ÁDÁM NOVÁK

USE OF SEALS IN THE ÁRPÁD ERA

Seals used to authenticate documents are reference sources in the special area between written and material sources. They were indispensable starting points for the study of Árpád-era history. The Golden Bull, our most important medieval document with legal power, was named after the golden seal it was certified with. Royal seals, combined with the results of numismatic studies, have enabled researchers to reconstruct the heraldic programme of the Hungarian kings. The seals of church figures and institutions provided sources for art historians to help examine changes in the artistic styles of the Árpád era. The seals of secular officials grant insight into the use of coat of arms by ancient clans, and a collection of these imprints provide important family history data for a period with very few sources.

This is precisely why the present study cannot undertake to give a detailed account of the emergence, development and certain aspects of seal usage in the Árpád era. Fortunately, this work was carried out in sufficient depth by the historical research of recent centuries, thanks to the collections of Jesuit

I take this opportunity to remember Professor Géza Érszegi, who died recently at the age of 78. As an archivist, researcher and teacher, his contribution to the auxiliary sciences was immense. His name is particularly associated with one medieval source: the Golden Bull of King András II. His written works remain with us, however, including his monograph (Érszegi 1990) and his catalogue of royal seals (Érszegi 2001). For the latest on the Golden Bull in English, see Zsoldos 2022.

Perhaps it is not an exaggeration to say that the most extensive historiographic guide on the topic is Terézia Kerny's work, even if she herself did not consider it all-encompassing: Kerny 2015. Here are three selected works of analysis regarding the use of regal coats of arms: Kumorovitz 1941; Kumorovitz 1942; Körmendi 2011A.

³ Bodor 1984; Takács 1992; Takács 2012, pp. 64–68.

⁴ Rácz 1992; 1995; Körmendi 2009; 2010; 2011B; 2011C.

historiographers,⁵ the depositaries of Hungarian diplomacy and sphragistics,⁶ and to cultivators of art history research⁷ as well as scholars of the related sciences, such as numismatics,⁸ genealogy, archontology and heraldry. Apart from the fact that the writer of this paper is not able to, the size of the study also limits the possibility for writing such a synthesis. Therefore, a brief definition of seals and a list of their types is provided below. Royal seals and the sealing customs of ecclesiastical and secular officials are summarised without striving to provide an exhaustive summary.

Seals, a means of authentication9

The word "seal" (*sigillum*, *sfragis*) signifies two notions: *typarium* or seal matrix as a certifying device with a negative image carved in a hard material (e.g. metal, stone, clay) and the seal imprint, which is the positive impression of the former in a soft medium. It is important that we can only speak of a seal if it clearly identifies its owner and expresses said owner's acclamation and possession. It is used to close and certify documents from antiquity until today. Its heyday was undoubtedly the Middle Ages, when – with the spread of written records – it became necessary to warrant the content of documents unequivocally.¹⁰

The most rudimentary type was the summoning seal or *billog* in Hungarian. This single, medal-like bronze seal with a handle made it possible in an age of widespread illiteracy for the holder of judicial power to express their will in an authenticated form, through their representatives, i.e. the fact of being summoned to court or the execution of a sentence. Thus the summoning seal authenticated what was expressed orally, even without writing. Anyone who presented it could speak on behalf of its owner. The process of document

⁵ An emblematic work: Pray 1805. Cf. Kerny 2015, pp. 178–180.

⁶ Szentpétery 1930; Kumorovitz 1938; Kumorovitz 1993.

⁷ Bodor 2001; Takács 2012, pp. 78–153.

⁸ A more recent example: Tóth 2020, pp. 71–73, p. 97.

⁹ The overview is primarily based on Kumorovitz 1993, Bodor 2001 and Bertényi 1998.

¹⁰ For several studies on the development of written records, see Solymosi 2006.

authentication was launched by affixing the summoning seal on a document. The ever-increasing number of charters were produced with the authenticating impression of a seal, often accompanied by a *monogram* on royal charters, and a *chirograph* in the case of other charters.

