

Imperial Spheres and the Adriatic

Byzantium, the Carolingians
and the Treaty of Aachen (812)

**Edited by Mladen Ančić,
Jonathan Shepard and Trpimir Vedriš**

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

First published 2018
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2018 selection and editorial matter, Mladen Ančić, Jonathan Shepard and Trpimir Vedriš; individual chapters, the contributors

The right of Mladen Ančić, Jonathan Shepard and Trpimir Vedriš to be identified as the authors of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

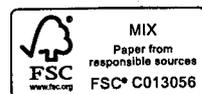
Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
A catalog record for this book has been requested

ISBN: 978-1-138-22594-7 (hbk)
ISBN: 978-1-315-10984-8 (ebk)

Typeset in Times New Roman
by Apex CoVantage, LLC



Printed and bound in Great Britain by
TJ International Ltd, Padstow, Cornwall

Contents

<i>List of figures</i>	viii
<i>List of maps</i>	ix
<i>Notes on contributors</i>	x
<i>Preface</i>	xv
<i>Acknowledgements</i>	xviii
<i>List of abbreviations and notes on bibliography</i>	xix
<i>Maps</i>	xxiii
1 Introduction: Circles overlapping in the Upper Adriatic	1
JONATHAN SHEPARD	
PART I	
The Franks move east	23
2 The Treaty of Aachen: How many empires?	25
MLADEN ANČIĆ	
3 <i>Aemulatio imperii</i> and the south-eastern frontier of the Carolingian world	43
IVAN MAJNARIĆ	
4 Imperial politics and its regional consequences: Istria between Byzantium and the Franks 788–812	57
PETER ŠTIH	
PART II	
Byzantium in turmoil	73
5 A resurgent empire? Byzantium in the early 800s	75
PANOS SOPHOULIS	

6	Franks and Bulgars in the first half of the ninth century	84
	ANGEL NIKOLOV	
7	Dangerous neighbours: The Treaty of Aachen and the defeat of Nikephoros I by the Bulgars in 811	93
	DANIEL ZIEMANN	
PART III		
	Circles overlapping in the northern Adriatic	109
8	Aachen, Venice and archaeology	111
	SAURO GELICHI	
9	Patriarchs as patrons: The attribution of the ciboria in Santa Maria delle Grazie at Grado	121
	MAGDALENA SKOBLAR	
10	Holding the Aquileian patriarchate's title: The key role of local early-ninth-century hagiography	140
	MARIANNA CERNO	
PART IV		
	Dalmatia: The land in between	153
11	Post-Roman Dalmatia: Collapse and regeneration of a complex social system	155
	DANIJEL DZINO	
12	One more Renaissance? Dalmatia and the revival of the European economy	174
	NEVEN BUDAK	
PART V		
	Pannonia beneath the surface	193
13	What did the Treaty of Aachen do for the peoples of the Carpathian basin?	195
	BÉLA MIKLÓS SZŐKE	
14	Lower Pannonia before and after the Treaty of Aachen	207
	HRVOJE GRAČANIN	

15	Changing political landscapes in the ninth-century central Carpathian basin: Interpreting recent settlement excavation data	225
	MIKLÓS TAKÁCS	

PART VI		
	The church between Rome and Constantinople	241

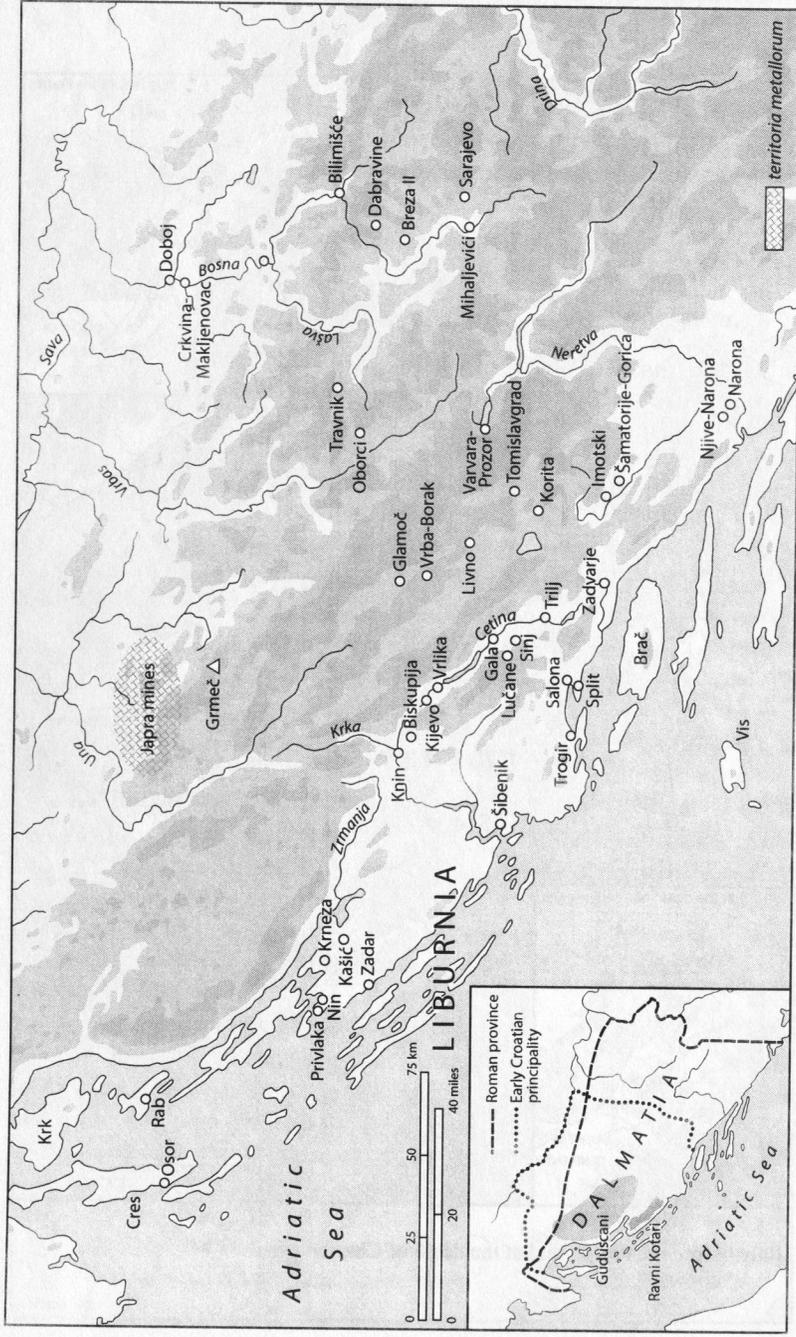
16	Rome and the heritage of ancient Illyricum in the ninth century	243
	MADDALENA BETTI	

17	Dalmatian bishops at the Council of Nicaea in 787 and the status of the Dalmatian church in the eighth and ninth centuries	253
	PREDRAG KOMATINA	

