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Warsaw Insurgents' Blood on the Marble Floor in the Staszic Palace – Experimental Verification of the Myth

INTRODUCTION

In the Staszic Palace, the Museum of the Earth of the Polish Academy of Sciences, the seat of the ZNP (Polish Teachers Association), a residential building at the corner of Oleandrów and Marszałkowska Street, and several other, less known places, one can see rusty stains on marble tiles.[1] According to urban legend, these would be traces of human blood, silent mementos of the drama of the Warsaw Uprising.

Coming into the Staszic Palace in Warsaw through the main entrance, going straight to the staircase, one can see the only structural element of this part of the building that was not destroyed during World War II. Then the platform can be entered, on which the stairs branch

[1] K. Guttmejer, "Krajobraz warszawski, czyli o zespole gmachów ZNP", *Magazyn Urbanistyczno-Architektoniczny* 2013, nr 144, p. 1–12; K. Kosiński, *"Ekonomia krwi". Konspiracja narodowa w walczącej Warszawie: 1939–1944–1990* (Warszawa: Instytut Historii PAN, 2020).

to the left and right, leading to the hall, which serves as a foyer in front of the Great Column Hall. On the platform, both on the left and on the right, behind the pillars, there are sofas, on which lecturers or doctoral students sometimes sit. The original marble floor has been preserved here. One can see rusty streaks, stains, and spots resembling traces of blood on the floor. This place hides a secret, that the authors of this study intend to explore in this article.

The authors had obtained information that, according to the urban legend, these streaks and stains are traces of blood of the wounded Warsaw Insurgents. So, they decided to solve the mystery. The first attempts to explain it did not turn out to be very promising. Unfortunately, key witnesses had already died, others were difficult to contact. The available publications and documents did not contribute anything significant to the case. However, an inspection of the site brought additional clues. There are holes in the wrought iron supports and bars of the balustrade. Also, marble slabs on the stairs between the ground floor and the first-floor show traces of restorations in places of bullet marks. These traces made the legend more credible and encouraged further investigation. In the fall of 2014, an employee of the Archives of the Polish Academy of Sciences, Doctor Joanna Arvaniti, provided the authors with a copy of the catalog of the exhibition organized in the summer of 1995 at the Palace, entitled "Staszic Palace and its surroundings in the Warsaw Uprising". The catalog contained a list of soldiers who took part in the battles for the Staszic Palace (in the course of further research, the list was refined). The only person from this list who could be still reached was Witold Kieżun. Authors have made efforts to secure and take the building under the care of a monument restorer. They reconstructed the events of August and September 1944 in the Staszic Palace and its surroundings, as well as the history of the palace itself.

The battle for the Staszic Palace, and primarily for the nearby St. Cross church and the Police Headquarters, took place on August 23, 1944. The palace was captured by the soldiers of the Special Division under the command of podporucznik (2nd Lt.) Seweryn Krzyżanowski. They defended the palace until 6/7 September 1944. It was established that there were the following insurgents: Wiesław Chrzanowski, Maciej Czerski, Władysław Jarosz, Tomasz Jaroszyński, Bożena Kalinowska-Jeske, Stanisław Kiciński, Stefan Kiersnowski, Witold Kieżun, Tadeusz Konopacki, Seweryn Krzyżanowski, Andrzej Ligęza, Jan Makarczuk, Lesław Michalski, Franciszek Mieczysiak pseudonym *"Pies"* ["Dog"], Zofia Murawiecka, Jerzy Niezgoda, Kazimierz Skrobik, Mieczysław Skrobik, Zdzisław Staros and Bronisław Walkowiak.

On 28 June 2016, there was a meeting with Kieżun (his testimony from 28 June 2016, a full record of the accounts is in the author's collection). During a long conversation, he talked about the history of the Special Unit, as well as about the battle on 23 August 1944. He confirmed that during the defense of the Staszic Palace, the wounded insurgents were transferred from the front part of the building – including today's Column Hall – to the staircase sheltered by thick walls. Hearing the report of the traces of blood, he assumed that it might be the blood of Chrzanowski (later Marshal of the Polish Parliament), whom he helped to get out from under German fire after he was so seriously injured bythe fragment of grenade mortar, that the observators were affraid, he will die before medical aid coming.