The origin of the use of seals by ecclesiastical bodies should be explained here. According to literature, as early as the late 11th century, during trials by ordeal, the bandaged wound was sealed by the seal of the church conducting the red-hot iron trial. This procedure was also recorded in the *Váradi Regestrum* in the early 13th century, although the charter-issuing activity of the chapters had already begun by that time. The impression of seals used in trials by ordeal still appear on some charters from the 1230s. Later, when trials by ordeal were discontinued, and in the wake of the destruction caused by the Mongol invasion, new seals were prepared in most places, which served as the seals of the places of authentication.¹¹

In the 11th century seals were appended on charters. One or two intersecting parchment strips were passed through two parallel incisions in the parchment membrane with their ends on the same side of the parchment. These strip ends were attached to the membrane by pressing them in wax.

In Hungarian seal usage, pendent wax seals appeared at the turn of the 12th century. A bun-shaped "nest" was made of harder wax, and softer wax was poured into the middle in which the final imprint was pressed. A strip of parchment or twisted silk or hemp cord was used to affix it. Originally, they were threaded through the middle of the charter, but the heavy seal pendant often tore them out, so they created the *plica* by folding the bottom edge of the parchment once or multiple times. A string was pulled through two holes pierced in the thickened parchment, the ends of which were pressed into the wax of the seal. Wax seals were generally made of beeswax with natural colouring ranging from light yellow to dark brown. Other materials were often added to make it harder. Coloured seal wax only appeared in the second half of the 13th century.

¹¹ For the catalogues of chapters and convents, see Takács 1992. For seal usage during trials by ordeal, see Solymosi 1989, 2009.

Bullae, i.e. metal round seals were made of gold or lead. Lead seals were usually solid in design, while golden seals were assembled from two separate thin sheets. Hungarian bullae were modelled on the seals used by the Byzantine imperial and the papal chancelleries. Bullae were attached to the charters as pendants, often with a closing function. Researchers presume that the appearance of double seals can be traced back to bullae. Medal-like, double royal seals appeared in Hungary from the early 13th century, and they became an important expression of regal power up until the 19th century.

In the Middle Ages, illiterate people turned to people who could put their cases and avowals in writing. So non-royal charters may have been issued in their own or for other people's cases. It was in connection with the authenticity of this latter group that the concept of the authentic seal emerged from canon law. Documents affixed with *authentic* seals were considered evidentiary by the courts. Two types of these are known: seals with authenticating effect for anybody's cases, or those only for cases falling within the jurisdiction of the seal owner. According to seal owners, seals can be categorised into five broad groups: royal seals, seals of church dignitaries, ecclesiastical bodies, secular dignitaries and secular bodies.

As seals were used for authentication, if they lost this function, for example when their owners died or were replaced, they were most often destroyed or damaged. As a result, only a few seal matrices have survived for posterity. Numerous medal-engraving goldsmiths became seal-makers, as evidenced in many cases by the striking similarity of royal seals and the mint designs issued by the monarchs. The top of the rim of the few millimetre-thick metal seal matrix depicting a circular inscription [legend] and an image was fitted with a lug so it could be hung around the neck. The upper edge of the seals produced with such a typarium is marked with a wide, semi-cylindrical or angular groove (longitudinal groove), which is the impression of the lug. A pliers-like, articulated tool was used to press the bullae. Two engraved matrices with four lugs equally spaced around the rim of each were used to create double wax

¹² For more detail see: Kumorovitz 1936.

seals. The parts of the clamping device that were pushed through them ensured the exact fitting of the two matrices. In the case of double royal seals, it quickly became common for the *typarium* on the front and the back to be entrusted to different guardians to prevent abuse.

Examining the authenticity of the seal was essential, especially in judicial proceedings, so *sphragis*, i.e. the method and later the science of studying seals, emerged parallel to the seals. Seal forgery also developed concurrently with seal usage, which was considered a case of *nota infidelitatis*, i.e. high treason. Punishment could amount to capital punishment or loss of property, but the perpetrators were often branded on their faces.

