

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Marek Jankowiak

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Abstract and Keywords

Northern Europe and the Islamic world, although separated by the wide belt of the steppe, were in contact throughout the pre-Mongol period. The intensity of these contacts varied over time and so did their geography: objects of Islamic provenance were imported to the basin of the Kama in the 7th–10th centuries, to the lands settled by the Scandinavians and those Slavs who were under their political or cultural influence in the 9th and 10th centuries, and to the northern edge of the steppe in the two centuries before the Mongol invasion. This chapter surveys the finds of Islamic objects associated with these interactions—mostly silver coins and silverware—and investigates the mechanisms that account for their importation to the North.

Keywords: Northern Europe, long-distance trade, slave trade, dirham hoards, Islamic silverware

NORTHERN Europe and the Islamic world, although separated by the wide belt of the steppe, were in contact from the 7th to 13th centuries. The intensity of these contacts varied over time, but vast quantities of coins, silverware, beads, and other objects of Islamic provenance were imported to Scandinavia and the Slavic lands at their peak in the 9th and 10th centuries (Figure 3.6.1). Trade seems to have been the primary reason behind the inflow of large quantities of objects of Islamic origin, especially coins, to northern Europe. It is an open debate what they were exchanged for: furs, for instance, were certainly sought after in the Islamic world (Howard-Johnston forthcoming), but the main areas of their production in northern Scandinavia and the Kama Basin do not coincide with the distribution of the finds of dirhams (Kovalev 2000–2001). Muslim sources—such as the account of Ibn Fadlan who travelled to Bulgar on the Volga in 922—emphasize the significance of slave trade, but modern research has so far focused on the numismatic material rather than the mechanisms and implications of this long-distance trade system spanning much of western Eurasia.

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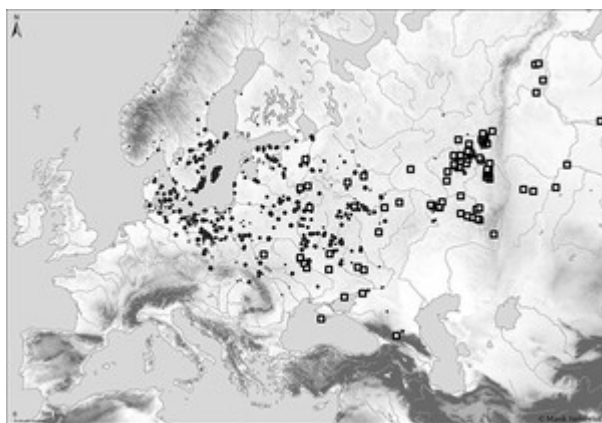


Figure 3.6.1 Finds of silverware of near eastern and central Asian provenance (7th-13th centuries, squares) and of dirham hoards (9th-10th centuries, circles) in northern Europe. Gray circles represent hoards of unknown size.

No comprehensive survey of finds of Islamic objects from this entire period and area exists. Important studies are, however, available, for Sweden—in the first place the exemplary survey of Jansson (1988) and the older study by Arne (1914), complemented by more recent overviews by Duczko (1998) and Mikkelsen (2008)—and Russia, where “Oriental” metal objects have been studied by Darkevich (1976) and (p. 356) pottery by Koval (2010). Finds of Sasanian and Islamic coins are the subject of a number of articles by Thomas Noonan and Roman Kovalev. This chapter places their findings in a broader historical and geographical context, with special attention to dirhams, the most widely distributed category of finds. Its main focus is on finds related to the period of intensive trade between the Islamic world and Scandinavia and the Slavic lands in the 9th and 10th centuries, but attention will be also given to earlier and later periods, until the Mongol invasion in mid-13th century that transformed the geopolitics of northern and eastern Europe. In terms of geography, most finds come from an area that broadly coincides with the zones of Scandinavian and Slavic settlement around the Baltic Sea and in Rus, and extends eastward to the Ural Mountains.

Such a survey raises methodological problems. The distribution of known dirham hoards, for instance, does not directly reflect their circulation in the medieval period, but rather the patterns of hoarding and recovery during and after the Viking Age as well as the intensity of modern agriculture and development which has been responsible for many of the discoveries of the past two centuries. The unusually high numbers of finds on the Baltic island of Gotland and in the Kama Basin, for instance, may reflect a special regime of hoarding or locally significant reasons for non-recovery of hoards rather than the prominence of these regions within trading systems. In both cases, the absence of written sources makes interpretation dependant on social contexts reconstructed from the archaeological material.

Historical Background

Apart from the so far unsuccessful attempts to find evidence for religious interest in Islam in the north, the impact of contacts with the Islamic world on the peoples of northern Europe has rarely been discussed. And yet trade between the Islamic world and the north in the 9th and 10th centuries coincided with a deep transformation of the political landscape in northern Europe. Its final outcome, the emergence of state structures which, by the year 1000, controlled the major part of the region, is likely to have been influenced by the importation and availability of vast quantities of Islamic coins that came to constitute a convenient marker of status and repository of wealth for northern societies.

The political organization of the Slavic lands at the beginning of the 9th century, when the first dirhams were imported to Rus, is unclear: the “tribes”, usually thought to have been its basic unit, appear to have been unstable, and much of the region was probably sparsely populated. In the traditional view, the “tribes” gradually consolidated into larger political units that, under the influence of Western and Byzantine models of kingship, morphed at the end of the 10th century into such states as Rus, Poland, or Bohemia (Berend et al. 2013: 52–137). This perspective, however, does not sufficiently take into account the dynamic social and political changes reflected in the proliferation of (p. 357) fortified centers in the course of the 9th and 10th centuries and in the dramatic changes in settlement patterns and the depopulation of vast swathes of the Slavic lands. In the absence of earlier significant trade networks, it appears that Islamic silver, often found in the vicinity of the emerging political centers, provided the local elites with sufficient wealth to invest in military followings, which in turn enabled them to control, concentrate, and possibly enslave the surrounding populations. The adoption of Christianity by the leaders of such followings—Czech dukes at the end of the 9th century, Olga of Kiev in 946 or 957, Mieszko of Poland in 966, and Vladimir of Rus in 988—legitimized the newly formed polities and defined the map of central and eastern Europe for the centuries to come. The process was less dynamic in those parts of Scandinavia directly exposed to the inflow of the dirhams: silver encouraged the consolidation of power in the central Swedish region of Uppland, but broad access to it seems rather to have prevented the emergence of elites in other regions, for instance in Gotland.

Trade with the Islamic world depended also on the situation on the Pontic and Caspian steppe. Security and political unity provided by nomadic “empires” were not, however, prerequisites to trade across the steppe: the two most detailed accounts, of Ahmad ibn Fadlan (in 922) and Abu Hamid al-Gharnati (in the mid-12th century), show intensive short- and long-distance trade in the context of political fragmentation.

