Hungary in Medieval Europe Research Group

Database of Diplomatic Sources and 3D Scanning of Wax Seals – Observations

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Introduction of the Memoria Hungariae Research Group

- Established in 2014 within the frameworks of the "Lendület" (Momentum) programme of the Hungarian Academy of Sciences
- Goals of the research group
  - Identifying the place of the Hungarian Kingdom in Europe
  - Determining its diplomatic connections
  - Collecting Hungarica throughout Europe
  - Networking with European researchers
- The operation of the research group is assured until 2026

Members of the research group at the University of Debrecen
According to a 1971 directive of the Hungarian Academy of Sciences we call Hungarica all documents which relate to:

- The territory, population, inhabitants, political, administrative, judicial, socio-economic, scientific, etc., relations of Hungary at any given time;
- The relations of Hungary and its residents with foreign lands and foreigners;
- The views of foreign states, organisations and residents regarding the views and activities of residents (bodies) living (working) in Hungary or its territory;
- Significant persons of Hungarian origin who have lived or are living abroad, and their activities; and finally
- Memories that contain data of historical value on Hungarian ethnic groups living or having lived abroad.
Introduction of research fields

- Revealing previously unknown sources
  - Diplomatic correspondence,
  - Reports of envoys,
  - Empowerments,
  - Polysigillic charters,
  - Seals

- Uncovering and digitalising sources in Great Britan, France, Germany, Austria, Italy, the Vatican, Croatia, Poland, Lithuania, Slovakia, Scandinavian countries.
Significance and diadvantages of the DL-DF

❖ DL: Diplomatic Archive
❖ DF: Diplomatic Photo Collection
❖ The collection prior to the Battle of Mohács (29 August 1526) is available online
❖ ~ 320 000 records
❖ In many cases only the microfilm copy of the manuscript is available, the "attachments" are not
Example

❖ King Matthias of Hungary and King Casimir of Poland sign a treaty of perpetual peace through their envoys.
❖ They regulate in detail how conflicts between the two rulers and the inhabitants of the two kingdoms are to be settled.
❖ The seals can be viewed separately under "related records"
❖ For example, the seal of Gabriele Rangoni, Bishop of Transylvania is accessible in high resolution
Research of medieval seals

- Scientific sphragistics exists in Europe and Hungary since the 18th century (Kumorovitz, 1938)
- The first in Hungary: Georgius Pray - Syntagma historicum de sigillis
  - He provided drawings of the seals examined
  - There were many genuine and false additions
Seal recording and publishing

- Photography is not an appropriate means to reconstruct damaged seals.
- Digital photography is inexpensive and has brought forward a breakthrough in online publication.
- Photography is not suited for completing damaged seals.
- The seal is illuminated from only one angle.
- John Alexander McEwan pointed out that the RTI technique, developed in 2001, might be the next step in examining medieval seals (History Compass, 2018)
Experimental RTI project

- 2014–2015: professional practice at the Prešovská Univerzita v Prešove
- Digitalisation of the 12 medieval seals at the Štátny archív v Prešove
- In cooperation with Mensor 3D Ltd. (today member of the 4iG group)
- Exhibition: Gothic in the Monastery of Pilis – French Connections of Andrew II
  - 3D animation
  - Golden bull of Andrew II made of metal
  - Negative of the seal impression: matrix
  - Scientific dissemination – Museum pedagogy
Excursus: Hungarian medieval seals

- Hungarian Middle Ages – few narrative sources – charters are important
- Half/two-thirds are in Hungary – seals can be found abroad
- Hence copy collections were established
  - Kumorovitz, 1960s: plaster copy collection (BTM)
  - Marosi–Bodor, 1970s: plastic copy collection (MTA MI)
- Sigillographic and art historical analyses were made
- Seal corpuses are missing
- Exception: Seals of the rulers of the Árpád dynasty (Takács, 2012)
  - Foreign seal impressions are missing (Queen Isabella, seal of the young Stephen V)
RTI technique – Seal fragments

❖ Only fragments survived from Andrew II’s first royal seal (12 pieces)
  ❖ Pannonhalma, Veszprém, Esztergom, HHStA, MNL OL
❖ Hypothesis: It can be recorded put together and completed using the RTI technique
  ❖ "Reconstruction" of a lost source
  ❖ Sphragistical observations: can authentication marks be used to recognize forgery?
  ❖ Preservation of cultural heritage
  ❖ Seals can be "brought" home
3D printed seals

Use:
- Exhibitions
- Awareness-raising presentations
- Education (secondary and higher education)
- Collection establishment
- Making seal matrices

Advantages:
- Can be reprinted several times
- Less vulnerable
- Can be made of closing or embossed seals
Publication of digital models

- Sketchfab – https://sketchfab.com/memhung
- Memoria Hungariae https://lendulet.memhung.unideb.hu/
Thank You for Your Attention!

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