Royal seal usage over the centuries¹⁴

When discussing the founding of the state by Saint Stephen, the laying of the foundations of the ecclesiastical system of institutions is always emphasised, which is closely linked to the beginnings of royal charter-issuing and seal usage. Not one original charter has survived from the age of our state-founding monarch. However, the texts of nine Latin and one Greek charter were preserved as transcriptions and copies. Six of the Latin texts proved to be later forgeries, and three are interpolated versions of the original charters¹⁵ Thus none of King Stephen I's original seals survived, yet research established that he used at least two seals, as texts of his charters reveal that the closing seal on the charter of Veszprémvölgy could not be identical to the one imprinted on the

¹³ The two symbolic examples of seal forgery from the Árpád era were the two summoning seals described by Pál Rainer: Rainer 2000. In the 21st century, the use of metal detectors has led to an increasing number of similar findings: Rábai 2020; Novák and Pánya 2020.

¹⁴ Art historian Imre Takács compiled a catalogue of Árpád-era royal seals in 2012. Despite its minor flaws (Kurecskó 2013), we can safely state it is the most up-to-date and complete catalogue on the subject. Based on the catalogue and Imre Bodor's publication (Bodor 2001), we will briefly summarise the development of royal seal usage. For the chancellery history summary of the topic, see Kumorovitz 1937. For the history of the Árpád period in English, cf. Engel 2001.

¹⁵ Szentpétery 1938.

founding charter of Pannonhalma (*anulus-sigillum*), because the latter must have been larger. ¹⁶ In relation to this, it is also accepted by research that it may have been similar to the *maiestas*-type throne seal of Holy Roman Emperor Otto III. This means that the monarch could have been depicted seated on the throne, his hands raised, holding the sceptre in his right, and the orb in his left as the symbol of the universe. This similarity also shows that Hungarian royal charter-issuing followed a European (principally German) pattern. ¹⁷

Researchers have very little source material regarding the use of seals by the direct descendants of Stephen I. However, it is typical that the monarch's name appears in the nominative case with the attribute "king of the Hungarians" (VNGARIORVM/VNGARORVM) added to the legend. One lead bulla with Byzantine influences survived from Peter Orseolo, and only documentary references to the Great Seal of King András I, and two copies of his summoning seal are known. Since András I reverted to the practice of Stephen I as regards minting, we can assume he did the same in his seal usage, so these fragments help us form an image of the seal of our state-founding king.

Only one broken piece of Béla I's seal survived, which was most probably the middle part of the round royal seal. A lead bulla associated with King Solomon was unearthed during the excavation of the Castle of Belgrade. While King Géza I's seal is only referred to in a charter clause issued by him, the first wax seal somewhat intact but seriously damaged – broken in two – survived from King (Saint) László I. The pendant imprint appended on a charter kept in the archives of the Benedictine Archabbey of Pannonhalma is a throne seal, the legend of which is different from the earlier ones. So in the SIGILLVM LADESLAI REGIS text, the ruler's name is in the genitive case. The throne seal of his successor King Kálmán dates back to 1109, when it was used to authenticate the founding charter of the nuns in Veszprémvölgy. This is the last appended seal in the catalogue of our kings' seals.

New types of throne seal were produced from Béla II to Béla III, which are also referred to in literature as Great Seals. The enlarged seal "nest" with

¹⁶ Jakubovich 1933.

¹⁷ Kumorovitz 1993, pp. 11–12.

a rounded back was attached to charters as a pendant. While King Coloman's seal measured 86 mm in diameter, Béla II's known seal was 110 mm. In the new era, the legends of wax seals bear the kings' names in the genitive case, and the names of their countries are given instead of the formerly common practice of their people's name.

The first gold seals were made in the 12th century. The gold seal of Géza II is mentioned in the 1156 donation letter of Archbishop of Esztergom Martyrius. However, only one copy of King Béla III's golden bull is known to exist, which was bought by the Hungarian National Museum without a certificate in 1871. The medal-like seal made of two golden plates was engraved on both sides and follows the patterns of the lead seals of Péter, Solomon and Géza II.

