implements (including those with stirrups) by correspondence analysis. With this technique, which has been introduced to archaeology only during the last 20 years or so, the relationships between hoards, those between artefact categories, and those between artefact categories and hoards, may be analysed together and represented in the same scattergram or series of scattergrams produced by the plotting of pairs of orthogonal axes. In addition to 21 hoards found on Early Byzantine sites, the analysis has also taken into consideration 11 other hoards of a certainly medieval date. The scattergram displaying the relationships between hoards shows a cluster in the first, and another in the third and fourth quadrants (fig. 6).

Judging from the scattergram displaying the relationships between artefact categories (fig. 7), a few outliers (Preslav 2, Stambolovo, and Montana 2) include such typically medieval tools as bill-knives of Henning’s class G5, sickles of Henning’s class H4, scythes of Henning’s class I5, and so-called ‘ogribki’.

56 Antonova (1973) 139; Milinković (2001) 102.
57 Henning (1986) 107; Werner (1992) 415. The most recent advocate of this idea is Kirilov (2007).
58 For Trojanov most, see above, n. 53. For Pernik, Shumen, Odărci, Montana, Razgrad, and Gamzigrad, see Changova (1992); Antonova (1975) and (1985); Doncheva-Petkova (1986); Kurnatowska and Mamzer (2007); Stanilov and Aleksandrov (1983); Georgieva (1961); Bikić (1997). A medieval, possibly 10th or 11th c. occupation of the site at Jelica is betrayed by potsherds of Combed Ware found within the basilica A. See Milinković (2001) 71–74, 80, and 102.
59 For the 21 hoards found on Early Byzantine sites, see Table 1. For the other, later hoards, see Bobcheva (1972); Mutafchiev (1914); Zlatarski (1960); Dzhingov (1966) 52–53; Vitliianov (1978); Pleterski (1987); Stanchev (1985); Barački (1960). The definition of tool types follows Henning (1987) 43, that of axes the classification of Bartošková (1986) 6 fig. 1, and that of lance-heads and stirrups the classification of Iotov (2004) 79–83 and 140–58. For correspondence analysis, see Shennan (1990) 283–86; Bolviken et al. (1982). For an exemplary application to the analysis of burial assemblages, see Nielsen (1988).
60 Short scythes with shortened ‘half handles’ (Henning’s class I5) were found in relatively large numbers on 9th c. sites in Bulgaria and north of the Lower Danube, see Curta (1997) 220–21. Sickles of Henning’s class H4 are considerably later than others, perhaps first
One hoard in the first quadrant (Stara Zagora 1) stands out as the only assemblage combining such items as a copper-alloy kettle, two bronze candlesticks, and several bronze vessels, including four 2nd to 3rd c. authepsae.\(^61\) That the Stara Zagora 1 hoard must be of a later date emerges from the examination of the candlesticks and of 6 bells, all of liturgical use. One bell has an inscription mentioning a certain presbyter named Sergios, another bears the monogram of Emperor Justin II—the latest appearing in the 10th c. Similarly, bill-knives of Henning’s class G5 were in use in the 900s: one was found among the grave goods of a 10th c. burial in Oborochishte—Henning (1987) 90, 96. ‘Ogribki’ are commonly interpreted as tools for scraping the kneading trough, but there is no solid argument for that interpretation.