In the course of further research, the authors established a list of the wounded during the defense of the Staszic Palace between 23 August 6/7 and September 1944. In chrono-

logical order they were: an unknown soldier of the "Krybar" group (23 August 1944), Krzyżanowski (23 August), Jaroszyński (23 August), Makarczuk (23 August), Chrzanowski (25 August) and Ligęza (3 September). The question remains open about the suggestion of Kieżun, included in his published memoirs, that a liaison officer was killed in the Staszic Palace; other accounts do not confirm this.[2] The most seriously injured was an unknown soldier of "Krybar", along with Krzyżanowski, Chrzanowski, and Ligęza. Most likely, the analyzed traces are the result of wounds sustained by many insurgents. Undoubtedly, this place needs to be commemorated.

The Polish Academy of Sciences Earth Museum is located at Aleja Na Skarpie 27. The building was completed in 1935 under the architect Bohdan Pniewski. During the occupation, the owner and his family were displaced by the Germans. In 1944, fierce battles were fought over the building, as it was an important bridgehead on the way to the Parliament building. Several Home Army soldiers were seriously wounded here. After the war, Pniewski regained the building and lived in it until 1965. A year later, the Polish Academy of Sciences bought the building and located the museum there. During the renovation, it turned out that difficult to remove traces of blood remained in the marble-lined staircase. In 1978, they were examined by experts from the Institute of Criminology of the Academy of Internal Affairs under the supervision of authors of this study. According to oral information from the authors, the tests consisted of performing a microspectral test for haemochromogen, a derivative of the blood pigment (haemoglobin). This test, widely used in forensics, was considered specific for blood; not necessarily human. The test was positive and on this basis the authors considered the stains they were examining to be traces of blood.

MATERIALS AND METHODS

In 2010, Carol A. Grissom and al. wrote, that the red stains on marble may have been of inorganic or organic origin.[3] This could be alpha and beta lead oxide, formed by the corrosion of metallic lead that was frequently used as a hot melting "glue" for the montage of large marble elements. Many examples may be observed in the main US Army Central Cemetery in Arlington. Biological stains may also be the result of colonization by some microrganisms. Three years earlier, in 2007, Veerle Bams and Stijn Dewaele wrote the same conclusion, but they gave as the cause of staining to be either iron salts or a biogenic substance similar to humus.[4] Everything indicates that this paper is the first to propose blood as a source of the colour.

The site inspection of traces from the Staszic Palace took place on 28 July 2015. Authors of this study selected for examination a small reddish stain on the marble tiles on the right side of the staircase, from the place where the medical point of the Warsaw insurgents

[2] R. Jarocki, W. Kieżun, *Magdulka i cały świat. Rozmowa biograficzna z Witoldem Kieżunem, przeprowadzona przez Roberta Jarockiego* (Warszawa: Wydawnictwo Iskry, 2013), p. 144.

[3] C.A. Grissom, L. Gervais, C. Icole, G. Ittle, N.D. Ieniosek, R. Peakman, "Red Staining on Marble: Biological or inorganic origin?", *Bul.J.Res.Technol*. 2010, no. 41, p. 2–3.

[4] V. Bams, S. Dewaele, "Staining of white marble", *Materials characterisation* 2007, no. 58, p. 1052–1053.

Figure 1. Stains from the floor in the staircase of the Staszic Palace. Test stain marked with a red circle

was said to have been located. The stain on two adjacent tiles was selected, which, according to the researchers, proves that it was formed after the floor had been laid (Figure 1).

The stain marked in Figure 1 was ground to a depth of about 0.2 mm with a Dremel mini grinder using a brand new, never used before, abrasive. The obtained dust (approx. 100 mg) was collected on a piece of paper and poured into an Eppendorf Tube. Half of the dust was kept for possible identification tests, and the other half was soaked in 18 MΩ demineralized water and kept at + 4°C for 24 hours. After strong centrifugation, the supernatant was tested with the Hexagon OBTI test, considered to be specific in forensic genetics for the detection of human hemoglobin. A weakly positive fringe was obtained, the existence of which was confirmed by another four impartial persons, although it was too weak to obtain clear, convincing photographs. According to the authors, the obtained result of the study initially confirmed the hypothesis about the connection of spots with the turbulent history of Warsaw. In this situation, the authors asked themselves a question about the mechanism of such stains. It was decided to solve this puzzle experimentally.