King Imre broke with the tradition of his predecessors and introduced a new, French-influenced image of the king sitting on the throne on his Great Seal.¹⁸

In his right hand, the king is holding the double-cross orb. His crown, sceptre, feet resting on the throne stool, and the claws of the sculpted, richly detailed animal by the side of the throne extend into the legend. King Imre's golden bull from 1202 brought about a new innovation. The legend on the front continues on the back. Unlike on his Great Seal, the front of his bulla shows a bench-like throne with a tall backrest. This is the first Hungarian double seal whose back image shows the coat of arms of the monarch. This is the first depiction of the escutcheon with seven stripes which later became the coat of arms of the Árpád dynasty and the country.¹⁹

Imre's golden bull served as a model for the seal reform of András II. This is because he also used a double royal seal in addition to his Great Seal. Earlier, charters providing privileges and ensuring rights could only be verified with the Great Seal, and in special, ceremonious cases with the golden seal. During András's time, the double wax royal seal can be proven to have appeared on these charters from 1213, alternating inconsistently with the Great Seal. It is not impossible that the assassination of Queen Gertrude was the reason why he saw

¹⁸ Bartoniek 1924, p. 14.

¹⁹ More recently, for the origin story of the coat of arms, see: Bertényi 2009.

the need to use such a new type of seal. It is conceivable that one or the other was more closely linked to him, and thus he could pursue more diversified politics. He had three Great Seals made during his lifetime. Introducing the third was necessary due to abuse. No intact copy of his second double royal seal survived,²⁰ but the fragments show similarities to his golden seal, which he used from 1214. His most solemn seal was a bulla with a diameter of 67 mm and the image of the king sitting on the throne on the front. To the left and right are the Sun and the Moon, with a star. On the back is an almond-shaped escutcheon with the seven stripes, in stripes 2, 4 and 6 two lions on each side face each other with a heart in the middle, and there is a single lion in the eighth stripe.²¹

During his reign, Béla IV only used wax double seals and golden bulls. The two types of seal became legally equivalent. His golden bull with a diameter of 69 mm differs primarily in size from the 90-mm wax double seal. During the time of Béla IV, the seven-striped escutcheon with lions known from Imre and András II was replaced by the double cross in a triangular shield with rounded corners. This escutcheon then becomes dominant on the back of the monarchs' royal seals.

It is worth mentioning here a seal depicting the Lamb of God (Agnus Dei) bearing the inscription SIGILLUM ADALBERTI REGIS, i.e. "seal of King Adalbert". The bronze *billog* [summoning seal] found in the vineyard of Nyírcsaholy was added to the collection of the Hungarian National Museum in 1938. Among others, András Kubinyi, György Györffy and Zsuzsa Lovag tried to identify it.²² All but the first of our kings named Béla were believed to have been identified by the Adalbert name, but they were unable to connect it to any of them with clear reasoning beyond all doubt. In his work in 2011, Takács

²⁰ For more on the fragmented seals and the processing potential see Novák 2016.

²¹ Two copies remain, neither on the famous Golden Bull. DL 39250. (1221); DF 238574. (1233). A plastic copy of the former was prepared for the seal copy collection of the Art History Research Group of the Hungarian Academy of Sciences (V8.1168), of which we made a 3D copy with the MTA-DE: "Hungary in medieval Europe" "Momentum" Research Group. Its digital model is available on the Sketchfab website: https://skfb.ly/o7OLG Downloaded on: 1 February 2022.

²² Kubinyi 1984; Györffy 1998; Lovag 1999, p. 85.

classified the seal as fake.²³ In 2018, a very similar piece was found in the Piarist Museum during a collection reorganisation, which only differed in one letter.²⁴ So it is questionable whether these are two very similar forgeries, or whether they can indeed be linked to one of the monarchs as a summoning seal.²⁵

The double royal seal established under Béla IV became permanent under the last Árpád rulers. Significant changes were made primarily to the legends and the attributes of the cross on the back.²⁶ The queens' seals followed the pattern of the royal seals, although they were not larger than around 80 mm in diameter and the cross on the back was not enclosed in a shield. We know of seals from Queens Maria (Béla IV), Elisabeth (Stephen I), Isabel (Laidslau IV), Fennena and Agnes (András III), and more than one from Elisabeth and Isabel.