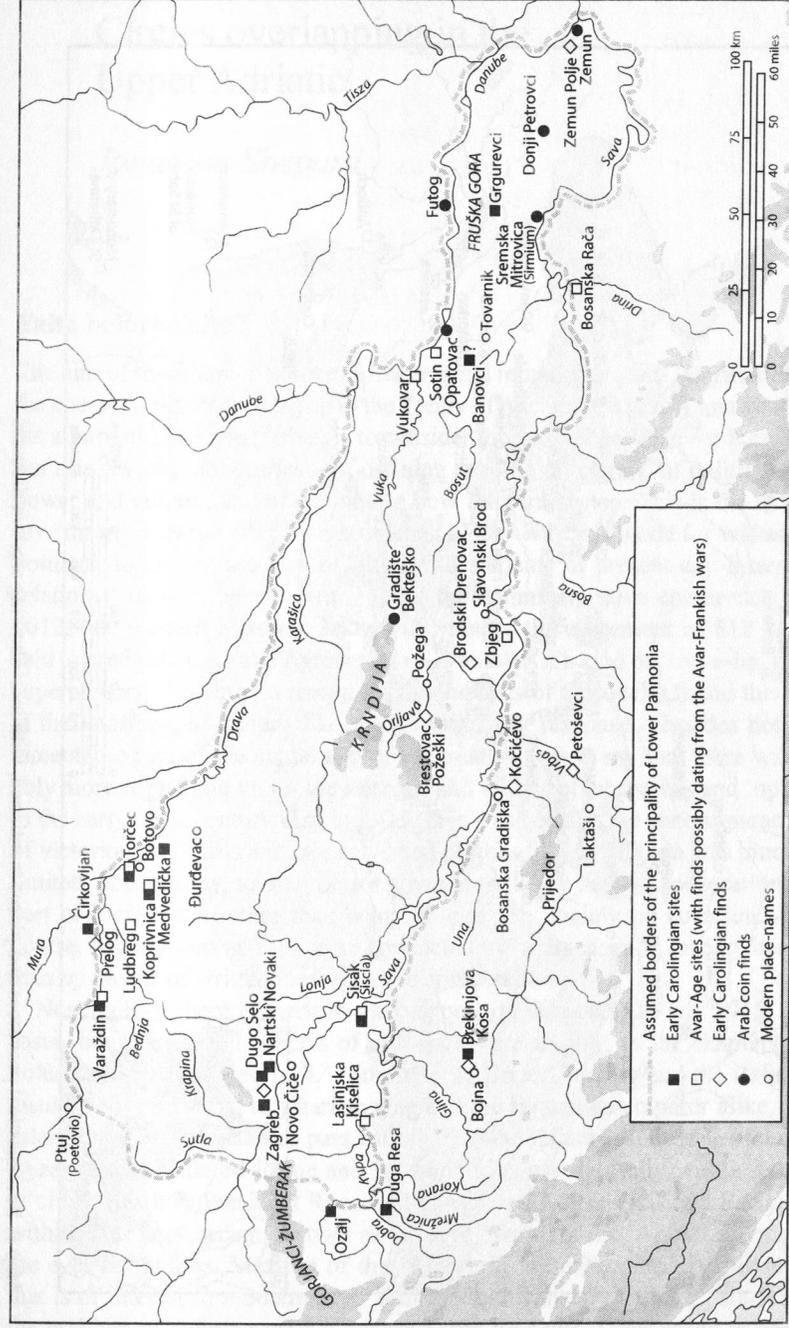
18	New evidence for the re-establishment of the Adriatic dioceses in the late eighth century	261
	IVAN BASIĆ	

19	Amalarius' stay in Zadar reconsidered	288
	TRPIMIR VEDRIŠ	

	<i>Glossary</i>	312
	<i>Alternative place names</i>	316
	<i>Index</i>	319



Map 7 Dalmatia, with inset showing the approximate boundaries of the Roman province, the early Croatian principality, the region of Ravni Kotari and the area inhabited by the Gudusceni



Map 8 Find sites in Lower Pannonia, showing the assumed boundaries of the area (although for a fuller discussion of the highly ambiguous term 'Pannonia', see 225–27 below)

14 Lower Pannonia before and after the Treaty of Aachen

Hrvoje Gračanin

Introduction

We can be fairly sure – at least by the standards of early medieval history – that the Franks' expansion into the region between the Danube and the Adriatic had a profound effect on the socio-political circumstances of the region's peoples. Admittedly, this assumption rests on a weak base, since we know little about the previous period: the extant evidence allows us only a few glimpses of the historical processes at work in the region before the arrival of the Franks. It is as if the two-centuries-long Avar sway more or less froze the region in time. Undoubtedly this impression is wrong, but we have little to tell us exactly how societies in the region developed, and to what extent they may have already been affected by external influences during the seventh and eighth centuries. Here the archaeological record, as well as anthropological and forensic evidence, may be of use: artefacts and osteological remains can be instructive about everyday living conditions, burial customs, what was deemed to be of particular communal or personal value, and even how groups and individuals formed their social identity or defined their social status. But they cannot really help explain complex socio-political and economic processes.

Even our written evidence is practically non-existent before the late eighth and the early ninth centuries. One obvious reason is that the Avars never felt in need of a developed written culture. Another, equally debilitating, reason is that the region between the Danube and the Adriatic had for quite some time been a sort of a double periphery: there was no interest or ability in either the west or the east to record events in the former Roman provinces of Pannonia and Dalmatia during the seventh and eighth centuries. Furthermore, the surviving post-Roman communities on the eastern Adriatic were too insignificant to attract external attention, as well as being too small and too weak to deal with anything beyond their own affairs. The story of those affairs is, in any case, preserved only fragmentarily, and in much later traditions.

This would change with the advent of the Franks, and Pannonia and Dalmatia would once more become, to a degree, interesting to outside observers. The region between the rivers Sava, Drava and Danube, with which our overview is concerned, was caught up in the struggle between the Franks and Avars and

underwent significant socio-political changes, although essentially it remained an in-between zone, especially after the collapse of Duke Liudewit's revolt. One must, however, stress that, despite our Frankish writers' new-found interest in the region, extant written evidence is fragmentary at best. The same can be said of the archaeological evidence, which is still very far from being enough to fill the gaps in our knowledge or provide new insights. The inadequacy of both the narrative and the material sources presents a methodological problem not easily overcome. That said, it is also true that there are some firm points upon which to base a reconstruction, at least in general outline, of the main historical processes in operation in ninth-century Pannonia.

This chapter has two aims: firstly, to offer a brief narrative of events in southern Pannonia in the decades before and after 812 and to provide as coherent a picture as possible of its political history then. Our focus will be on the new political conditions that followed the Franks' encroachment and the overthrow of the Avar khaganate; on the establishment of a new polity between the rivers Sava, Drava and Danube under Frankish tutelage, serving their overall strategic interests; and on the clash between the recently formed Slav elite under Duke Liudewit of Lower Pannonia and his Frankish overlords. Within this framework, special attention is given to the questions of whether Frankish-Byzantine relations influenced the Franks' politico-military strategy in the region, and the extent to which Duke Liudewit's conspiring with Patriarch Fortunatus of Grado (who eventually turned out as pro-Byzantine) may have been construed by the Frankish authorities as a potential threat to their overall position in the region between the Adriatic and the Danube. Our second aim is to present and contextualize the existing archaeological evidence that indicates an influx of Frankish influence, sparse as it may be. In this respect, one may note that, given the present level of knowledge, there is no clear break in the customs and traditions of the material culture between the periods of Avar rule and Frankish domination in Pannonia.

Historical narrative

The Frankish thrust into the central Danube region was a natural consequence of their expansion into areas to the east of the Rhine and in northern Italy. The central Danube basin opened up as a theatre of action for the Franks when, in 787–788, the duchy of Bavaria was finally subdued and absorbed into the *Regnum Francorum*.¹ Around this time, and definitely before 791, the Franks occupied Byzantine-held Istria.² In 791, the Franks invaded Avar territory. The southern Frankish army seems to have advanced along the old Roman road from Aquileia to Poetovio by way of Emona, before moving along the southern bank of the Drava and thus entering the 'Pannonia' of the *Annals of Lorsch*.³ In the Drava basin the Franks may have encountered an Avar stronghold, a fortified settlement enclosed by a defensive rampart. Archaeological investigations have revealed a significant concentration of Avar-Age finds in the Drava basin around Varaždin, Ludbreg and Koprivnica. There are also stray finds of weaponry in the vicinity of Koprivnica, dated to the late eighth and the early ninth centuries. Of these a sabre,

a long fighting knife and several axes have been attributed to the Avars and Slavs, while two winged lances and a scramasax are of Frankish provenance. These finds may provide support for the assumption that this was perhaps the area where the Avar fortification which the southern Frankish army took by force was situated.⁴

The final blows to Avar rule in the region between the rivers Sava, Drava and Danube, and consequently in the whole of Pannonia, were dealt by two expeditions, the first in the autumn of 795 and the second in the summer of 796. In both cases the Frankish armies moved through southern Pannonia, presumably along the ancient Roman road through the Drava and Danube basins.⁵ Having subdued southern Pannonia, the Franks may have organized the area into a vassal principality called Lower Pannonia by 803. Our Frankish sources all start referring to Pannonia in plural form when describing events relating to the year 803, which may indicate that this organizational change was already in place by then.⁶ In any case, this is consistent with the system established by the Franks throughout their frontier areas: they relied not only on their own border regions (marches) but also on dependent polities ruled by local princes.⁷ The duke of Lower Pannonia, who presumably resided in Sisak, was directly subject to the duke of Friuli, whose jurisdiction extended, in the early ninth century, as far as the middle and lower Drava.