RESULTS AND DISCUSSION

There four were made experiments that attempted to explain the mechanism of stains on marble.

Experiment 1. First 5 ml of freshly drawn human blood was applied to the marble plate and kept for four months at a temperature of about 10°C under high humidity conditions, preventing the stain from drying completely by moistening gently with

a water mist every few days. After just a few days, the blood began to rot and mold. After mechanically wiping the mold with a wet cloth, a clear brown stain was obtained, which, however, was completely washed off with cold water, gray soap, and a rice brush (these were frequently used cleaning products in the period just after the war). The experiment showed that human blood does not stain the marble tile. The result is presented in Figure 2.

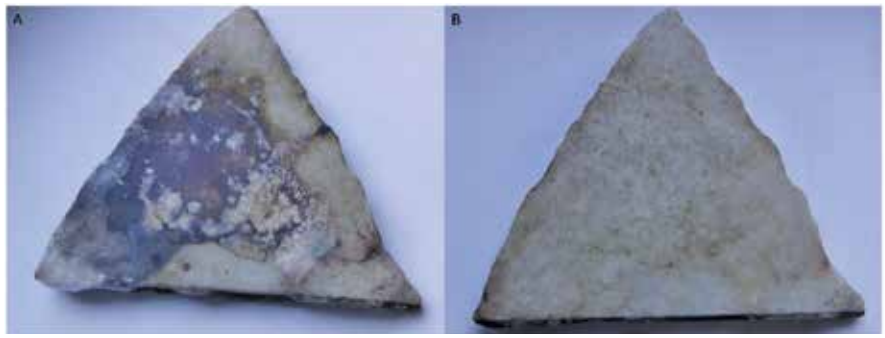

Figure 2. On the left, a human blood stain after four months, on the right – the substrate after washing the stain with water

Experiment 2. When analyzing the results of the above-described Experiment, the authors asked themselves, what could be the difference between the blood from Experiment 1 and the blood from the Warsaw Uprising. The authors concluded that perhaps ketoacidosis, which occurs in the blood of starving people. The experiment was therefore repeated, adding 50 milligrams of beta-hydroxybutyric acid to 5 ml of freshly drawn blood. After applying this mixture to a marble tile, as in Experiment 1, after just a few days the blood began to rot and mold. After four months of storage in the same conditions as in Experiment 1, after rubbing the mold, the obtained stain was washed with cold water, a rice brush, and gray soap. Despite all efforts, the marble still had a slightly saturated, indistinctly visible brown stain, as shown in Figure 3.

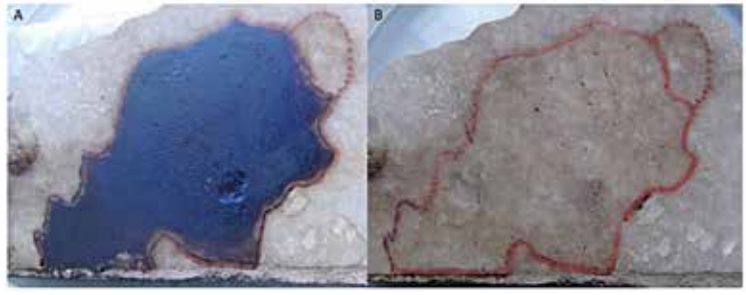

Figure 3. On the left, blood stain after three days, on the right – scrubbed marble after washing the stain after four months of incubation. The obtained, partially positive result became an incentive to perform Experiment 3