Pendant seal of Queen Erzsébet (Izabella) (front and reverse), Archiv mesta Kosice, Archivum Secretum, GARADNA K Nr. 2.

²³ Takács 2012, pp. 18-19.

²⁴ https://mandadb.hu/tetel/667680/Agnus_Deit_abrazolo_bronz_medaillon Downloaded on: 1 February 2022.

²⁵ More on this issue: Ritoók 2020.

²⁶ Internal strife that flared up under László IV forced the monarch to change his seal four times, and his wife to change hers twice: Takács 2012, pp. 49–50.; Novák 2014.

The practice of younger kings in issuing charters is equally important for legal as well as charter and seal study reasons. The later Béla IV, when young, used royal gem counter-seals, 27 and oval seals similar to his father's Great Seal, but smaller in size. Stephen V's younger royal seal was already a double seal. The front was a traditional throne seal, the back depicted a galloping knight in armour and a great helm. The figure is holding a flag in his right hand with its end extending among the letters of the legend. On his left arm is a triangular shield. Before 1258, the flag and the shield depicted the double cross of the Árpád dynasty, later a panther rearing up, evoking the coat of arms of Styria. This later version is used on the original charter disclosed in the publication by Imre Szentpétery, which is not included in the DL-DF database of the Hungarian National Archives. Today the charter can be found in the Ljubljana archives of the Slovenian State Archives. 28



Pendant seal of King-junior Stephen of Eastern Hungary, (front and reverse) Archiv mesta Kosice, Archivum Secretum, A (Cassovie) Nr. 1.

On antique gem seals, see Gesztelyi and Rácz 2006. Also included are the counter-seals of Stephen III, Béla III and Imre, not explained in detail above.

²⁸ This later version is used on the original charter disclosed in the publication by Imre Szentpétery, which is not included in the DF database of the Hungarian National Archives. Today the charter can be found in the Ljubljana archives of the Slovenian State Archives. Reg. Arp. 1756. Original: Arhiv Republike Slovenije AS 5769.

Ducal seals are also known from the 13th century. The earliest ducal seal, which can be studied, albeit in a heavily damaged state, is from Prince Béla, Béla IV's younger son, who died in 1269. A lancer knight riding to the right can be seen on the single seal, his shield on his left indistinguishable today. Prince András, later András III, like the Slavic prince Béla, used a single seal depicting a horseman with the striped escutcheon of the Árpád dynasty on his shield.²⁹

Ecclesiastical and secular seals

The charter-issuing activity of ecclesiastical people began in the late 12th century. Bishops and archbishops issued charters or made private donations in their judicial capacity. In many cases, they acted as judges upon royal commissioning. Their seals were generally mandorla-shaped, pointy at both ends, which was exclusive to bishops and archbishops, and also common for lower-ranking dignitaries, but they often had round seals. They always used single seals, without exception. All high priests only had one seal, except for the Archbishops of Esztergom who had both a larger and a smaller seal. The seals were most often around 55x35 mm in size. In all cases, the matrix shows the high priest standing or seated on a throne bench, with the bishop's mitre on his head, his right hand raised in blessing, and holding a crosier in his left.³⁰

The first secular seal holders were dignitaries who had to issue charters as part of their official function, such as the palatine, the judge royal and their deputies, as well as the Voivode of Transylvania and the bans. Royal seal usage served as a clear model, but apart from a few examples, they all used single seals. Their seals bore the insignia of the ruling dynasty, the stripes and the double cross, which also showed how they followed the royal patterns and symbolised the grounds for their judicial practice. We have a rich collection of *ispán* seals. Ispáns [i.e. county heads] acted in the affairs of one or several

²⁹ On the history of princes and dukedoms, see Zsoldos 2016.

³⁰ Kumorovitz 1993, pp. 58–59; Analysis by Erik Fügedi: Bodor 1984, pp. 11–20; 2002, pp. 11–12.

counties entrusted to them, issuing sealed charters when necessary. On their seals, clan coats of arms appeared as early as the first half of the 13th century.³¹

For both ecclesiastical and secular usage of seals, we can say the spread of written records meant that lower levels of society also adopted seals. However, the circle of seal users only began expanding from the 14^{th} century.

