Online Resource 3 to the paper entitled '*Composition, raw material provenance and manufacture of a unique late Roman silver folding stand (quadripus) from Kőszárhegy, Hungary*' by Mozgai et al.

Possible ore sources of the various parts of the folding stand based on calculated Euclidean distances (d) between each sample and the database[1]

Sample	strong overlapping (d < 0.1)	weak overlapping (d = 0.1–0.2)
KŐSZÁRHEGYI QUADRIPUS		
Q_M01	Thasos (GR); Chalcidice (GR); Pangaeon (GR); Rhodope (BG); Kosovo; Kopaonik (RS); Rudnik (RS); Zletovo (RS); Roșia Montană (RO)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Laurion (GR); Siphnos (GR); Euboea (GR); Baia Mare (RO)
Q_M02	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M03	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)
Q_M04	Thasos (GR); Chalcidice (GR); Pangaeon (GR); Rhodope (BG); Kosovo; Kopaonik (RS); Rudnik (RS); Zletovo (RS); Roșia Montană (RO)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Laurion (GR); Siphnos (GR); Euboea (GR); Baia Mare (RO)
Q_M05	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)
Q_M06	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR);

[1] Data sources: OXALID; British Isles: Rohl 1996; France: Brévart et al. 1982; Le Guen et al. 1991; Baron et al. 2006; Germany: Large et al. 1983; Krahn and Baumann 1996; Niederschlag et al. 2003; Durali-Müller et al. 2007; Bode et al. 2009; Sardinia and Tuscany: Boni and Köppel 1985; Stos-Gale et al. 1995; Spain: Graeser and Friedrich 1970; Arribas and Tosdal 1994; Stos-Gale et al. 1995; Velasco et al. 1996; Canals and Cardellach 1997; Velasco et al. 2003; Santos-Zalduegui et al. 2004; Tornos and Chiaradia 2004; Renzi et al. 2009; Switzerland: Guénette-Beck et al. 2009; Cattin et al. 2011; Aegean: Wagner et al. 1986; Stos-Gale et al. 1996; Bulgaria: Stos-Gale et al. 1998; Amov 1999; Kosovo: Westner 2016; Northern Macedonia: Velojić et al. 2018; Romania: Marcoux et al. 2002; Baron et al. 2011; Serbia: Pernicka et al. 1993; Veselinović-Williams 2011 Westner 2016; Turkey: Yener et al. 1991; Sayre et al. 1992

Sample	strong overlapping (d < 0.1)	weak overlapping (d = 0.1–0.2)
		Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M07	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M08	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M09	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M10	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)
Q_M11	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)
Q_M12	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M13	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)
Q_M14	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE)

Sample	strong overlapping (d < 0.1)	weak overlapping (d = 0.1–0.2)
Q_M15	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M16	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M17	Srednogorie (BG)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Crete (GR); Peloponnese (GR); Kosovo; Panagyurishte (BG); N-Eifel (DE); Roșia Montană (RO)
Q_M18	Thasos (GR); Chalcidice (GR); Pangaeon (GR); Rhodope (BG); Kosovo; Kopaonik (RS); Rudnik (RS); Zletovo (RS); Roșia Montană (RO)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Laurion (GR); Siphnos (GR); Euboea (GR); Baia Mare (RO)
Q_M19	Thasos (GR); Chalcidice (GR); Pangaeon (GR); Rhodope (BG); Kosovo; Kopaonik (RS); Rudnik (RS); Zletovo (RS); Roșia Montană (RO)	Apuseni Mts. (RO); Mendips (GB); Pennines (GB); Burgas (BG); Cévennes (FR); Sardinia; Basque-Cantabrian Basin (ES); Laurion (GR); Siphnos (GR); Euboea (GR); Baia Mare (RO)

References

Amov BG (1999) Lead isotope data for ore deposits from Bulgaria and the possibility for their use in archaeometry. Berliner Beiträge zur Archäometrie 16:5–19

Arribas A, Tosdal RM (1994) Isotopic composition of Pb in ore deposits of the Betic Cordillera, Spain: origin and relationship to other European deposits. Econ Geol 89(5):1074–1093. https://doi.org/10.2113/gsecongeo.89.5.1074

Baron S, Carignan J, Laurent S, Ploquin A (2006) Medieval lead making on Mont-Lozère massif (Cévennes-France): tracing ore sources using Pb isotopes. Appl Geochem 21:241–252. https://doi.org/10.1016/j.apgeochem.2005.09.005

