

## HISTORIA WOJSKOWOŚCI



### **”WHEN A NATION IS BEING MURDERED” – THE SECRET BIOLOGICAL AND CHEMICAL WAR AGAINST THE THIRD REICH**

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#### **Abstract**

During the Second World War, the Polish resistance movement used chemical and biological weapons (CBW) against the Nazi occupation in Poland and inside the Third Reich. This subject is under growing scrutiny in modern-day Poland, but remains largely unknown outside the country. By using a wide range of sources (including Polish and German wartime records) this paper attempts to reconstruct what happened.

**Key words:** chemical and biological warfare, Home Army, second world war

#### **Introduction**

The Second World War in Europe began with the German invasion of Poland in 1939. Over the following six years, the Poles were victims of severe persecution and genocide, thereby losing six million citizens (or 22 percent of the population). Half of the victims were Polish Jews<sup>1</sup>. While suffering at the hands of foreign occupiers, the Poles also developed one of the most sophisticated resistance movements during the war. The first named ZWZ (Związek Walki Zbrojnej, Union of Armed Struggle) and renamed AK (Armia Krajowa, Home Army) in 1942 was meant to be a secret Polish army loyal to the Polish Government-in-Exile. At its peak in 1944, the AK probably had about 380,000 members, although only a small percentage of them were properly armed<sup>2</sup>. A significant part of the AK perished during the Warsaw Uprising in August-October 1944, when they tried and failed to liberate the Polish

<sup>1</sup> Richard C. Lukas: ”The Forgotten Holocaust”. Hippocrene Books, Third edition 2012, ISBN 978-0-7818-1202-0, p. 38-39.

<sup>2</sup> Ibidem, p. 62.

capital before the arrival of the Soviet Army. In January 1945, the AK was dissolved, but remnants of the old resistance movement continued the fight against the Soviet occupation of Poland until 1947.

This article is about one of the lesser-known aspects of the occupation of Poland: the use of chemical and biological weapons (CBW) against the German occupation. The subject may appear strange. It is commonly understood that biological and chemical weapons were not used in Europe during the Second World War. In reality, there is plenty of evidence indicating the use of CBW in German-occupied Poland. The subject is often mentioned in several books, although only briefly. For example, historian David G. Williamson writes in a book about Polish “employment of substances to contaminate foodstuffs and cause sickness amongst human beings and animals”<sup>3</sup>. He later mentions the use of “bacterial sabotage” against German soldiers, causing 178 cases of typhus in the spring and early summer of 1941<sup>4</sup>.

This article intends – by using historical methods – to describe and analyse the Polish use of CBW. It will first explain what sources are available. It will then investigate Polish attitudes towards CBW in the interwar period, including claims that Poland had a CBW-programme. It will then describe and analyse the Polish use of CBW during the Second World War by asking where these weapons were used, how, by whom and especially why. The goal is to provide a better understanding of this part of the war in Poland.

## The sources

The Polish use of CBW in 1939-1945 has attracted increasing historical attention in Poland in recent years. Several articles have been written about the subject and it is mentioned in a chapter in a recent history book about the AK<sup>5</sup>. The best Polish primary sources are available in a series of volumes published by the Polish Underground Movement (1939-1945) Study Trust, entitled “Armia Krajowa w dokumentach 1939–1945” (“The Polish Home Army in Documents 1939-1945”). The first volume was published in London in 1970 and the last in 1991 containing documents relating to the Polish resistance movement and the Polish Government-in-Exile. Several of these documents contain references to use of “bacteria” and “poison”, especially in 1940-1941. There are fewer references in documents from 1942 and 1943. At least

<sup>3</sup> David G. Williamson: “The Polish Underground 1939-1947”, Pen & Sword Military 2012, ISBN 978-1-84884-281-6, p. 42.

<sup>4</sup> Ibidem, p. 55.

<sup>5</sup> Rafał Kuzak: „Wąglik, wszy i prostytutki – Najbardziej nietypowe metody walki z okupantem”. Chapter in „Wielka Księga Armii Krajowej”, edited by Ewelina Olszek, Znak Horyzont 2015. ISBN 978-83-240-3422-2, p. 257-275.

some of the same documents are also freely available as scanned files on the internet, provided by the Polish Institute and Sikorski Museum in London<sup>6</sup>.

While there is very little reason to doubt that the ZWZ/AK used CBW, its effectiveness is open to debate. In 1984 – while Poland was still a communist dictatorship – a book about Kedyw (Kierownictwo Dywersji, Directorate for Subversion) was published. Kedyw was a part of the AK, which, in 1943-1944, specialised in active and passive sabotage, propaganda and armed action against German forces and their collaborators. Their activities also included use of CBW, which is described in a table in the book. If correct, the Germans suffered thousands of casualties as a result of these attacks. The problem is that German records do not mention such casualty numbers.

Paradoxically, one of the most difficult questions to answer is not about what happened during the war, but rather what occurred before 1939. It seems inconceivable that the ZWZ/AK, out of the blue, would have improvised a large CBW programme, but, besides a few articles, there is very little information about Polish interest in CBW between 1918 and 1939.

