

# THE EARLIEST DIRHAM FIND OF THE CARPATHIAN BASIN FROM THE TURN OF THE 9<sup>TH</sup>–10<sup>TH</sup> CENTURIES. THE ARCHAEOLOGICAL DATA AND THE CHRONOLOGICAL ASPECTS OF THE HUNGARIAN CONQUEST PERIOD

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**Cuvinte-cheie:** *perioada cuceririi maghiare, secolele IX–X, dirhem, Europa de Est, comerț, maghiar timpuriu.*

**Abstract:** *Among the 9<sup>th</sup>–10<sup>th</sup> centuries finds of the Carpathian Basin, the dirhams from the site at Jászfelsőszentgyörgy, beyond Zagyva River, are unique. According to specialised literature, this is the only known discovery of such a dirham from the Carpathian Basin. In fact, from a broader perspective, it is currently considered to be one of the oldest Abbasid coin in Central and Eastern Europe (Fig. 3–4). The so-called hacksilver finds from Eastern Europe show that the influx of Abbasid dirhams during the reign of al-Mutawakkil ‘ala-Allāh (847–861) into the Khazar Khaganate and Russia was intense starting from the late 840s. In the 850s, the circulation of coins was largely composed of this type of dirham. There are known hoards where al-Mutawakkil’s coins represent approximately half of the total assemblage. This type of coin remained in circulation until the late 860s, that is, throughout the entire D1 period, according to Vyacheslav S. Kulesov’s chronology, i.e., between 845/850 and 865/870. In the subsequent period, D2 (865/870–895/900), they are also found in larger hoard assemblages that accumulated during the D1 period and ended in the D2 period (Fig. 4). In smaller assemblages, however, coins minted in the narrow period of the last third of the 9<sup>th</sup> century predominate, a fact that is also interesting from a Hungarian perspective. In assemblages dating from the first half of the 10<sup>th</sup> century, there are only a few isolated cases of al-Mutawakkil dirhams. These are known from the numerous Kozyanka and Rakovci*

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hoards in Belarus and the Murom hoard in Russia, although even there they are very rare. Therefore, after the 9<sup>th</sup> century, as far as we currently know, they only appear in large hoards. In assemblages dating from the second half of the 10<sup>th</sup> century, al-Mutawakkil dirhams are completely absent (Fig. 3–4).

The coin provides a firm terminus post quem date of 851, but its placement in the ground is likely later. For now, this seems probable, even though we now know of half a dozen early Hungarian burials in the Carpathian Basin which, according to radiocarbon dating and archaeological observations, were dug before the commonly accepted date of 895. This archaeological phenomenon is also consistent with written sources, which show that the Hungarian army appeared in the Carpathian Basin over several years starting from 862, where they participated as allies in the Carolingian-Moravian conflict. Additionally, in recent years, following archaeogenetic investigations, the grave of a Hungarian mercenary buried in the second half of the 9<sup>th</sup> century at Zalavár-Vársziget 8/2000 was uncovered. Therefore, the above data provide a theoretical possibility of dating the Jászfelsőszentgyörgy dirham to the late 9<sup>th</sup> century. At the same time, it was already known that the appearance of dirhams in the Carpathian Basin was clearly related to the early Hungarian period.

In conclusion, although we cannot determine the exact date of the Jászfelsőszentgyörgyi dirham due to the lack of context, we cannot exclude the possibility that it may have been in the ground as early as the late 9<sup>th</sup> century.