Before Islam

Contacts between the forest zone in northern Europe and the Near East and Central Asia predate the emergence of Islam. In the late Sasanian period (4th–6th centuries), Sassanian, Byzantine, and Sogdian silverware found its way to the basin of the river Kama in the

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eastern part of European Russia. Around one hundred fifty vessels from some seventy findspots were known before the advent of metal detectors (Figure 3.6.1). These have primarily been studied from an art historical perspective (e.g., Cruikshank Dodd 1961; Marshak 1986, 2017; Trever and Lukonin 1987; see also Smirnov 1909) rather than for their archaeological or historical context. Vessels of different provenances are frequently found within the same hoards, which makes it likely that they were imported together to the forest zone. Property marks on the vessels in middle Persian, Sogdian, and Khorezmian suggest that they journeyed through Central Asia, whereas a cluster of finds around and to the south of the modern town of Ufa, roughly midway between Khorezm and the Kama Basin, signposts the crossing of the steppe. Silverware is absent from the area of the future Volga Bulgaria on the Lower Kama: its emergence as a major trade hub between the Near East, Central Asia, and the North therefore dates to a later time (cf. Morozov 1996).

A group of finds from Bartym (Perm Krai, Russia) sheds some light on the mechanisms of the importation of the silverware (Goldina et al. 2013). Seven Byzantine, Sasanian, and Khorezmian silver vessels were found in seven separate finds in two clusters. One of the vessels, a Byzantine bowl, contained 272 little circulated hexagrams of (p. 358) Heraclius dated to 615–625; another Byzantine dish belonged at some point, according to a Sogdian inscription, to “the lord of Bukhara Dazoy”; whereas three Khorezmian bowls are inscribed with dates in the second half of the 7th century. Taken together, this material suggests importation from Central Asia in the course of the 7th century, which is consistent with the chronology of the settlement of the Nevolino culture in which they were found. The same site yielded numerous beads which—especially those made of carnelian—are likely to have been imported from Sasanian Iran. It is tempting to relate these finds with the fur trade, but the precise context of their appearance in the Kama Basin, as well as the role played by the Turkic or Khazar Khaganates, the dominant powers on the Eurasian steppe, in facilitating the exchanges remain unclear (Noonan 1982 (with a confusion between the Turks and the Khazars); de la Vaissière 2000). Given that the majority of Byzantine vessels date from before 630 CE, they may have constituted Persian loot or perhaps Byzantine diplomatic gifts for the Turks during the “last great war of antiquity”; that is, the last conflict between Byzantium and Persia (602–628).

Apart from the exceptional find of Byzantine hexagrams from Bartym, few coins accompanied the silver vessels to the basin of the Kama: a recent survey mentions finds of several Sogdian and a dozen Khorezmian pre-Islamic coins (Naymark 2015). Such coins, unknown from the Baltic area, must have been imported before the beginning of the inflow of dirhams to northern Europe in the early 9th century. By contrast, the approximately 200 Sasanian silver coins known from the Kama Basin (Morozov 1996: 150) were probably brought together with the dirhams: a dozen of hoards shows that contacts between the Kama Basin and the Islamic world continued into the 9th and 10th centuries.

The Islamic conquest of Central Asia in the first half of the 8th century and the disorders accompanying the “Abbasid revolution” probably disrupted the communications with the steppe and the forest zones further to the north. They seem to have been reestablished in the early Abbasid era, judging from the large numbers of Sogdian silverware dated to the

second half of the 8th century or the first half of the 9th century and found in the Kama Basin, in similar locations as the earlier silverplate.

Trade in the 9th and 10th Centuries

The situation in the Kama Basin—abundant silverware and few coins—contrasts with that further to the west, in Rus and in the Baltic area, where hundreds of thousands of Islamic and Sasanian coins, but very few other objects of near Eastern or Central Asian provenance, have been found (Figure 3.6.1). Although the dirham hoards of northern and eastern Europe contain many Sasanian, Umayyad, and early Abbasid coins, there is no indication that their importation began before about 800 CE. The presence of these early coins rather reflects the monetary stock in circulation in the Caliphate in the early 9th century.

(p. 359) Contacts between the Scandinavians and the Islamic world were initially mediated by the Khazars, who controlled the steppe between the Black and the Caspian Seas from the second half of the 7th century. Glass beads, probably of Islamic origin, were imported to the northern periphery of the Khazar Khaganate in the 8th century (Callmer 2000: 59–73). Their appearance may indicate the extension to that area of Khazar commercial or tributary networks supplying the Islamic world in furs. It is likely that furs were initially the main commodity supplied by the Scandinavians, but the presence of Saqaliba (i.e., Slavic) slaves in the Islamic world from the early 9th century indicates that captives quickly became an important object of trade (Mishin 2002 on the Saqaliba in the Islamic world; Ayalon 1999: 349–352, on the term “Saqaliba”).

Arab geographers of the 9th and 10th centuries confirm this impression: they describe the trade between the Scandinavians and the Muslims as exchanges of slaves and furs against dirhams and beads. Ibn Rustah, who wrote around 900 CE, is perhaps the most explicit:

The Rus ... raid the Saqaliba, sailing in their ships until they come upon them, take them captive and sell them in Khazaria and in Bulgar. They have no cultivated fields and they live by pillaging the land of the Saqaliba. ... They earn their living by trading in sable, grey squirrel and other furs. They sell them for silver coins which they (p. 360) set in belts and wear round their waists. ... they treat their slaves well and dress them suitably, because for them they are an article of trade.

(Ibn Rustah, in Lunde and Stone 2012: 126)

The central role of the markets of Bulgar on the Volga in the 10th century is confirmed by the famous account of Ahmad ibn Fadlan who, in 922, visited Bulgar on a diplomatic mission from the Abbasid court. His report, rich in ethnographic observations on the steppe nomads, the Volga Bulgars, and the Rus, offers a unique insight into the mechanisms of trade and is consistent with the information provided by such geographers as al-Mas'udi or Ibn Hawqal. Ibn Fadlan witnessed the arrival of a group of Rus warrior-merchants with “beautiful slave girls for sale”:

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I saw the Rus, who had come for trade and camped by the river Itil [modern Volga]. ... With them, there are beautiful slave girls, for sale to the merchants. ... As soon as their boats arrive at this port, each of them disembarks ... and prostrates himself before the great idol, saying to it: "Oh my lord, I have come from a far country and I have with me such and such number of young slave girls, and such and such a number of sable skins ... I would like you to do the favour of sending me a merchant who has large quantities of dinars and dirhams and who will buy everything that I want and not argue with me over my price."

(Ibn Fadlan, in Lunde and Stone 2012: 45–48; on this account, see Shepard and Treadwell forthcoming).

Ibn Fadlan also mentions the role of beads in this trade. Even if we do not need to take at face value his remark that one necklace of beads symbolized the wealth of 10,000 dirhams, his account emphasizes the important role that Islamic objects played in displaying status in Scandinavian society.