Some German records have been found in Germany, but the majority of the records have been found at The National Archives and Records Administration (NARA) in the USA. During the Second World War, the United States organised the so-called “Alsos Mission” in order to capture German records relating to secret military programmes. About 160 pages of the captured “Alsos”-documents are about Polish use of biological weapons, while other documents describe disease outbreaks inside Germany. The German documents differ from Polish documents in the sense that they go much more into detail. Several documents contain translations of captured Polish instructions for a wide range of chemicals and biological substances. They also contain laboratory reports of captured materials, which confirm that the Poles – besides bacteria and toxins – also used a wide range of chemicals.

### **“We Poles have no right to deceive ourselves”**

Poland was reborn in 1918 as an independent state after having disappeared from the map of Europe for 123 years. The new Polish state had a troubled birth and fought six wars between 1918 and 1921<sup>7</sup>. The new state survived, but remained difficult to defend. It had long borders and lacked natural barriers. Poland had a large army of 266,000 soldiers in 1923, which rose to 350,000 in 1935<sup>8</sup>. Despite its size, the Polish army was technologically backward and could not expect to compete with its more powerful neighbours in the long run. Poland was also divided internally and

<sup>6</sup> For example, see page 80-86 by following this link: <http://polishinstitute.com/prm/prm46a.pdf>.

<sup>7</sup> Norman Davies: “God’s Playground – A History of Poland”, Volume II 1795 to the Present, Oxford University Press 1981, ISBN 0-19-821944-X, p. 394.

<sup>8</sup> *Ibidem*, p. 419.

had significant minority problems. The people identifying themselves as Poles only formed 68.9 percent of the population, according to a census in 1931<sup>9</sup>. In 1926, the fragile Polish democracy was overthrown in a military coup. Poland was ruled by the so-called *Sanacja*<sup>10</sup> regime until 1939, which was dominated by the military<sup>11</sup>.

Like any other state, Poland wanted security, but how? The new state developed a small chemical weapons programme aimed at researching fluoroorganic compounds, mustard gas and lewisite. A small amount of sulphur mustard gas was produced at the Pionki armaments plant. The gas was filled into artillery shells and land mines at Skarżysko-Kamienna<sup>12</sup>. The attitude towards chemical weapons was summed up by an unknown author, who stated: “We Poles have no right to deceive ourselves with pseudo-humanitarian phrases, because at the critical moment no one can help us. In defence of our freedom, we can only help ourselves. The best guarantee of our peace and development is the preparation of the Polish Nation and its Army to effectively defend themselves not only with technology, but also the chemistry of war”<sup>13</sup>.

It seems certain that Poland also developed a biological defence programme against natural disease outbreaks and biological attacks. There has always been a strong correlation between warfare and disease and many military units were severely affected by dysentery, typhus and malaria during the First World War. Malaria incapacitated entire divisions of the British and French army on the Balkan front<sup>14</sup>. Poland was hit hard by the Spanish flu in 1918-1919 and by a typhus and cholera epidemic in 1920. Furthermore, German agents had used biological weapons for sabotage during the First World War<sup>15</sup>. With the growing insight into microbiology, it seemed possible that even large-scale biological warfare could become possible. The Polish military began to pay attention to the threat of biological weapons around 1925, when it discovered that the Romanian defence attaché was looking for information regarding biological warfare. In the coming years, the military took a number of steps to protect Poland against the threat of biological weapons, including training

<sup>9</sup> Ibidem, p. 404.

<sup>10</sup> *Sanacja* literally means “sanitation”, but should be understood as a slogan for “Return to (political) health”.

<sup>11</sup> Davies 1981, op. cit. p. 421-422.

<sup>12</sup> Zbigniew Wertejuk and Mieczysław Koch: „A Two-Stage Method of the Destruction of Toxic Agents”. Chapter in „Scientific Advances in Alternative Demilitarization Technologies”, edited by F.W. Holm, Kluwer Academic Publishers 1996, ISBN 0-7923-4035-3, p. 67.

<sup>13</sup> Piotr Maszkowski: „Produkcja i użycie broni chemicznej w II Rzeczypospolitej Polskiej”. *Biuletyn Chemik* Nr 2/2007. <http://schwrpwwoc.republika.pl/dodatki/biuletyn/biuletyn2/uzyciebr-chemicznej.htm>

<sup>14</sup> Aleksander Wysocki: „Zarys przygotowań obronnych do wojny biologicznej prowadzonych w Polsce w latach 1918-1939”. *Biuletyn Wojskowej Służby Archiwalnej*. Nr 23. 24.05.2000. [http://caw.wp.mil.pl/plik/file/biuletyn/b23/b23\\_6.pdf](http://caw.wp.mil.pl/plik/file/biuletyn/b23/b23_6.pdf)

<sup>15</sup> Jerzy Witt Mierzejewski and John Ellis van Courtland Moon: „Poland and biological weapons”. Chapter in „Biological and Toxin Weapons: Research, Development and Use from the Middle Ages to 1945”, edited by Erhard Geissler and John Ellis van Courtland Moon, Oxford University Press 2003, ISBN 0-19-829579-0, p. 68.

of key personnel, creation of mobile field laboratories, development of procedures and plans and a monthly collection of information about infectious disease outbreaks in the country<sup>16</sup>.