**Rezumat:** Printre descoperirile din secolele IX–X din Bazinul Carpatic, dirhemii din situl de la Jászfelsőszentgyörgy, dincolo de râul Zagyván, sunt unici. Conform literaturii de specialitate, aceasta este singura descoperire cunoscută a unui astfel de dirhem din Bazinul Carpatic. De fapt, dintr-o perspectivă mai largă, este considerată în prezent a fi una dintre cele mai vechi monede abbaside din Europa Centrală și de Est (Fig. 3–4). Așa-numitele descoperiri de argint din Europa de Est arată că afluxul de dirhemi abbasizi în timpul domniei lui al-Mutawakkil 'ala-Allāh (847–861), în Kaganatul Kazar și în Rusia Kieveană, a fost intens începând cu sfârșitul anilor 840. În anii 850, circulația monedelor era în mare parte compusă din acest tip de emisiuni. Se cunosc tezaure în care monedele al-Mutawakkil reprezintă aproximativ jumătate din componența totală. Acest tip de monedă a rămas în circulație până la sfârșitul anilor 860, adică pe parcursul întregii perioade D1, conform cronologiei lui Vyacheslav S. Kulesov, adică între 845/850 și 865/870. În perioada următoare, D2 (865/870–895/900), acestea se regăsesc și în ansamblurile mai mari de tezaure, care s-au acumulat în timpul perioadei D1 și s-au încheiat în perioada D2 (Fig. 4). În ansamblurile mai mici, însă, predomină monedele bătute în perioada restrânsă la ultima treime a secolului al IX-lea, fapt interesant și din perspectivă maghiară. În ansamblurile care datează din prima jumătate a secolului al X-lea există doar câteva cazuri izolate de dirhemi al-Mutawakkil. Acestea provin din numeroasele tezaure Kozyanka și Rakovci, din Belarus, și din tezaurul Murom, din Rusia, deși chiar și acolo sunt foarte rare. Prin urmare, după secolul al IX-lea, din câte știm în prezent, nu mai apar decât în tezaurele mari. În ansamblurile care datează din a doua jumătate a secolului al X-lea, dirhemii lui al-Mutawakkil lipsesc cu desăvârșire (Fig. 3–4).

Moneda oferă o dată terminus post quem fermă de 851, dar plasarea ei în pământ este posibil să fie mai târzie. Deocamdată, acest lucru pare probabil, chiar dacă acum cunoaștem o jumătate de duzină de înmormântări maghiare timpurii din Bazinul Carpatic care, conform datării radiocarbon și observațiilor arheologice, au fost practicate înainte de data de 895, care a fost acceptată în mod obișnuit. Acest fenomen arheologic este, de asemenea, în concordanță cu sursele scrise, care arată că armata maghiară a venit în Bazinul Carpatic de-a lungul mai multor ani, începând cu 862, unde a participat ca aliat în conflictul carolingiano-morav.

În plus, în ultimii ani, în urma unor investigații arheogenetice, a fost evidențiat mormântul unui mercenar maghiar, înhumat în a doua jumătate a secolului al IX-lea în Zalavár-Vársziget, 8/2000. Prin urmare, datele de mai sus oferă o posibilitate teoretică de datare a dirhemului de la Jászfelsőszentgyörgy la sfârșitul secolului al IX-lea. În același timp, este deja cunoscut faptul că apariția dirhemilor în Bazinul Carpatic a fost în mod clar legată de perioada maghiară timpurie.

În concluzie, deși nu putem oferi datarea exactă a dirhemului de la Jászfelsőszentgyörgy, din cauza lipsei contextului, nu excludem faptul că acesta să fi fost îngropat încă de la sfârșitul secolului al IX-lea.

## Description of the site<sup>1</sup>

A pierced silver dirham from the site of Jászfelsőszentgyörgy, beyond the River Zagyva (**Fig. 1**) (Jász-Nagykun-Szolnok country, Hungary) was brought to the local Jász Museum around May 2020. To investigate the context of the find, the Jász Museum, together with the Pázmány Péter Catholic University and the Early Hungarian History Research Group of the HUN-REN Faculty of Science, executed a planned field survey of the site, which took place on 29 October 2020.

We opened five trial trenches in the area. The first was opened in an east-west direction on the highest sand hill of the area in a 4 × 12 m size but was empty. The second east-west trench followed about 80 m northeast of the first, again on the north side of a hill in a size of 4 × 12 m. The third section was launched 80 m northeast of the second and was oriented north-south measuring 6 × 14 m. The fourth and largest section was opened where the dirham emerged, 20 m east of section 3. This lay at the bottom of the hill, indicates that the coin had been brought to its place by ploughing. The fourth section was north-south oriented in an L-shape of 20 m length and 14 and 8 m width. The last and fifth trench was opened about 60 m southeast of section four and was oriented east-west measuring 2 × 10 m. During digging, we observed a topsoil thickness ranging from 40 to 80 cm. During the excavation, no Conquest period date archaeological objects were detected in the trenches, but metal detecting revealed an additional 10<sup>th</sup> century finds; a fragment of a bead-encrusted strap-end manufactured of a copper-based alloy. This made it likely that the last remains of a 10<sup>th</sup> century cemetery/site, destroyed by agricultural cultivation, were identified.