The quantity of dirham finds from northern Europe makes it possible to reconstruct in some detail the chronology and geography of the trade between the Scandinavians and the Islamic world (Jankowiak 2020). The inflow of dirhams to the North falls broadly into two periods, circa 800–875 and circa 900–980. They are separated by a period of lower activity in the last quarter of the 9th century.

In the first phase, dirhams, mostly minted in Iraq and northern Iran, flowed northward via Khazaria. A particularly high number of hoards with *termini post quem* (or *tpq*; i.e., dates of their latest coins, equivalent to the earliest possible date of their concealment) in the 860s and early 870s indicates intensive trading in this period. It was interrupted around 875, probably because of a lower demand for slaves from the Abbasid court and the collapse of the Scandinavian settlement in Rus (Zuckerman 2000). Dirhams are virtually absent from Rus in the following quarter-century, but finds from Sweden and Poland indicate that Baltic Scandinavians were able to maintain contacts with Khazaria by roundabout routes by-passing Rus. The hoard from Bertby (Åland Islands, *tpq* 890) shows that such contacts could be direct: it is the only known Baltic hoard with long series of die-identical coins, all of which seem to belong to Khazar imitative coinage (coins listed in Granberg 1966: 50–122; die analysis in Rispling et al. forthcoming). (p. 361) (p. 362)

(p. 363) Interestingly, this is also one of the rare northern hoards found in a vessel of Islamic origin or at least inspiration (see later discussion).

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Figure 3.6.2 Trade in the 9th century. Circles represent hoards of dirhams and squares the main Islamic mints represented in the North.



Figure 3.6.3 Trade in the 10th century. Circles represent hoards of dirhams and squares the main Islamic mints represented in the North.

Trade was reinvigorated after the Samanid emir Isma‘il b. Ahmad had started a mass production of dirhams in such Central Asian mints as Samarqand and al-Shash (modern Tashkent) in 893. Contacts with the North were initially still mediated by the Khazars, but around 910 a major reorientation took place with the emergence of the market of Bulgar on the Volga. Conveniently situated at the confluence of the Volga and the Kama, it replaced the markets of Khazaria as the main meeting point of Scandinavian and Muslim merchants, probably as a result of a massacre of the Rus by Muslim mercenaries of the Khazars, known from a description by al-Mas‘udi (Lunde and Stone 2012: 144–146). Exchanges culminated between 920 and 950, when, judging from the distribution of the hoards, most of Scandinavia and the Slavic lands had access to dirhams. The decline began in the 950s, perhaps because of the deterioration of Samanid coinage. The inflow of dirhams to Sweden ceased about 955, but Rus and Poland had access to Islamic coins for another quarter of a century. The quantities of dirhams reaching eastern Europe after approximately 980 were very small, and the latest coins date from 1013, after which date

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trade between Scandinavia and Rus came to a complete halt. Its demise seems to have been caused, among other factors, by the lower availability of silver in Central Asia (the “silver crisis”; see, e.g., Noonan 1987–1991) and the disintegration of the Samanid emirate around the year 1000.

While dirhams found in northern Europe were minted almost without exception in the Near East and Central Asia, written sources attest to the existence of a lively system of trade between the western part of the Islamic world and northern Europe. Saqaliba slaves were present in large numbers in Muslim Spain, where slave soldiers of Slavic origins were one of the main pillars of Umayyad rule in the 10th century (Meouak 2004). It is likely that they were mostly brought from Prague, where an active slave market is attested in the 10th century (Třeštík 2001). The precise mechanisms of this trade remain unclear, however, as virtually no Spanish coins or objects of Andalusian provenance were found in northern Europe. A possible reason for this is that trade between central Europe and al-Andalus was mediated by merchants of other origins, no doubt mostly by Jewish trading communities frequently mentioned in the sources (Jankowiak forthcoming).

Dirham Hoards

More than 1,500 hoards containing approximately 350–400,000 dirhams are known from northern Europe and Rus (Kovalev and Kaelin 2007; Jankowiak 2020). This represents only a fraction of the original inflow, which can consequently be estimated at millions, if not tens of millions, of coins. These high figures of silver coins contrast with an almost total absence of copper or gold coins, of which only several dozens of specimens are known (Noonan 1974). Thanks to their sheer quantity and our ability to (p. 364) precisely date them (as opposed to western European or Byzantine coins), dirhams provide a uniquely detailed insight into the chronology, geography, and mechanisms of the trade between Muslim and Scandinavian merchants. Elemental and isotopic analysis also allows us to identify precious metals from the Islamic world that were used to create local coins or objects (e.g., Merkel 2016).

The abundance of dirham finds from northern Europe is, however, a mixed blessing because of the difficulty of publishing and processing such vast material. The most recent comprehensive catalogue of dirham hoards is—as in the case of the silverware—more than one century old (Markov 1910). A new catalogue has been compiled by Thomas Noonan, but his death in 2001 delayed its publication. In the meantime, the main sources for the study of dirham hoards are the articles of Noonan (listed in Kovalev 2001) and Roman Kovalev (e.g., Kovalev and Kaelin 2007), several recent listings of hoards (Brather 1995–1996; Adamczyk 2014; Kuleshov and Gomzin 2017), and comprehensive catalogues available for some countries (Bogucki et al. 2013–17 for Poland; Leimus 2007 for Estonia). Less detailed summaries exist for Norway (Skaare 1976), Denmark (Skovmand 1942; von Heijne 2004), Finland (Talvio 2002), and Belarus (Riabtsevich 2006–2008). The material from the two countries with the highest number of finds is particularly difficult to access: only around a quarter of Swedish material has been published (Malmer et al. 1975–2010),

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whereas finds from Russia, especially those discovered in the past half-century, are scattered in a variety of publications (for earlier finds, see Kropotkin 1971).

Dirham hoards are primarily found around the Baltic Sea and along the rivers of Russia, Ukraine, and Belarus (Figure 3.6.1). The most prominent cluster is located on the island of Gotland, where more than 500 Viking Age finds of silver have been recorded, of which around 350 contained dirhams (Gruszczyński 2019). Many dirham finds come also from other Baltic islands—Öland, Bornholm (an example of a successful cooperation with metal detectorists; see Ingvardson and Nielsen 2015), Saaremaa, and the Åland Islands—as well as from the southern coast of the Baltic (Polish and German Pomerania). It may seem surprising that, despite the political significance of mainland Sweden, Denmark, and Kievan Rus in this period, fewer hoards come from these areas. One reason may be that the centralized states that formed in the second half of the 10th century were able to bring the hoarded wealth back into circulation, whereas the lack of central control favored the accumulation, deposition, and non-retrieval of hoards. The exception is Greater Poland, where the cataclysmic collapse of the first Polish state in the 1030s and the dispersal of its elites prevented the recovery of buried wealth. In Rus, the most prominent clusters of hoards are found along the Oka river, in the watersheds between the major river systems in the areas of Kursk and Gnezdovo, in northern Rus (the region of Novgorod and Staraja Ladoga), and in Volga Bulgaria. From this core zone of dirham hoarding, Islamic coins and metal were redistributed further to the west—to Norway, the southern coasts of the North Sea, and the British Isles—where they survive in small numbers, but where their trace can be detected in locally produced silver ornaments and coins (Merkel 2016: 91–114).

