Early Byzantine Arms and Weapons from the Episcopal Complex in Novae

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Abstract: The large number of military finds (analyzed in the text) in the episcopal complex in Novae lends credibility to the hypothesis that the garrison, at least in the 6th century AD, was maintained by the local community or, in fact, by the bishop – the most esteemed and wealthiest resident of Novae. So it comes as no surprise that whenever soldiers were suffering any injustice (like, for example, in Asemus in 594), they would turn for aid and protection to a local bishop, who acted not only as their spiritual guide, but was often the de facto commander-in-chief.

Key words: Novae, episcopal complex, military finds, 6th century AD.

Historical background

The history of Novae in Late Antiquity was shaped by the policies regarding the Danubian limes drawn up by rulers residing in Constantinople, particularly during the period of Slav and Avar raids (Καρδαράς 2010, 70-78). The narrative of this paper begins with the construction of the episcopal complex (map 1) at the site of old legionary baths (Biernacki 1990, 187-208; Биернацки / Кленина 2003, 82-97; Biernacki 2003, 28); it was completed at the beginning of the 7th century, when the Roman Balkans were being plagued by Avar and Slav raiding parties. During both periods the complex not only functioned, but actually thrived, at one point becoming a destination for pilgrimages to the burial place of St. Lupus (Ilski 2013; Ilski 2006). This must have been a crucial element in the lives of Novae’s citizens, as evidenced by the erection of a large ptochotrophium, which offered shelter to the poor and the sick, as well as pilgrims; the complex comprised sleeping rooms and a large dining hall (Biernacki / Czerner 2013, 71).

Thanks to the reforms of Constantine the Great, the army was divided into mobile units – comitatenses, and slightly worse equipped border forces – limitanei, tasked mainly with garrison duties (Richardot 2005, 148-152; Cosme 2012, 243-250). Legio I Italica, or at least its traditions, still existed in the first half of the 5th century – this is the date of the most recent inscriptions in Novae referring to the legion (Sarnowski 2005).

The significance of Novae’s recruits is evidenced by the fact that according to Notitia dignitatum, the soldiers of legio I Italica were stationed at numerous locations: Novae, Sexaginta Prista, Durostorum, Transmarisca and most likely Iatrus, which also housed the cavalry unit cuneus equitum scutariorum (Not. dign. Or. 40). Traces of legion-
naires from Novae can be found even in the distant Italia – a papyrus piece from Ravenna dated to the beginning of the 7th century certifies one Petrus v(ir) d(evotus), mil(es) bandi novi, serving in Bandus Novus (Santoni 2011; Schwarze 2015, 183). Although in this particular case it is questionable if the soldier was actually from Novae, or rather simply a member of a unit that retained its traditional name referring to the unit’s place of origin.

The important role played by Novae and other surrounding strongholds in the defense of the limes is evident considering the investments made by successive emperors, and looking at the increase in Roman activity in the area (Dimitrov 1998, 101) following the return of Roman rule along the Danube. It is worth noting that despite Procopius’ claim that Novae was restored to prominence by Justinian, investments in fortifications and within the city walls began as early as the reign of Emperor Anastasius I (Parnicki-Pudełko 1990, 56), which is confirmed by numerous archaeological sources. At the least, we know that the town gates and some of the towers were modified to fit the requirements of a frontier stronghold (Parnicki-Pudełko 1990, 56). One such modification, which was done during the reign of Justinian, was reducing the clearings in town gates – a typical change in the case of older city fortifications undergoing modernization in Late Antiquity (Băjenaru 2010, 22). Novae returned to its role of an important border location with a strong permanent military presence in the form of a town garrison. The episcopal complex and the basilica extra muros with the tomb of St. Lupus (Biernacki 2005; Ilski 2013; Ilski 2006) most likely remained important pilgrim destinations. Although this stage of functioning of the structures located within

Map 1. Bird’s-eye view of the complex of the bishopric of Novae. View from the west (Arc-photo)
the town walls has not yet been fully studied in terms of archaeology, we may already conclude that everyday life in the town, despite the constant threat of attack, ran its normal course.