It is less certain if Poland developed an offensive biological weapons programme. In 2010, the Polish historian and journalist Andrzej Krajewski wrote an article describing the creation of a Polish biological weapons programme around 1930. The sources he used were government records from the 1950s, when Poland was a communist dictatorship and planned a show trial against former members of the *Sanacja* regime. The planned show trial was, without explanation, suddenly stopped by orders of the Kremlin in 1953. According to these documents, Poland developed an offensive biological weapons programme in response to intelligence regarding Soviet biological warfare activities and a number of mysterious outbreaks of salmonella poisoning among Polish soldiers. Sabotage was suspected. The II. Bureau (military intelligence) of the Polish General Staff responded by setting up a secret laboratory at a chemical warfare facility in Warsaw<sup>17</sup>.

It is possible the laboratory only conducted defensive work in the beginning, but, if this was the case, it quickly changed direction. One of the scientists, Janina Gębarska-Mierzwińska, developed a new technique to make botulinum toxin into a dry powder and storing germs through dehydration. Another scientist, Jan Golba, created a new technique to grow *Salmonella typhi* using an artificial food source. These early breakthroughs motivated the General Staff to invest more. In 1935, a new organisation called SRT (Samodzielny Referat Techniczny, Independent Technical Department) was created with a budget of approximately half a million zloty. Overall responsibility remained at the II. Bureau. In 1937, SRT employed seven officers and nearly sixty scientists and technicians. To accelerate the work, a larger laboratory with an aerosol chamber was built inside the fortress of Brześć. According to Golba's witness testimony in the 1950s, the chamber was a "brick chamber, painted inside with oil paint, of approximately 9 square meters". Scientific work included increasing the virulence of pathogenic bacteria and development of methods to infect humans, animals, food and water supplies. Under the direction of Golba, the scientists also conducted experiments using a car to disperse harmless microbes in Warsaw. They used petri dishes to take samples and detect the spread and longevity of the microbes in the air<sup>18</sup>.

The government records from the 1950s contain two controversial claims: first that the Polish military ordered scientists to kill captured Soviet agents by using biological agents. Seven were allegedly killed in these human experiments. The

<sup>16</sup> Wysocki 2000, op. cit.

<sup>17</sup> Andrzej Krajewski: „Broń biologiczna w Polsce, czyli kanapka ze śmiercią”. Focus Historia, March 13 2010. <http://historia.focus.pl/swiat/bron-biologiczna-w-polsce-czyli-kanapka-ze-smiercia-604>.

<sup>18</sup> Ibidem.

second claim is that Poland shared a close intelligence collaboration with Japan<sup>19</sup> regarding biological weapons. The Japanese Unit 731 was a covert biological and chemical warfare research and development unit of the Imperial Japanese Army, which conducted human experiments and later used biological weapons against Chinese civilians. In 1936, a conference was held in Warsaw, where a Japanese delegation from the Unit 731-facility in Pingfan in Manchuria met with Polish experts. Golba delivered a personal briefing during the meeting<sup>20</sup>.

If Poland did indeed possess a biological weapons programme in the 1930s, it would be a paradox. Poland played a leading role in the creation of the Geneva Convention in May-June 1925, which banned the use of CBW. While most delegates understandably were most interested in banning the use of chemical weapons (which were widely used in the First World War), the Polish representative, General Kazimierz Sosnkowski, also insisted on a ban against biological weapons. The General Committee of the Conference adopted this amendment and the convention was signed on 17 June 1925<sup>21</sup>. One way to explain the paradox could be that Poland wanted to keep its options open. If the Geneva Convention could prevent biological warfare, it would be fine, but if not, the Polish military wanted to be ready to use CBW. The convention did not ban research and production of CBW, so many assumed it was still legal to use these weapons in retaliation. Everything seems to suggest that the Polish General Staff was keenly aware of the potential of CBW and, especially, biological weapons may very well have been viewed as a cheap superweapon in an increasingly dangerous strategic situation in the 1930s<sup>22</sup>.

## Invasion and resistance

On 1 September 1939, the German army invaded Poland from the west. On 17 September 1939, the Soviet Army invaded Poland from the east in accordance with the Molotov-Ribbentrop Pact. Poland was divided after the invasion. Some of the German-occupied areas (those with significant German minorities) were annexed into the Third Reich. The remaining German-occupied parts (with a significant Polish

**19** The fact that Poland had a close relationship, which included intelligence sharing, with Japan in the 1930s is not in dispute. The Polish attitude towards the intelligence cooperation with Japan was perhaps best summed up by a Polish intelligence officer, Captain Jerzy Niezbrzycki, who, in 1936, instructed his subordinates that the cooperation with the Japanese „must be characterised by 100 percent loyalty at all times”.

**20** Krajewski 2010, op. cit.

**21** Mierzejewski and van Courtland Moon 2003, op.cit. p. 67.

**22** To put matters into perspective, Poland spend a total of a billion zloty on the military in 1938-1939. This amount – partly raised through private donations – only constituted a mere 10 percent of the German Air Force budget in 1939 and was fifty times less than Germany’s defence spending as a whole.

majority) were reorganised into the so-called Generalgouvernement. The Soviet-occupied territories were annexed into the Soviet Union.

