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GLASSOIL LAMPS IN POSTOJNSKA JAMA IN THE 19TH CENTURY

SUMMARY

Three small glass containers found in Postojnska jama have been identified as oil lamps. They are said to have been found quite frequently throughout the cave but have never been described before. Only two writers describing the cave have mentioned such lamps, in 1861 and 1862. Usually only portable oil lamps of metal, torches of wood and candles were noted. However, detailed tables in the archives show how many fixed lights were placed in each part of the cave for "grand illuminations" – candles, oil lamps and wax night-lights. Thus on 8 September 1873 there were about 663 oil lamps in use as well as 4600 candles. Smaller quantities of lamps were recorded in the 1850s, supplied by Jožef Gomiseč of Planina.

RIASSUNTO

RINVENIMENTI DI LAMPADRE AD OLIO DEL 19° SECOLO NELLE GROTTRE DI POSTUMIA

Tre piccoli contenitori in vetro rinvenuti nelle Grotte di Postumia sono stati identificati come "lampade ad olio". Si parla di frequenti ritrovamenti di queste lampade nelle Grotte, ritrovamenti peraltro mai accuratamente descritti. Esistono solamente due descrizioni specifiche nelle quali sono menzionate queste lampade, e risalgono agli anni 1861 e 1862. In genere sono state rinvenute comuni lampade ad olio metalliche, torce in legno e semplici candele in cera. I documenti di archivio indicano frequentemente come furono collocate numerose luci fisse (candele e lampade ad olio) in ogni parte della Grotta in occasione delle "grandi illuminazioni". Si cita l'evento del giorno 8 settembre 1873, quando furono accese 663 lampade ad olio e 4600 candele. In una precedente occasione, nel 1850, una quantità minore di lampade fu fornita all'Amministrazione delle Grotte da un tale Jožef Gomiseč di Planina.

IZVLEČEK

STEKLENE OLJNE SVETILKE V POSTOJNSKI JAMI V 19. STOLETJU

Tri majhne steklene posodice, ki so bile najdene v Postojnski jami, so identificirane kot oljne svetilke. Po ustnih virih so jih v jami pogosto našli, vendar pred tem še nikoli niso bile opisane. Takšne svetilke sta omenila le dva opisovalca jame in sicer leta 1861 ter 1862. Običajno so bile zabeležene le prenosne

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oljne svetilke iz kovine, lesene bakle in sveče. Natančni popisi iz arhivov prikazujejo, koliko ognjenih svetil je bilo postavljenih v vsakem delu jame za "svečano osvetlitev" - sveče, oljne svetilke in nočne lučke. Tako je bilo dne 8. Semtembra 1873 v uporabi 663 oljnih svetilk in 4600 sveč. Manjša količina luči je bila prejeta leta 195°, destavil pa jih je Jožef Gomiseq iz Planine.

Introduction

Three previously unrecorded glass objects (Fig. 1) were found in Postojnska jama on 17 January 2000 by Stanislav Glazar and the author. Superficially they resemble small bulbous glass bottles but the "neck" is of solid glass and there is a hole in the bottom of the body. One of them was brought to a conference on the history of paves and karst in eastern Europe held in the year 2000 at Zadar and another at Gorizia in 2002 but no one had seen one before or knew what it was. Nor have they been reported in American or Australian caves. They have now been identified and it has been found how, when and where they were used at Postojnska jama.

Description

These three glass objects (Fig. 1) are all slightly different, as they were made by hand. The body of each is about 5 cm in diameter, and their overall heights are 6 cm, 6 ½ cm and 7 ½ cm respectively, giving a stem or "neck" between 2 ½ cm and 4 cm long. As already stated, this stem is solid and what resemble holes at the end of it in Fig. 1 are imperfections in the glass or deposits adhering to it.



Fig. 1 - The three oil lamps found in Postojnska jama in 2000.