Fig. 7 Correspondence analysis plot of the artefact categories found in 32 hoards of iron implements and weapons: ANV—anvil; AXEFAN—battle axe, fan-shaped; AXEIIIAa—battle axe, Bartošková’s class IIAa; AXEIIIAb—battle axe, Bartošková’s class IIIAb; AXEIIIB—battle axe, Bartošková’s class IIIB; BELL—cattle bell; BELTB—belt buckle; BILLG1a—bill-knife, Henning’s class G1a; BILLG1b—bill-knife, Henning’s class G1b; BILLG2a—bill-knife, Henning’s class G2a; BILLG4a—bill-knife, Henning’s class G4a; BILLG5—bill-knife, Henning’s class G5; BIT—bridle bit; BRONZE—bronze vessels; BUCK—bucket handles; CANDLE—candlestick; CENS—censer; CHAIN—plow chain; CHIS—chisel; COMB—currycomb; COUL—coulter, Henning’s class E 1; HAMM—hammer; HOEK3—drag hoe, Henning’s class K3; KETTLE—kettle; KEY1—key, L-shaped; KEY2—key, anchor-shaped; LAMP—lamp; LANCE—lance head, Iotov’s class 1B; MATTK4—mattock, Henning’s class K4; MATTK5—mattock, Henning’s class K8; MATTK8—mattock, Henning’s class K8; MATTK10—mattock, Henning’s class K10; MATTK15—mattock, Henning’s class K15; OGRIB—tool (“ogribka”); PICKL1—pickaxe, Henning’s class L1; PICKL2—pickaxe, Henning’s class L2; PLANI—plane, curved; PLAN2—plane, straight; PLOWA1—ploughshare, Henning’s class A1; PLOWB3—ploughshare, Henning’s class B3; PLOWC1—ploughshare, Henning’s class C1; SCIS—scissors; SCARPP2—scraping tool, Henning’s class P2; SCARPP3—scraping tool, Henning’s class P3; SCYTHI2—scythe, Henning’s class I2; SCYTHI5—scythe, Henning’s class I5; SOCK—socketed share; SPADE—spade, Henning’s class F1; SPIK—spike; STIRR8A—stirrup, Iotov’s class 8A; TONGS—tongs; WHETS—whetstone; WIMB—wimble.
chronological indication within the entire assemblage. A 6th c. date may also be advanced for the Olympia hoard, which, besides iron tools and bronze vessels, included 22,252 copper coins, mostly minimi, but also coins struck for Justinian and Justin II.

Can the same date be therefore assigned to other hoards from the cluster in the first quadrant? The Zheglica hoard includes a measuring cup with Greek inscription, which is believed to be of a 6th or early 7th c. date, although no convincing analogies are so far known. The Caričin Grad hoard was found within a smithy built within the portico of a street excavated in the south-western section of the Upper City; the smithy has been dated to the last phase of occupation at Caričin Grad, ca. AD 600. Similarly, the Odârci hoard is said to have been buried during the last phase of occupation on the site, which is coin-dated to the 610s. To be sure, many of the items included in hoards from the cluster in the first quadrant are known only from 5th or 6th c. assemblages. For example, ploughshares of Henning’s class B3 are attested on 6th c. monastic sites and hill-forts. One such ploughshare, as well as a scythe of Henning’s class I2, was recovered on the site of the villa rustica in Obelia near Sofia (Bulgaria), which was abandoned shortly before 450. A sickle of Henning’s class H1 was found in a house of the Early Byzantine fort in Pazarište (Ras) together with a half-follis struck for Justin II in Thessalonica in 569/70. All known mattocks of Henning’s class K4 have been found in assemblages or on sites dated to Late Antiquity; mattocks of classes K4 and K8, as well as bill-knives of Henning’s class G1a, were among the items discovered in a large (still unpublished) hoard from Voivoda, which also produced a copper-alloy kettle, bronze lamps, and a clasp-helmet of the Baldenheim class.

The seriation by correspondence analysis has isolated in the first quadrant a group of hoards which appear to be of an early, most likely