The principality of Lower Pannonia seems to have encompassed the entire region between the Drava, Sava and Danube, stretching from the river Sutla and the Gorjanci-Žumberak mountains in the west to the mouth of the Sava, where it discharges into the Danube in the east.⁸ This much can be deduced from our written sources. In Paulinus of Aquileia's poem on Duke Eric of Friuli, Sirmium is mentioned as one of the places under the duke's control.⁹ Much later, as recorded by Niketas Choniates in the early 1200s, the Byzantines knew the region of Syrmia as 'the Frankish land' (*Phrangochōrion*): this may either reflect local memory of Frankish rule, passed on to the Byzantines, or the significant presence of a new Germanic population – or possibly both.¹⁰ We know from the *Conversio Bagoariorum et Carantanorum* that the Bavarians settled the Slav *dux* Pribina and his people in northern Pannonia, and that he was given rule over the area to the north of the Drava – and possibly to a limited extent also to the south.¹¹ And there were always people ready to colonize frontier areas of their own volition: such frontiersmen (*confin(i)ales*) would establish themselves as part of the frontier defences and, like any other freemen, had to do military service and provide specific guard and reconnaissance duties.¹² Present-day Fruška Gora, known in antiquity as *Alma mons*, still preserves the memory of the Franks in its name, since it is usually thought to be a Slavic rendering of the Latin *mons Francorum*.¹³ We should certainly allow for the possibility that such references to the Franks are the result of a much later influx of Germanic immigrants in the eleventh and twelfth centuries, colonists from the west invited into their lands by the Hungarian kings.¹⁴ However, it is equally possible that they evoke memories of a Frankish presence dating as far back as the ninth century. The archaeological evidence to corroborate this presence is unfortunately still negligible, apart from the isolated find of a belt assemblage in the present-day village of Zemun Polje (near Zemun)

in the far south-east of Syrmia, dating from the late eighth or early ninth century; its decorative motifs show Christian influence, usually explained by the arrival of Frankish rule.¹⁵ Furthermore, subsequent Frankish contacts with the Timociani and the Obodrites (*Praedenecenti*) may also suggest that the Franks controlled the middle course of the Danube up to the mouth of the Sava.¹⁶

As noted, the establishment of Frankish rule in the central Danube basin was a natural consequence of Frankish expansion and may have served several aims. First and foremost, the expansionist move against the Avar khaganate aimed at securing their eastern frontier, but may also have been directed at strengthening the Franks' position in the wider region. Byzantino-Frankish hostilities broke out in 788, and shortly afterwards the Franks seized Istria from the Byzantines. Relations between the two empires continued to deteriorate, and it may be that the attack on the Avars was a pre-emptive strike to forestall similar action by the Byzantines in the future or, better yet, to prevent the Byzantines from attracting the Avars to join them against the Franks. That there may have been a real danger from such a development can be seen from the fate of Duke Eric. He was killed in an ambush near present-day Rijeka in 799, apparently staged by the inhabitants of Tarsatica but probably due to Byzantine machinations.¹⁷ The Frankish occupation of the Avar khaganate may also have served as a barrier to future expansion from any other power in the region, notably the Bulgars (assuming that Charlemagne and his advisors were well informed about the situation in south-eastern Europe). In the 790s, the Bulgars were increasingly a force to be reckoned with, as is shown by the outcome of their clashes with the Byzantines.¹⁸ Moreover, the conquest of Avar-held Pannonia brought under Frankish sway a large portion of territory once belonging to the Roman empire, thus giving more substance to Charlemagne's claim of *renovatio imperii Romani*, which eventually resulted in his assumption of the imperial title in 800. Finally, such a thrust into the central Danubian basin gave the Franks the opportunity to deepen and intensify their policy towards regional groups of Slavs. This was all the more important, since good relations with the Slavs had proved of considerable value in the Franks' repeated attempts to pacify the Saxons; they might have expected similar support from the Slavs based on the central Danube and the Adriatic against Byzantium.

The provisions of the Treaty of Aachen in 812 presumably covered Pannonia, and it may even be that Frankish rule in the region was at least tacitly recognized by the Byzantines. We can assume that the first two decades of this rule saw profound changes in the social structure of the region and the emergence of a new elite enjoying the support of the Franks. The archaeological evidence suggests that there were members of local Slav groupings in Frankish service and that they had themselves buried with weapons and military equipment of Frankish provenance (for find sites, see Map 8 on xxxi).¹⁹

We may also assume that missionaries regularly visited the region, bringing the Christian faith back to the local populations, as had been agreed at a synod held on the banks of the Danube in 796.²⁰ A demarcation line separating the two missionary areas of Aquileia and Salzburg had already been set up along the Drava in the same year, and was confirmed by Charlemagne in 803 and again in 811.²¹

The ultimate success of the Aquileian mission is confirmed by the Gospel Book of Cividale, which records the names of pilgrims from the principality of Lower Pannonia, undoubtedly members of the new elite.²² To be sure, the re-Christianization of the region does not mean that Christian worship had ceased altogether when the Avars occupied Pannonia. The Christian faith had lived on in the region. The acts of the synod in 796 mention *clerici inlitterati* or *idiotae*, who maintained some sort of Christian cult for the indigenous populations during the Avar period; but the ecclesiastical organization ceased to exist and was brought back to life only with Frankish rule.

In any case, Frankish influence may be seen as instrumental in giving rise to a south Pannonian Slav elite, and also in establishing favourable preconditions for the formation of an ethnic identity around a local polity created under their patronage.²³ This was something the Avars were not prepared to allow and even tried to forestall – all the more resolutely, we may assume, in light of their experience with the 'Sermesiano' in the late seventh century.²⁴ However, the process was abruptly checked after the dismal failure of Duke Liudewit's revolt. What caused this revolt – the single best-known event in the history of ninth-century southern Pannonia²⁵ – can only be surmised, but several factors seem to have been in play, the penetration of the Frankish socio-political system being the common denominator. In 818 Liudewit, duke of Lower Pannonia, complained to Louis the Pious about the cruelty and arrogance of the Frankish border governor Cadolah, duke of Friuli. This complaint has echoes of similar complaints raised by the inhabitants of Frankish Istria against Duke John and recorded in much detail in the Plea of Rižana of 804.²⁶ It is also possible that Cadolah tried to privilege new men, over whom Liudewit could not exercise as much control as he wanted, or whom he saw as a potential threat to his own position within the principality. Liudewit may also have sought greater autonomy or even to create a virtually independent polity, only loosely under Frankish suzerainty, much as Bavaria had been in the eighth century. It may be that personal motives were also at work in Liudewit's decision to rebel, namely rivalry with the duke of Dalmatia, Borna. The fact that Cadolah was in no hurry to fix the boundaries between the Dalmatian Slavs and towns of the *Romanoi* on the coast – as the Treaty of Aachen would seem to have prescribed – implies that Borna found favour with Cadolah, since such an adjustment would necessarily have been at the expense of Borna's people.