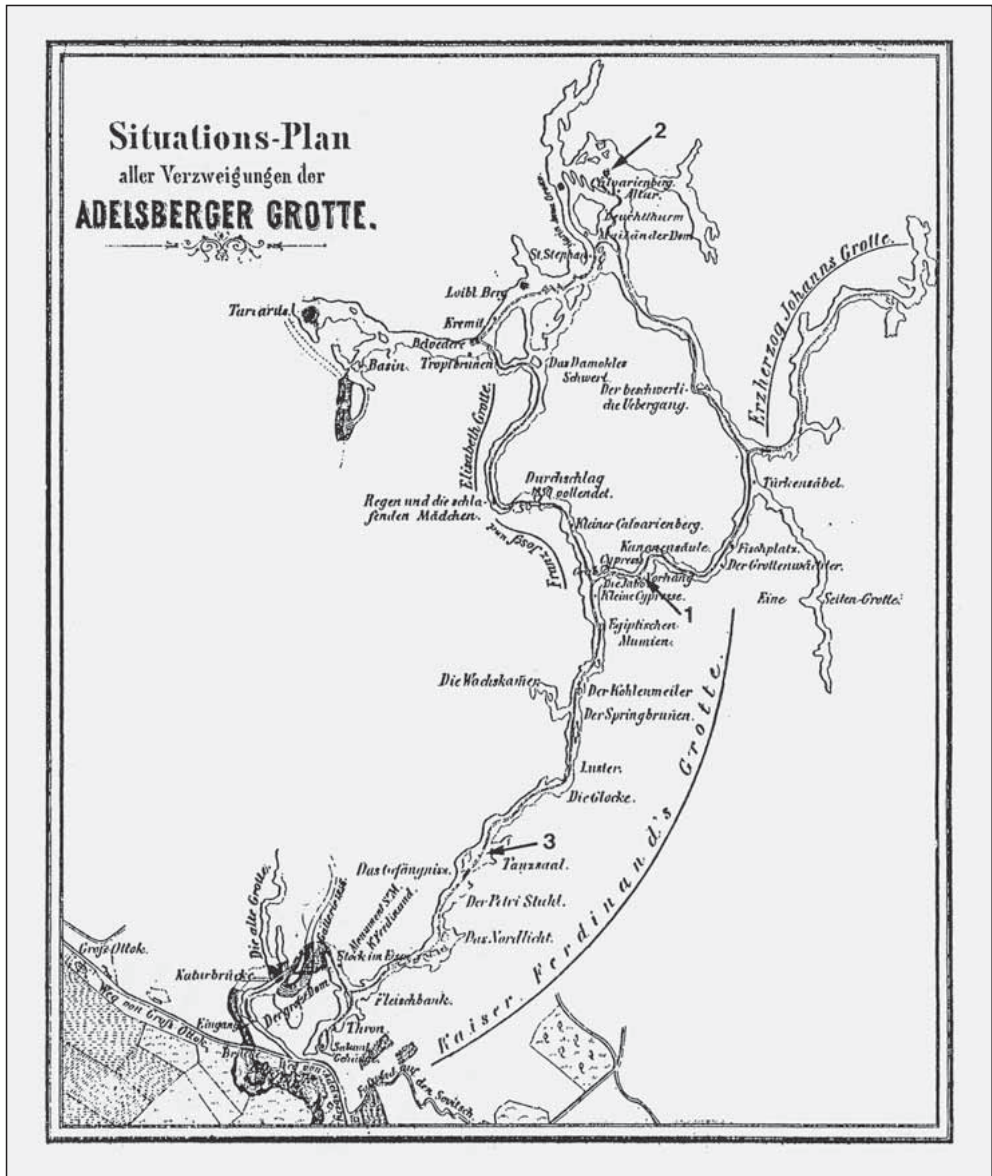


Fig. 2 - A plan of Postojnska jama in 1870 showing: 1. Curtain/Vorhang/Zastor; 2. Calvary/Calvarienberg/Velika gora or Kalvarija; 3. Ballroom/Tanzsaal/Kongresna dvorana. (based on Anon. 1870)

Location

The three specimens described and illustrated here were found together, placed loosely in a fissure on the south-east side of the passage through which the cave railway now runs, near its junction with Male jama. They were near the calcite “drapery” formation known as the Curtain (Vorhang), now Zastor (Fig. 2), the point at which many 19th century visitors turned back.