## Finds descriptions

1. Abbasid *dirham* (**Fig. 1/2; Fig. 2**), the currency of Caliph al-Mutawakkil 'alā ʿAllāh, reigned from AH 232–247 (= 847–861). The dirham was minted in Samarra (Sura-man-ra) in AH 237 (= 851). The dirham has two holes in the upper part, which presumably indicate that it was worn or held fastened to some kind of material, perhaps textile. Ltsz.: 2021.8.1.1; N21.1.1 (Jász Museum).

2. A rectangular fragment of a cast, copper-based alloy, presumably a *strap-end* upper part (**Fig. 1/3**). The object is framed by a smooth, unarticulated pattern of bulging circles within the frame. In the centre is a bulging decoration consisting of

<sup>1</sup> The research was carried out in the framework of the PPKE-BTK-KUT–23–3 and the HUN-REN Early Hungarians Research Team: The interdisciplinary based research programme on early Hungarian history (2022–2026).

three triangles, inverted at their apexes, joined at the centre of the bezel by a double V-shaped element, also with its apex inwards. It is fixed at the back by a spike which is driven away. Dimensions: height: 1.2 cm; width: 1.8–1.9 cm; thickness: 0.15 cm. Item no. 2021.8.2.1 (Jász Museum).

## Evaluation

Among 10<sup>th</sup> century artefacts from the Carpathian Basin, the dirham from the site of Jászfelsőszentgyörgy, the beyond Zagyva, is unique. According to existing secondary literature, this is the only dirham find of this type known from the territory<sup>2</sup>. In fact, from a broader perspective, it is currently one of the earliest Abbasid coin in East Central Europe (Fig. 3–4)<sup>3</sup>.

The coin gives a firm *terminus post quem* date of 851 for the site, however, its deposition in the ground is probably later. For the time being, this seems the safest, even though we know by now half a dozen early Hungarian burials in the Carpathian Basin which, according to radiocarbon and archaeological observations, were dug before the commonly agreed date of “conquest”, that is 895<sup>4</sup>. The appearance of this early coin paired with a Hungarian strap-end is also in line with written sources, which document that the parts of the Hungarian army appeared in the Carpathian Basin in several years from 862 onwards, where they participated as allies in a Carolingian-Moravian conflict<sup>5</sup>. Moreover, in recent years the grave of a (presumably) Hungarian mercenary buried in the second half of the 9<sup>th</sup> century has been found at Zalavár-Vársziget 8/2000<sup>6</sup>. The above data, therefore, provide a theoretical possibility for dating the dirham of Jászfelsőszentgyörgy to the end of the 9<sup>th</sup> century. At the same time, it has been widely accepted that the appearance of dirhams in the Carpathian Basin was clearly linked to the early Hungarian Conquest/Settlement period<sup>7</sup>.

The identification of the dirham, and the evaluation of the coin type’s

<sup>2</sup> Recently, an interesting theory has appeared, written by Erwin Gáll, on the distribution of dirhams in the Carpathian Basin and the direction of the 10<sup>th</sup> century campaigns (which were led by the occupiers in the north, northeast and east): “Based on the various intercontinental dirham distribution maps, we consider this phenomenon to be well interpretable: Northeastern Europe and Scandinavia formed an active, integrative part of the vast economic system that the world imperial activity of the Arab Caliphate had created. In our view, the Hungarian steppe state was also integrated into this system on some level, as an arm extended towards Europe. This also explains why the Hungarian steppe state did not lead a campaign to the north-east and east, but we do not exclude Arab economic interests in the realisation of the enterprise known as the conquest!” (GÁLL 2019, p. 97). Of course, the direct influence of Muslim economic circles on the politics of the early Hungarian ruling class is difficult, if not impossible, to prove. However, the theory itself is certainly interesting, and the perspective of looking at historical processes through the lenses of the contemporary global economic systems is useful.