Duke Liudewit's uprising was crushed after a prolonged struggle: ten Frankish forces were involved in suppressing the rebel and his allies, and they employed a scorched-earth strategy. The outcome was no surprise, despite the somewhat dramatic description of the revolt by our Frankish narrative sources as the *Liudewiti-cum bellum* and of Liudewit himself as *tyrannus*.²⁷ What is surprising is the fact that Liudewit ventured to challenge Frankish might in the first place: he must have been aware from the start that his own resources could not match the Franks', especially in the long run. There seems little doubt that Liudewit attempted a full-scale rebellion. However, he would have been a very poor politician and an imprudent military leader had he counted solely on local forces. The only other power in the region that could effectively counter the Franks was Byzantium,

notwithstanding the recent understanding reached at Aachen, and it may be that Liudewit raised the banner of rebellion in expectation of concrete help from Constantinople. That there may have been at least some contacts, possibly even some sort of Byzantine promise of support, can be deduced from the fact that the by now pro-Byzantine patriarch of Grado, Fortunatus, encouraged and aided Liudewit in his struggle against the Franks. But it soon became clear that the Byzantines were not capable of providing any tangible help: they had their own battles to fight with another flare-up of iconoclasm and, far more importantly and debilitatingly, the rebellion of Thomas the Slav in 820. This effectively paralysed the imperial government for a full three years.²⁸ Such inability on the part of the Byzantines to act when circumstances seemed favourable for challenging Frankish dominance in Dalmatia and Pannonia may have been why Constantine VII Porphyrogenetos blamed Michael II (820–829), the emperor at the time of Liudewit's revolt, for the total collapse of Byzantine influence on the eastern Adriatic coast and the Slav lands of the western Balkans.²⁹

The resolute action taken by the Franks against Liudewit in 820 and 821 may to some extent be explained by their concern that the Byzantines would use any apparent weakness in dealing with this revolt to undermine the Frankish position in the region. Patriarch Fortunatus of Grado's escape to Byzantine territory in Zadar in the autumn of 821, after being exposed as a traitor to the Frankish cause, may have convinced the Franks that they were right to suspect the Byzantines of being ready and willing to take advantage of Liudewit's revolt to destabilize Frankish dominance in the region between the Adriatic and the Danube. It may even be that Fortunatus' subsequent rendition was by way of making up for the Byzantines' role in Liudewit's revolt, minor as it turned out to be.³⁰

Archaeological narrative

As already noted, our archaeological evidence for the influx of Frankish influence and the rise of new socio-economic conditions is meagre, but instructive nevertheless. Some artefacts indicating Frankish influence may have arrived in the region even before the Frankish conquest, since it is known from our literary sources that the Avars had been exchanging embassies with the Franks from 782 on, and commercial and cultural contacts are likely to have started even earlier. The spread of elements of Frankish material culture undoubtedly received a much stronger stimulus after the establishment of Frankish rule in the region, when the local population adopted military equipment of Carolingian provenance as symbols of social status and a new political identity. Some artefacts may even be remnants of the wars against the Avars and Duke Liudewit: this was when Frankish armies poured into the region between the Sava, Drava and Danube, possibly leaving traces of their activities. Archaeological remains from the early Carolingian era have been found across southern Pannonia, with the majority of finds from the western part of the region. Our overview of sites and finds can be seen in Table 14.1. It should be noted that items 9, 13 and 14 cannot be dated to the early Carolingian era with certainty.

Table 14.1 Overview of early Carolingian finds in Lower Pannonia (see Map 8)

Locality	Site	Finds	Date
1. Bojna ³¹	Brekinjova Kosa	Early medieval building (possibly a church) containing graves of the same era. Two Carolingian deluxe gilded, bronze spurs with decorated fastenings, a gold coin of Constantine V (741–775), a semiprecious stone pendant mounted with gold, an iron knife, gold thread (possibly from a mantle) and parts of a funeral cloth found in the southern grave The excavated portion of the cemetery contains in total 21 graves. A silver spur from the Carolingian period, with silver fastenings, has been found in a grave located just south-east of the early medieval building	788–852 (Carbon-14 dating)
2. Brestovac Požeški (west of Požega) ³²	Brestovac Požeški	Gold pieces of a belt assemblage and the iron strap-end of a Carolingian sword scabbard	Early ninth century
3. Cirkovljan (near Prelog) ³³	Diven Gravel Pit	K-type double-edged iron sword and a teardrop stirrup, probably from a looted grave	c. 800
4. Duga Resa ³⁴	River Mrežnica	Iron-winged spearhead (Westphal type III)	Late eighth/early ninth century c. 800
5. Dugo Selo ³⁵	Unknown (reportedly the northern slopes of Martin Breg)	Iron-winged spearhead (Westphal type II)	
6. Đurđevač ³⁶	Medvedička	Grave find of a double-edged iron sword (apparently Geibig Combination Type 5, Variants I and IV), with repoussé decorated hilt and damascened blade Other finds made out of archaeological context include an iron battle axe with a hammer; a small knife; and a Carolingian-type bronze, fire-gilded strap-end (with Insular animal decoration in Tassilo Chalice style)	c. 800

(Continued)

Table 14.1 (Continued)

Locality	Site	Finds	Date
7. Koprivnica ³⁷	Jagnjeda Gravel Pit Šoderica Gravel Pit (near Botovo/Drnje) ³⁸	Two iron-winged spearheads, probably from looted graves Several battle axes, an iron sabre and a long scramasax, probably from looted graves	c. 800 c. 800
8. Nartski Novaki (near Dugo Selo) ³⁹	Nartski Novaki (reportedly a gravel pit on the right bank of the river Sava; archaeological context unclear)	Francisca-type battle axe Three battle axes, iron tools and an awl (from a possible hoard)	Second half of the fifth/early sixth century Eighth to tenth century
9. Ozalj ⁴⁰	Stari Grad	Iron spur	Undetermined (possibly ninth century) c. 800
10. Prelog ⁴¹	Šljunčara	Arrowheads; horse bits; stirrups; eight 'Danubian-type' pottery vessels; an iron battle axe; small knives; and a long scramasax, from looted graves	c. 800
11. Sisak ⁴²	Unknown	Small battle axe with Frankish features and bilaterally widened blades (possibly francisca-type) and pieces of spur fittings with Carolingian features	c. 800
12. Sremska Mitrovica ⁴³	Grgurevci-Šuljam on the southern slopes of Fruška Gora mountain	Iron-winged spearhead	Assumed to be ninth century
13. Torčec ⁴⁴	Torčec	Battle axe with Frankish features (possibly francisca-type)	Undetermined
14. Tovarnik ⁴⁵	Banovci	Sword with Carolingian features	Undetermined (possibly ninth century)
15. Varaždin ⁴⁶	Stari Grad	Iron-winged spearhead (Westphal type III)	Late eighth/early ninth century
16. Zagreb ⁴⁷	Kruge	Long scramasax; riding gear (stirrups, horse bits and sheet-metal reinforcers); three bronze quadrangular buckles; a small iron knife; iron fragments; a bone reinforcing plate for a composite bow; a sharp bony tip; and a cast bronze strap-end with tendril ornamentation from the burial of a human with horse	Late eighth century Late eighth century
17. Zagreb ⁴⁸	Podsused Hill (below Susjedgrad Fort)	Warrior grave with belt fittings and double-edged K-type sword with five-lobed pommel	First half of the ninth century
18. Zemun ⁴⁹	Zemun Polje	Gilded bronze belt assemblage with strap-ends and fasteners; two bronze hairpins; three glass paste beads; a hand-made pot; and an iron battle axe from a male grave	c. 800

Finds of Abbasid coins may also be taken as indicators of the opening up of communication routes in the region between the Sava, Drava and Danube in the twilight of the Avar khaganate. The hoard of Abbasid dinars struck by Caliphs al-Saffah (749–754) or al-Mansur (754–775), al-Mahdi (775–785) and Harun al-Rashid (786–809) discovered at Donji Petrovci in Syrmia testifies to long-distance trade. Their deposition may have been due to the Avar-Frankish wars in the late eighth century, since the coins seem not to have circulated for long before being deposited.⁵⁰ The most recent piece is dated to 788–789,⁵¹ which has led some scholars to conclude that the coins were buried in the ground around 790.⁵² Along with the coins, Byzantine-style jewellery of the late Avar period has also been discovered in the hoard.⁵³ So if the owner concealed his treasure because of war-time uncertainties, a somewhat later deposition date is more likely. On the other hand, the hoard may have been created for savings purposes. Besides the Donji Petrovci hoard, there are several other stray finds of Arab coins: single dinars found at Gradište Bekteško on the southern slopes of Mount Krndija; at Opatovac (near Sotin); in the vicinity of Zemun; and two dinars from Sremska Mitrovica. All of these were struck in the caliphate of al-Mahdi.⁵⁴ Three are pierced (those from Opatovac, Sremska Mitrovica and near Zemun), which shows that they were used as jewellery. What may seem odd is that only gold dinars have been found in the region, and not a single silver dirham. This may imply that the dinars were primarily set aside as savings. In any case, the Arab coins would indicate that local trade-routes were now operational again.