(p. 365) The hoards are found in a variety of archaeological contexts. Due to the density of finds, evidence from Gotland is of particular importance: it seems—although this is debated—that hoards were mostly concealed within farmsteads, and that relatively few come from marginal areas such as moors (Östergren 1989; essays in Gruszczyński et al. 2020). In Greater Poland, many hoards were found within several hundred meters from fortified sites (Andrałojć et al. 2011), which perhaps points to a connection with the dwellings of the elite. It is, however, not uncommon to find hoards near by rivers, which signals the role of waterways in the circulation of dirhams. Most hoards for which we have information on their containers were stored in recipients usually made of clay, more rarely of metal or organic material.

The sheer scale of hoarding in the North raises the question of why were dirhams in such demand from the Scandinavians and Slavs. The extent to which they played a monetary role in the North is debated, and there is much regional variation (Metcalf 1997; Graham-Campbell and Williams 2007; Graham-Campbell et al. 2011; Kershaw and Williams 2019). Whether fragmentation can be taken to be a sign of monetary circulation is similarly controversial (Hårdh 1996; Jankowiak 2019). Dirhams were used as pendants and ornaments or were melted down and reshaped into other objects such as ingots or jewelry (Audy 2018). The variety of uses of Islamic silver in northern Europe is illustrated by one of the largest known hoards of the Viking Age, found in 1999 in Spillings (Gotland, *tpq* 870).

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Three deposits buried close to each other contained in total 67 kilogram of silver and 20 kilogram of bronze; the silver part included over 14,000 dirhams weighing 17 kilogram, almost 500 bangles and bracelets, 25 finger rings, 80 bars, and large quantities of other fragmented silver objects (Östergren 2009). The presence of the original dirhams, their fragments, their Khazar imitations, and of various whole and fragmented locally produced silver objects shows silver in its roles as a depository of value, means of exchange, and instrument of display that it assumed in the North.

Other Finds

It is striking that, despite its intensity, trade between the Scandinavians and the Islamic world did not result in a more diverse range of goods imported to the North. In comparison with the dirhams, other objects of Islamic origin are remarkably rare.

Beads are the second most commonly found objects in the northern hoards (Callmer 1977, 1997; for a sample from a Scandinavian trading-place, see Resi 2011). Many, especially those made of rock-crystal, carnelian, and millefiori and green glass, are likely to be of Islamic origin, but their precise provenance remains speculative. A bead from Wolin, for instance, despite an ornament reminiscent of Arabic script, is likely to have been produced in northern Europe (Kokora 2016). Middle Eastern origin (e.g., Persian Gulf or Red Sea) is more secure for beads made of cowrie shells, but apart from a group of burials in Gotland they are rare. The shells themselves are almost absent from the material dated to the Viking Age (Jansson 1988: 589–592 and 635–636).

(p. 366) Textiles are another candidate for large-scale importation from the Islamic world. Byzantine or Islamic textiles are often mentioned in written sources, but archaeological remains are difficult to provenance. This regards in the first place, silk which could have been imported from Byzantium, the Near East, or Central Asia (there is little evidence for contacts with China in the Viking Age). The most abundant finds in Scandinavia come from Birka and the boat burial of Oseberg (Norway) dated to about 840 (Jansson 1988: 593–539; Vedeler 2014). Scraps of silk textiles are relatively common also elsewhere, from Dublin (Wallace 2016: 272–276) to Bohemia (Profantová 2009: 591), but how many of them are of Islamic or Byzantine origin is not known. Finds of unworked threads (Dublin, see Wallace 2016: 272) or even of cocoons of silkworms (Poznań, see Moldenhawer 1960) suggest that some silk textiles may have been produced locally of imported raw material. The provenance of other potentially imported textiles such as fine woolen fabrics or fabrics with gold or silver threads is even less certain.

Other objects of Islamic provenance are found only very rarely in the area of dirham hoarding. Finger rings with stones (or only the stones) engraved in Arabic have been found in Birka in Sweden, Timerevo and Staraja Ladoga in Rus, and Tankeevka in Volga Bulgaria; the inclusion of precious stones or of glass suggests an Islamic provenance also for two other rings from Birka and a lost silver ring with an emerald from Kashira (Moscow oblast': Darkevich 1976, no. 92; Jansson 1988: 578–579 and 632; Duczko 1998: 111; Kirpichnikov 2009: 342–343; Wärmländer et al. 2015). Bronze vessels are known

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from various contexts from Sweden and Rus. Bottle-shaped jugs have been found in rich burials in Klinta (Öland: Petersson 1958) and Aska (Östergötland: Arne 1932). Bottles from Bertby (Åland Islands: Arne 1932: 101–102), Fölhagen (Gotland: Arne 1932: 103), and Tatarskii Tolkysh (Volga Bulgaria: Darkevich 1976, no. 91a) contained hoards of dirhams with *tpqs* of 890, 971, and 984 CE respectively. The bottle from a 10th-century grave in Tuna (Uppland) was cut into halves and made into a cooking vessel (Odencrants 1934). A bronze jar was found during excavations of a medieval residential neighborhood in Novgorod (Darkevich 1976, no. 96); another jar, from the region of Velikie Luki (Pskov oblast), has the unique form of a female head—which may, however, point toward a non-Islamic (e.g., Byzantine) provenance (Darkevich 1976, no. 97). A bronze bucket comes from the 10th- and 11th-century Liadinskii burial ground (Tambov oblast': Darkevich 1976, no. 93). A richly ornamented bronze dish is known from Toropets (Tver oblast': Darkevich 1976, no. 98); several fragments are known from Fånö (Uppland, Jansson 1988: 646).

Other bronze objects are extremely rare. Bronze or silver belt strappings and copper weights that occasionally carry Arabic or pseudo-Arabic inscriptions (e.g., Darkevich 1976, nos. 94 and 104; Jansson 1988: 607–614) should probably not be seen as imports; they are more likely to have been inspired by Islamic prototypes and produced in the steppe or in the North. Such inspirations may have been transmitted by Muslim craftsmen, as perhaps suggested by the find of a mould for belt strappings from Kiev inscribed “turk” in Arabic (Ivakin 2000: 236, fig. 8). Similarly, the balances used by Scandinavian merchants are thought to replicate Islamic models (see, e.g., Kilger 2008: 298–321). The Islamic origin of a lamp in the shape of a female head found in Gnezdovo (p. 367) is suggested by a small inlaid turquoise (Darkevich 1976, no. 99). A possible fragment of another lamp was found with three pairs of tongs and an incense burner in Åbyn (Gästrikland). The incense burner—a square object with a dome, resting on four animal legs with hoofs, with a long protruding handle—is thought to be of Khorasanian origin and has been tentatively dated to the 9th century (Ådahl 1990). Finally, a small figurine of Buddha, 8.4 centimeters high, was found in Helgö (Uppland), a major trading post in the early Viking Age. How it arrived in Helgö from the Swat Valley in Pakistan, where it is thought to have been produced in the 6th century, is unknown (Gyllensvärd 2004).