The cave guides say that these glass objects have been quite common “all over the cave” in the past. Certainly a full wooden box containing 20 or more of them was found near Tartarus by Franjo Drole and Jurij Hajna of the Karst Research Institute when they were surveying there in the 1980s. The box was rotting and unlabelled. It was left undisturbed but recent attempts to rediscover it have been unsuccessful.

In view of the apparently wide distribution of the things throughout the cave, the possibility was considered at one time of their being insulators used in the electric lighting installations of 1883 and later. But ceramic insulators were already available at that time and these hollow glass objects would have been too weak and liable to trap water, as well as seeming to have no way of securing the wire. Use as insect traps was also suggested, but biting insects have never been a problem in the cave and speleo-biologists use different methods. It was also suggested that they could have been small oil lamps, either placed in die mud to mark die edges of pathways, or in holders on the walls. No such lamps are mentioned in Robins’ s (1939) study of lamp design and ethnologists did not know of such lamps being manufactured or used in Slovenia.

Lamps

Nevertheless it has been confirmed that they are lamps . The discovering of what they were, how, where and when they were used and also where they came from will be described more or less in the sequence it was found out. A specimen of unknown provenance exists in die Department of Glass, Ceramics and Porcelain in the Museum of Decorative Arts (Umělecko Průmyslové Museum) in Prague, reported by its curator Dr Helena Brožková via Dr Pavel Bosák. Photographs of it (Fig. 3, 4 and 5) show that the glass was protected by metal sleeves both round its solid stem and in the hole through which the wick would project. In at least one picture (Fig. 4) an asbestos – like insulating material is visible between the glass and the metal. Dr. Brožková also provided pictures of rather similar glass containers, called Ämpeli (Fig. 6), which appeared in the trade catalogues of the Swiss glass-making firm Flühli und Hergiswill of Luzern between 1857 and 1872 (HORAT 1986, appendix). Such lamps were often used in churches to illuminate shrines and they were widely used throughout Europe until the end of the 19th century (HORAT, 2002). There is also a photograph (Fig. 7) of such an item used as a domestic lamp, with its stem placed in a holder like a candlestick and with the metal sleeve through which the wick would emerge visible at the top.

Simpler but quite effective iron brackets for fixing such lamps to the cave wall (Fig. 8) have been found in the cave but just where was not recorded. They are different to those used for candles which have small metal drip trays to catch melted wax.

The lamps used in Postojnska jama may possibly have been supplied by the same Swiss firm but there is no documentation confirming this. Advertisements in the cave archives from other lamp manufacturers (Kugel & Schirm of Wien and Otto Schumann of Hamburg in 1884) do not include this kind of lamp. As will be seen, at least some were supplied from the nearby village of Planina.

Normal Lighting in the Cave

Some evidence for what kind of lighting was used in the cave at various periods can be obtained from descriptions written by visitors (SHAW, 2008). In the early days blazing torches, made of wood impregnated with resin-or wax, were widely used. Then there were the portable oil lamps carried by the guides and the visitors themselves and also other lights that were stationary, fixed to the walls or hanging from above.