<sup>3</sup> An Abbasid dirham minted under the reign of kalifa al-Mu‘tazza in 867 AD known from the Lesser Carpathian Mountains from Moravian territories (Svätý Jur, Slovakia), see: VAVÁK 2019, p. 8.

<sup>4</sup> Cf. SOMOGYI, TÜRK 2023.

<sup>5</sup> MAKK 1998; BÁCSATYAI 2017.

<sup>6</sup> ÉVINGER 2022. On this issue, see also SZŐKE 2014; SZŐKE 2019.

<sup>7</sup> BÁLINT 1982; KOVÁCS 1989; KOVÁCS 2011.

distribution patterns in Eastern Europe were carried out by Suleman al-Halabi and Vyacheslav S. Kulesov numismatists (Fig. 2–4). This was supplemented with a study of the material composition of the dirham in Debrecen in the laboratory of the HUN-REN Nuclear Research Institute. It resulted in a remarkable silver content of about 99% (Fig. 2/2).

The key question about the dating value of coins is to determine how long it was in circulation between its issuing and deposition into the ground. Most recently, László Révész, in his monograph on the settlement history of the Carpathian Basin east of the Danube in the 10<sup>th</sup> and 11<sup>th</sup> centuries, summarised the latest results and current state of research on dating with coins<sup>8</sup>. The Jászfelsőszentgyörgy coin is a stray find, so unfortunately no find context or accompanying artefact can provide us with any further clues as to the exact date of deposition. We most agree with the assessment of Révész that it would be unrealistic to stretch a coin's *terminus post quem* dating period to (sometimes) a century and a half, whilst at the same time “we cannot objectively judge how long it took between the issue of the coin...and its placement in the ground”<sup>9</sup>. With the Jászfelsőszentgyörgy dirham, however, we have attempted to establish a more restrictive date, considering the evidence of early medieval dirham circulation in an Eastern European perspective (Fig. 3–4).

The so-called broken silver treasure finds from Eastern Europe illustrate that the influx of Abbasid dirhams from the reign of al-Mutawakkil into the Khazar Khaganate and the Rus was intense from the late 840s. In the 850s, coin circulation consisted mostly of this type. There are known hoards in which al-Mutawakkil's coins account for about half of the total assemblages. The type remained in circulation until the end of the 860s that is during the entire D1 period (845/850–865/870) according to Vyacheslav S. Kulesov's chronology<sup>10</sup>. In the next, namely D2 period (865/870–895/900), they are also found in the larger hoards which were accumulated during the D1 period and closed in D2 (Fig. 4). In the smaller hoards, however, coins, struck in the narrow period of the last third of the 9<sup>th</sup> century, predominate, a fact that is also interesting from a Hungarian perspective.

In hoards or other complexes dating from the first half of the 10<sup>th</sup> century, the dirhams of al-Mutawakkil largely disappear with only a few isolated exceptions. They are only known from the extensive hoards of Kozyanka and Rakovtsy in Belarus, and a few specimens came to light from the Murom hoard in Russia. After the 9<sup>th</sup> century, therefore, as far as we know at present, *they no longer occur* with the exception of a few larger hoards. In assemblages dating to the second half of the 10<sup>th</sup> century, the dirhams of al-Mutawakkil are absent (Fig. 3–4).

Accordingly, the dirham of Jászfelsőszentgyörgy most likely infiltrated Eastern Europe in the 850s, but more likely in the early 860s, which is roughly synchronous with the appearance of the Hungarian army in the Carpathian Basin. Based on Eastern European parallels, the chronology of artefact assemblages with such coins does not extend beyond the mid–10<sup>th</sup> century. However, in the light of the frequency of their appearance in 10<sup>th</sup> century contexts, it seems safer to assume that

<sup>8</sup> RÉVÉSZ 2020, p. 14–20, with further comprehensive literature.

<sup>9</sup> RÉVÉSZ 2020, p. 16.