Poland never formally surrendered to the Germans. A Polish Government-in-Exile was first located in France, but was later forced to move to Great Britain after the French surrender in June 1940. Despite, or perhaps rather because of the brutal occupations, Poland quickly saw the birth of a strong resistance movement. In October 1939, the Polish General, Michał Karaszewicz-Tokarzewski, travelled around the country and assessed there were at least a hundred resistance groups operating<sup>23</sup>. The Government-in-Exile demanded the creation of an umbrella organisation for all these groups. The result was the creation of the ZWZ in December 1939<sup>24</sup>. The first leader of ZWZ was General Tokarzewski-Karaszewicz, but he was mistrusted because of his close links to the *Sanacja* regime, which many blamed for the defeat. The Prime Minister of the Polish Government-in-Exile, General Władysław Sikorski, instead named Colonel (later General) Stefan Rowecki as the commander of ZWZ in Poland. His superior (and therefore commander-in-chief of the ZWZ) was General Sosnkowski.

A report sent by Rowecki to Sosnkowski from 19 March 1940 described the plans for using sabotage and diversion. These plans included use of CBW:

In order to exhaust all possibilities in subversive-diversive actions, I have created a special unit concerned with chemical-technical-bacteriological operations, comprised of specialists, researching under our conditions the possibilities of employing such methods and producing ready agents. I intend to use it firstly to destroy material and equipment, secondly – infecting people without threat to our population, and even moving them into the Reich territory using exported workers<sup>25</sup>.

It is important to understand the context: the core idea behind the ZWZ was to lay the ground for an armed uprising. In the spring of 1940, many expected that the Germans would soon lose the war. Once the Germans were defeated, the Poles would rise up. According to orders from January 1940, the ZWZ should remain dormant until then. Only minor acts of sabotage should be conducted<sup>26</sup>. CBW were expected to play an important role in setting the stage for an armed uprising. It would damage the Germans, divert their attention and at the same time minimise the risk of detection<sup>27</sup>. To the extent it was possible, the war should clandestinely be moved to the Third Reich using Polish workers conscripted by the Nazis<sup>28</sup>.

<sup>23</sup> Williamson 2012, op.cit., p. 34.

<sup>24</sup> Ibidem, p. 12.

<sup>25</sup> „Armia Krajowa w dokumentach 1939-1945”. Tom I: Wrzesień 1939 - Czerwiec 1941, London 1990, ISBN 83-04-03629-0, No. 28, p. 179-180.

<sup>26</sup> Williamson 2012, op.cit., p. 34-35.

<sup>27</sup> „Armia Krajowa w dokumentach 1939–1945”. Tom I, London 1990, op. cit. p. 181.

<sup>28</sup> In order to ensure wartime production the Germans had ordered the conscription of Polish workers. By January 1941, 798,000 Poles were working inside the Reich and by 1943 the number had grown to 1.6 million.

## Escalation in 1941

The German conquest of France in May-June 1940 left the Third Reich in control over large parts of Western Europe. Only Great Britain continued to fight. The ZWZ was forced to remain dormant and even restrict the numbers of new members<sup>29</sup>. This may explain a terse order from Prime Minister Sikorski to Rowecki from November 1940, where he orders a complete halt on all sabotage and diversion operations on Polish soil (the Generalgouvernement) and annexed territories. He also orders a halt on bacteriological sabotage carried out by “farmers and forest workers” inside The Third Reich<sup>30</sup>.

The Third Reich invaded the Soviet Union in June 1941, which changed the entire war. At the same time, the Nazi treatment of the Jews changed from persecution to outright genocide. The Germans built 2000 concentration camps and 7 major death camps on Polish territory to facilitate the destruction of the European Jews<sup>31</sup>. The year 1941 would also signal a new phase in the Polish use of CBW. On 14 February 1941, General Sosnkowski sent a message to Rowecki ordering him to increase sabotage operations, including the use of CBW. He acknowledged a previous order to restrict sabotage, but the growing fear of a German invasion of Great Britain had changed the situation. As before, the growth in sabotage should be carried out in a way to deflect responsibility and avoid retaliation against the Polish people. Instead, acts of sabotage should be carried out in a way to attribute responsibility to foreigners. Sabotage operations inside the Third Reich were also to be resumed, not least because it would minimise the risk of retaliation against the Polish people. Sabotage inside the Reich should be designed so it would be blamed on German communists (and presumably the Soviet Union)<sup>32</sup>.

In a report to General Sosnkowski (from 27 March 1941), General Rowecki gave the most detailed account about the use of CBW. He began by requesting an absolute ban on mentioning the result of sabotage or diversions for propaganda purposes. The responsibility for conducting acts of sabotage and diversions was placed on the unit ZO (Związek Odwetu, Union of Retaliation), which was created in April 1940. The main command level included a group of professors and doctors with expertise in bacteriology and toxicology. Their primary task was to develop instructions regarding sabotage and diversions. The department for bacteriological-toxicological warfare had access to eight bacteriological laboratories for cultivation and preparation. The biological agents were: typhoid, dysentery, glanders, anthrax and rabies. In preparation were cholera and a mixture of different bacteria. If the mixtures proved practical and showed great virulence, they would be used. In addition, the department

<sup>29</sup> Williamson 2012, op. cit., p. 44.

<sup>30</sup> „Armia Krajowa w dokumentach 1939-1945”. Tom VI: Uzupełnienia, London 1991, ISBN 83-04-03667-3, No. 1638, p. 108.