With the exception of the Helgö Buddha, the Islamic provenance of these objects is indicated by Kufic inscriptions, the presence of precious stones, and typological similarities. The bottles from Klinta and Tatarskii Tolkysh, as well as from Aska and Bertby, and the dishes from Toropets and Fånö form pairs of very similar objects. It is likely that most of them came from Central Asia in the 9th and 10th centuries. Some may, however, have been produced in the intermediary zone between the Islamic world and the northern forests: the ornaments on the jars from Aska and Bertby, for instance, can be interpreted as garbled Arabic inscriptions (Arne 1932: 74–75 and 102); in conjunction with the high number of dirham imitations of probably Khazar origin contained in the vessel from Bertby this raises the possibility that the vessels themselves were also manufactured in Khazaria.

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The near-total absence of silver vessels in the dirham hoarding area strongly contrasts with their numbers in the Kama Basin. Only small fragments are known from Swedish hacksilver hoards; their late dates—none is earlier than the second half of the 10th century (Jansson 1988: 646–647)—suggest that they were imported from Rus to Scandinavia together with other cut silver objects after the importation of the dirhams had declined. The absence of complete silver vessels may indicate a selection bias of the Scandinavians, who seem to have been interested primarily in standardized silver objects (i.e., dirhams). The hoard from Iagoshur (*tpq* 842) in the Kama Basin, found in a silver Sogdian jug, as well as finds of Islamic silverplate from the same area—and as far north as the Arctic Circle (Iarkov and Pertsev 2018)—show, however, that vessels were still exported from Central Asia in the 9th and 10th centuries.

Finds of Islamic pottery from the Viking Age are very rare. Three very similar glazed cups come from Hemse (Gotland), Sigulda (Latvia), and the region of Suzdal' (Russia); their shapes echo those of silver cups found in the Kama Basin and attributed to Sogdian workshops of the 8th and 9th centuries (Arne 1938; Ģinters 1937; cf. Darkevich 1976, tab. 16–17). A fragment of an unglazed jar of a possibly Caucasian provenance was found in a burial in Gnezdovo (Koval 2010: 139–140). Among the glazed sherds recovered from the excavations in Novgorod, only three came from layers dated to the 10th century and nine from those of the 11th century; such finds are equally rare in the rest of Rus (Koval 2006, 2010: 186–187). No white glazed dishes characteristic for the Samanid urban centers are known from northern Europe.

Finds of glassware of possible Islamic origin are similarly rare. Among the few finds, the cylindrical translucent and partly painted glass cup from grave 542 in Birka stands (p. 368) out as probably the only fully preserved glass vessel; on the basis of analogies it has been attributed a Near Eastern provenance. Fragments of six glass vessels, at least two of them of Islamic origin, have been recovered from tomb 14 at Barkarby (Uppland; Lamm 1941); other possible fragments turned up in a grave from Halla (Gotland; Thunmark-Nylen 2006: 356).

Finally, traces of animals and plants native to the areas within the Islamic world have been recorded in northern Europe. Bones of camels are frequently found in Volga Bulgaria; some examples are also known from Rus, including Kiev (Kropotkin 1973). A gift of a camel by the Polish duke Mieszko I to the German king Otto III in 986 is mentioned in the chronicles (Thietmar 2001: 156). Walnuts were found in the boat burial of Oseberg (Norway), in Hedeby, and in Dublin (Winroth 2012: 78; Wallace 2016: 200 and 365); spices, such as the ones listed by Ibrahim b. Ya'qub in his report from Mainz—"pepper, ginger, cloves, nard, costus and galingale" (Lunde and Stone 2012: 163)—were also imported from the Islamic world.

Trade between northern Europe and the Islamic world in the 9th and 10th centuries was certainly more complex than a simple exchange of dirhams for slaves. But not significantly more complex. The few objects of Islamic provenance other than dirhams and beads found in Scandinavia and Rus look more like souvenirs than objects of trade. Despite the

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large volume of exchanges, Scandinavian-Islamic trade was rather limited in scope—or at least this is the picture that emerges from its material remains. This provisional image of northern European-Islamic interactions in the pre-Mongol period is likely to evolve in the future. Provenance studies of coins, glass beads and textiles—which are still at their beginnings (Merkel 2016; Neri et al. 2018)—will no doubt modify it in significant ways and will pose, yet again, the problem of the integration of these new data with the information provided by written sources.

From the 11th Century To the Mongols

The end of the dirham trade around the year 1000 did not spell the end of the contacts between northern Europe and the Islamic world. Without the overarching framework of the Scandinavian slave trade, however, the picture becomes more complex. Indirect contacts mediated by Byzantium, the Caucasian kingdoms, and Volga Bulgaria probably played a greater role in the importation of Islamic objects to Rus and the Baltic area than, for instance, pilgrimage and crusades to Palestine. This variety of contacts is reflected in the diversity of finds from Rus: from silver and bronze vessels (Darkevich 1976), to silk (Fekhnner 1982) and glazed pottery of Egyptian, Syrian, and Iranian origin (Koval 2006, 2010). Glass and glazed pottery reached also Sweden and the Baltic, albeit in small quantities (Roslund 2011). Various exotica—such as the North African monkey found at Riurikovo Gorodishche and dated by radiocarbon to the late 12th century (Brisbane et al. 2007)—accompanied these flows.

(p. 369) The precise mechanisms of their importation are often unclear: it is difficult, for instance, to explain the abundant finds of cowrie shells, probably imported from the Persian Gulf, in Latvia, Estonia, Ingria, and the Finno-Ugric settlement areas on the Upper and Middle Volga. They were particularly popular in Latvia, where they are found in most female burials from the 12th and 13th centuries, but very few specimens are known from Rus or Scandinavia (Mugurevich 1965: 54–59; Johansson 1995). What remains, however, beyond doubt is the role of Muslim trading communities on the steppe. The vivid description of Abu Hamid al-Gharnati (Lunde and Stone 2012: 61–92), who toured Volga Bulgaria, the Pontic steppe, and Hungary in the mid-12th century, attests to a lively trade in furs, honey, slaves, swords, mammoth tusks, and other wares conducted by Muslim merchants. Their communities, according to al-Gharnati mostly of Maghribi origin, may have looked like the Muslim settlement excavated in Hajdúböszörmény in Hungary (Antalóczy 1980). This state of affairs was upset by the Mongol invasions, which mark a watershed in long-distance connections between northern Europe and the Islamic world.