<sup>10</sup> KULESHOV 2020.

the Jászfelsőszentgyörgy find was introduced into the Carpathian Basin in the last third of the 9<sup>th</sup> century.

According to numismatists, the appearance of these early dirhams in Eastern Europe most probably is due to intermediaries and is to be sought in a Khazar-Alan environment, a territory in close contact with the early Hungarians during the 9<sup>th</sup> century<sup>11</sup>. Thus, the coin probably arrived in the Carpathian Basin and in the region of present-day Jászfelsőszentgyörgy with the first generation of the conquerors. The chronology of this seems to pre-date the consensually accepted (historical) date of the conquest, that is 895. However, a written source also testifies that the army of the conquering Hungarians appeared in the Carpathian Basin as early as 862<sup>12</sup>, and we know of individual, mainly isolated burials of armed men whose radiocarbon data indicate that the burials occurred before 895<sup>13</sup>. The written contemporary accounts of Hungarian and Kabar military involvement in Eastern Frankish territory (in 862, 891, 892, 894) and the archaeological data therefore suggest a Hungarian presence, even sporadic settlement, in the Carpathian Basin before 895. The trustworthiness of the source about the appearance of the Hungarians in the Carpathian Basin at 862, is generally accepted among historians and is backed up by German, Slovak and Czech archaeologists<sup>14</sup>. All this sheds new light on the historical context and evaluation of the Jászfelsőszentgyörgy dirham find<sup>15</sup>.

In a broader perspective, it is intriguing that dirhams appear in the territory of the modern Czech Republic only from the beginning of the 10<sup>th</sup> century. It should be stressed, however that we do not possess reliable data on the functioning of the trade route between Kiev and Prague until the mid-10<sup>th</sup> century. In the meantime, it is well-known that silver dirhams were widespread among the early Hungarians in the late 9<sup>th</sup> and during the 10<sup>th</sup> centuries, which they acquired from Central Asia, Khazaria and Volga-Bulgaria. These coins, together with finds of Caucasian snail remains, *taqueté* silk fragments<sup>16</sup>, and South Sea ray and fish skins found in Hungarian graves, are evidence of former contacts of the conquering Hungarians with the Silk Roads<sup>17</sup>. This interpretation is increasingly supported by a parallel finds in the Caucasus<sup>18</sup>. However, after the middle of the 10<sup>th</sup> century, it is recorded in a written source (Ībrahīm ibn Ya`qūb, from 965) that to Prague “*Moslems, Jews, and Turks come there from the country of the Turks and bring goods and trade balances. Flour, tin, and various kinds of furs are exported from there*”<sup>19</sup>. Thus, a new interpretation

<sup>11</sup> KULESHOV 2020.

<sup>12</sup> BÁCSATYAI 2017; SZÁNTÓ 2018.

<sup>13</sup> LŐRINCZY, TÜRK 2015; TÜRK 2021; JANCSIK 2021, p. 18; SOMOGYI, TÜRK 2023; TÜRK *et alii* 2023, fig. 8.

<sup>14</sup> SCHULZE-DÖRRLAMM 2002; ŠALKOVSKÝ 2002; KOUŘIL 2003; KOUŘIL 2008; PROFANTOVÁ 2008; HOLESCÁK 2019.

<sup>15</sup> MAKK 1998. We would like to thank László Veszprémy, Kornél Szovák, Richárd Szántó and Dániel Bácsatyai for their expertise in the evaluation of the source data on Hungarians in 862 AD.

<sup>16</sup> BERTA *et alii* 2018.

<sup>17</sup> HARANGI, TÜRK 2023.

<sup>18</sup> ZÁGORHIDI CZIGÁNY, KENÉZ, TÜRK 2019.