<sup>31</sup> Lukas 2012, op. cit., p. 37.

<sup>32</sup> „Armia Krajowa w dokumentach 1939-1945”. Tom I, London 1990, No. 139, p. 448.



had also selected dozens of poisons, which would only show symptoms after a long time. As a result of the new orders, Rowecki had ordered an increase of sabotage to medium intensity. Rowecki then describes the results of CBW attacks in Poland:

- 1784 registered cases of illnesses and 149 deaths among the occupants,
- 680 horses were infected with glanders in nine different centres.

Inside the Reich:

- Typhoid fever caused in 17 towns,
- Cattle infected with anthrax in four counties and in three towns,
- Rabies used in three counties,
- Trains carrying food and persons from Polish territory to the Reich had been contaminated. The number of disease cases were unknown. In December 1940, all trains with Germans on holiday were contaminated. Illnesses were reported, but the numbers were uncertain.

Interestingly enough, Rowecki appeared quite sober regarding the effectiveness of biological weapons. He noted that it was difficult to get an overview because the Germans tended to isolate their patients once they became ill. The effectiveness of bacterial warfare was further diminished because of immunization among the Germans. Rowecki anticipated that the summer months would be the optimal period for spreading bacterial material inside the Reich, but he did not really expect much would come out of it:

Expansions of use of bacteriological agents can only be expected in the summer months. Toxic substances can be used earlier in the case of receiving the appropriate number of all sorts of toxins, particularly those that cause disease relatively late after use. Primarily needed are uranium salts (acetate, uranium nitrate) in large amounts, i.e. approximately 150 kg. The country lacks toxins. Found quantities of toxins were purchased by us. What is left is extremely difficult to obtain. With the current state of organisation of medical service, causing major epidemics is doubtful. In any case, the bacteria will only give a moral effect. Toxins can give tangible great results, especially in the Reich<sup>33</sup>.

It is necessary to explain Rowecki's remarks. Biological warfare has a great potential, but is in reality very difficult to master. Biological agents are vulnerable to environmental effects like radiation from the sun and can be difficult to disseminate effectively. Rowecki seemed to understand the problem and suggested a way around it. While not excluding the use of bacteria, he preferred to concentrate on toxins and other "poisons". It was not possible to vaccinate against them and some of them would only show symptoms after a long time, which would maintain deniability.

33 „Armia Krajowa w dokumentach 1939-1945”. Tom VI, London 1991, No. 1659, p. 178-183.

## Conspiracy in Posen

A Polish document (written in May 1942, but first read in London in November 1942) demonstrates how the subject of CBW had become a part of the training programme in the Polish resistance (now renamed AK): “Expansion of the training unit of ZO. From October 1941, new training courses for the instructors of ZO are being launched. The course takes 2 weeks and covers 9 subjects: general, tactics, bomb-diffusion, telecommunication, rail, mechanics, chemistry, bacteriology and toxicology. Course run by specialists. 100 people have been trained so far”<sup>34</sup>.

The attacks also continued: A message – written by General Rowecki and dated 1 February 1942 – describes the results of sabotage operations in October and November 1941. Glanders was used against four German infantry divisions with positive results<sup>35</sup>. In a message from 31 July 1942, General Rowecki reported poison had been used in 194 cases and seven train wagons had been contaminated<sup>36</sup>. In a report from March 1943, Rowecki mentioned that poison had been used in 189 cases and typhoid germs had been disseminated in several hundred cases the previous month<sup>37</sup>. One of the incidents was a series of poisonings at the Kasimir Krankenhaus in Radom, where at least 27 Germans were killed between January 1941 and April 1943 by Polish personnel in German service. In some cases, arsenic was used and, in other cases, an overdose of morphine or pantopone. The German leader of the hospital, Wilhelm Lonsdorf, was arrested on 9 April 1943 for dereliction of duty<sup>38</sup>.

Between 1939 and 1942 a Polish resistance group named WKZO (Wielkopolskie Kierownictwo Związku Odwetu, the Wielkopolska branch of the ZO) conducted sabotage in the German-annexed area Reichsgau Wartheland and its main city Posen (today Poznań). The WKZO also made extensive preparations for the use of CBW against the Germans, creating makeshift laboratories in private homes and stockpiling biological agents with instructions for their use<sup>39</sup>. The intention was to use them if the group could see signs of mass killings of Poles similar to the genocide against the Polish Jews. A few attacks were carried out and a German report (written by Professor Heinrich Kliewe from Militärärztliche Akademie in Berlin, who became responsible for investigating Polish use of CBW) shows that there were 30 cases of infections and five deaths as a result (a German engineer, a bank manager, a director of a factory, a young girl and an architect)<sup>40</sup>.

**34** „Armia Krajowa w dokumentach 1939-1945”. Tom II: Czerwiec 1941 - Kwiecień 1943, London 1990, ISBN 83-04-03630-4, No. 306, p. 237-238.