The finds of several iron axes from Sotin and Vukovar, in the region of the Danube, and from Zbjeg (south-west of Slavonski Brod) in the region of the Sava, may also belong to the late eighth and the early ninth centuries.⁵⁵ To these may be added several axes found in the area of Sisak and dated to around 800.⁵⁶ Stray finds of axes that might belong to the late Avar period have been discovered in the vicinity of Koprivnica⁵⁷ and Torčec⁵⁸ in the region of the Drava; and several iron axes have also been recovered from the river Sava at Bosanska Rača, south-west of Sremska Mitrovica, but their date is undetermined.⁵⁹ Whether these finds are connected to the Avar-Frankish wars or the war against Duke Liudewit cannot be said with certainty, but it may at least be hypothesized where the finds did not originally form part of a grave assemblage.⁶⁰ However, where the finds lack a clear archaeological context, interpretation is almost impossible, although their location in the Drava, Danube and Sava basins would certainly fit into our general picture of fighting along the main river routes, that is near suitable river crossings: it is well known that the Franks made use of riverways as convenient corridors for advancing troops.⁶¹ Archaeological remains of the early Carolingian era have also been found at sites on the right bank of the Sava, in modern Bosnia and Herzegovina. From Petoševci near Laktaši (the site of the Bagruša necropolis) comes a stirrup of an early Carolingian type dated to the ninth century.⁶² An iron spearhead and an iron spur of Frankish provenance have been found in Kočićevo (formerly Junuzovci) near Bosanska Gradiška⁶³ and Prijedor respectively,⁶⁴ both probably dating from the ninth century.

There are two finds of Frankish provenance that may deserve special attention. First is the francisca-type battle axe from Nartski Novaki (near Dugo Selo), which actually dates from the fifth or early sixth century, but has traditionally been assumed to form part of a possible hoard – together with three other battle axes, iron tools and an awl – dating broadly to the eighth to tenth centuries.⁶⁵ More recently, however, the francisca-type battle axe has been dissociated from this possible later hoard and ascribed to a Germanic presence in sixth-century southern Pannonia.⁶⁶ There are two other finds of battle axes, from Sisak and Torčec respectively, believed to have francisca-type features; but the unclear archaeological context makes it difficult to confirm their provenance. However, rather than being seen as testimony to a Germanic presence, the find of at least one and possibly three francisca-type battle axes may be explained by contacts the Avars had with the Franks in the second half of the sixth century.

The second find of Frankish provenance is a winged spearhead from the river Kupa (near Lasinjska Kiselica), presumably found on the site of an old river ford. It is dated to the first half of the eighth century and thought either to have been brought to the area by a Frankish soldier or to have been lost by a Slav warrior fighting for the Franks against the Avars.⁶⁷ If the spear had been used over two generations, as has also been suggested, it may possibly be connected to the time of Duke Liudewit's rebellion.⁶⁸ However, attention has been drawn to the practice of the votive deposition of spears.⁶⁹ Neither of the proposed hypotheses can be substantiated and the question remains open as to how the spear ended up in this area and in the river. It may even be that it was loot from one of the Avar campaigns in the west in the first half of the eighth century, for instance, from the border clashes with the Bavarians and the Carantanians in 713–714 and 741–742.⁷⁰

Conclusion

On balance, we can draw one general conclusion from the archaeological record: Frankish rule in southern Pannonia facilitated the rise of a new warrior elite, whose members had themselves buried with military equipment of Carolingian provenance. It is believed that the owner of a double-edged iron sword and a teardrop stirrup from Cirkovljan (near Prelog) was probably a distinguished local Slav warrior in Frankish service, who was deliberately buried apart from the nearby Avar-Slav necropolis; the idea was to emphasize his association with the new elite, which owed their status to their Carolingian overlords.⁷¹ The owner of another double-edged iron sword from Medvedička (near Đurđevac) is similarly thought to have been a member of the Slav elite who was in the service of the March of Friuli.⁷² The same, then, may be concluded for the owners of iron spears from the gravel pit at the Jagnjede site (near Koprivnica).⁷³ The practice of leaving weapons with the dead had a clear social function. In ninth-century southern Pannonia after the destruction of the Avar khaganate, the appearance in local graves of elements of Carolingian military equipment indicates that some saw their chance in adapting to the new political situation and to advance socially

by adopting a new allegiance and identity. The members of this newly created, or merely refashioned, elite detached themselves from those who seem to have preferred to cling to old identities and ways, such as the people buried in the Avar-Slav graveyards in Prelog or at the Kruge site in Zagreb. That this political conversion or re-invention brought many benefits is self-evident, but there may be more telling testimony: the Brestovac Požeški 'treasure' could easily have belonged to a member of this new south Pannonian Slav elite, who owed his promotion to the Franks.⁷⁴

Notes

- 1 Wolfram 1995, 338–44.
- 2 *FiF*, 199–200. In terms of chronology, it is worth stressing that no Istrian bishops are recorded as attending the Second Council of Nicaea in 787, which may or may not be the result of the rise of Frankish influence in the region. The matter is surely open for debate.
- 3 It is presumably the area around Poetovio which the *Annals of Lorsch* understands as 'Illyricum': *Annales Laureshamenses* s.a. 791, 34–35. See also *ASM*, 316; Bowlus 1995, 49 (who omits the duke of Friuli).
- 4 Gračanin 2011, 151.
- 5 *ASM*, 319; Bowlus 1995, 55–56. Béla Miklós Szóke (2011, 282) believes that the Franks moved along the Sava, but it is more likely that the main strike force marched down the Drava. However, we cannot exclude the possibility that there had also been some fighting in the Sava area (see below, 228–29).
- 6 *ARF*; Einhard, *Annales* s.a. 803, 191; *VKM*, 17–18; Poeta Saxo, *Annales* V.195, 270.
- 7 Goldberg 2006, 119.
- 8 Gračanin 2011, 153–55.
- 9 Paulinus Aquilensis, *Carmina*, II.
- 10 Niketas Choniates, *Historia*, vol. 1, 18, lines 58–60, 92, lines 50–52, 127, line 73.
- 11 *Conversio Bagoariorum*, chs 10–11, 120–23.
- 12 Smith 1995, 170, 176–79; Wolfram 2001, 242. For the impact of the Frankish border on the formation of local polities, see Curta 2005.
- 13 Wolfram 1995, 310.
- 14 Engel 2001, 60.
- 15 Gračanin 2011, 140 n. 147, 154 n. 61.
- 16 Einhard (*VKM*, 17–18) says that Dacia on the left bank of the Danube was under Frankish control, which means that the Franks perceived the Obodrites as under their sway.
- 17 *VKM*, 15–17.
- 18 On deteriorating relations between the Bulgars and the Byzantines, see *BaB*, 159–286. See also the chapters by Sophoulis and Nikolov in this volume.
- 19 Gračanin 2011, 165–66.
- 20 On the synod, see Bratož 1998, 154–79.
- 21 Bratož 1993, 180; Wolfram 1995, 285–86, 303, 308.
- 22 Pilgrims from the principality of Lower Pannonia are recorded in 'The Gospel Book of Cividale', 249–50, 252.
- 23 See also Ivan Majnarić's study in this volume for the importance of the concept of *aemulatio imperii* and the process of 'othering' in the formation of ethnic identity along the south-eastern frontier of the Carolingian world.
- 24 Gračanin 2011, 137–39.
- 25 For the historical narrative of Liudewit's rebellion, see Wolfram 1987, 268–72; *FiF*, 186–92; Bowlus 1995, 60–71; Gračanin 2011, 158–64. The principal sources are