63 Völling (1995) 425–41. All coins have since been lost.
64 Gerasimov (1946) 204.
66 Cholakova (2005) 149.
67 Henning (1987) 59–60. The distribution of B3 ploughshares is restricted to the territory of the 5th and 6th c. Roman provinces in the northern Balkans. For finds from monastic sites, see Dzhambow (1956) 188 fig. 29. For hill-fort finds, see Velkov (1935) fig. 5.
6th c. date. They typically include several agricultural tools of distinct types, such as pick-axes, mattocks, drag hoes, bill-knives, sickles, and scythes, in combination with lance-heads of Iotov’s class 1B and battle-axes, either fan-shaped or of Bartošková’s class IIa. A ploughshare of Henning’s class B₃ may also appear occasionally in such an assemblage. However, the overwhelming presence of gardening tools, such as mattocks of Henning’s classes K₄, K₅, and K₈, and pick-axes strongly suggests that the agriculture practised in the 6th c. Balkans was restricted to areas sufficiently small to be cultivated with little or no use of draught animals. This has often been explained in terms of the specific landscape surrounding the 6th c. fortified sites in the Balkans. Hence, the small number of agricultural tools found in Caričin Grad, in sharp contrast to the comparatively larger number of blacksmithing or carpentry tools, was related to the hilly and densely-forested hinterland of the city, with no signs of agricultural cultivation even during the centuries pre-dating its foundation.⁷¹ Others have pointed out the causal link between the disappearance during the 5th c. of villae rusticae, and the drastic changes in the rural economy of the 6th c. Balkan provinces. Farming implements, such as mattocks and pick-axes, often of larger size than those of earlier periods, could be indications of this new economic profile, characterised by a drastic reduction of areas under cultivation, and by the emphasis placed on human labour, with little or no use of draught animals.⁷²

A very different picture emerges from the examination of hoards from the third and fourth quadrants of the correspondence analysis plot. They produced a number of agricultural tool categories almost equal to that from late antique hoards, but of quite different quality. Mattocks of Henning’s classes K₄, K₅, and K₈ have been replaced by ‘light’ specimens of his classes K₁₀ and K₁₅, most typical for work in the early medieval vineyards.⁷³ Similarly, ploughshares of Henning’s class A₁ and C₁ appear in great numbers (as many as 9 specimens in the Dâlgopol hoard), often in combination with coulters of Henning’s class E₁—indicative of the cultivation of larger fields by means of ploughs with mouldboards, such as depicted in graffiti on the walls of the royal palace in Pliska, dated

⁷¹ Popović (1990) 293 and (1994–1995) 69. There is a significantly smaller number of ploughshares from Early Byzantine than from Roman sites in the northern Balkans.
to the 9th c.74 Ploughshares, especially where found in a great number of specimens, often appear together with socketed ard-shares of Central Asian origin, an association most typical for early medieval hoards found in north-eastern Bulgaria and south-eastern Romania.75

Spades and tanged shares in the form of spade irons (Henning’s class F2) have also been regarded as indicators of a type of agriculture associated with the early medieval nomads.76 To the same direction points the presence of scraping tools of Henning’s class P2, the earliest European specimens of which are known from 8th to 9th c. assemblages of the Saltovo-Mayaki culture of southern Ukraine and Russia, which is commonly associated with the Khazar Qaganate.77 It is therefore no surprise that hoards from the third and fourth quadrants combine agricultural tools with bridle bits and stirrups, as well as weapons typically associated with mounted shock combat, such as the spear-shaped battle axe from Shumen or axes of Bartošková’s class III.78 This is true not only for hoards, for which a medieval date may be advanced on the basis of the associated stirrups (fig. 8), but also for others, such as Shumen, Jelica, Montana 1, or Gamzigrad, which were until now believed to be of late antique date (Table 1).

Moreover, a late, possibly 9th c., date may be tentatively advanced for at least some of the hoards from the first quadrant, on the basis of the presence in such assemblages of such typically medieval items as axes of Bartošková’s class III, ‘ogribki’, ploughshares of Henning’s class A1 or ‘light’ mattocks (classes K9–11) (fig. 9).

If so, then such hoards have nothing to do with the Early Byzantine forts in which they were found, and must instead be attributed to the Early Medieval occupation of those sites, and are part of a phenomenon linked to the political, administrative and military changes taking place in 9th c. Bulgaria.