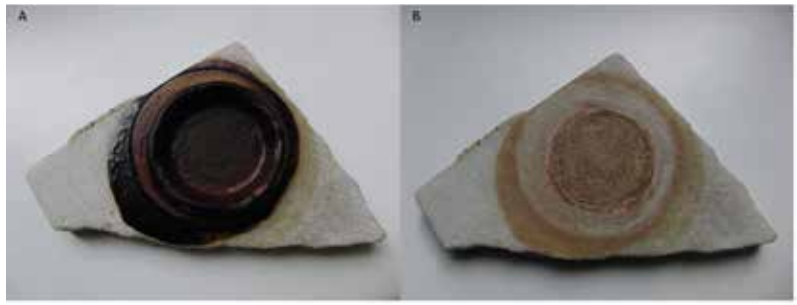

Figure 4. On the left, stain after three days, on the right 120 days after scrubbing with a rice brush and gray soap

Experiment 3. The question was, how, apart from ketoacidosis, could the blood of an insurgent differ from the blood of contemporary living ones? Additionally, the question was asked, what could the difference be between the base of the stain from Experiment 1 and 2 from the base of the stain from the Warsaw Uprising? Additionally, the question was asked about the differences between the experimental conditions and reality. The answer to both questions was unequivocal – the cleanliness level. In the conditions of a fierce overwhelming struggle, in the absence of water, cleaning agents, and washing conditions, the skin of the insurgents could have contained numerous bacteria (mainly lactic acid bacteria) and yeasts, and in the attacked, burning building, there must have been a layer of dust, ash, and soot on the floor. So, Experiment 2 was repeated, but in this case, additionally adding to the blood a swab from the skin of a homeless person, hygienically neglected, and the formed stain was sprinkled with "battle dust" consisting of ground brick, a ground piece of old plaster, with a small admixture of burned gunpowder, the scraps of explosive singe from the testing ground sapper, sludge from dried urine and ash from the fire. The surface of the stain was protected with a paraffin sealant to increase the thickness of the blood layer to 3–4 mm (unfortunately, after a few days, the sealing failed). The very next day after applying the stain to the marble, a difference was observed – the stain had a more intense color and had a jelly-like consistency. In the following days, the stain gave off a much weaker putrid smell than in Experiments 1 and 2, with a clear admixture of the smell characteristic of sour food products, while molding was minimal. After four months, an unsuccessful attempt was made to wash the stain with cold water, even with the use of gray soap and a harsh rice brush. In the central place, where the stain was the thickest, the emerging organic acids slightly etched the marble surface. The results are presented in Figure 4.

Experiment 4. After performing the above-mentioned Experiments and obtaining coloring of the marble, the consulting doctors drew our attention to another possibility, which was the etching of the marble by acid gastric juice in the case of shots of the stomach or the vomiting on blood stains of an injured person suffering from trauma. Of the two experiments performed, in one case (see Figure 5) a less pronounced, but undoub-

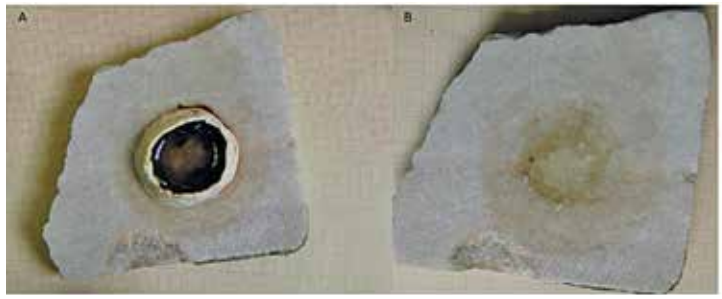

Figure 5. On the left, a two-day stain of 5 ml of human blood mixed with 2 ml of gastric juice at pH = 3.5; on the right, the same stain was washed off after 120 days with gray soap and a rice brush

tedly colored marble was obtained. This experiment allowed the authors to achieve the "enhancement" of the marble coloring effect as described.

CONCLUSION

According to the authors, the conducted experiments have shown that it is possible to obtain permanent staining of marble with human blood under some conditions. Blood should come from a hygienically neglected person with starvation ketoacidosis; then not only decomposition of this blood occurs, but also acidification. Blood should also be in contact with dust similar to that ubiquitous in a burning, shelled building, as well as with acidic gastric juice.

To sum up, the authors believe that the stains from the Museum of the Earth of the Polish Academy of Sciences, the Staszic Palace, and other places may be authentic stains of human blood from the Warsaw Uprising period, deserving conservation, and the mechanism of their formation has been explained here.