- ARF* s.a. 819–823, 149–64; *GHI* chs 32–36, ed. Pertz, 624–27; ed. and trans. Tremp, 390–417.
- 26 On the Plea of Rizana, see *FiF*, 200–43.
- 27 *ARF* s.a. 822, 157–59; *GHI* ch. 36, ed. Pertz, 627; ed. and trans. Tremp, 412–16.
- 28 For the iconoclast crisis and the rebellion of Thomas the Slav, see *BR*, 207–44.
- 29 *DAI*, ch. 29, 124, lines 60–63; *Life of Basil*, ch. 52, ed. Bekker, 288–89; ed. and trans. Ševčenko, 188–89.
- 30 Fortunatus accompanied a Byzantine embassy to Louis the Pious' court in 824 and was interrogated by the emperor about the reasons for his flight to Byzantine territory, while the Byzantine envoys said nothing in his defence (*ARF* s.a. 824, 164–67).
- 31 Miletić *et al.* 2015, 77–98. I wish to thank wholeheartedly Vinko Madiraca, who led the 2015 archaeological field campaign at the Brekinjova Kosa site, for kindly providing me with information on the preliminary research results.
- 32 Sekelj Ivančan 1995, 192, no. 533; Szentpéteri 2002, vol. 1, 70. See now the comprehensive study by Birgit Bühler (2014).
- 33 Vinski 1983–1984, 199, no. 18; Sekelj Ivančan 1995, 166, no. 112; Sekelj Ivančan 2004, 122; Bilogrivić 2009, 132–33; Bilogrivić 2011, 86, 87.
- 34 Bošković 2002, 168, no. 41; Sekelj Ivančan 2004, 112; Demo 2010, 71. Demo has redated the spearhead from the ninth to eleventh centuries (as suggested by Bošković and Sekelj Ivančan) to the late eighth/first half of the ninth century.
- 35 Demo 2010.
- 36 Vinski 1977–1978 [1979], 165–66, 177–78; Vinski 1983, 469, 472, 495; Vinski 1983–1984, 194–95, 199, no. 19; Sekelj Ivančan 2004, 122; Bilogrivić 2011, 86, 87.
- 37 Sekelj Ivančan 2004; Sekelj Ivančan 2007.
- 38 Marković and Zvijerac 2000, 56; Sekelj Ivančan 2004, 120; Sekelj Ivančan 2007, 425. Željko Demo (1983–1984, 212–13) has classified the scramasax as an X-type sword dating from the second half of the ninth century.
- 39 Simoni 1982, 251–61; Sekelj Ivančan 1995, 97, no. 21; Sekelj Ivančan 2004, 122; Rapan Papeša 2012, 427–28 (for the battle axe of the francisca type).
- 40 Tomičić 1997, 65; Sekelj Ivančan 2004, 122.
- 41 Sekelj Ivančan 1995, 119, no. 131; Szentpéteri 2002, vol. 1, 295; Filipec 2002–2003, 134, no. 28.
- 42 Sekelj Ivančan 1995, 179, no. 468; Burkowsky 1999, 88–89, 90; Sekelj Ivančan 2004, 122.
- 43 Vinski 1977–1978 [1979], 176 n. 192; Bekić 2003, 169.
- 44 Marković and Zvijerac 2000, 57.
- 45 Sekelj Ivančan 1995, 239, no. 792.
- 46 Demo 2010, 71; Tomičić 2013, 137–39.
- 47 Sekelj Ivančan 1995, 93, no. 1.
- 48 Vinski 1983–1984, 199, no. 17; Sekelj Ivančan 1995, 94, no. 6; Bilogrivić 2009, 134.
- 49 Dimitrijević 1966; Trbuhović 1982, 73; Szentpéteri 2002, vol. 1, 431.
- 50 Bartczak 1997–1998, 265.
- 51 Bartczak 1997–1998, 261.
- 52 *OEE*, 377–78, 828.
- 53 Kovács 1989, 55, no. 277.
- 54 Mirmik 1997, 194, 198, nos 10–14 (incorrectly identified as dirhams, which is repeated in Gračanin 2011, 166). One more Arab dinar, dated to 707/708, has been found at Futog on the northern bank of the Danube (Kovács 1989, 121; *OEE*, 377, 822), strictly speaking outside the region between the Sava, the Drava and the Danube; it has therefore been omitted from this overview.
- 55 Vinski 1977–1978 [1979], 184.
- 56 Vinski 1977–1978 [1979], 184; Burkowsky 1999, 90.
- 57 Two battle axes from the Jagnjeđe gravel pit, broadly dated between the eighth and tenth centuries: Kolar 1976, 110–11; Marković 1993.

- 58 One battle axe was found at the Dožina/Dužina site (Marković 1997, 37) and another to the south of the Prečno Pole 1 site (Sekelj Ivančan and Zvijerac 1997, 66); both are broadly dated to the eighth to tenth centuries.
- 59 Filipec 2002–2003, 125.
- 60 Weaponry discovered in burials includes, for example, an iron axe from Brezje (near Varaždin), found with fragmented pottery and dated to the late eighth and early ninth centuries (Bekić 2006, 290); a small iron axe found together with a pottery vessel in the gravel pit at Stara Šljunčara, Novo Čiče, south of the Sava and dated to the late eighth century (Rendić-Miočević 1995, 156, nos 414–15; Sekelj Ivančan 1995, 99, no. 34; Filipec 2002–2003, 133, no. 23); and a massive iron axe found with a pot and dated to the late eighth century (Rendić-Miočević 1995, 153, no. 407; Sekelj Ivančan 1995, 93, no. 1).
- 61 Bowlus 1995, 49–52.
- 62 Žeravica 1985–1986, 165; Tomičić 1997, 65.
- 63 Miletić 1963, 158, 160.
- 64 Tomičić 2000, 157.
- 65 Simoni 1982.
- 66 Sokol 1986, 56; Sekelj Ivančan 1995, 97; Rapan Papeša 2012, 427–28.
- 67 Bekić 2003, 165–66, 173–74.
- 68 Bekić 2003, 174.
- 69 Sekelj Ivančan 2007, 422.
- 70 Sekelj Ivančan 2007, 422.
- 71 Vinski 1983, 495. One may also note the chance find of an X-type sword at the Plana site in Brodski Drenovac, where an Avar-Slav necropolis dating from around 800 has been discovered (Sekelj Ivančan 1995, 191, no. 534; Szentpéteri 2002, vol. 1, 71); the sword probably dates to the second half of the ninth century, and comes from a looted grave located close to the Avar-Slav graveyard (Vinski-Gasparini and Ercegović 1958, 145, 153; Sekelj Ivančan 2004, 122).
- 72 Vinski 1981, 32; Sekelj Ivančan 2004, 122.
- 73 Gračanin 2011, 160–61.
- 74 It is worth noting that a gold ring with the inscription 'IYI' is usually taken to indicate a lasting Bulgar influence in the region between the Sava, Drava and Danube and that even the Brestovac belt assemblage was worn by a Bulgar (see Stanilov 2006, 221, 223). However, the ring may have been an import from Bulgar territory, whereas the style and technique of the belt assemblage point to Byzantine models, which were also imitated in the Avar khaganate (see Bühler 2014, 198–202). There is really no need to explain the find of either the ring or the belt assemblage as proof of a Bulgar presence in the region, given Frankish contacts with the Timociani: previously under Bulgar sway, in 818 the Timociani came over to the Franks. Furthermore, the 'treasure' is likely to have arrived well before the Bulgars intervened in the region; for details about Frankish-Bulgar relations in ninth-century southern Pannonia, see Gračanin 2013, 3–18.