74 Henning (1987) 49–69. With few exceptions, ploughshares of Henning’s class A1 are not known from 6th c. assemblages in the Balkans.
76 Vágarelski (1929); Henning (1987) 73. The earliest evidence of ards equipped with tanged shares comes from China under the Han dynasty—see Pleterski (1987) 275.
77 Kovács (1981) 94. Along with various battle axes, scraping tools of Henning’s class P2 may have served as markers of social status for burials of Khazar warriors of the so-called afsad class—see Afanas’ev (1993) 141–42.
78 For spear-shaped axes, see Henning (1989) 91. On the use of such weapons, as well as of battle axes of Bartošková’s classes II and III, in mounted combat, see Curta (1997) 225.
There are several conclusions to be drawn from the above discussion. First, it appears that very little, if any, evidence exists for the presence of large numbers of horsemen garrisoned in Balkan forts. According to Procopius, a commander of the cavalry cohorts stationed ‘from ancient times’ at Tzurullum (present-day Çorlu, in Turkey) was defeated, captured, and savagely executed by marauding Sclavenes in A.D. 549. But Tzurullum was a major city in the hinterland of Constantinople, and the presence of

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79 Procop. Goth. 7.38.5. The Sclavenes of A.D. 549 were probably horsemen, for Procopius calls them an ‘army’ (στράτευμα), a word he commonly uses for cavalry troops (e.g., Procop. Pers. 1.12.6, 1.21.15, 2.4.4, Procop. Vand. 3.18.13). See Ivanov et al. (1991) 234.
cavalry troops there may be explained in connection with the defence of the Anastasian Long Wall. There is nothing in the archaeological evidence so far known from Çorlu that could be used either to confirm or to reject Procopius’ information. But the much richer archaeological record of 6th c. forts in the northern Balkans is unambiguous: there were very few, if any, cavalry units in Early Byzantine garrisons. No horsemen are mentioned in the garrison of Asemus, which so much impressed Peter, the

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80 The only Early Byzantine remains from Çorlu known so far are the city walls, for which see Pralong (1988) 185–86. For the archaeology of the Anastasian Long Wall: Crow (2007) and (in this collection).
general at the head of the army sent by Emperor Maurice in A.D. 594 against the Sclavenes north of the Danube. The evidence of weapons found on 6th c. fortified sites in the northern Balkans and discussed in the first part of this paper also suggests that the garrisons stationed there were made up of foot-soldiers, not horsemen.

But were those full-time soldiers, or were they peasants like those at Thermopylae, whom Procopius describes as suddenly becoming ‘make-shift soldiers for the occasion’, abandoning their agricultural occupations until Justinian replaced the inexperienced garrison with regular troops? Some scholars have interpreted the archaeological evidence of 6th c. fortified settlements as indicating not military, but civilian sites. According to Archibald Dunn, fortified hilltop sites in northern Greece offered shelter to the urban and rural populations fleeing the lowlands under the continuous threat of barbarian raids. Andrew Poulter denies the existence of any identity or even similarity between the hill-top sites in northern Balkans, which he regards as temporary refuges, and those “regularly built fortifications on the frontier, which more obviously performed a military role”. Chavdar Kirilov points to the archaeological evidence of agricultural occupations as an argument in favour of the idea that hilltop sites were fortified villages, not military forts. Because of farming implements from hoards, Pernik, Shumen, and Odărci are therefore re-interpreted as defended villages, although, in all three cases, there is plenty of evidence of an early medieval occupation phase.