**35** „Armia Krajowa w dokumentach 1939-1945”. Tom VI, Londyn 1991, No. 1686, p. 217.

**36** „Armia Krajowa w dokumentach 1939-1945”. Tom II, Londyn 1990, No. 323, p. 291-292.

**37** „Armia Krajowa w dokumentach 1939-1945”. Tom VI, Londyn 1991, No. 1755, p. 306.

**38** ”Alsos Mission: Biological Warfare (BW) #1 - German Intelligence Reports on Use of BW Agents by Polish Resistance Movement”. [https://research.archives.gov/id/778820?q=\\*:\\*](https://research.archives.gov/id/778820?q=*:*), p. 41.

**39** Piotr Bojarski: „Toksyny nur für Deutsche”. Wyborcza.pl. December 28 2012. [http://wyborcza.pl/alehistoria/1,129850,13115135,Toksyny\\_nur\\_f%C3%BCr\\_Deutsche.html](http://wyborcza.pl/alehistoria/1,129850,13115135,Toksyny_nur_f%C3%BCr_Deutsche.html)

**40** ”Alsos Mission: Biological Warfare (BW) #1, op. cit. p. 91-98.

There was apparently a conflict between some members of the WKZO. The leader of the group, Lieutenant Zenon Pluciński, wanted an aggressive approach and made plans for a massive CBW attack against the German police and administration<sup>41</sup>. The man responsible for the production of the biological agents – Doctor Franciszek Witaszek – tried to restrict the use of CBW. He refused to authorise the poisoning of food in German magazines and biological attacks inside hospitals or against trains with wounded soldiers. He frequently went to the church to pray and sought the counsel of the Polish bishop in Posen, Walenty Dymek. The bishop reassured the doctor: “When a nation is being murdered, it must defend itself with all means necessary”<sup>42</sup>. In any case, most of the CBW agents were destroyed in September 1941 following the arrests of some members of the WKZO<sup>43</sup>.

Following the poisoning of five German officers from the military intelligence (Abwehr) and three civilians in April 1942, the Gestapo arrested 35 members of the WKZO in one blow<sup>44</sup>. Witaszek was one of them. He was tortured by the Gestapo and had to be carried when he, together with 23 men and 6 women, was hanged inside the old fortress Fort VII outside Posen on 8 January 1943. 70 family members were afterwards deported to the death camp, Auschwitz<sup>45</sup>.

### Operations inside the Reich

For reasons already mentioned, the ZWZ/AK tried to attack deep inside Germany with CBW. The Gestapo occasionally intercepted packages containing biological agents and poisons sent to Polish agents in German cities. Translated instructions show one of the biological agents was *Staphylococcus aureus*. The Gestapo also arrested Poles planning to conduct CBW attacks inside the Reich in 1943-1944<sup>46</sup>. Whether Polish agents succeeded in causing any damage is unclear. German records show that there was a strange outbreak of disease in Allendorf in Hesse, where 120 members of the Nazi-organisation RAD (Reichsarbeitsdienst, Reich Labour Service) were infected with *Paratyphoid B* in October 1941.

It was quickly established that the infection came from pudding powder from the company Reese, but how the bacteria got into the powder was unclear.

41 Marian Woźniak: „Encyklopedia konspiracji Wielkopolskiej: 1939-1945”, Instytut Zachodni 1998, ISBN 83-85003-97-5, p. 441-442 and p.628-629.

42 Bojarski 2002, op.cit.

43 Woźniak 1998, op. cit., p. 441-442 and p. 633-634.

44 Bojarski 2002, op.cit.

45 Ibidem.

46 Alsos Mission: Biological Warfare (BW) #1, op.cit., p. 28 and p. 66-71.

A series of laboratory tests established that Paratyphoid B could have survived in the powder for six months<sup>47</sup>.

This case was followed by a similar case in Kassel in April 1942, where a shipment of pudding powder from Reese resulted in a massive outbreak of Paratyphoid B disease among 540 soldiers, causing two fatalities<sup>48</sup>.

By September 1942, Paratyphoid B had affected more than a thousand German soldiers in Wehrkreis IX (parts of Thuringia and Hesse); there was nothing to suggest a natural outbreak and an intelligence report stressed that it was urgent to consider the possibility of sabotage from Soviet or Polish agents. 300 civilians had also been affected by Paratyphoid and dysentery in Meiningen<sup>49</sup>.

It is known that SS and Gestapo leader Heinrich Himmler briefed Adolf Hitler about Polish CBW activities in December 1942<sup>50</sup>. This raises an important question: why did the Germans never publicise the Polish use of CBW? This could have been a perfect propaganda tool against the Poles. But publicising these facts would also mean admitting that the Germans were vulnerable to CBW attacks inside the Third Reich. Considering the numerous military setbacks and the growing intensity of Allied bombing raids against German cities, this could further demoralise the Germans. In a report from May 1943, Professor Kliewe stressed that intelligence regarding Polish CBW-operations inside the Reich should be kept secret – even from the Abwehr and hospitals. Civil defence measures should not be implemented at this stage. Instead, the Germans should use counterintelligence to disrupt the Polish operations<sup>51</sup>. Strangely enough, that meant that both the ZWZ/AK and the Nazi leadership – although for very different reasons – wanted to prevent anybody knowing about the use of CBW. The secret chemical and biological war would remain a secret on both sides.