Primary sources

- Annales Laureshamenses*. Ed. Georg Heinrich Pertz, in *MGH SS 1, Annales Laureshamenses, Alamannici, Guelferbytani et Nazariani* (Hanover: Hahn, 1826), 19–60.
- Conversio Bagoariorum*. Ed. and German trans. Fritz Lošek, *Die Conversio Bagoariorum et Carantanorum und der Brief des Erzbischofs Theotmar von Salzburg* (Hanover: Hahn, 1997), 90–135.
- Einhard, *Annales*. Ed. Georg Heinrich Pertz, in *MGH SS 1* (Hanover: Hahn, 1826), 135–218.

- 'The Gospel Book of Cividale'. Ed. Franc Kos, in *Gradivo za zgodovino Slovencev v srednjem veku*, vol. 2: 801–1000 (Ljubljana: Lenova, 1906), no. 328, 248–56.
- Life of Basil*. Ed. Immanuel Bekker, in *Theophanes continuatus, Ioannes Cameniata, Symeon Magister, Georgius Monachos, Corpus scriptorum historiae byzantinae* (Bonn: Weber, 1838), 211–353; Ed. and trans. Ihor Ševčenko, *Chronographiae quae Theophanis Continuati nomine fertur liber quo Vita Basilii imperatoris amplectitur*, *CFHB* 42 (Berlin – New York: de Gruyter, 2011).
- Niketas Choniates, *Historia*. Ed. Jan Louis van Dieten, *CFHB* 11, 2 vols (Berlin: de Gruyter, 1975).
- Paulinus Aquiliensis, *Carmina*, II: *Versus de Herico duce*. Ed. Ernest Dümmler, in *MGH PLAC 1* (Berlin: Weidmann, 1881), 131–33.
- Poeta Saxo, *Annales de gestis Caroli magni imperatoris*. Ed. Georg Heinrich Pertz, in *MGH SS 1* (Hanover: Hahn, 1826), 225–79.

Secondary literature

- Bartczak, Andrzej, 1997–1998. 'The Early Abbasid Dinars of the Petrovci Hoard', *VAMZ* 30–31: 259–72.
- Bekić, Luka, 2003. 'Novi nalaz ranosrednjovjekovnog koplja s krilcima [New Discovery of Early Medieval Winged Spear]', *VAMZ* 36: 165–80.
- Bekić, Luka, 2006. *Zaštitna arheologija u okolici Varaždina/Rescue Archaeology in the Varaždin Environs* (Zagreb: Ministry of Culture RH).
- Bilogriović, Goran, 2009. 'Karoliński mačevi tipa K/Type K Carolingian Swords', *Opuscula archaeologica* 33: 125–82.
- Bilogriović, Goran, 2011. 'O mačevima posebnog tipa u Hrvatskoj [Über Schwerter des Sondertyps 1 in Kroatien]', *SHP* 38: 83–108.
- Bošković, Dora, 2002. 'Naoružanje vojske kralja Kolomana: oružje i oprema ratnika u 11. stoljeću', in *Kolomanov put: katalog izložbe [Koloman's Way. An Exhibition Catalogue]*, ed. Jelena Borošak-Marijanović *et al.* (Zagreb: Hrvatski povijesni muzej), 150–62 and selected catalogue entries on 163–76.
- Bowlus, Charles, 1995. *Franks, Moravians, and Magyars: The Struggle for the Middle Danube, 788–907* (Philadelphia: University of Pennsylvania Press).
- Bratož, Rajko, 1993. 'Aquilaia und der Alpen-Adria-Raum (von der Mitte des 6. Jahrhunderts bis 811)', in *Karantien und der Alpen-Adria-Raum im Frühmittelalter*, ed. Günther Hödl and Johannes Grabmayer (Vienna: Böhlau), 151–208.
- Bratož, Rajko, 1998. 'La cristianizzazione degli Slavi negli atti del Convegno "ad ripas Danubii" e del Concilio di Cividale', in *XII centenario del Concilio di Cividale (796–1996)*, ed. Sandro Piussi (Udine: Facoltà teologica dell'Italia settentrionale), 145–90.
- Bühler, Birgit, 2014. *Der 'Schatz' von Brestovac, Kroatien. Seine kulturellen Beziehungen und technologischen Aspekte* (Mainz: Römisch-Germanischen Zentralmuseums).
- Burkowsky, Zdenko, 1999. *Sisak u prapovijesti, antici i starohrvatskom dobu* (Sisak: Gradski muzej Sisak).
- Curta, Florin (ed.), 2005. *Borders, Barriers, and Ethnogenesis. Frontiers in Late Antiquity and the Middle Ages* (Turnhout: Brepols).
- Demo, Željko, 1983–1984. 'Srednjovjekovni mačevi u Muzeju grada Koprivnice [Medieval Swords in the Muzej Grada Koprivnice]', *VAMZ* 16–17: 211–40.
- Demo, Željko, 2010. 'Ranosrednjovjekovno koplje s krilcima iz okolice Dugog Sela u svjetlu novih saznanja o ovoj vrsti oružja na motki [An Early Medieval Winged/Lugged

- Spearhead From the Dugo Selo Vicinity in the Light of New Knowledge About This Type of Pole-Mounted Weapon], *Archeologica Adriatica* 4: 61–84.
- Dimitrijević, Danica, 1966. 'Der Fund von Zemun Polje im Lichte der spätawarenzeitlichen Problematik', *Archaeologia Jugoslavica* 7: 53–76.
- Engel, Pál, 2001. *The Realm of St Stephen: A History of Medieval Hungary. 895–1526* (London: IB Tauris).
- Filipec, Krešimir, 2002–2003. 'Kasnoavarski ukrasni okov (falera) u obliku veprve glave iz Siska'. *Godišnjak Gradskog muzeja Sisak* 3–4: 117–46.
- Goldberg, Eric J., 2006. *Struggle for Empire: Kingship and Conflict Under Louis the German, 817–876* (Ithaca, NY: Cornell University Press).
- Gračanin, Hrvoje, 2011. *Južna Panonija u kasnoj antici i ranom srednjovjekovlju (od konca 4. do konca 11. stoljeća)* [South Pannonia in the Late Antiquity and the Early Middle Ages (From the End of the Fourth Century to the End of the Eleventh Century)] (Zagreb: Plejada).
- Gračanin, Hrvoje, 2013. 'Bugari, Franci i južna Panonija u 9. stoljeću. Reinterpretacija povijesnih izvora [The Bulgars, Franks and South Pannonia in the Ninth Century. The Reinterpretation of Historical Sources]'. in *Hrvati i Bugari kroz stoljeća Povijest, kultura, umjetnost i jezik. Zbornik radova sa znanstvenog skupa održanog u Zagrebu i Đakovu. 23–24. rujna 2010.* ed. Damir Karbić and Tihana Luetić (Zagreb: HAZU), 3–22.
- Kolar, Sonja, 1976. 'Arheološki lokaliteti u općini Koprivnica', *Podravski zbornik* 2: 103–16.
- Kovács, László, 1989. *Münzen aus der ungarischen Landnahmezeit. Archäologische Untersuchung der arabischen, byzantinischen, westeuropäischen und römischen Münzen aus dem Karpatenbecken des 10. Jahrhunderts* (Budapest: Akadémiai Kiadó).
- Marković, Zorko, 1993. 'Nekoliko zanimljivih arheoloških nalaza iz koprivničke Podravine', *Muzejski vjesnik* 16: 26–30.
- Marković, Zorko, 1997. 'Osvrt na neke pretpovijesne i srednjovjekovne nalaze u Podravini', *Podravski zbornik* 23: 33–52.
- Marković, Zorko, and Ivan Zvijerac, 2000. 'Arheološko-povijesni slijed naseljavanja Torčeca i okoline', in *Povijest Torčeca*, ed. Dragutin Feletar and Hrvoje Petrić (Torčec: Meridijani, Društvo za povjesnicu i starine Torčec), 44–59.
- Miletić, Martina, Vedran Koprivnjak and Vinko Madiraca, 2015. 'Stručno izvješće o zaštitnim arheološkim istraživanjima na arheološkom nalazištu Glina – Brekinjova Kosa 2015. g.', unpublished report submitted to the Sisak Conservation Department (Split: Contarini d.o.o.).
- Miletić, Nada, 1963. 'Nakit i oružje IX–XII veka u nekropolama Bosne i Hercegovine [Schmuck und Waffen des IX–XII. Jahrhunderts in den Nekropolen Bosniens und der Herzegowina]', *GZMS* 18: 155–78.
- Mirnik, Ivan, 1997. 'O nekim nalazima novca 11. stoljeća u Hrvatskoj [On Some 11th Century Coin Finds in Croatia]', in *Zvonimir, kralj hrvatski: zbornik radova*, ed. Ivo Goldstein (Zagreb: HAZU), 191–206.
- Rapan Papeša, Anita, 2012. 'Early Mediaeval Barbarian Elements in Late Antique Southern Pannonia', in *The Archeology of Roman Southern Pannonia: The State of Research and Selected Problems in the Croatian Part of the Roman Province of Pannonia*, ed. Branka Migotti, *BAR International Series* 2393 (Oxford: Archaeopress), 415–39.
- Rendić-Miočević, Ante (ed.), 1995. *Zagreb prije Zagreba. Arheološka baština Zagreba od pretpovijesti do osnutka biskupije 1094. godine/Zagreb Before Zagreb. The Archaeological*