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81 Theoph. Sim. 7.3.1–10.
82 Procop. Aed. 4.10. For the archaeological evidence of a Justinianic garrison guarding the pass at Thermopylae, see Rosser (2001).
85 Poulter (2004) 247, repeated verbatim in Poulter (2007) 380. While criticising others for being “too quick to assume that they [the fortified sites] all served a military function”, Poulter then hastily attributes the last phase of occupation on fortified sites in the northern Balkans to “newcomers arriving about 500 AD”, either Slavs or other “nomadic migrants”—Poulter (2004) 248 and (2007) 381. As the archaeological evidence of the last phase of occupation has nothing in common with that of sites north of the Lower Danube attributed to the 6th c. Slavs, his remarks must be treated with extreme caution, especially his idea that the “Slav pottery does not exist or is exceedingly rare because the nomadic Slavs did not use it”—Poulter (2004) 250 and (2007) 382.
86 Kirilov (2007) 333–35, on the basis of the results of Dimităr Nikolov’s excavations at Mezideva, near Krăn, for which see Nikolov (1990). However, it is not clear from either whether the abundance of agricultural tools on the site must be dated to the 5th or to the 6th c. Judging by the numismatic evidence, Mezideva was flourishing ca. A.D. 400.
We have seen that the Shumen hoard has in fact been misdated, together with other assemblages such as Jelica and Gamzigrad. As for hoards securely dated to Late Antiquity, it is important to note that farming implements, especially those used in tillage (as opposed to those used for harvesting) represent only a small percentage of the entire assemblage: the Olympia hoard, dated with coins struck for Justinian and Justin II, includes 12 harvesting implements (5 bill knives and 7 sickles), but only 6 tilling tools (two mattocks and 4 pick-axes). None of those tilling tools may be associated with any form of large-scale cultivation, and some of them were instead a natural accompaniment to forest clearing activities. The Sliven hoard (with three mattocks, one pickaxe, and 7 drag-hoes) is the only assemblage in which tilling tools predominate. For Pernik, although its hoard produced a ploughshare, two drag-hoes, three mattocks, and a pick-axe, the largest number of items comprise tools for harvesting (4 bill-knives, one scythe and 8 sickles). The same is true for the Odârci and Stara Zagora 2 hoards, in which tools for harvesting, especially sickles and scythes, appear in much greater numbers than those for tilling. Despite the presence of mattocks and pick-axes, the Carevec, Tinje, and Voivoda hoards have produced more carpentry tools (especially chisels, wimbles, saws, burins, planes, and other carving tools) than either farming implements (for both tilling and harvesting) or weapons. The only hoard in which weapons predominate is Razgrad, which is probably not of late antique date.

Observation of the scattergram showing the relationships between artefact categories reveals the combination of tools and weapons underlying the structure of the late antique hoards. The cluster of hoards in the first quadrant is based on a combination of tilling (mattocks of Henning’s classes K4 and K8, pick-axes of classes L1 and L2, drag-hoes of class K3, and ploughshares of class B3), harvesting (bill-knives of Henning’s classes G1 and G2b, sickles of class H1, and scythes of class I2), and primarily carpentry tools (straight planes, wimbles and chisels). If fan-shaped axes were also used in carpentry, then the number of craftsman tool types is as large as that of tilling tool types. The ‘grammar’ of late antique hoards seems to be based on the conceptual association of vineyard or field harvesting with tilling. Judging from the tools themselves, the latter was an activity linked to work in the garden or on small fields, and cannot therefore serve for the identification of the function of any site as ‘agricultural’ and not ‘military’.

The mattocks and pick-axes, as well as the sickles and bill-knives found in abundance in late antique hoards, fit very well within the picture of small-scale cultivation of crops either within or just outside the city or fort.
walls. Large ‘open spaces’ existed, for example, on the northern side of the Early Byzantine fort built in the south-eastern corner of the ancient city of Nicopolis ad Istrum (Nikiup); there is no sign of large-scale grain cultivation, and the open spaces may have been used for garden cultivation of millet and legumes. Analysis of palaeobotanical assemblages from Iatrus (Krivina) has revealed that the diet of the soldiers in the fort’s garrison consisted of oats and peas, both of which may have been cultivated on site. This is further substantiated by the evidence of written sources: in 583, when attacking Singidunum by surprise, the Avars ‘encountered the majority of the city’s inhabitants encamped in the fields, since the harvest constrained them to do this; for it was summer season and they were gathering in their subsistence’.

However, there is also evidence to suggest that the small-scale cultivation on plots inside or outside city walls was not sufficient for the subsistence of the relatively large number of people living inside 6th c. hill-top sites. The distribution of 6th c. amphorae (particularly LR1, LR2, and spatheia) on such sites in the Balkans has been interpreted as evidence of a state-run distribution of food supplies to the garrisons stationed in forts. Palaeobotanical assemblages from the late 6th and early 7th c. military site at Svetinja comprised mixes of wheat, rye, barley, and millet—an indication of supplies of corn coming from outside the military settlement, probably from neighbouring Viminacium, to which they may have been shipped via the annona-like distributions signaled by finds of Late Roman amphorae. The author of the Strategikon recommends that when campaigning north of the Danube River, in Sclavene territory, Roman troops do not destroy provisions found in the surrounding countryside, but instead ship them on pack animals and boats ‘to our own country’. That Roman soldiers needed to rely on food supplies captured from the enemy suggests that there was no large-scale production of food in or around the fortified sites in the Balkans. Similarly, the analysis of