Authentic seals used by the clergy and secular officials were sufficient to certify charters in most cases. Yet we already know of charters with several and multiple seals from the Árpád era.³² In particular, they sought to enhance the evidential value of the charters by means of multiple authentication. In many cases, the written case involved more than one actor. It was common for a judicial body to adjudicate a given case, with each of the members putting their seal imprint on the charter. Their seal was sometimes affixed to the charter as an acceptance of the text written on the parchment. A specific type of such charters comprised those with a "guardian seal", which were issued by the royal chancellery, but, in addition to the royal seal, they were also authenticated by the seals of the high priests and barons. Even if not all of these survived in original form, several of these charters were issued in the last decades of the 13th century.³³

Summary

The above clearly shows that the subject is extremely complex, so it is impossible to give a comprehensive description of it in this format. It is also clear that this period led many researchers with great expertise in historical and associated sciences in the narrow sense to analyse seal usage. Lajos Bernát Kumorovitz's comprehensive monograph, first published in 1944, has been supplemented and

³¹ Kumorovitz 1993, pp. 59–62; Bodor 2002, pp. 13–14; Körmendi 2009.

³² Due to length constraints we are unable to list and analyse them. However, here are some excellent examples from the online repository of the Diplomatic Archive of the Hungarian National Archive: DL 209. (1236); DL 221. (1237); DL 40076–77. (1268); DL 1473. (1297); DL 2216. (1299).

³³ Kumorovitz 1993, p. 14, pp. 82–84. On the later period, see Lővei 2015.

refined by a number of partial studies since its second edition in 1993. It is partly the reason why we have an almost complete catalogue of the corpus of royal seals, nearly exhaustive from an art history perspective, which can be polished from an auxiliary sciences point of view. However, it may still be necessary to collect the seal materials preserved abroad, especially as regards non-royal seals. In the 21st century, digitalisation has made great progress in neighbouring countries too. Fortunately, Hungary is at the forefront of digitalising and publishing medieval charters online, so organising such sources into online photo databases is not nearly as impossible an endeavour as it seemed decades earlier. Not to mention that wax seals are affected particularly badly by the adversities of time.



Letter of donation of Prince Dávid to the Abbey of Tihany, Archives of the Archabbey of Pannonhalma (Archives of the Abbey of Tihany, fasc. 1. nr. 3.)

REFERENCES

- **Bartoniek 1924.** Bartoniek Emma: Az Árpádok ércpecsétei. *Turul*, 38. (1924) 13–26.
- **Bertényi 1998.** Bertényi Iván: Pecséttan. In: Bertényi Iván (szerk.): *A történelem segédtudományai. A történettudomány kézikönyve.* Budapest 1998, 279–304.
- **Bértényi 2009.** Bertényi Iván: Az Árpád-házi királyok címerei és Aragónia. In: Ramon Sarobe Tóth Csaba (szerk.): *Királylányok messzi földről.* Budapest 2009, 188–197.
- **Bertényi 2010.** Bertényi Iván: *A címertan reneszánsza. Tanulmányok.* Budapest, 2010.
- **Bodor 1984.** Bodor Imre (szerk.): *A középkori Magyarország főpapi pecsétjei Magyar Tudományos Akadémia Művészettörténeti Kutató Csoportjának pecsétmásolat-gyűjteménye alapján.* Budapest, 1984.
- **Bodor 2001.** Bodor Imre: Árpád-kori pecsétjeink I. rész: Az Árpád-ház pecsétjei. *Turul*, 74. (2001) 1–20.
- **Bodor 2002.** Bodor Imre: Árpád-kori pecsétjeink. II. rész. Egyházi és világi pecsétek. *Turul*, 75.(2002) 11–22.
- **Engel 2001.** Engel Pál: The Realm of St. Stephen. In: *A History of Medieval Hungary 895–1526.* Edited by Andrew C. Ayton. London and New York: I. B. Tauris, 2001.
- Érszegi 1990. Érszegi Géza: Az Aranybulla. Budapest, 1990.
- **Érszegi 2001.** Érszegi Géza (szerk.): Sigilla regum reges sigillorum. Királyportrék a Magyar Országos Levéltár gyűjteményéből. Budapest, 2001.
- **Gesztelyi-Rácz 2006.** Gesztelyi Tamás Rácz György: *Antik gemmapecsétek a középkori Magyarországon. Antike Gemmensiegel im mittelalterlichen Ungarn.* Debrecen, 2006.
- **Györffy 1998.** Györffy György: Adalbert király idézőpecsétje. In: Csukovits Enikő (szerk.): *Tanulmányok Borsa Iván tiszteletére*. Budapest 1998, 77–80.
- **Jakubovich 1933.** Jakubovich Emil: I. Endre király törvénybe idéző ércbilloga. *Turul*, 47. (1933) 56–74.