Baron S, Tămaş CG, Cauuet B, Munoz M (2011) Lead isotope analysis of gold-silver ores from Roşia Montană (Romania): a first step of a metal provenance study of Roman mining activity in Alburnus Maior (Roman Dacia). J Archaeol Sci 38:1090–1100. https://doi.org/10.1016/j.jas.2010.12.004

Bode M, Hauptmann A, Mezger K (2009) Tracing Roman lead sources using lead isotope analyses in conjunction with archaeological and epigraphic evidence – a case study from Augustan/Tiberan Germania. Archaeol Anthropol Sci 1:177–194. https://doi.org/10.1007/s12520-009-0017-0

Boni M, Köppel V (1985) Ore-lead isotope pattern from the Iglesiente-Sulcis Area (SW Sardinia) and the problem of remobilization of metals. Miner Deposita 20:185–193. https://doi.org/10.1007/BF00204563

Brévart O, Dupré B, Allègre CJ (1982) Metallogenic provinces and the remobilization process studied by lead isotopes; lead-zinc ore deposits from the southern massif central, France. Econ Geol 77:564–575. https://doi.org/10.2113/gsecongeo.77.3.564

Canals A, Cardellach E (1997) Ore lead and sulphur isotope pattern from the low-temperature veins of the Catalonian Coastal Ranges (NE Spain). Miner Deposita 32:243–249. https://doi.org/10.1007/s001260050089

Cattin F, Guénette-Beck B, Curdy P, Meisser N, Ansermet S, Hofmann B, Kündig R, Hubert V, Wörle M, Hametner K, Günther D, Wichser A, Ulrich A, Villa IM, Besse M (2011) Provenance of Early Bronze Age metal artefacts in Western Switzerland using elemental and lead isotopic compositions and their possible relation with copper minerals of the nearby Valais. J Archaeol Sci 38:1221–1233. https://doi.org/10.1016/j.jas.2010.12.016

Durali-Müller S, Brey GP, Wigg-Wolf D, Lahaye Y (2007) Roman lead mining in Germany: its origin and development through time deduced from lead isotope provenance studies. J Archaeol Sci 34:1555–1567. https://doi.org/10.1016/j.jas.2006.11.009

Graeser S, Friedrich G (1970) Zur Frage der Altersstellung und Genese der Blei-Zink-Vorkommen der Sierra Cartagena in Spanien. Miner Deposita 5:365–374. https://doi.org/10.1007/BF00206733

Guénette-Beck B, Meisser N, Curdy P (2009) New insights into the ancient silver production of the Wallis area, Switzerland. Archaeol Anthropol Sci 1:215–229. https://doi.org/10.1007/s12520-009-0014-3

Krahn L, Baumann A (1996) Lead isotope systematics of epigenetic lead-zinc mineralization in the western part of the Rheinisches Schiefergebirge, Germany. Miner Deposita 31:225–237. https://doi.org/10.1007/BF00204029

Large D, Schaeffer R (1983) Lead isotope data from selected galena occurrences in the North Eifel and North Sauerland, Germany. Miner Deposita 18:235–243. https://doi.org/10.1007/BF00206211

Le Guen M, Orgeval JJ, Lancelot J (1991) Lead isotope behaviour in a polyphased Pb-Zn ore deposit: les Malines (Cévennes, France). Miner Deposita 26:180–188. https://doi.org/10.1007/BF00209256

Marcoux E, Grancea L, Lupulescu M, Milési JP (2002) Lead isotope signatures of epithermal and porphyry-type ore deposits from the Romanian Carpathian Mountains. Miner Deposita 37:173–184. https://doi.org/10.1007/s00126-001-0223-x

Niederschlag E, Pernicka E, Seifert Th, Bartelheim M (2003) The determination of lead isotope ratios by multiple collector ICP-MS: a case study of Early Bronze Age artefacts and their possible relation with ore deposits of the Erzgebirge. Archaeometry 45(1):61–100. https://doi.org/10.1111/1475-4754.00097

Pernicka E, Begemann F, Schmitt-Strecker S, Wagner GA (1993) Eneolithic and Early Bronze Age copper artefacts from the Balkans and their relation to Serbian copper ores. Praehistorische Zeitschrift 68(1):1–54. https://doi.org/10.1515/prhz.1993.68.1.1