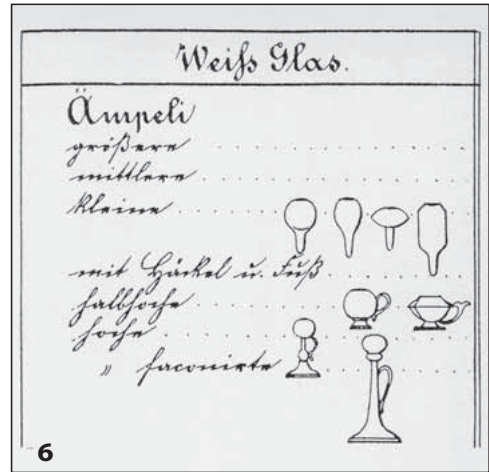
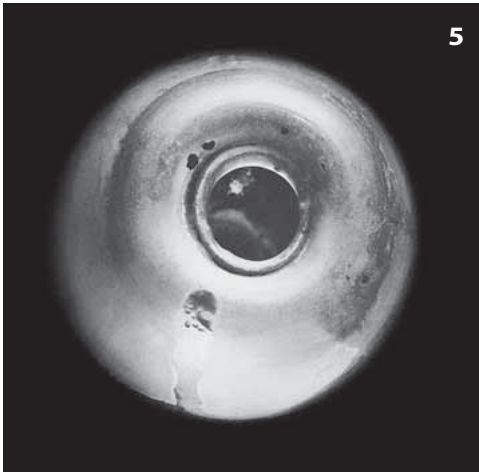
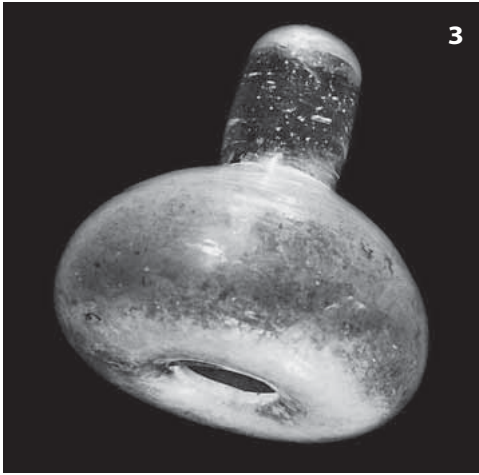


Fig. 3 - Glass oil lamp in the Prague Museum of Decorative Arts (specimen no. 23129/2) with the metal sleeves removed.

Fig. 4 - The same lamp with a thermally insulated metal sleeve round the stem.

Fig. 5 - The same lamp showing the internal metal sleeve through which the wick protrudes.

Fig. 6 - Similar lamps described as Ämpeli (hanging lamps), in the 1857/1872 Catalogue of Flühli und Hergisvill (from HORAT, 1986).

Portable oil lamps were certainly carried in the 1820s. Bronn (1826) noted in 1824 what a disaster it would be if oil for the guides' lamps ran out when in the cave, and they are illustrated in Schaffenrath's lithographs of the same year (Fig. 9 & 10). The same lamps appear in some of his original water-colours of 1821 held in the National Museum at Ljubljana and also in the subsequent aquatint engravings (HOHENWART, 1832). To what extent this particular style of lamp, with the tall handle enabling it to be hung up when required, remained in use is not known.

Schmidl's 1853 guidebook said that "*only miner's lamps are permitted as the smoke from torches blackens the stalactites. ... If you wish to have a brighter light than that carried*



by the guides, candles must be placed at certain points". Normally the cave was displayed by candle - light from the 1850s until electricity was installed in 1884, with portable oil lamps carried by each party. Comfort (1863) reported that in 1861 "Candles are fixed in wooden sockets in all the important parts of the cave, and are ready to be lighted at a moment's notice".

The presence of candles was mentioned by many of the visitors but, as will be seen, the archives provide evidence of fixed oil lamps in addition from at least as early as 1852 and it is likely that they were used before that as well. The oil lamps being less bright than the candles attracted less attention but two travellers, in 1861 and 1862, did mention them.

The French schoolteacher and writer Hippolyte Durand (1863) visited Postojnska jama on 29 August 1861. Describing Calvary (Calvarienberg), now Velika gora or Kalvarija (Fig. 2), the big underground hill close to the place where tourists now leave the cave train, he wrote:

One climbs this Calvary by a steep and narrow path. Small lights are placed along it. To right and left, white shapes, standing or kneeling, like women at prayer, accompany the pilgrim.... This place is truly solemn and religious. Such small lights, marking the pathway while maintaining the dramatic effect of the vast dark space, allowed the visitor to experience the mysteriousness of the place. In this case the lamps were probably placed on the ground where the glass stems would enable them to be fixed securely.