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Warsaw Insurgents' Blood on the Marble Floor in the Staszic Palace – Experimental Verification of the Myth

The authors of this study attempted to discover the origin of the rust stains on the marble floor in the Staszic Palace in Warsaw, Poland. It was suspected that these streaks and stains were blood traces of wounded Warsaw Insurgents. According to the authors, the experiments they conducted have shown that it is possible to obtain permanent staining of marble with human blood under some conditions. The list of the wounded during the defense of the Staszic Palace between August 23 and September 6/7, 1944 has been established. The conducted experiments allowed the authors to conclude that the traces are most likely the result of wounds sustained by many insurgents and that this place needs to be commemorated.

KEYWORDS
Warsaw Uprising, wounded, blood stains, Staszic Palace

Krew powstańców warszawskich na marmurowej posadzce w Pałacu Staszica – eksperymentalna weryfikacja mitu

Autorzy niniejszego opracowania podjęli próbę odkrycia pochodzenia rdzawych plam na marmurowej posadzce Pałacu Staszica w Warszawie. Podejrzewano, że te smugi i plamy były śladami krwi rannych powstańców warszawskich. Według autorów przeprowadzone eksperymenty wykazały, że w pewnych warunkach możliwe jest uzyskanie trwałego zabarwienia marmuru ludzką krwią. Ustalono listę rannych podczas obrony Pałacu Staszica od 23 sierpnia do 6/7 września 1944 r. Przeprowadzone eksperymenty pozwoliły autorom stwierdzić, że ślady są najprawdopodobniej wynikiem ran odniesionych przez wielu powstańców i miejsce to wymaga upamiętnienia.

SŁOWA KLUCZOWE
Powstanie Warszawskie, ranni, plamy krwi, Pałac Staszica

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TOMASZ JUREK – doktor habilitowany nauk medycznych, magister prawa, profesor Uniwersytetu Medycznego im. Piastów Śląskich we Wrocławiu, lekarz, specjalista medycyny sądowej, kierownik Katedry i Zakładu Medycyny Sądowej tej uczelni. Autor ponad 300 publikacji z zakresu medycyny sądowej i prawa medycznego, w tym dwóch monografii: *Opiniowanie sądowo-lekarskie w przestępstwach przeciwko zdrowiu* (2010) i *Opiniowanie sądowo-lekarskie w przypadkach narażenia na bezpośrednie niebezpieczeństwo utraty życia albo ciężkiego uszczerbku na zdrowiu* (2013). Redaktor naukowy polskiego wydania brytyjskiego podręcznika: J. Payne-James, R. Jones, *Simpson. Medycyna s*ądowa (2021). Członek zarządu głównego Polskiego Towarzystwa Medycyny Sądowej i Kryminologii. Wykładowca Krajowej Szkoły Sądownictwa i Prokuratury. Od 20 lat biegły sądowy z zakresu medycyny sądowej.

TADEUSZ DOBOSZ – profesor doktor habilitowany nauk medycznych, emerytowany kierownik Zakładu Technik Molekularnych Katedry Medycyny Sądowej Uniwersytetu Medycznego im. Piastów Śląskich we Wrocławiu. Zainteresowania naukowe: znajomość podstawowych metod biochemii, immunologii i biologii molekularnej, szerokie doświadczenie w kryminalistyce i genetyce sądowej (w tym technologii DNA); pionierskie badania w dziedzinie zastosowań DNA w dochodzeniu ojcostwa i kryminalistyce; ochrona i ratowanie starych okazów muzealnych. Zainteresowanie szczególne: konserwacja starych okazów muzealnych, identyfikacja szczątków ludzkich i seroantropologia, uzyskiwanie, naprawa i badanie kopalnego, diagnoza medyczna metodą PCR; dodatkowe zainteresowania: balistyka kryminalistyczna (depozyty DNA na broni, łuskach i pociskach); nieniszczące metody izolacji DNA z cennych obiektów (w tym relikwii), materiału historycznego i okazów muzealnych. Autor 71 publikacji z IF (IF153,739; 1977 pkt.), 138 publikacji bez IF (535,5 pkt.), monografii i rozdziałów w monografiach (133 pkt.), index Hirscha 22.
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