Renzi M, Montero-Ruiz I, Bode M (2009) Non-ferrous metallurgy from the Phoenician site of La Fonteta (Alicante, Spain): a study of provenance. J Archaeol Sci 36:2584–2596. https://doi.org/10.1016/j.jas.2009.07.016

Rohl BM (1996) Lead isotope data from the Isotrace Laboratory, Oxford: Archaeometry data base 2, galena from Britain and Ireland. Archaeometry 38(1):165–180. https://doi.org/10.1111/j.1475-4754.1996.tb00769.x

Santos-Zalduegui JF, García de Madinabeitia S, Gil Ibarguchi JI, Palero F (2004) A lead isotope database: the Los Pedroches–Alcudia area (Spain); implications for archaeometallurgical connections across southwestern and southeastern Iberia. Archaeometry 46:625–634. https://doi.org/10.1111/j.1475-4754.2004.00178.x

Sayre EV, Yener KA, Joel EC, Barnes IL (1992) Statistical evaluation of the presently accumulated lead isotope data from Anatolia and surrounding regions. Archaeometry 34(1):73–105. https://doi.org/10.1111/j.1475-4754.1992.tb00479.x

Stos-Gale Z, Gale NH, Houghton J, Speakman R (1995) Lead isotope data from the Isotrace Laboratory, Oxford: Archaeometry data base 1, ores from the Western Mediterranean. Archaeometry 37(2):407–415. https://doi.org/10.1111/j.1475-4754.1995.tb00753.x

Stos-Gale ZA, Gale NH, Annetts N (1996) Lead isotope data from the Isotrace Laboratory, Oxford: Archaeometry data base 3, ores from the Aegean, part 1. Archaeometry 38(2):381–390. https://doi.org/10.1111/j.1475-4754.1996.tb00784.x

Stos-Gale ZA, Gale NH, Annetts N, Todorov T, Lilov P, Raduncheva A, Panayotov I (1998) Lead isotope data from the Isotrace Laboratory, Oxford: Archaeometry data base 5, ores from Bulgaria. Archaeometry 40:217–226. https://doi.org/10.1111/j.1475-4754.1998.tb00834.x

Tornos F, Chiaradia M (2004) Plumbotectonic evolution of the Ossa Morena Zone, Iberian Peninsula: Tracing the influence of mantle-crust interaction in ore-forming processes. Econ Geol 99:965–985. https://doi.org/10.2113/gsecongeo.99.5.965

Velasco F, Pesquera A, Herrero JM (1996) Lead isotope study of Zn-Pb ore deposits associated with the Basque-Cantabrian basin and Paleozoic basement, northern Spain. Miner Deposita 31:84–92. https://doi.org/10.1007/BF00225398

Velasco F, Herrero JM, Yusta I, Alonso JA, Seebold I, Leach D (2003) Geology and Geochemistry of the Reocín zinc-lead deposit, Basque-Cantabrian Basin, Northern Spain. Econ Geol 98:1371–1396. https://doi.org/10.2113/gsecongeo.98.7.1371

Velojić M, Prelović D, Jelenković R (2018) The origin of lead and sulphur in Tulare ore field, Lece magmatic complex, SE Serbia. Annales Géol Péninsule Balk 79(2):19–28. https://doi.org/10.2298/GABP1802019V

Veselinović-Williams M (2011) Characteristics and origin of polymetallic mineralisation in the Kopaonik region of Serbia and Kosovo, with particular reference to the Belo Brdo Pb-Zn (Ag) deposit. Dissertation, Kingston University, London

Wagner GA, Pernicka E, Vavelidis M, Baranyi I, Bassiakos I (1986) Archäometallurgische Untersuchungen auf Chalkidiki. Der Anschnitt Zeitschrift für Kunst und Kultur im Bergbau. 36:166–186

Westner K (2016) Roman mining and metal production near the antique city of ULPIANA (Kosovo). Dissertation, Johann Wolfgang Goethe University, Frankfurt

Yener KA, Sayre EV, Joel EC, Özbal H, Barnes IL, Brill RH (1991) Stable lead isotope studies of Central Taurus ore sources and related artifacts from Eastern Mediterranean Chalcolithic and Bronze Age sites. J Archaeol Sci 18:541–577. https://doi.org/10.1016/0305-4403(91)90053-R