## Effectiveness

As mentioned previously, a book about the Polish group Kedyw was published in Poland in 1984, which contains some interesting information about the use of CBW in 1943-1944. The book mentions that Kedyw attacked entertainment and dining places with CBW, especially in the summer months, when the consumption of beverage and

**47** „Also Mission: BW #4 - Reports on Epidemic Diseases in Various German Hitler Youth and Other Camps; Analysis of Causes”. Ordered from: [https://research.archives.gov/id/778823?q=\\*:\\*](https://research.archives.gov/id/778823?q=*:*), p. 53-60.

**48** Ibidem, p. 49-52.

**49** Ibidem, p. 46-47.

**50** W. Seth Carus: „Bioterrorism and Biocrimes: The Illicit Use of Biological Agents Since 1900”. Center for Counterproliferation, Research National Defense University. Washington, D.C. 2001. <http://www.dtic.mil/dtic/tr/fulltext/u2/a402108.pdf>, p. 88 and „Blitz-Fernschreiben vom 4.12. 1942 an Reichsführer SS und Chef der Deutschen Polizei”.

**51** Also Mission: Biological Warfare (BW) #1, op.cit. p. 66.

ice was at its highest. In October 1943, Kedyw excluded members of the German army from further attacks and instead concentrated on members of the Gestapo, SS, police, the Nazi party, German railway workers and Ukrainian or Russian auxiliary soldiers. In addition, shipments with food to the Eastern Front were poisoned and German armament workers in Warsaw were targeted<sup>52</sup>. A table (see figure 1) shows the use of biological agents month by month against different categories of enemies. If correct, 6,10 individual attacks were carried out in 1943-1944<sup>53</sup>.

While intriguing, there is a major problem with this number: German records do not mention such large casualties. One possible way of explaining this discrepancy is that the ZWZ/AK carried out a large number of successful attacks, which also remained – as intended – undetected. Instead, the Germans presumed they were dealing with natural outbreaks of disease or other natural causes. Biological attacks can easily be confused with natural outbreaks of disease and some chemicals like “Lost” (i.e. sulphur mustard, which the Polish resistance used in candy or chocolate) did not have any known symptoms and could not be traced when digested<sup>54</sup>. The Germans were also hardly in a good position to investigate Polish use of CBW. In the first four months of 1943, 500 separate attacks against the German administration in Poland were carried out. On average, the Germans lost one policeman every single day in Warsaw in 1943 and 750 Gestapo agents were assassinated in the first half of 1944. The Gestapo was investigating 10,000 Poles in Warsaw, but only 20 percent had been properly identified. Alcoholism and stress-related illnesses were common among German officials. A posting to Warsaw was increasingly viewed as a death sentence<sup>55</sup>. It is, therefore, possible that CBW attacks did have a major effect.

But there is also another explanation which must be considered: that the use of CBW was largely a failure. Toxins and chemicals can decay and must be used in the right dosage to be effective. Bacteria are (as stated earlier) vulnerable to environmental effects like radiation, humidity and temperature. Effective dissemination of biological agents is also a challenge. When interrogated by Professor Kliewe, one member of the WKZO in Posen explained that he had poured “entire ampoules” with Typhus bouillons into drinks for German guests in a restaurant without any effect<sup>56</sup>. All in all, the effectiveness of the Polish CBW-operations must be viewed critically. However, it should be possible to compare German and Polish wartime records to see if the Polish numbers are reliable, but this is beyond the purpose of this paper.

**52** Henryk Witkowski: „Kedyw - Okręgu Warszawskiego Armii Krajowej w latach 1943-1944”, Warszawa 1984, ISBN 83-202-0217-5, p. 184.