References

Ådahl, K. 1990. “An Early Islamic Incense Burner of Bronze in a Swedish Collection,” in Gh. Gnoli and A. Panaino (eds.), *Proceedings of the First European Conference of Iranian Studies* (Rome: Istituto Italiano per il Medio ed Estremo Oriente), vol. 2, 333–345.

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Adamczyk, D. 2014. *Silber und Macht. Fernhandel, Tribute und die piastische Herrschaftsbildung in nordosteuropäischer Perspektive (800–1100)* (Wiesbaden: Harrassowitz).

Andrałojć, M., Andrałojć, M., Silska, P., and Szyngiera, P. 2011. *Odkrycia skarbów wczesnośredniowiecznych z terenu Wielkopolski. Kontekst archeologiczny znalezisk* (Poznań: Wydawnictwo Poznańskie).

Antalóczy I. 1980. "A nyíri izmaeliták központja, Böszörmény falu régészeti leletei I," *Hajdúsági Múzeum Évkönyve*, 4, 131–170.

Arne, T. J. 1914. *La Suède et l'Orient* (Uppsala: K.W. Appelbergs Boktryckerei).

Arne, T. J. 1932. "Ein bemerkenswerter Fund in Östergötland," *Acta Archaeologica*, 3, 67–112.

Arne, T. J. 1938. "En sino-iransk kopp," *Fornvännen*, 33, 107–113.

Audy, F. 2018. *Suspended Value: Using Coins as Pendants in Viking-Age Scandinavia (c. AD 800–1140)*, Stockholm Studies in Archaeology 74 (Stockholm: Stockholm Universitet).

Ayalon, D. 1999. *Eunuchs, Caliphs and Sultans: A Study in Power Relationships* (Jerusalem: Magnes Press, Hebrew University).

Berend, N., Urbančzyk, P., and Wiszewski, P. 2013. *Central Europe in the High Middle Ages: Bohemia, Hungary and Poland c.900-c.1300* (Cambridge: Cambridge University Press).

Bogucki, M., Ilisch, P., and Suchodolski, S. (eds.) 2013–17. *Frühmittelalterliche Münzfunde aus Polen. Inventar*, 5 vols. (Warszawa: Institut für Archäologie und Ethnologie der Polnischen Akademie der Wissenschaften).

Brather, S. 1995–1996. "Frühmittelalterliche Dirham-Schatzfunde in Europa. Probleme ihrer wirtschaftsgeschichtlichen Interpretation aus archäologischer Perspektive," *Zeitschrift für Archäologie des Mittelalters*, 23/24, 73–153.

Brisbane, M., Hambleton, E., Maltby, M., and Nosov, E. 2007. "A Monkey's Tale: The Skull of a Macaque Found at Rurik Gorodishche During Excavations in 2003," *Medieval Archaeology*, 51, 185–191.

(p. 370) Callmer, J. 1977. *Trade Beads and Bead Trade in Scandinavia, ca. 800–1000 A.D.* (Bonn: Habelt).

Callmer, J. 1997. "Beads and Bead Production in Scandinavia and the Baltic Region c. AD 600–1100: A General Outline," in U. von Freeden and A. Wieczorek (eds.), *Perlen. Archäologie, Techniken, Analysen* (Bonn: Habelt), 197–201.

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Callmer, J. 2000. "From West to East: The Penetration of Scandinavians into Eastern Europe ca. 500–900," in M. Kazanski, A. Nercessian, and C. Zuckerman (eds.), *Les centres proto-urbains russes entre Scandinavie, Byzance et Orient* (Paris: Lethielleux), 45–94.

Cruikshank Dodd, E. 1961. *Byzantine Silver Stamps* (Washington, DC: Dumbarton Oaks Research Library and Collection).

Darkevich, V. P. 1976. *Khudozhestvennyi metall Vostoka VIII–XIII vv.: proizvedeniia vostochnoi torevniki na territorii Evropeiskoi chasti SSSR i Zaural'ia* (Moskva: Izdatel'stvo "Nauka").

de la Vaissière, E. 2000. "Les marchands d'Asie centrale dans l'empire khazar," in M. Kazanski, A. Nercessian, and C. Zuckerman (eds.), *Les centres proto-urbains russes entre Scandinavie, Byzance et Orient* (Paris: Lethielleux), 367–378.

Duczko, W. 1998. "Viking Age Scandinavia and Islam: An Archaeologist's View," in E. Piltz (ed.), *Byzantium and Islam in Scandinavia* (Jonsered: P. Åströms Förlag), 107–115.

Fekhner, M. V. 1982. "Shelkovye tkani v srednevekovoi vostochnoi Evrope," *Sovetskaia arkheologiya*, 2, 57–70.

Ģinters, V. 1937. "Siguldas kapukalna ķīniešu trauciņš," *Senatne un māksla*, I, 41–45.

Goldina, R. D., Pastushenko, I. Ju., and Chernykh, E. M. 2013. "The Nevolino Culture in the Context of the 7th-Century East-West Trade: The Finds from Bartym," in C. Zuckerman (ed.), *Constructing the Seventh Century*. Travaux et mémoires, 17 (Paris: Association des amis du Centre d'Histoire et Civilisation de Byzance), 865–930.

Graham-Campbell, J., and Williams, G. (eds.) 2007. *Silver Economy in the Viking Age* (Walnut Creek, CA: Left Coast Press).

Graham-Campbell, J., Sindbæk, S., and Williams, G. (eds.) 2011. *Silver Economies, Monetisation and Society in Scandinavia, AD 800–1100* (Aarhus: Aarhus University Press).

Granberg, B. 1966. *Förteckning över kufiska myntfynd i Finland* (Helsinki: Societas Orientalis Fennica).

Gruszczyński, J. 2019. *Viking Silver, Hoards and Containers: The Archaeological and Historical Context of Viking-Age Silver Coin Deposits in the Baltic c. 800–1050* (London: Routledge).

J. Gruszczyński, M. Jankowiak, and J. Shepard (eds.) 2020. *Viking-Age Trade: Silver, Slaves and Gotland* (London: Routledge).

Gyllensvärd B. 2004. "The Buddha Found at Helgö," in *Excavations at Helgö XVI. Exotic and Sacral Finds from Helgö* (Stockholm: Kungl. Vitterhets historie och antikvitets akademien), 11–27.

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Hårdh, B. 1996. *Silver in the Viking Age: A Regional-Economic Study* (Stockholm: Almquist & Wiksell International).

von Heijne, C. 2004. *Särpräglat: Vikingatida och tidigmedeltida myntfynd från Danmark, Skåne, Blekinge och Halland (ca 800–1130)*, Stockholm Studies in Archaeology, 31 (Stockholm: Stockholm Universitet).

Howard-Johnston, J. 2020. "The Fur Trade in the Early Middle Ages," in J. Gruszczyński, M. Jankowiak, and J. Shepard (eds.), *Viking-Age Trade: Silver, Slaves and Gotland* (London: Routledge).