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89 Hajnalová (1982) 232. According to Beech (2007) 244 and 247, the analysis of 6th c. samples from Nicopolis ad Istrum suggests “continued supply” of cereals, but it remains unclear whether those were locally cultivated or brought to the site from afar.
90 Theoph. Sim. 1.4.1–2 (trans. Whitby and Whitby (1986) 24–25). For a similar episode in Thessalonica during the early years of Heraclius’ reign, see the Miracles of St. Demetrius 2.2.199.
91 Curta (2001b) 209–10. For LR1 amphorae as an indicator of annona-type distributions to the army stationed in the northern Balkans, see Karagiorgou (2001).
92 Borojević (1987) 67 and 70.
93 Strategikon 11.4.8.
faunal remains from Iatrus shows that the soldiers in the garrison relied heavily on hunting for meat procurement.\textsuperscript{94}

Even if some inhabitants of fortified sites in the 6th c. Balkan provinces of the empire turned to small-scale, garden cultivation of crops in order to supplement (insufficient or irregular?) \textit{annona} distributions, no evidence exists that such activities were anything more than temporary or economically marginal. Hill-top sites in the Balkans may not have all been military, but none of them appears to have functioned as a fortified village. Behind or just outside the walls of the 6th c. forts, no agricultural occupations could be practised in such a way as to satisfy the needs of the existing population. The ‘ruralisation’ of the late antique Balkans must instead be understood as the militarisation of the countryside.

\textbf{Conclusion}

This discussion brings into focus a number of themes which have relevance to an understanding of the wider social issues underpinning the 6th c. changes in the settlement pattern of the empire’s Balkan provinces. As part of the military strategy implemented by Emperor Justinian, a great number of fortified sites perched on hill-tops appeared almost everywhere in the Balkans. It is difficult to prioritise the various factors, since they must be considered interdependent. However, the lack of sufficient troops in the Balkans, the disappearance of the old administrative structure, especially of \textit{civitates} and \textit{provinciae}, and the need to provide an efficient response to devastating raids by barbarian horsemen—‘Huns’, Cutrigurs, or Avars—all contributed to the implementation of a vast program of fortification, the size of which the Balkans had never witnessed before. The picture to emerge from the evidence reviewed is one of “landscapes of \textit{kastra}”,\textsuperscript{95} a conclusion supported by the relative paucity of weapons or military equipment of Avar inspiration in relation to the existence of large numbers of cavalry units permanently stationed in the Balkan provinces.

On the other hand, reflecting upon the specific range of farming implements discovered in hoard assemblages from Early Byzantine fortified

\textsuperscript{94} Bartosiewicz and Choyke (1991) 191. The situation at Iatrus sharply contrasts that at Butrint (Albania) and Tinje (Slovenia), two sites on which early and mid-6th c. animal bone assemblages are dominated by pig, with no traces of game. See Powell (2004) 306 Table 17.1; Ciglenečki (2000) 167–71.

\textsuperscript{95} Dunn (2004) 578.
sites, a more general tendency towards garden cultivation of small fields that could be tilled by hand, without the use of draught animals, seems to suggest that among 6th c. fortified sites, some, at least, had a civilian, and not military function. That distinction, however, is currently too ill-defined to be operational: the identification of certain fortified sites as ‘military’ is based on “the strengths of their fortifications, their relationships to lines of communication, and the edge of the plain, and on the presence of particular internal features”; conversely, civilian sites “do not in practical terms control the Plain, or its points of egress and entry, or its roads”.96

In reality, no criteria currently exist to enable a clear-cut distinction between ‘military’ and ‘civilian’ fortified sites on the basis of the archaeological evidence alone. To the extent that all 6th c. sites in the Balkans had defensive walls, it is perhaps safer to assume that they were all ‘military’, despite the wide variation in the number and quality of troops stationed in every one of them. Moreover, the sheer number of forts precludes the possibility that some of them were fortified villages meant to supply the others with food. There is simply no evidence of a settlement hierarchy in the 6th c. Balkans, which could possibly mirror the distinction currently, but artificially, drawn between various hilltop sites. The agrarian technology revealed by the analysis of hoards is one of limited resources, which could in no way be linked to a self-sufficient rural economy. Since the size of the fields is dependant on the implements being used to till them, one might ask how it was possible to feed the population—military or otherwise—living within the ramparts of the numerous 6th c. Balkan forts.