A major shift occurred in the second half of Justinian’s reign, after 542, i.e. the period of financial crisis caused by the wars in the East and the West and also by a recurring epidemic, which decimated the population of the empire’s towns (Σινάκος 2004-2006, 97-121; Kennedy 2006, 87-99; Sarris 2006, 119-135). It is worth pointing out that the most recent palaeodemographic studies of Slav burial places conducted by Rafał Fetner have found no evidence of a similar epidemic in the lands beyond the Danube. And any local outbreaks among the Slav communities in the Balkans were much less severe compared to urbanized populations (Fetner 2011, 103-119). This may be one of the reasons for the increased military activity of the Slavs, who have already won a decisive victory against the imperial forces in the Barbaricum (Procop. De bel. 6.26.18-23). This coincided with the slow retreat of central authority from the borderlands, which was due to financial, demographic and military difficulties. Consequently, the area of the Danubian limes lost its prominence and its defense was left to local forces, which were supported by the imperial army only in the direst of circumstances. This strategy could not have yielded positive results in the long run, particularly since both the neighboring Slavs and Avars adopted a hostile attitude. The military strength of the Danubian limes was failing, and the local communities were mostly left to fend for themselves. Not surprisingly, in the times of Emperor Maurice (582-602) the locals treated their ties to the empire very loosely, as evidenced by what happened before the walls of Asemus, not far from Novae (Simoc. 7.3). The situation further deteriorated because of barbarian raids, launched by both the Slavs and the Avars, which the central authority was powerless to prevent in the face of its conflict with Persia and continuing financial problems. A suitable response from the Emperor was only possible in the second half of the 90s of the 6th century, when the mobile army was relocated to the area following the conclusion of the war in the East. In order to fully comprehend the scale and the timeline of these events, we need only remind ourselves that the plague broke out in the imperial capital in 542, which means that for almost 60 years Constantinople’s grasp on the limes was weakening, until the reign of Emperor Phocas, when the organized system of border defenses practically ceased to exist.

Sixty years is like an era for a town garrison and surely many things must have changed throughout this time. If we assume that the soldiers serving along the limes – and these comprised the majority of the garrison – passed on their functions to their children (Haldon 1979, 23-24), we are looking at three consecutive generations of defenders. Such a long period of inaction on the part of the central authority undoubtedly weakened any existing ties to the empire. The soldiers assigned to the defense of the town were simply its residents and it would be difficult to imagine them seeing themselves as part of the imperial army. This was perfectly exemplified in 593, when the Asemus garrison rebelled against the emperor’s brother, Peter, who tried to conscript the town’s defenders into his army. The residents presented him with a legal document issued by Emperor Justinian, which granted the town a permanent garrison, and the soldiers fled...
to the local bishop before the wrath of the Roman strategos (Tapkova-Zaimova 1979, 75). In this context, two facts are of crucial importance when analyzing the state of Novae in the second half of the 6th century. First of all, the soldiers did not consider themselves to be members of the imperial army, but rather protectors of the local populace, from which they were most likely conscripted. Secondly, once the imperial document of Justinian failed to stop the strategos, the garrison turned to the local bishop for help, seeing him as the actual head of the armed forces and their protector.

In any municipal community – and at the end of the 6th century Novae certainly qualified as such – in the event of a crisis involving the central government it was the local bishop who took over the duties of the main executive power, subordinate and answerable to the emperor (Rapp 2000, 397-399). This was due to legal prerogatives that in their earliest form were laid down by Constantine the Great (Drake 2002, 72-110; Rapp 2000, 392). But it was also a result of the natural process of emergence of Late Antiquity elites, which most certainly included the bishops. In the course of demilitarization and Christianization of communities the bishops took responsibility for both the spiritual and physical protection of their congregations. This, naturally, increased their status among such communities (Liebeschuetz 1990, 228-232). It is also worth mentioning that after the reign of Constantine a career in the church became one of the viable possibilities for members of ancient aristocratic families. As such, the prestige awarded to certain bishops was not only the result of the ecclesiastical and secular power that they held, but also their aristocratic descent (Rapp 2000, 392-393).

In many civilian centers that lacked any means of direct contact with the capital, the bishop would become responsible for enforcing the law, but, what is more, would probably also take over the local garrison, whose soldiers needed to be paid, equipped and fed – a task beyond the means of increasingly impoverished communities. A similar process, although on a much larger scale, could be observed in the western lands of the empire during the decline of the Roman state. Once again, the bishops were the ones to seize power over the administrative and military structures (Hohlweg 1971, 51-62; Chadwick 1990).