Iarkov, A. P., and Pertsev, N. V. 2018. "Islamskii import na velikom mekhovom puti," *Vestnik Severnogo (Arkticheskogo) Federal'nogo Universiteta. Gumanitarnye i sotsial'nye nauki*, 1, 25–32.

Ingvardson, G., and Sonne Nielsen, F. O. 2015. "100 Viking Age Hoards of Bornholm: Status, Challenges and Perspectives," in L. Larsson, F. Ekengren, B. Helgesson and B. Söderberg (p. 371) (eds.), *Small Things: Wide Horizons. Studies in Honour of Birgitta Hårdh* (Oxford: Archaeopress), 27–34.

Ivakin, G. 2000. "Kiev aux VIIIe-Xe siècles," in M. Kazanski, A. Nersessian, and C. Zuckerman (eds.), *Les centres proto-urbains russes entre Scandinavie, Byzance et Orient* (Paris: Lethielleux), 225–239.

Jansson, I. 1988. "Wikingenzeitlicher orientalischer Import in Skandinavien," *Bericht der Römisch-Germanischen Kommission*, 69, 562–647.

Jankowiak, M. 2019. "Silver Fragmentation: Reinterpreting the Evidence of the Hoards," in J. Kershaw and G. Williams (eds.), *Silver, Butter, Cloth: Monetary and Social Economies in the Viking Age* (Oxford: Oxford University Press), 15–31.

Jankowiak, M. 2020. "Flows of Dirhams and Rhythms of the Slave Trade Between the Islamic World and North-eastern Europe," in J. Gruszczyński, M. Jankowiak, and J. Shepard (eds.), *Viking-Age Trade: Silver, Slaves and Gotland* (London: Routledge).

Jankowiak, M. forthcoming. "Infrastructures and organisation of the early Islamic slave trade with northern Europe", in H. Kennedy and F. Bessard (eds.), *The Early Islamic Economy: Economic integration and social change in the Islamic world system (800–1000)* (Oxford: Oxford University Press).

Johansson, B. M. 1995. "Sub-Fossil Cowry Shells in Northern Europe: Traces of Eastern and Western Contacts with the Orient," in A.-M. Robertsson, T. Hackens, S. Hicks, J. Risberg, and A. Åkerlund (eds.), *Landscapes and Life: Studies in Honour of Urve Miller*. PACT, 50 (Strasbourg: Council of Europe), 347–352.

Kershaw, J., and G. Williams (eds.) 2019. *Silver, Butter, Cloth: Monetary and Social Economies in the Viking Age* (Oxford: Oxford University Press).

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Kilger, C. 2008. "Wholeness and Holiness: Counting, Weighing and Valuing Silver in the Early Viking Period," in D. Skre (ed.), *Means of Exchange. Dealing with Silver in the Viking Age* (Aarhus: Aarhus University Press), 253–325.

Kirpichnikov, A. N. 2009. "Istoricheskoe nasledie Staroi Ladogi," in N. A. Makarov, *Arkheologicheskie otkrytiia 1991–2004 gg. Evropeiskaia Rossiia* (Moscow: Institut arkheologii RAN), 333–348.

Kokora, K. 2016. "Paciorek ze szkła ołowiowo-krzemowego znaleziony w Wolinie," *Archeologia Polski*, 61, 171–190.

Koval, V. Y. 2006. "Eastern Pottery from the Excavations at Novgorod," in C. Orton (ed.), *The Pottery from Medieval Novgorod and Its Region* (London: UCL Press), 161–192.

Koval, V. Y. 2010. *Keramika Vostoka na Rusi IX–XVII veka* (Moscow: Nauka).

Kovalev, R. K. 2000–2001. "The Infrastructure of the Northern Part of the "Fur Road" between the Middle Volga and the East During the Middle Ages," *Archivum Eurasiae medii aevi*, 11, 25–64.

Kovalev, R. K. 2001. "Bibliography of Thomas S. Noonan," *Russian History*, 28, 7–28.

Kovalev, R. K., and Kaelin, A. C. 2007. "Circulation of Arab silver in medieval Afro-Eurasia: preliminary observations," *History Compass*, 5, 560–580.

Kropotkin, V. V. 1971. "Novye nakhodki sasanidskikh i kuficheskikh monet v Vostochnoi Evrope," *Numizmatika i epigrafika*, 9, 76–97.

Kropotkin, V. V. 1973. "Karavannye puti v Vostochnoi Evrope," in *Kavkaz i Vostochnaia Evropa v drevnosti* (Moscow: Nauka), 226–230.

Kuleshov, V. S., and Gomzin, A. A. 2017. "Osteuropäische Hortfunde kufischer Münzen," in N. A. Makarov (ed.), *Die Rus im 9.–10. Jahrhundert: ein archäologisches Panorama* (Mainz: Wachholtz, Murmann Publishers), 395–401.

(p. 372) Lamm, C. 1941. *Oriental Glass of Mediaeval Date Found in Sweden and the Early History of Lustre-Painting* (Stockholm: Wahlström & Widstrand).

Leimus, I. 2007. *Sylloge of Islamic Coins. Estonian Public Collections* (Tallinn: Eesti Ajaloomuuseum).

Lunde, P., and Stone, C. 2012. *Ibn Fadlān and the Land of Darkness: Arab Travellers in the Far North* (London: Penguin).

Malmer, B., Jonsson, K., and Lagerqvist, L. O. (eds.) 1975–2010. *Corpus nummorum saeculorum IX–XI qui in Suecia reperti sunt*, 9 vols. (Stockholm: Almqvist & Wiksell International).

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Markov, A. K. 1910. *Topografiia kladov vostochnykh monet, sasanidskikh i kuficheskikh* (St. Petersburg: Tipografiia Imperatorskoi Akademii Nauk).

Marshak, B. 1986. *Silberschätze des Orients: Metallkunst des 3.-13. Jahrhunderts und ihre Kontinuität* (Leipzig: E.A. Seemann).

Marshak, B. I. 2017. *Istoriia vostochnoi torevtiki III-XIII vv. i problemy kul'turnoi preemstvennosti* (St. Petersburg: Akademiia issledovaniia kul'tury).

Meouak, M. 2004. *Şaqaliba, eunuques et esclaves à la conquête du pouvoir: géographie et histoire des élites politiques "marginales" dans l'Espagne umayyade* (Helsinki: Academia Scientiarum Fennica).

Merkel, S. 2016. *Silver and the Silver Economy at Hedeby* (Bochum: VML Verlag Marie Leidorf).

Metcalf, D. M. 1997. "Viking-Age Numismatics 3: What Happened to Islamic Dirhams After Their Arrival in the Northern Lands?," *The Numismatic Chronicle*, 157, 295-335.

Mikkelsen, E. 2008. "The Vikings and Islam," in S. Brink and N. Price (eds), *The Viking World* (London: Routledge), 543-549.

Mishin, D. E. 2002. *Sakaliba (slaviane) v islamskom mire v rannee srednevekov'e* (Moscow: IV RAN "Kraft+").