Fig. 7 - A similar lamp in a holder, showing the internal metal sleeve (HORAT 1986, p. 162).

Fig. 8 - Iron wall bracket from Postojnska jama, holding a glass lamp; total length 12,5 cm.

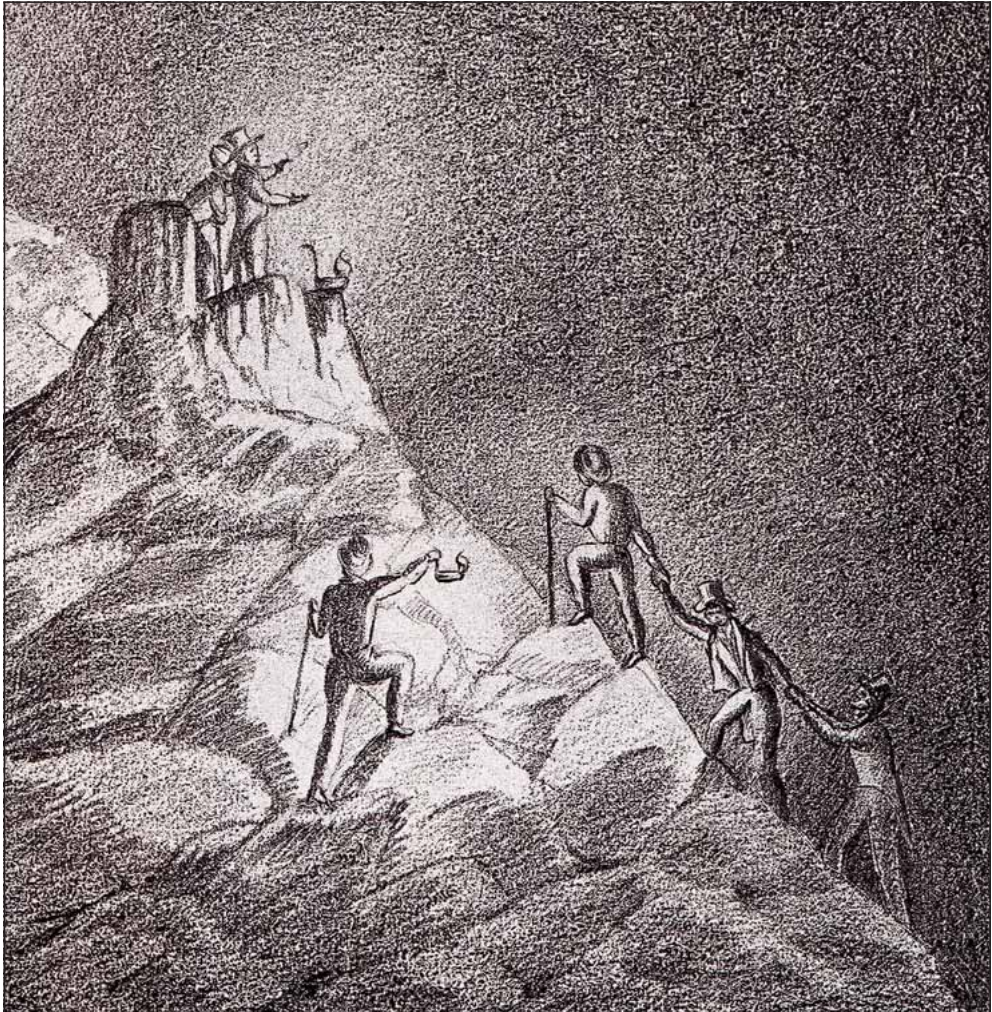


Fig. 9 - Portable oil lamps in use on Kalvariija. Detail from an 1824 lithograph by Schaffenrath.