**53** Ibidem, p. 418-419.

**54** Alsos Mission: Biological Warfare (BW) #1, op.cit., p. 37-39.

**55** Roger Moorhouse: “Killing Hitler”. Vintage Books 2007, ISBN 9781844133222, p. 99-103.

**56** Alsos Mission: Biological Warfare (BW) #1, op.cit., p. 94.

Figure 1

Period	Gestapo	SS	SD	Police and gendarmes	NSDAP	Various military	Italians	Russian white guardsmen	Russians working for the Germans	Georgians, Turkmens	Ukrainians and Byelorussians working for Germans	Organisation Todt (OT)	Officials and civilian Germans	Propaganda workers	German border patrol officers	German rail-workers	Various Germans	Post workers	Total
IV 1943	1	43	2	20	-	79	14	-	-	-	-	8	7	1	-	-	24	36	233
V	No data in the report																		
VI	No data in the report																		
VII	2	78	1	40	8	100	-	-	-	95	4	4	11	4	1	15	4	30	397
VIII	10	52	6	68	-	27	-	-	4	4	17	-	6	-	28	26	31	84	362
IX	2	60	2	43	21	24	-	39	12	-	22	-	17	-	40	40	-	27	309
X	-	97	-	23	20	16	-	-	-	-	5	-	23	32	12	23	4	-	255
XI	-	17	-	2	-	4	-	-	-	-	-	7	6	-	9	14	-	48	107
XII	-	60	2	37	-	13	-	-	-	-	-	-	16	-	25	-	-	11	164
<b>1943</b>	<b>15</b>	<b>405</b>	<b>13</b>	<b>233</b>	<b>49</b>	<b>263</b>	<b>14</b>	<b>39</b>	<b>16</b>	<b>99</b>	<b>48</b>	<b>19</b>	<b>86</b>	<b>37</b>	<b>41</b>	<b>138</b>	<b>77</b>	<b>236</b>	<b>1828</b>
I 1944	7	376	-	144	-	-	-	-	-	-	26	-	51	-	-	24	-	11	639
II	3	285	-	129	-	-	-	-	1	-	151	-	85	10	-	31	-	-	695
III	13	329	-	143	-	-	-	-	33	-	127	-	112	16	-	37	-	5	815
IV	3	238	-	206	-	-	-	-	-	-	41	-	157	-	-	28	-	12	685
V	2	205	-	232	-	-	-	-	-	-	106	-	179	-	-	21	-	18	763
VI	13	128	-	132	-	3	-	-	2	-	83	-	88	-	-	-	-	36	485
VII	9	161	-	96	-	2	-	-	3	33	-	-	182	-	-	14	-	-	500
<b>1944</b>	<b>50</b>	<b>1722</b>	-	<b>1082</b>	-	<b>5</b>	-	-	<b>36</b>	<b>3</b>	<b>567</b>	-	<b>854</b>	<b>26</b>	-	<b>155</b>	-	<b>82</b>	<b>4582</b>
<b>Total</b>	<b>65</b>	<b>2127</b>	<b>13</b>	<b>1315</b>	<b>49</b>	<b>268</b>	<b>14</b>	<b>39</b>	<b>52</b>	<b>102</b>	<b>615</b>	<b>19</b>	<b>940</b>	<b>63</b>	<b>41</b>	<b>293</b>	<b>77</b>	<b>318</b>	<b>6410</b>

Bacteriological and toxicological operations (number of administered poisons in 1-person doses) for period 04-1943 – 07-1944

Compiled based on  
 1. Report of Kedyw Przystan for months IV, VII 1943  
 2. Report of Kedyw Kolegium for months VIII, IX, XI, XII 1943, I, II, III, IV 1944  
 3. Report Kedyw Cenzura for month V 1944  
 4. "U" for month VI 1944 and report of the toxicological-bacteriological operation for VII 1944

Source: Witkowski 1984, page 418-419

If nothing else, the use of CBW managed to spook the Germans. Even after the failed Warsaw Uprising in August-October 1944, the Germans remained on alert for further CBW-attacks. The last German intelligence report regarding Polish use of CBW is dated 12 December 1944. By this time, the Soviet Army was camped deep inside Poland and only the western parts of the country (including Reichsgau Wartheland) were still in German hands. In his report, Professor Kliewe stated that, since 1940, groups inside the Polish resistance had used biological weapons. It therefore seemed likely that a recent outbreak of typhus inside a Hitler Youth-camp at Schieratz (today Sieradz) was caused by sabotage. There had also been a similar typhoid epidemic in Marienburg (today Malbork), affecting soldiers from an armoured unit. The usually very objective Kliewe complimented the previous accomplishments of the Polish resistance as “meisterhaft” (masterful). He then expressed his fear that the remnants of the AK would try to rebuild their shattered units in Wartheland<sup>57</sup>. In any case, Kliewe did not need to worry. On 12 January 1945, the Soviet Army renewed its offensive and pushed deep inside the Reich. In May 1945, Germany surrendered.

## Conclusion

The Polish use of CBW in the Second World War is an important case. It is often difficult to document the use of CBW, but, in this case, there are good sources from both sides of the war. Another reason why this is an important case is because the Polish use of CBW offers insight into motivation. To put it differently: why did they do it? This is never explained in any of the documents, but it is possible to make some educated guesses.

The main reason has to be availability. Poland had a small chemical weapons programme before September 1939 and it seems likely Poland also had a small biological weapons programme. Poland did not (unlike France in June 1940) capitulate and it is, therefore, possible that the biological weapons programme went underground and became a part of the Polish resistance struggle. A second reason was concealment. What made CBW attractive to the ZWZ/AK was their ability to be used with a high degree of deniability. A third reason could have been the lack of alternatives. The ZWZ/AK faced a serious arms shortage during the war and CBW offered an opportunity to compensate for the lack of conventional weaponry. A fourth reason was that CBW could act as a force-multiplier, offering the ZWZ/AK an ability to strike the enemy from different directions using different methods and even deep

<sup>57</sup> ”Also Mission: BW #22 - Reports Entitled „Sabotage by Polish Resistance Groups, Using Bacteria” and „Report on Activities of Polish Resistance Groups in Military Districts XXI and XX””. [https://research.archives.gov/id/778841?q=\\*:\\*](https://research.archives.gov/id/778841?q=*:*), p. 1-4.

inside the Reich. A fifth reason was revenge. The ZWZ/AK began to use CBW early in the war, but Nazi brutality probably influenced the scale and the intensity.

Even if the use of CBW was effective, could it be morally justified? This is the most difficult of all questions. On one hand, the use of CBW was viewed as morally abhorrent even before the Second World War and its use was restricted to retaliation according to the Geneva Convention. In the 21<sup>st</sup> century, it is both illegal and immoral to possess (not to mention use) CBW. However, the circumstances facing the Poles between 1939 and 1945 make easy moral judgment very difficult. The question of morality quickly becomes obsolete when faced with the threat of total destruction. Perhaps this is the most important lesson regarding the Polish use of CBW.

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