- **Kerny 2015.** Kerny Terézia: "Dupplici sigilli nostri authentici munimine" A középkori magyar uralkodói pecsétek kutatástörténetének vázlata. *Ars Hungarica*, 41. (2015) 2. sz. 173–221.
- **Körmendi 2009.** Körmendi Tamás: A magyarországi nemzetségi címerek kialakulásának kérdéséhez. *Századok*, 143. (2009) 391–426.
- **Körmendi 2010.** Körmendi Tamás: Az Osl nemzetség címerváltozatai a középkorban. *Turul*, 83. (2010) 3–24.;
- **Körmendi 2011A.** Körmendi Tamás: A magyar királyok kettőskeresztes címerének kialakulása. *Turul*, 84. (2011) 73–91.
- **Körmendi 2011B.** Körmendi Tamás: Az Aba nemzetség címerváltozatai a középkorban. *Turul*, 84. (2011) 109–130.
- **Körmendi 2011C.** Körmendi Tamás: A Hontpázmány nemzetség címerváltozatai a középkorban. *Levéltári Közlemények*, 82. (2011) 3–77.
- **Kubinyi 1984.** Kubinyi András: Isten bárányát ábrázoló törvénybeidéző pecsét (billog). *Folia Archaeologica*, 35. (1984) 139–159.
- **Kumorovitz 1936.** Kumorovitz Lajos Bernát: Az authetikus pecsét. *Turul*, 50. (1936) 45–68.
- **Kumorovitz 1937.** Kumorovitz Lajos Bernát: A magyar királyi egyszerű- és titkospecsét használatának alakulása a középkorban. *A gróf Klebelsberg Kunó Magyar Történetkutató Intézet Évkönyve*, VII. (1937) 69–112.
- **Kumorovitz 1938.** Kumorovitz Lajos Bernát: A magyar szfragisztika múltja. In: Kumorovitz Lajos Bernát–Szilágyi Loránd (szerk.): *Emlékkönyv Szentpétery Imre születése hatvanadik évfordulójának ünnepére*. Pécs 1938, 507–524.
- **Kumorovitz 1941.** Kumorovitz Lajos Bernát: A magyar címer kettőskeresztje. *Turul*, 55. (1941) 45–62.
- **Kumorovitz 1942.** Kumorovitz Lajos Bernát: A magyar címer hármashegye. *Turul*, 57. (1942) 22–32.
- **Kumorovitz 1993.** Kumorovitz Lajos Bernát: *A magyar pecséthasználat története a középkorban*. Második, bővített és javított kiadás. Budapest, 1993.
- **Kurecskó 2013.** Kurecskó Mihály: Takács Imre: Az Árpád-házi királyok pecsétjei. Corpus sigillorum Hungariae medievalis I. (Ismertetés). *Turul*, 86. (2013) 77–79.