**Military finds from the episcopal complex in Novae**

Naturally, in the 6th century any town's bishop would be one of the most important residents. Following the decline of historical civilian elites, it was these members of the clergy who shouldered much of the responsibility that used to belong to the civilian administration or the local government. There are reasons to believe that this was also the case in Novae, and that the head of the town's Christian congregation exerted a degree of power even over the military. The relationship between the city's soldiers and the local bishop can be examined by studying the military finds discovered in Novae during the excavation of the bishopric complex conducted by the AMU International Interdisciplinary Archaeological Expedition headed by Dr. Andrzej B. Biernacki (Biernacki / Czerner 2013, 7). The sole fact that a large number of military items (helmets, spear heads, a shield boss, sling bullets) were discovered at the site of the bishop's residence seems
intriguing. Equally unusual is the quality of said pieces, particularly the Spangenhelm-type helmets (pl. 2/fig. 4), uncovered in a building identified as the *ptochotrophium* (in the complex’s dining hall). The presence of several dozen helmets (around 30) in the dining hall, stacked on one another, is a clear proof that the garrison in Novae was completely or partially funded by the local bishop (Biernacki 2012, 91-104). We can assume with a high degree of certainty that the soldiers took off their helmets before the meal, and left them in an easily accessible place. The *ptochotrophium* was later consumed by fire, which caused the ceiling and the roof to collapse. The helmets discovered in the building were of the highest quality, and it is equally surprising just how many there were – the whole set would have been worth a small fortune. Notably, all the helmets share the same design and method of manufacture, which likely means that they all came from one workshop; most probably a local one, somewhere on the territory of modern-day Bulgaria – perhaps Marcianopolis (Biernacki 2012, 100).

The discovery of numerous types of spear heads may mean several things. First of all, these weapons were relatively easy to produce, so they may not have been manufactured centrally, but rather locally, which led to the differences in form. During the studied period much of the easily manufacturable equipment, which included spear heads, tended to be produced locally. Secondly, each spear head type was designed for use against a different enemy, which mostly had to do with the blade width (Densem 1976). The items from Novae can be subdivided into two categories based on the width of the spear head blade. Type I would be spear heads with an elongated, narrow blade, perfectly suited for punching through armor. Type II comprises heart-shaped blades and blades in the form of a birch tree leaf, which would be most effective against unarmored enemies. The descriptions in the catalogue take into account this latest trend of identifying the spear head type based on the extent of wounds that would be dealt with it, i.e. whether or not it was leaf-shaped. This is in line with the most recent developments in the field of experimental archaeology (Barker 1966, 3-8); a more detailed study, but for earlier periods, was conducted by Odell and Cowan (1986, 195-212). Narrow-bladed spear heads (pl. 3/figs. 7, 8) were decidedly better in a fight against armored opponents, but if they failed to penetrate the armor, they only caused superficial wounds. However, if the spear head penetrated into the body, the person receiving the thrust was usually eliminated from further combat. Leaf-shaped heads were designed against fighters wearing little or no armor (pl. 1/figs. 5, 6). If the attack punched through flesh, such a blade would cause much more extensive internal damage, increasing the chances for outright killing or permanently disabling the enemy. But faced against any type of protective gear, be it chainmail, lamellar, scale or even improvised armor, these broad-bladed spear heads were significantly less effective. Their wide surface, which was an advantage once it penetrated the body, at the same time made it extremely difficult to drive through any form of protection. Possibly, the occurrence of two types of spear heads in a single location means that the town’s defenders were simply well prepared to fight off both unarmored raiders as well as those using some form of armor. Interestingly enough, two uncovered spear heads in the shape of an elongated candle flame (pl. 1/figs. 1, 2) were dated to
the period of fighting between the Romans and the Goths, i.e. the 5th century. Whereas finds from the 6th century, when the city was harassed by both lightly armored Slavs and well protected Avars (Nagy 2004, 137-140), include spear heads of varying shapes. It is possible that this variety of blade types reflected the garrison’s preparedness to engage different enemies.

The one uncovered iron shield boss (pl. 4/fig. 9) was of a size and shape typical for other Late Roman bosses (Ratiu / Opris 2014, 425-40). It would have been fitted to a large Roman shield, most likely oval-shaped. It is difficult to determine if the damage to the boss is the result of post-deposition processes; however, the character of fractures and the point of their origin make it more likely that it was sustained in use. This is further supported by the fact that the boss was not recovered – the damage was severe enough that any attempt at repairs would have been a wasted effort. The top of the shield boss has suffered the most; fractures move away from that point in the
direction of where the item was riveted to the wooden shield. This means that the boss received a very strong blow to the top. These types of fractures are characteristic for a sword or axe stroke, and less likely to have been caused by a spear. The presence of a typical Late Roman shield boss and numerous helmets confirms that the garrison was equipped in Roman fashion.

