

**THE REVEALED REAL STORY OF THE NAGY-VÁZSONY IRON METEORITE.** I. Kubovics<sup>1</sup>, Zs. Kereszty<sup>2</sup>, Sz. Bérczi<sup>3</sup>, Gy. A. Gönczi<sup>4</sup>. <sup>1</sup>Eötvös University, Dept. Petrology and Geochemistry, H-1117 Budapest, Pázmány P. s. 1/c. <sup>2</sup>IMCA, Meteoritical Society; CoronaBorealis Observatory, Győrújbarát, Hungary, (cbo@t-online.hu), <sup>3</sup>Eötvös University, Dept. Materials Physics, H-1117 Budapest, Pázmány P. s. 1/a. Hungary, (bercziszani@caesar.elte.hu), <sup>4</sup>Zselic Csillagpark Observatory, H-7477 Zselickisfalud, Kardosfapuszta, Hungary

**Introduction:** The chain of events lead off to the real origin of the Nagy-Vázsony iron meteorite. Observed as an eyewitness fall in 1890 at Nagyvázsony town, collected by J. Koralovszky, exchanged in Veszprém by Baron K. Hornig with a Toluca, sent to Szeged in 1944, and presented to Rev. M. Török in 1973 with classified origin, and finally reported as Kaposfüred-candidate (yet undocumented) IVA iron meteorite, a fine octahedrite in 1998 [1], coming from the village of Kaposfüred.

**Previous report of Kaposfüred-candidate (undocumented)**

In 1995 a church has been built in Kaposfüred village titled House of Virgin Marie in Ephesus by Rev. Török, who was a collector of extraordinary stones. One of the architects, A. Szabó observed a dark sample in the house-altar requested the origin of the dark sample. Rev. Török was obligated to preserve the secret origin at that time, and reported a false story. He gave the specimen as Kaposfüred-candidate (yet undocumented) iron meteorite sample to researchers from Eötvös University, who reported the classification of IVA type iron meteorite candidate [1]. Other, more detailed investigations were also reported about it [2].

**The real origin of Kaposfüred-candidate (yet undocumented) iron meteorite – as Nagy-Vázsony:**

In 2014 Mnr. Török was ill. and for the scientific purposes stopped keeping parts of the secret obligation and declared that the iron meteorite candidate sample he reported coming from Kaposfüred village, originally had been given him in 1973 by Rev. G. Havas in Szeged on the occasion of his ordinand and first mass. Two of us (Zs. K. and Gy. A. G.) began to search the threads of how the iron meteorite has arrived to Rev. Havas they reached Veszprém. In 1890 Baron K. Hornig was the bishop and he was a great collector of stones. After observing the fall and finding the Nagy-Vázsony sample J. Koralovszky visited the inns

and told the story and exhibited the sample for money. Baron Hornig got to know the news of the Nagy-Vázsony meteorite and reported it in his local journal. Later, he could meet with J. Koralovszky and could exchange the sample for a Toluca iron and some money, because he wanted to retain the meteorite in Hungary (like as Reformed church College of Debrecen could retain Kaba in the Collection of the Collegium in Debrecen). The Toluca iron occurred in great abundance in Hungary, because at that time Emperor of Mexico was a Habsburg king Maximilian, who had Hungarian Husars as guardists. When husars returned to Hungary they delivered great amounts of Toluca iron meteorite from Mexico to Hungary. Half a century later the meteorite was in the property of the diocese, they did know its origin, however in the 2nd WW conditions it was used only as a mass, delivered to Szeged, as reported earlier.

The thread of events continued with J. Koralovszky who sold the specimen with name Nagy-Vázsony to Albert Mayer von Günthof, a textile factory owner, who delivered it to the emperor's collection in Vienna. That sample become catalogize in the Vienna Collection and is residing there till today [3]. Vagn Fabritius Buchwald, in his Handbook of iron meteorites (1975) reports that the Nagyvázsony iron meteorite had not been investigated till that time with modern methods. After the measurements it may turn out that the Vienna Nagyvázsony may be really a hidden Toluca meteorite. [4]

**Tracing of Kaposfüred candidate iron meteorite in Hungarian Astronomical Association**

One of us (Zs. Kereszty) began to investigate the real story of Kaposfüred (yet undocumented) candidate iron meteorite in the Hungarian Astronomical Association. In the journal of the Association several papers reported speculations in connection with the origin of that sample. [5, 6, 7]. Finally he met with prof Kubovics and has received a fragment of it and could place a beau-

tiful photo about Kaposfüred-(yet undocumented) candidate iron meteorite [8].