Moldenhawer, K. 1960. "Jedwabnictwo w Polsce i innych krajach we wczesnym średniowieczu," *Archeologia Polski*, 5, 111-116.

Morozov, V. I. 1996. "Puti proniknoveniia sasanidskikh monet i khudozhestvennykh izdelii v Povolzh'e i Prikam'e," in D. A. Stashenkov (ed.), *Kul'tury evraziiskikh stepei vtoroi poloviny I tysiacheletii n.e.* (Samara: Samarskii oblastnoi istoriko-kraevedcheskii muzei im. P.V. Alabina), 148-164.

Mugurevich, E. 1965. *Vostochnaia Latviia i sosednie zemli v X-XIII vv* (Riga: Zinatne).

Naymark, A. 2015. "Zamechaniia o vostochnoevropeskikh nakhodkakh sogdiiskikh i khorezmskikh monet VI-IX vekov," in *Epokha vikingov v Vostochnoi Evrope v pamiatnikakh numizmatiki VIII-XI vv.* (St. Petersburg: Staroladozhskiy Historical-Architectural and Archaeological Museum-Reserve), 28-33.

Neri, E., Gratuze, B., and Schibille, N. 2018. "The Trade of Glass Beads in Early Medieval Illyricum: Towards an Islamic Monopoly," *Archaeological and Anthropological Sciences*, January 2018. <https://doi.org/10.1007/s12520-017-0583-5>.

Noonan, T. S. 1974. "Medieval Islamic Copper Coins from European Russia and Surrounding Regions: The Use of the Fals in Early Islamic Trade with Eastern Europe," *Journal of the American Oriental Society*, 94, 448-453.

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Noonan, T. S. 1982. "Russia, the Near East, and the Steppe in the Early Medieval Period: An Examination of the Sasanian and Byzantine Finds from the Kama-Urals Area," *Archivum Eurasiae medii aevi*, 2, 269–302.

Noonan, T. S. 1987–1991. "The Onset of the Silver Crisis in Central Asia," *Archivum Eurasiae medii aevi*, 7, 221–248.

Odenkrants, R. 1934. "Ett vikingatidsfynd med orientaliskt bronskärl," *Fornvännen*, 29, 144–152.

(p. 373) Östergren, M. 1989. *Mellan stengrund och stenhus: Gotlands vikingatida silver-skatte som boplatssindikation* (Stockholm: Stockholm Univ., Phil. Diss).

Östergren, M. 2009. "Spillings: The Largest Viking Age Silver Hoard in the World," in A.-M. Pettersson (ed.), *The Spillings Hoard: Gotland's Role in Viking Age World Trade* (Visby: Gotlands Museum), 11–40.

Petersson, K. G. 1958. "Ett gravfynd från Klinta, Köpings sn, Öland," *Tor*, 4, 134–150.

Profantová, N. 2009. "Byzantine Coins from the 9th–10th Century from the Czech Republic," in M. Wołoszyn (ed.), *Byzantine Coins in Central Europe Between 5th and 10th Century* (Kraków: Polish Academy of Arts and Sciences), 581–598.

Resi, H. G. 2011. "Gemstones: Cornelian, Rock Crystal, Amethyst, Fluorspar and Garnet," in D. Skre (ed.), *Things from the Town: Artefacts and Inhabitants in Viking-Age Kaupang* (Oslo: Aarhus University Press), 143–166.

Riabtsevich V. 2006–2008. "Monetnye depozity zapadnykh zemel' Drevnei Rusi (materialy)," *Światowit*, 7 (48) B, 107–137.

Rispling G., Jankowiak, M., and Treadwell, L. forthcoming. *Catalogue of Dirham Imitations from Northern European Viking-Age Finds*.

Roslund, M. 2011. "Muslimskt Medelhav vid Mälaren. Spår av islamisk handel i det förmoderna Sverige," in A. Andrén (ed.), *Förmodern globalitet: Essäer om rörelse, möten och fjärran ting under 10 000 år* (Lund: Nordic Academic Press), 159–177.

Shepard, J., and Treadwell, W. L. (eds.) forthcoming. *Muslims on the Volga in the Viking Age: Diplomacy and Islam in the world of Ibn Fadlan* (London: I.B. Tauris).

Skaare, K. 1976. *Coins and Coinage in Viking Age Norway* (Oslo: Universitetsforlaget).

Skovmand, R. 1942. "De danske skattefund fra vikingetiden og den ældste middelalder indtil omkring 1150," *Aarbøger for nordisk oldkyndighed og historie*, 1942, 1–275 and I–XIV.

Smirnov, I. I. 1909. *Atlas drevnei serebrianoi i zolotoi posudy vostochnago proiskhozhdeniia naidennoi preimushchestvenno v predelakh Rossiiskoi Imperii* (St. Petersburg: Arkheologicheskaya kommissiya).

Contacts Between the Islamic World and Northern Europe in the Pre-Mongol Period

Talvio, T. 2002. *Coins and Coin Finds in Finland, AD 800–1200* (Helsinki: Suomen muinaismuistoyhdistys).

Thietmar 2001. *Ottonian Germany: The Chronicon of Thietmar of Merseburg*, trans. D.A. Warner (Manchester: Manchester University Press).

Thunmark-Nylén, L. 2006. *Die Wikingerzeit Gotlands*. vol. III: *Text* (Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien).

Třeštík, D. 2001. “‘Eine große Stadt der Slawen namens Prag’ (Staaten und Sklaven in Mitteleuropa im 10. Jahrhundert),” in P. Sommer (ed.), *Boleslav II. Der tschechische Staat um das Jahr 1000. Colloquia mediaevalia Pragensia 2* (Praha: Centrum medievistických studií), 93–138.

Trever, K. V., and Lukonin, V. G. 1987. *Sasanidskoe serebro: sobranie Gosudarstvennogo Ermitaza; chudozestvennaja kultura Irana III-VIII vekov* (Moscow: Iskusstvo).

Vedeler, M. 2014. *Silk for the Vikings* (Oxford: Oxbow).

Wallace, P. 2016. *Viking Dublin: The Wood Quay Excavations* (Sallins: Irish Academic Press).

Wärmländer, S., Wählander, L., Saage, R., Rezakhani, K., and Hamid Hassan, S. 2015. “Analysis and Interpretation of a Unique Arabic Finger Ring from the Viking Age Town of Birka, Sweden,” *Scanning*, 37, 2, 131–137.

Winroth, A. 2012. *The Conversion of Scandinavia: Vikings, Merchants, and Missionaries in the Remaking of Northern Europe* (New Haven: Yale University Press).

Zuckerman, C. 2000. “Deux étapes de la formation de l’ancien état russe,” in M. Kazanski, A. Nercessian, and C. Zuckerman (eds.), *Les centres proto-urbains russes entre Scandinavie, Byzance et Orient* (Paris: Lethielleux), 95–120.

Marek Jankowiak

Marek Jankowiak, Associate Professor of Byzantine History, University of Oxford, UK