The catalogue also lists sling bullets, which undoubtedly date back to the late stages of functioning of the bishopric complex. The weight and shape of these stone bullets do not deviate in any way from Roman standards (cf. Lemke 2009, 213-214).

Among the military finds from the episcopal complex there are no fragments of Roman sword blades. But thanks to a single discovery of a leather strap fitting from a sword sheath (pl. 3/fig. 10), we can be certain that at least some of the soldiers were armed with Roman spathas. It is also possible that one discovered hilt with a spotted bone grip was part of a sword (pl. 3/fig. 11), although the grip type is more characteristic of a long dagger. The lack of swords is not surprising. Whereas the spear heads were relatively easy to manufacture and quite common, a sword was not only expensive and difficult to
make, but also had both symbolic and magical significance (Theuws / Alkemade 2000, 402-403), so after any fight it was usually claimed by the victor. Swords were valued as spoils of war and rarely misplaced. This would hold especially true for a garrison organized according to Roman military traditions. Roman laws from the time of Justinian, as well as provisions of military law mentioned in military treatises all define strict punishments for misplacing a weapon, losing it during combat or neglecting to maintain it properly (Strat. 1.6.11; Dig. 49.16.3.13). In this context it comes as no surprise that not many finds of this type have been discovered at Roman military sites. The same holds true for Novae in Late Antiquity. However, discovery of copper alloy slide further confirms that at least a portion of the Novae garrison was equipped with Late Roman swords.

It should be noted that the catalogue includes a number of military relics related to the beginnings of the Novae bishopric, i.e. the first half
of the 5th century; these are mainly spear heads (pl. 1/ figs. 1, 2) and a single bolt head from a scorpion projectile (pl. 1/ fig. 3). Both are type I heads, in the form of an elongated candle flame; typologically they are equivalent to weapon heads manufactured by the Goths (Halbout / Pilet / Vaudour 1987, 147). It is difficult to determine the cause of their deposition, especially since they were uncovered from different layers. They may simply be a testament to the military presence in Novae, although it cannot be excluded that some of the finds dated to the 5th century were tied to the military struggles against the Goths, or to the later military activity of the Huns along the Roman limes.

**Conclusions**

The large number of military finds lends credibility to the hypothesis that the garrison, at least in the 6th century, was maintained by the local community or, in fact, by the bishop – the most esteemed and wealthiest resident of Novae. So it comes as no surprise that whenever soldiers were suffering any injustice (like, for example, in Asemus in 594) they would turn for aid and protection to a local bishop, who acted not only as their spiritual guide, but was often the de facto commander-in-chief. The dispersion of military relics in the episcopal complex indicates that most were deposited in the southern part, i.e. the location of the ptochotrophium (map 2). It seems natural that this part of the bishopric infrastructure would be occupied by the local garrison. This is another proof of the hypothesis that in the second half of the 6th century the bishop of Novae funded and, consequently, at least partially controlled the town garrison.

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1 Novae was never taken by the Huns.
Catalogue

Spear head (pl. 1/ fig. 1)

Inventory ref. # P23/03ob. Location: section X, square 17, distance from S 4.00 m, distance from E 3.60 m, depth 48.24 m a.s.l., dated to: first half of the 5th century.

Overall length 134 mm; blade length 79 mm; maximum blade width 16 mm.

Analogies: Gencheva 2012, 113, fig. 26/3; Mrđić / Raičković 2013, 125, fig. 5/1; Halbout / Pilet / Vaudour 1987, 147, fig. 428; 150, fig. 463; Deschler-Erb et al. 2012, Taf. 2/a09.

The cross section, in its current state, is rectangular rather than rhombic. Type I head intended for armor penetration.

Spear head (pl. 1/ fig. 2)

Inventory ref. # P26/04w. Location: section X, hectare XVII, square 344, distance from S 4.00 m, distance from E 4.90 m, depth 48.40 m a.s.l. Dated to: first half of the 5th century. Overall length 175 mm, blade length around 95 mm, maximum blade width 20 mm.