The emerging picture is one of contrasting lines of development. On one hand, the great number of forts must have created an enormous demand for food supplies, even if we allow for the possibility that not all forts were permanently occupied. On the other hand, there is now clear evidence of a generalised collapse of the rural economy.97 Whether or not the garrisons of 6th c. forts were made up of ‘makeshift soldiers for the occasion’, by A.D. 500 there were certainly fewer peasants in the Balkans than in 400, and virtually no peasants at all by 600. If hoards of iron implements and weapons are to be regarded as evidence of civilian sites with agricultural

97 Curta (2001b). The much rosier picture in Dunn (2005) can hardly apply to the 6th c. Much closer to reality seems to be Dunn (2004) 579: “A countryside largely divided between supposedly self-sufficient, but actually impoverished, *kastra*, albeit of diverse origins, was a stagnant and probably disaffected one”.

functions, it is perhaps no accident that such hoards were found inside forts without ‘open spaces’, in which very little room was left for the possible garden cultivation of small fields. Unless we assume that the agricultural tools found in hoards were employed for working on fields outside the fort walls, there is no way to solve the contradiction between the concept of many, overcrowded forts providing shelter for the rural population from the lowlands, and the absence of any material culture indicators of a vibrant rural economy capable of feeding the inhabitants of forts.

So, were forts built as refuges or were they part of a much broader strategy of immediate response to barbarian raids from across the Danube frontier of the empire? The idea that Justinian’s programme of fortification in the Balkans was based on a defence-in-depth strategy has been vehemently rejected by some or hesitantly accepted by others. Instead of debating whether the concept of ‘defence in depth’ had any application in the 6th c., it may be wiser to give the last word to the author of the Strategikon, that savvy Roman army officer with a good knowledge of the situation on the frontier of the empire:

If an enemy force, superior in strength or even equal to ours, invades our country, especially at the beginning of the invasion, we must be sure not to engage it in pitched battle. We should instead carefully lay ambushes by day or by night, block the route it is taking, seize strong points beforehand, destroy supplies along its line of march... All necessary supplies must be collected in very strong fortresses... Forts which are not in a strong natural setting should be made more secure. Part of the army, depending on the progress of the fighting, should be assigned to their defence. Preparations should be made to transfer the inhabitants of weaker places to more strongly fortified ones. (Strategikon 10.2).

Acknowledgements

I wish to acknowledge the contribution of the two anonymous readers to the final version of this chapter. Although I disagree with both of them on almost every aspect of interpretation, their comments and recommendations helped sharpen the focus of this research and have forced me to re-think some of the implications of my conclusions.


Table 1. Re-dating of the hoards found on Early Byzantine sites

<table>
<thead>
<tr>
<th>Hoard</th>
<th>Previous dating</th>
<th>New dating</th>
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<tbody>
<tr>
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<td>Late antique (6th c.)</td>
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<tr>
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Fig. 1 Early Avar, apple-shaped cast stirrups with elongated suspension loop: 1—Baja, sacrificial pit; 2—unknown location in northeastern Bulgaria; 3—Pernik, Early Byzantine hill-fort; 4—Nevolino, grave 122; 5—Strezhevo, hoard of iron implements. (After Hampel (1905); Iotov (2004); Goldina and Vodolago (1990); and Janakievski (1980).)

Fig. 2 Distribution of late 6th to 7th c. stirrups in south-eastern Europe. The cluster in the Carpathian Basin is of Early Avar, apple-shaped cast stirrups with elongated suspension loop and flat tread slightly bent inwards. Smallest circle, thereafter up to 2, 3, and 7 specimens, respectively. (Data after Stadler (2005), with additions.)