Two of us (Zs. K. and Gy. A. G.) met in 2013. Tracing the origin of Kaposfüred-candidate (yet undocumented) iron meteorite after the revealing the secret of its origin, they reached Veszprém, in the vicinity of Nagy-Vázsony (20 kilometers distance from each other). Considering the geochemical classification of Kaposfüred-candidate (yet undocumented) iron meteorite (IVA) and that of Nagy-Vázsony (IAB-sLL), we conjectured the exchange and formulated the question: what kind of specimen would have been given by Korálovsky to Mayer von Günthof in 1890 in replacement of the original Nagy-Vázsony. (Probably Mayer von Günthof was a rich man who purchased the meteorite from Korálovsky and presented it as a gift to the imperial collection). To know the possibilities we looked for the IAB-sLL meteorites known yet in 1890. In the MetBull there were 6 meteorites [9].

No:	Name:	Year of fall/find, country:	MassTKW:
1.	<b>Toluca</b>	1776 Mexico	> 3 t
2.	<b>Wooster</b>	1858 USA	22,7 kg
3.	<b>Niagara</b>	1879 USA	115 gr
4.	<b>Mazapil</b>	1885 USA	4 kg
5.	<b>Bischtübe</b>	1888, today Kazakhstan	48,25 kg
6.	<b>Moctezuma</b>	1889 Mexico	1700 gr
7.	<b>Nagy-Vázsony</b>	1890 Hungary	1980 gr

There is a correspondence with **Toluca** iron only. Remembering the example of the story of Kaba our ancient meteorite collectors did not want to wrangle with the higher offices in Austria-Hungary, they took a Toluca from their collection – similar shape and size – and exchanged it with the original Nagy-Vázsony. We also remember the suggestion of Buchwald about the

Nagy-Vázsony-Toluca similarities (identities). Although the story seems closed further measurements may confirm or strengthen these results.

**References:** [1] Bérczi Sz, Földi T., Kubovics I, Simonits A, Szabó A. (1998): KAPOSFÜRED: A NEW IVA-TYPE IRON METEORITE FROM HUNGARY. *29th LPSC*, #1082, LPI Houston, [2] Kubovics I, Bendő Zs, Ditrói-Puskás Z, Bartha A, Lovas Gy. (2012): Heterogén szerkezetű és összetételű, IVA szerkezeti jellegű kaposfüredi (kaposvári) vasmeteorit. *Földtani Közlemények*, vol. 142/3, pp. 287-306. [3] Brezina, A. (1896): Die Meteoriten-sammlung des k. k. naturhistorischen Hofmuseums. *Annalen des k.k. Naturhistorischen Hofmuseums*, 10, 284 p. [4] Vagn. F. Buchwald: *Handbook of Iron Meteorites, Their History, Distribution, Composition, and Structure*. University of California Press, Berkeley 1975, 874-875.p. [5] Bartha L. (2007): A kaposfüredi meteorithullás. (The fall of Kaposfüred meteorite) = *Meteor* 37. 2007. júl-aug. 7-8.(373-374.) sz. pp. 30-31. [6] Keszthelyi S. (2007): Zarándoklat egy meteorithullás színhelyére. (Pilgrimage at the site of a meteorite fall) = *Meteor* 37. 2007. dec. 12.(378.) sz. pp. 27-28. [7] Becz M. (2009): A kaposfüredi meteorit nyomában. (Search of the Kaposfüred meteorite) = *Meteor* 39. 2009. febr. 2.(392.) sz. pp. 39-44. [8] *Encyclopaedia of Meteorites*, Kaposfüred IVA, photograph of the meteorite, [http://www.lpi.usra.edu/meteor/get\\_original\\_photo.php?recno=5666396](http://www.lpi.usra.edu/meteor/get_original_photo.php?recno=5666396); [9] <http://www.lpi.usra.edu/meteor/metbull.php>

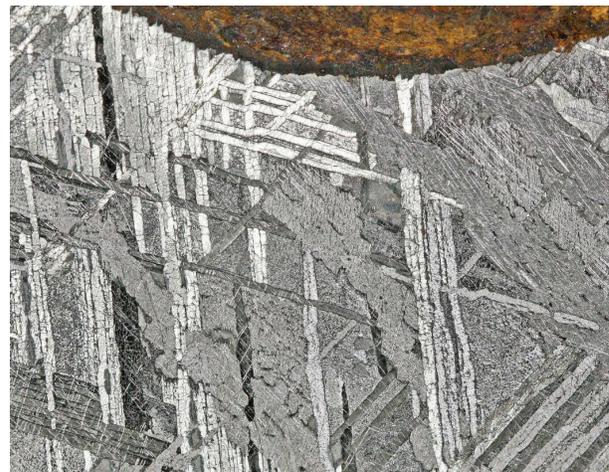


Fig. 1. Details from Kaposfüred candidate (yet undocumented) meteorite IVA fine octahedrite iron. (Photo by Zs. K.)