- **Lovag 1999.** Lovag Zsuzsa: *Mittelalterliche Bronzgegenstände des Ungarischen Nationalmuseum.* (Catalogi Musei Nationalis Hungarici. Seria Archeologica 3). Budapest, 1999.
- **Lővei 2015.** Lővei Pál: Sokpecsétes oklevelek a 14–15. századi Magyarországon. *Ars Hungarica*, 39. (2013) 2. sz. 137–144.
- Novák 2014. Novák Ádám: Izabella (Erzsébet) királyné pecsétjeiről. *Turul*, 87. (2014) 109–111.
- **Novák 2016.** Novák Ádám: II. András pecsétjei. In: Bárány Attila Pál Benkő Elek Kárpáti Zoltán (szerk.): *Pilisi Gótika II. András francia kapcsolatai. Kiállítási katalógus.* Szentendre 2016, 47–51.
- Novák-Pánya 2020. Novák Ádám Pánya István: Pecsétnyomó a föld mélyéből. *Turul*, 93. (2020) 39–41.
- **Pray 1805.** Pray György: Syntagma historium de sigillis regum, et reginarum Hungariae pluibusqve allis. Buda, 1805.
- **Rainer 2000.** Rainer Pál: A Berhidán és Felsőzsidén a XIX. században talált pecsétek (II. Géza és III. István királyunk pecsétnyomói?). *A Veszprém Megyei Múzeumok Közleményei*, 21. (2000) 77–88.
- **Rábai 2020.** Rábai Krisztina: Egy középkori pecsétnyomó azonosítására tett kísérlet. *Acta Historica*, 145. (2020) 81–100.
- **Rácz 1992.** Rácz György: Az Árpádok sávozott címere egyes főúri pecséteken a XIII–XIV. században. *Levéltári Közlemények*, 63. (1992) 123–135.
- Rácz 1995. Rácz György: Az Ákos nemzetség címere. Turul, 67. (1995) 11-34.
- **Reg. Arp.** Szentpétery Imre Borsa Iván (szerk.): *Az Árpád-házi királyok okleveleinek kritikai jegyzéke. Regesta regum stirpis Arpadianae critico diplomatica, I/1–II/4.* Budapest, 1923–1987.
- **Ritoók 2020.** Ritoók Ágnes: Egy titokzatos Árpád-kori királyi pecsét. MNM Blog, 2020/06/29 https://mnm.hu/hu/cikk/egy-titokzatos-arpad-kori-kiralyi-pecset Letöltés ideje: 2022. február 1.
- **Solymosi 1989.** Solymosi László: Guden magánoklevele másodlagos pecsétjének eredete. In: Praznovszky Mihály Veress D. Csaba (szerk.): *Veszprémi Történelmi Tár I.* Veszprém 1989, 101–105.
- **Solymosi 2006.** Solymosi László: Írásbeliség és társadalom az Árpád-korban: Diplomatikai és pecséttani tanulmányok. Budapest, 2006.

- **Solymosi 2009.** Solymosi László: Istenítélet és pecséthasználat. In: Neumann Tibor–Rácz György (szerk.): *Honoris causa. Tanulmányok Engel Pál tiszteletére.* (Analecta Mediaevalia III.). Budapest–Piliscsaba 2009, 359–375.
- **Szentpétery 1930.** Szetpétery Imre: *Magyar oklevéltan*. Budapest, 1930.
- **Szentpétery 1938.** Szentpétery Imre: Szent István király oklevelei. In: Serédi Jusztinián (szerk.): *Emlékkönyv Szent István király halálának kilencszázadik évfordulóján*. Budapest 1938, 325–394.
- **Takács 1992.** Takács Imre: *A magyarországi káptalanok és konventek középkori pecsétjei*. Budapest, 1992.
- **Takács 2012.** Takács Imre: *Az Árpád-házi királyok pecsétjei.* (Corpus sigillorum Hungariae mediaevalis 1.) Budapest, 2012.
- **Tóth 2020**. Tóth Csaba: *Bardus, grossus, florenus. Pénzverés az Anjouk Magyar-országán*. Budapest, 2020.
- **Zsoldos 2016.** Zsoldos Attila: Hercegek és hercegnők az Árpád-kori Magyarországon. In: Zsoldos Attila (szerk.): *Hercegek és hercegségek a középkori Magyarországon.* (Közlemények Székesfehérvár történetéből). Székesfehérvár 2014, 9–24.
- **Zsoldos 2022.** Zsoldos Attila: *The Golden Bull of Hungary*. Budapest, 2022.





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