<sup>19</sup> MISHIN 1996, p. 186. Szabolcs Polgár suggested that merchants from Hungary had probably appeared in Prague earlier (POLGÁR 2019, p. 47, 108–109, 280). He also assumed that “*the dirhams found in the Little Plain could also be linked to the Prague route.*” (POLGÁR 2019, p. 287).

linking the influx of dirhams into Bohemia before the 10<sup>th</sup> century to Hungarian involvement is possible. From the recent research of Vyacheslav S. Kulesov on the circulation of dirhams in Eastern Europe, it also becomes apparent that the Volga Bulgarian dirham imitations have spread already from the 930s onwards to the contemporary Rus'ian-Hungarian border region (present-day Slovakia and Poland)<sup>20</sup>. Most recently, Suleman al-Halabi, in his PhD thesis, processed the only known dirhem hoard of the Carpathian Basin from Huszt (now Khust in Ukraine): he came to the conclusion that although previously thought to contain 368 pieces<sup>21</sup>, the hoard contained 373 dirham pieces after out of which he found 34 per cent to be of Volga Bulgarian imitation copies<sup>22</sup>.

In the wider area of Jászfelsőszentgyörgy, beyond the Zagyva, dirhams are represented in significantly smaller numbers than western coins. Révész, in his previously mentioned monograph, made the following observations on the distribution of coins: from the north Hungarian region (including the Jászság), he identified four Muslim dirhams, three Byzantine coins and 29 Western coins, whilst from the Central Tisza region, two Muslim dirhams and four Western European coins are known. From the northern part of the Danube plain region, three Byzantine and nine Western coins but no Muslim dirhams are catalogued in his collection<sup>23</sup>.

## Conclusions

In conclusion, although we cannot give an exact date for the appearance of the dirham of al-Mutawakkil at Jászfelsőszentgyörgy due to a lack of context, we posit a probable date in the late 9<sup>th</sup> century. The dirham recovered from the site is a unique piece whose distribution in Eastern Europe in chronologically early contexts confirms our proposition, thus indicating Hungarian appearance in the Carpathian Basin before the date of the conquest of 895. However, it must be stressed once again that the artefact was unfortunately a stray find. It is hoped that the comprehensive authentication excavation planned by our working group at the site will provide new data for the evaluation of this rare and extremely important remain. Nevertheless, the trends of Eastern European dirham fluctuation and the picture painted by contemporary written accounts about the periodic involvement of the Hungarians in the affairs of the Carpathian Basin prior to the conquest already place the dirham find in an interpretable historical context.

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<sup>20</sup> For more on coins in Poland, see also ADAMCZYK 2020. For a general overview of coin circulation and trade in Eastern Europe, see: JANKOWIAK 2020.

<sup>21</sup> KOVÁCS, FOMIN 1987.

<sup>22</sup> HALABI 2023.

<sup>23</sup> RÉVÉSZ 2020, p. 296–297, 343, 362.

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1



Fig. 1. 1 – Location of the site Jászfelsőszentgyörgy, Zagyván túl; 2 – Dirham; 3 – Fragment of a strap-end.

Abbasid silver dirham. Found in old Hungarian archaeological site (Jászfelsőszentgyörgy). al-Mutawakkil 'ala Allāh the 10th Abbasid caliph 232- 247 AH / 847- 861 AD. Minted in Surra Man RaPa (SÁmarra). 237 AH/ 851 AD.



There is no God  
except Allah  
He is Alone  
There is no partner to him  
AbŪ YAbduallah

Marginal Legend:  
بسم الله ضرب هذا الدرهم بسر من رأى سنة سبع وثلاثين  
ومائتين

In the name of God this dirham was struck in **Samarra** in the year two hundred and thirty-seven. (237) AH.



Allah  
Muḥammad  
is the Messenger of God  
al-Mutawakkil Yala Allah

Marginal Legend:  
Outer margin: ((From Qur'ān IX, 33))  
محمد رسول الله أرسله بالهدى ودين الحق ليظهره على الدين كله  
ولو كره المشركون

Muhammad is the messenger of God. He sent him with guidance and the true religions to reveal it to all religions even if the polytheists abhor it

Outer margin: ((From Qur'ān XXX, 4-5))  
الله الامر من قبل ومن بعد يومئذ يفرح المؤمنون

with Allah is the decision, in the past and in the future; on that day shall the believers rejoice.