Map 2. Location of the military equipment found in Novae. Developed by A. B. Biernacki, R. Czerner, E. Klenina and St. Medeksza
Analogies: Gencheva 2012, 113, fig. 26/3; Mrđić / Raičković 2013, 125, fig. 5/1; Halbout / Pilet / Vaudour 1987, 147, fig. 428; 150, fig. 463; Deschler-Erb et al. 2012, Taf. 2/a09.

Description: Heavily corroded head, uncovered in the layer created after a fire; sleeve detached from the blade, heavily burnt. Deposited near the entrance to room D, based on stratigraphic information, dated to the first half of the 5th century.

Type I head, similar to item # 1, with a very narrow blade designed for armor penetration. Cross section impossible to determine due to the degree of corrosion. On the remaining fragment of the blade it is possible to identify the stud fitting the head to the shaft, and a protruding pin is visible inside the sleeve.

Iron bolt-head (pl. 1/ fig. 3)

Inventory ref. # P197/97w. Location: section X, hectare XVI, square 239, distance from S 0.6 m, distance from E 0.23 m, depth 48.06 m a.s.l. Dated to: first half of the 5th century. Overall length 151 mm.

Analogies: James 2004, 219, fig. 777; Avelaira 2006, 197, fig. 2/4; Deschler-Erb et al. 2012, Taf. 1/a01; Laharnar 2015, 38, fig. 1/7.

Description: A popular form of a war machine projectile, analogies have been found throughout the whole territory of the Roman Empire.

Roman Spangenhelm-type helmets (pl. 1/ fig. 4)

1. Inventory ref. # P5/04w. Location: section X; hectare XVII, square 367, distance from S 1.80 m, distance from E 4.20 m, depth 50.81 m a.s.l. Dimensions: width 299 mm, height 256 mm, hoop width 45-51 mm, bell segment width 78-15 mm. Diameter of connecting plate 30 mm. Diameter of holes for fastening the cheek guards 4 mm. Cheek guard: width 85 mm, length 141 mm. Hole diameter 2 mm. Dated to: mid-6th century.

First publication: Biernacki 2012, 96-97, fig. 7-8.

2. Inventory ref. # P8/04w. Location: section X; hectare XVII; square 367, distance from S 1.20 m, distance from E 3.87 m, depth 50.83 m a.s.l. Dimensions: width 273 mm, height 242 mm. Hoop width 50-45 mm, bell segment width 70-15 mm. The segments taper and are connected at the top by a round plate with a diameter of 34 mm. Every other segment is riveted. Rivet diameter 5 mm. The helmet is flattened at 138 mm. Thickness of sheet metal 5 mm. Dated to: mid-6th century.

First publication: Biernacki 2012, 96-97, fig. 7-8.

Spear head (pl. 1/ fig. 5)

Inventory ref. # P18/04w. Location: section X, hectare XVII, square 366, distance from S 3.00 m, distance from E 1.20 m, depth 49.86 m a.s.l. Overall length 185-190 mm, blade length 180 mm, maximum blade width 45 mm. Dated to: the mid-6th century.

Analogies: Gencheva 2012, 112, fig. 26/1; Mrđić / Korać 2009, 120, fig. 9/13; Avelaira 2006, 197, fig. 2/1.

Description: Heavily corroded head, in two pieces, slightly bent across the blade. Type II head, with a wider, lancet-shaped blade, tapering to a point from mid-length.

Spear head (pl. 1/ fig. 6)

Inventory ref. # P73/10w. Location: section X, hectare XXIII, square 59, distance from S 4.40 m, distance from E 1.00 m, depth 49.86 m a.s.l. Overall length 128 mm. Dated to: the mid-6th century.

Analogies: Mrđić / Korać 2009, 120, fig. 9/10.

Description: Type II spear head with no surviving sleeve. Due to the lack of sleeve, the blade is assumed to have had an overall length of over 130 mm (around 140-150 mm), quite possibly analogous to spear head # 5. Uncovered from the layer of burnt material created during a fire caused by an earthquake in 557.
Spear head (pl. 1/ fig. 7)
Inventory ref. # P51/10w. Location: section X, hectare XXIII, square 38, distance from S 4.40 m, distance from E 2.30 m, depth 50.93 m a.s.l. Overall length 275 mm. Dated to: the mid-6th century.
Analogies: Gencheva 2012, 111, fig. 25/3; Mrđić / Korać 2009, 121, fig. 10/17; Bailly 1990, 135, fig. 118/171.
Description: Type II spear head with a quadrilateral cross section and a clearly identifiable blade in the shape of an elongated willow leaf. The well-preserved part of the blade invites the conclusion that it was intended for use against unarmored enemies, with rather universal features, causing wide stab wounds. One notable aspect is that the whole length of the spear head, i.e. 275 mm, has been preserved, with only the tip of the point broken off and missing. Uncovered from the layer of burnt material created during a fire caused by an earthquake in 557.