- Heritage of Zagreb From Prehistory to the Foundation of the Bishopric in 1094* (Zagreb: Arheološki muzej u Zagrebu).
- Sekelj Ivančan, Tajana, 1995. *Catalogue of Medieval Sites in Continental Croatia, BAR International Series* 615 (Oxford: Tempus Reparatum).
- Sekelj Ivančan, Tajana, 2004. 'Ranokarolinško koplje s krilcima iz šljunčare Jegeniš kod Koprivnice [Frükarolingische Flügellanze aus der Kiesgrube Jegeniš bei Koprivnica]', *PIAZ* 21: 109–28.
- Sekelj Ivančan, Tajana, 2007. 'Another Find of an Early Carolingian Winged Spearhead From the Gravel Extraction Plant of Jegeniš Near Koprivnica [Još jedan nalaz ranokarolinškog koplja s krilcima iz šljunčare Jegeniš kraj Koprivnice]', *PIAZ* 24: 419–27.
- Sekelj Ivančan, Tajana, and Ivan Zvijerac, 1997. 'Nekoliko srednjovjekovnih položaja u okolini Torčeca – Koprivničko-križevačka županija', *Obavijesti Hrvatskog arheološkog društva* 29: 65–69.
- Simoni, Katica, 1982. 'Skupni nalaz oruda i oružja iz Nartskih Novaka [Ein Sammelfund von Waffen und Werkzeugen aus Nartski Novaki]', *VAMZ* 15: 251–66.
- Smith, Julia M. H., 1995. 'Fines imperii: The Marches', in *NCMH* 2, 169–89.
- Sokol, Vladimir, 1986. 'Područje sjeverozapadne Hrvatske u razdoblju između 400. i 800. godine (Velika seoba naroda)', in *40 godina arheoloških istraživanja u sjeverozapadnoj Hrvatskoj* [40 Jahre archäologischer Untersuchungen auf dem Gebiet des nordwestlichen Kroatien], ed. Dubravka Balen-Letunić and Zorko Marković (Koprivnica: Muzej grada Koprivnice), 54–60, 85–86, 104, 112, 114.
- Stanilov, Stanislav, 2006. *Khudozhestveniat metal na bulgarskoto khanstvo na Dunav (7–9 vek): opit za empirichno izsledvane* [Die Metallkunst des Bulgarenkhanats an der Donau (7–9. Jh.). Versuch einer empirischen Untersuchung] (Sofia: Klasika i stil).
- Szentpéteri, József (ed.), 2002. *Archäologische Denkmäler der Awarenzeit in Mitteleuropa, Varia archaeologica Hungarica* 13, 2 vols (Budapest: Instituti Archaeologici Academiae Scientiarum Hungaricae).
- Szöke, Béla Miklós, 2011. 'Die Donau und die letzten Tage des Awarischen Kaganats', in *Ten Thousand Years Along the Middle Danube. Life and Early Communities From Prehistory to History*, ed. Gyöngi Kovács and Gabriella Kulcsár (Budapest: Archaeolingua), 265–94.
- Tomičić, Željko, 1997. 'Archäologische Zeugnisse der Karolinger in den van Kroaten besiedelten Gebieten', *HAM* 3: 61–72.
- Tomičić, Željko, 2000. 'Arheološka slika ranoga srednjeg vijeka na prostoru međurječja Drave, Dunava i Save', in *HiK*, vol. 1, 142–61.
- Tomičić, Željko, 2013. 'Karolinško koplje iz Varaždina – Prinos poznavanju najranije prošlosti grada [Carolingian Spear From Varaždin: A Contribution to the Understanding of the Earliest Past of the Town]', *Radovi Zavoda za znanstveni rad HAZU Varaždin* 24: 137–52.
- Truhović, Leposava, 1982. 'Avar Finds From Sirmium and the Surrounding Region', in *Sirmium: recherches archéologiques en Syrmie*, vol. 4, ed. Noël Duval, Edward L. Ochsenschlager and Vladislav Popović (Belgrade: Institut Archéologique de Beograd – École française de Rome – Research Foundation of the City University of New York), 61–75.
- Vinski, Zdenko, 1977–1978 [1979]. 'Novi ranokarolinški nalazi u Jugoslaviji [Frühkarolingische Neufunde in Jugoslawien]', *VAMZ* 10–11: 143–90.
- Vinski, Zdenko, 1981. 'O nalazima karolinških mačeva u Jugoslaviji', *SHP* 11: 9–54.

- Vinski, Zdenko, 1983. 'Zu karolingischen Schwertfunden aus Jugoslawien', *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 30: 465–501.
- Vinski, Zdenko, 1983–1984. 'Ponovno o karolinškim mačevima u Jugoslaviji [Abermals zu karolingischen Schwertern in Jugoslawien]', *VAMZ* 16–17: 183–210.
- Vinski-Gasparini, Ksenija, and Slavenka Ercegović, 1958. 'Ranosrednjovjekovno groblje u Brodskom Drenovcu [Das frühmittelalterliche Gräberfeld von Brodski Drenovac]', *VAMZ* 1: 129–61.
- Wolfram, Herwig, 1987. *Die Geburt Mitteleuropas. Geschichte Österreichs vor seiner Entstehung 378–907* (Vienna: Siedler).
- Wolfram, Herwig, 1995. *Salzburg, Bayern, Österreich. Die Conversio Bagoariorum et Carantanorum und die Quellen ihrer Zeit* (Vienna: Oldenbourg).
- Wolfram, Herwig, 2001. 'The Creation of the Carolingian Frontier System c. 800', in *TFLAC*, 233–45.
- Žeravica, Zdenko, 1985–1986. 'Ranoslovenska nekropola Bagruša u Petoševcima kod Laktaša [The Early Slav Cemetery of Bagruša in Petoševci near Laktaši]', *GZMS* 40–41: 129–209.