In the following year the Slovak priest Jozef Viktorin (1864) wrote of Veliki dom, where the underground Pivka flows across the cave:

In this space, lit by thousands of lamps, one feels as if in an enchanted fairy - tale castle. I should say that the lighting consisted of more than 20 000 small lamps and candles.

The Use of Lamps and their Source

Handwritten tables showing the distribution of candles and oil lamps throughout the cave for special “grand illuminations” exist in the cave archives for 12 occasions between 1860 and

1885 (Table I). Figure 11 reproduces part of the table for the occasion on 8 September 1873 when Archduke Albrecht, the Commander - in - Chief of the Austrian army, arranged for all 3500 soldiers encamped for exercises at what is still a military training ground south-west of Javornik to visit the cave at his expense. It is reported that, with so many of them, it took an hour for everyone to enter the cave, with the first coming out as the last were still going in (SHAW & CUK, 2002). The column headings in the table are for pounds (weight) of candles (Millikerzen), the number of oil lamps, the number of “glasses with [wax] night-lights”, the total number of “flames” and the amount of oil needed. The columns themselves contain the figures for nine distinct parts of the cave, each the responsibility of a named guide. The totals on that occasion were 296 pounds of wax candles (i.e. about 4600 candles), 663 oil lamps and 460 night-lights, making a total of 5730 “flames” and a requirement for 79 pounds of oil.

So, for the years 1860 to 1885 it is known how many lamps were used on special occasions and how they were distributed in the cave. There is no information as to what extent, if at all, they were used for small groups of visitors. Nor has a source of supply been discovered for that period.