Spear head (pl. 1/ fig. 8)
Inventory ref. # P27/97w. Location: section X, hectare XVI, square 240, distance from S 0.90 m, distance from E 0.60 m, depth 50.08 m a.s.l. Overall length 210 mm, maximum blade width 39 mm. Dated to: the mid-6th century.
Analogies: Halbout / Pilet / Vaudour 1987, 148, fig. 399; Mrđić / Raičković 2013, 129, fig. 11/1.
Description: Type II head with the blade in two pieces, incomplete, clearly visible markings of exposure to fire. Item with a simple, heart-shaped form. The head must have fractured at the point of contact between the nail and the metal, the nail and the sleeve portion most likely corroded away.

Umbo (pl. 1/ fig. 9)
Inventory ref. # P2/05ob. Location: section X, hectare XVII, square 348, depth 50.45-50.20 m a.s.l. Dated to: second half of the 6th century.
Description: Typical central boss from a Late Roman shield. Fracture at the top suffered during use, possibly in combat. Numerous analogies from the Balkans and the whole Roman Empire.

Copper alloy slide (pl. 1/ fig. 10)
Inventory ref. # P104/03w. Location: section X, hectare XVII, square 325, distance from S 0.75 m, distance from E 4.40 m, depth 48.36 m a.s.l. Dated to: the mid-5th century.
Analogies: James 2004, fig. 533, 534, 539; Chirila et al. 1972, 92, fig. 49/1; Petculescu 1983, 457-458, fig I/3-6; Wuilleumier 1950, 147, fig. 1; Biddulph / Smith / Schuster 2011, 268, fig. 118/293.
First publication: Генчева 2013.
Description: Typical application used to attach the sword scabbard to a soldier’s belt. Based on stratigraphic information – dated to the first half of the 5th century.

Dagger hilt (pl. 1/ fig. 11)
Inventory ref. # P82/09ob. Location: section X, hectare XXIII, square 79/80, depth 51.85-51.50 m a.s.l. Dated to: second half of the 6th century.
Description: Bone hilt from a dagger or knife with preserved fragments of an iron blade, fitted with two rivets. Decorated with a pattern of spots in three parallel lines. Based on stratigraphic information – dated to the second half of the 6th century.

Sling bullets (pl. 1/ fig. 12)
1. Inventory ref. # P56/2000w. Location: section X, hectare XVII, square 361, distance from S 2.07 m, distance from E 0.95 m, depth 50.16 m a.s.l. Weight 6 gr. Dated to: the 6th century.
2. Inventory ref. # P1/2000w. Location: section X, hectare XVII, distance from S 2.05 m, distance from E 2.08 m, depth 50.30 m a.s.l. Weight 45 gr. Dated to: the 6th century.

3. Inventory ref. # P12/2000w. Location: section X, hectare XVII, distance from S 0.08 m, distance from E 3.85 m, depth 50.92 m a.s.l. Weight 45 gr. Dated to: the 6th century.

Bibliography


Roman, Saxon, and Medieval landscape. Northfleet, Kent. The Late Iron Age, speed 1 excavations at Springhead and...


Rapp, C. 2000. The elite status of bishops in Late Antiquity in ecclesiastical, spiritual, and social contexts. – Arethusa 33/3, 315-320.


Καρδαράς, Γ. 2010. Το Βυζάντιο και οι Άβαροι (ΣΤ΄-Θ΄ αι.). Πολιτικές, διπλωματικές και πολιτισμικές σχέσεις. Αθήνα.

Σινάκος, Α. Κ. 2004-2006. Η επίδραση των λοιμών και των φυσικών καταστροφών του τέλους του 6ου και των αρχών του 7ου αιώνα στη διαμόρφωση της πολιτικής του αυτοκράτορα Μαυρικίου. – Ἑῶα καὶ Ἑσπέρια 6, 97-121.