1

Coin Name	Mn(wt %)	Fe(wt %)	Ni(wt %)	Cu(wt %)	Zn(wt %)	Ag(wt %)	Au(wt %)	Hg(wt %)	Pb(wt %)	Bi (wt %)
Abbasid dirham	0.001	0.027	0.003	0.235	0.008	99.0	0.239	0.026	0.284	0.002

**Archaeometry examination**

2

Fig. 2. 1 – The dirham from Jászfelsőszentgyörgy: inscriptions and identifying; 2 – The metal composition of the dirham.



1

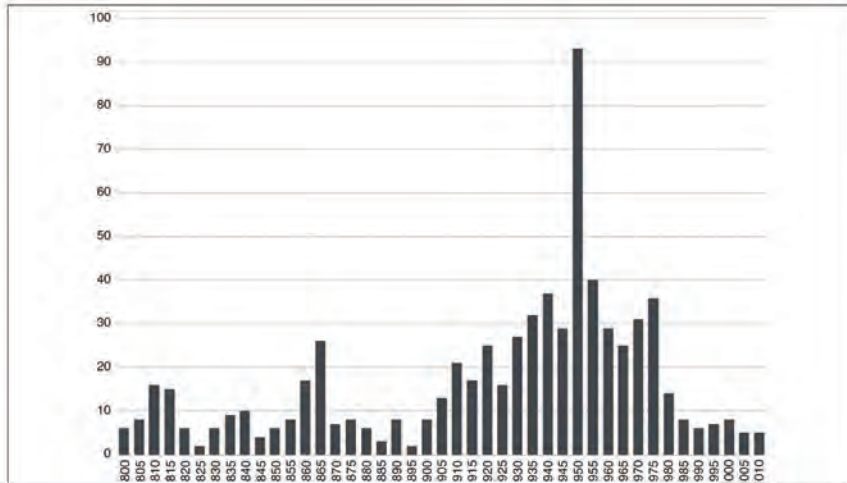


2

Fig. 3. 1 – Northern and eastern European dirham hoards with known find spots (after JANKOWIAK 2020, p. 107, Map 6/1); 2 – Northern and eastern European dirham hoards with *terminus post quem* between 831 and 877 (after JANKOWIAK 2020, p. 115, Map 6/3).

Stage	Sub-stages	Approximate hoard dates	Time-span (years)	Caliph coins circulating	Other types of coins found (dirhams unless otherwise stated)
A		750s–80s	~ 30–5	c. 725–75	Sasanian ( <i>draclms</i> ) Umayyad Early Abbasid
B		780s–800s	~ 20–5	c. 775–800	Abbasid governors of Ifriqiyya Abbasid governors of Tabaristan
C <sup>1</sup>		800s–50	~ 40–5	c. 800–47 (end of al-Wathiq's rule)	Early Abbasid (Harun al-Rashid, al-Amin and al-Ma'mun) Khazar imitations (2nd quarter of the ninth century; Stage C2 only)
	C1	800s–20s			
	C2	830–40s			
D		850–905	~ 45–50	847–c. 892 (al-Mutawakkil's rule to the end of the Middle Abbasid period)	Middle Abbasid 'blank-flan' (i.e. not struck with die, or struck with worn die) dirhams Khazar imitations (2nd half of the ninth century) Saffarid / Banjurid coins (Stage D2 only)
	D1	850–70s			
	D2	880s–900s			
E		895–955	~ 50–5	c. 892–943 (reigns of Isma' il I, Ahmad II and Nasr II)	Early Volga Bulgar imitations Late Abbasid Saffarid Sajid Early Buyid (pre-945)
F		945–79	~ 25–30	c. 943–76 (opening stages of the late period; reigns of Nuh I, Abd al-Malik I and Mansur I)	Buyid (post-945) Volga Bulgar (including emirs Mika'il ibn Ja'far, Abdallah ibn Mikhail, Talib ibn Ahmad) Hamdanid Sallarid Late Wajihid (including those of Muhammad and Umar, sons of the dynasty's founder Yusuf ibn Wajih) Julandid

1



2

Fig. 4. 1 – Analysis of 18<sup>th</sup> century coins found in Kyivan Rus (after KULESHOV 2020, Table 8/5–8/6); 2 – *terminus post quem* data of the northern and eastern European dirham hoards (after JANKOWIAK 2020, p. 109, fig. 6/1).