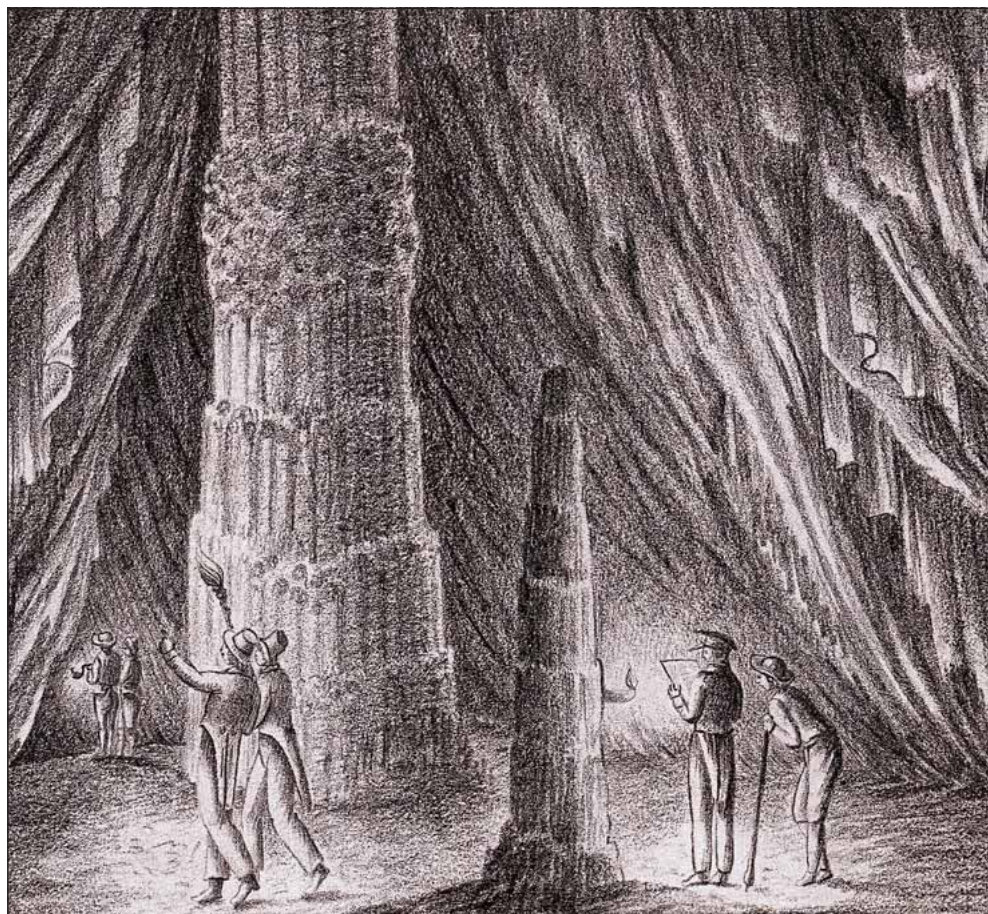


Fig. 10 - Portable oil lamps in use at the Kanonensäule, near the Curtain. Note the one hanging from the smaller stalagmite. Detail from a Schaffenrath lithograph of 1824.

YEAR	NUMBER
1860	147
1860	311
1864	476
1865	514
1867	518
1868	577
1869	549
1871	633
1871	597
1872	663
1873	663
1885	573

Table 1 - Numbers of Oil Lamps used in major illuminations.

Fig. 11 - Part of the Adelsberger Grotte illumination table for 8 September 1873.

	Öl-Lampen mit Schalen	Öl-Lampen ohne Schalen	Öl-Lampen mit Schalen ohne Öl	Öl-Lampen ohne Schalen ohne Öl	Öl-Lampen mit Schalen mit Öl
I. Adelsberger Grotte - Adelsberger Grotte	25	120	200	120	16
II. Adelsberger Grotte - Adelsberger Grotte	30	65	150	695	6
III. Adelsberger Grotte - Adelsberger Grotte	35	189	50	119	22
IV. Adelsberger Grotte - Adelsberger Grotte	20	15	50	385	3
V. Adelsberger Grotte - Adelsberger Grotte	18	37	50	375	6

There is also however some important evidence, less detailed, about the 1850s. Inventories in the cave archives record that 173 glass lamps existed in 1852, 1854 and 1856. Curiously the entire inventories are identical for all three years.

Much more revealing are two manuscript receipts. On 28 May 1852 Jos. Gomiseq of Planina was paid 8 gulden and 42 kreuzer for delivering 174 glass lights. It seems that one of the 174 was broken before they were listed in the inventory. In 1854 (Fig. 12) he received 1 gulden 24 for a further 28 oil lamps.

Although the receipts themselves give no more information about Gomiseq, it is known that he himself was a glass manufacturer. The Slovene karst scholar Dr Roman Savnik (1978), in his typed summary of the contents of some of the cave archives, adds that he was a master glass worker ("staklarski mojster", as typed). This must have come from his own knowledge

Votta

Für die Adelsberger Grotte gezeichnet
28 Stück Öllampen a 3 fl. Stück
entworfener fl. 24

Planina am 7^{ten} Junij 1854

Jos. Gomiseq

Fig. 12 - Receipt dated 7 June 1854 for the supply to Postojnska jama of 28 oil lamps by Jožef Gomiseq of Planina.

as a local historian but its source is not now known. There had been two glassworks in the Javornik area, not far from Planina. One was near Cerknica and the other somewhere in the forest (VALENČIČ, 1955) but they closed in the 1840s. Jožef Gomiseč (born 1 October 1804; died 13 October 1864) lived at house number 76 (now 96) in Planina according to the church records. By 1852 he was 47 years old. Perhaps by then, as a master craftsman, he was working in his own home.

Where the larger numbers of oil lamps used in the 1860s and 1870s came from is not known. Gomiseč himself died in 1864, so the continuation of a local supply is unlikely.

Acknowledgements

I am grateful for historical information about other lamps from museums in Praha and Kroper and from Dr Heinz Horat of the Historisches Museum, Luzern. Specialist advice came also from Alenka Čuk of Notranjski muzej and from Leon Drame of the Karst Research Institute, both in Postojna. Rudolf Reinbacher as usual assisted by being able to read the 19th century German script and by translating it. Christine Ballinger was able to read my handwriting and converted it to a CD.

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