Fig. 3 Distribution of 6th and 7th c. stirrups in Eastern Europe.

Fig. 4 Hoard of iron implements found in Strezhevo (Macedonia), selected artefacts: L-shaped key, sickle, bridle bit, processionial cross, and stirrups. (After Janakievski (1980).)

Fig. 5 Distribution of hoards of iron implements and weapons found on Early Byzantine hill-fort sites in the Balkans.
Fig. 6  Correspondence analysis plot of 32 hoards of iron implements and weapons: ASEN—Asenovgrad; BALA—Balajnac; BOZHU—Bozhurovo; CARE—Carevec; CARG—Caričin Grad; CHELO—Chelopech; DALG—Dălgopol; DOLI—Dolisse; GAMZI—Ganzgrad; JELI—Jelica; MONT1—Montana 1; MONT2—Montana 2; ODAR—Odârci; OLYMP—Olympia; PERN—Pernik; PRES1—Preslav 1; PRES2—Preslav 2; RAZG—Razgrad; SEBEN—Sebenje; SHUM—Shumen; SLIV—Sliven; STAM—Stambolovo; STARA1—Stara Zagora 1; STARA2—Stara Zagora 2; STREZHR—Strezhevo; TINJ—Tinje; TROI1—Troianov most 1; TROI2—Troianov most 2; VOIV—Voiyoda; VRSA1—Vršac 1; VRSA2—Vršac 2; ZHEG—Zheglica.

Fig. 7  Correspondence analysis plot of the artefact categories found in 32 hoards of iron implements and weapons: ANV—anvil; AXEFAN—battle axe, fan-shaped; AXEIIAa—battle axe, Bartošková’s class IIa; AXEIIAb—battle axe, Bartošková’s class IIb; BELL—cattle bell; BELTB—belt buckle; BILLG1a—bill-knife, Henning’s class G1a; BILLG1b—bill-knife, Henning’s class G1b; BILLG2b—bill-knife, Henning’s class G2b; BILLG4a—bill-knife, Henning’s class G4a; BILLG5—bill-knife, Henning’s class G5; BIT—bridle bit; BRONZE—bronze vessels; BUCK—bucket handles; CANDLE—candlestick; CENS—censer; CHAIN—plow chain; CHIS—chisel; COMB—currycomb; COUL—coulter, Henning’s class E 1; HAMM—hammer; HOEK3—drag hoe, Henning’s class K3; KETTLE—kettle; KEY1—key, L-shaped; KEY2—key, anchor-shaped; LAMP—lamp; LANCE—lance head, Iotov’s class I b; MATTK4—mattock, Henning’s class K4; MATTK5—mattock, Henning’s class K8; MATTK8—mattock, Henning’s class K 8; MATTK10—mattock, Henning’s class K10; MATTK15—mattock, Henning’s class K15; OGRIB—tool (“ogribka”); PICKL1—pickaxe, Henning’s class L 1; PICKL2—pickaxe, Henning’s class L 2; PLAN1—plane, curved; PLAN2—plane, straight; PLOWA1—ploughshare, Henning’s class A 1; PLOWB3—ploughshare, Henning’s class B 3; PLOWC1—ploughshare, Henning’s class C 1; SCIS—scissors; SCRAPP2—scraping tool, Henning’s class P2; SCRAPP3—scraping tool, Henning’s class P3; SCYTHI2—scythe, Henning’s class I 2; SCYTHI5—scythe, Henning’s class I5; SOCK—socketed share; SPADE—spade, Henning’s class F 1; SPIK—spike; STIRR8A—stirrup, Iotov’s class 8A; TONGS—tongs; WHETS—wetstone; WIMB—wimble.

Fig. 8  Hoard of iron implements found in Troianov most (Serbia), selected artefacts: sickle, scythes, belt buckle, stirrup, and censer. (After Garašanin and Vašić (1987).)

Fig. 9  Hoard of iron implements found in Razgrad (Bulgaria), selected artefacts: battle axes, ploughshares, and billknives. (After Ivanov and Stoianov (1985).)