

Air Photo Evidence

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1. Introduction

During the 1930s German scientists and engineers pioneered aerial photography and developed it to high technological standards which the Allies did not attain until World War Two. During the Second World War German reconnaissance fliers took millions of photos of the contested areas as well as of areas in enemy territory. After the war these photos fell into American hands, and have been stored in the National Archives Air Photo Library in Alexandria, Virginia, ever since. The Soviets, British and Americans also took air photos of Germany and the German-occupied territories as of late 1943. This chapter shall examine a few of these photos to see what they can reveal about the events alleged to have taken place at certain sites in connection with the 'Final Solution' of the 'Jewish Question'.

2. Technique of Air Photo Interpretation

The correct interpretation of an air photo depends not only on the expertise of the interpreter, but also on the resolution of the photo and on the sharpness of its focus, in other words, on the quality of the cameras, films and the photographing technique (e.g., compensation for the motion of the airplane). The technique of stereoscopy in particular has effected great improvements in air photo interpretation. In this technique, two photos of the same area are taken in rapid succession. Due to the motion of the airplane, the angle at which the photos are taken will have changed somewhat in this brief time. If these two slightly different photos are then viewed through a stereoscope, one picture with each eye, the result is a three-dimensional effect that allows for the easy differentiation between raised and flat objects on the ground.¹

3. Air Photo Archeology

Air photo archeology was used as early as 1938 to locate the sites of medieval, ancient or even Stone Age settlements.² An element of vital importance to the discovery of ancient, extinct settlements is the fact that the remnants of these settlements – remnants which are generally sub-surface, i.e., underground today – are indicated by slight changes in topography, or even in the vegetation on the earth's surface. These minute differences can be made very clearly visible from great elevations. If, on the other hand, larger-scale disruptions of the soil involving disturbances of the vegetation and the nature of the soil date back only a few months, these changes are very easy to discern on air photos even if these disturbances have been covered up so as to prevent detection on ground level.

¹ Due to the photomechanical reproduction process, some of the pictures shown in this chapter are unfortunately of considerably poorer quality than the originals, so that they no longer show all the details which are clearly visible on the original exposures. Online documents are available at: www.air-photo.com/.

² Cf. O. G. S. Crawford, "Luftbildaufnahmen von archäologischen Bodendenkmälern in England", in *Luftbild und Luftbildmessung* No. 16, Hansa Luftbild, Berlin 1938, pp. 9-18; cf. also J. Dassié, *Manuel d'archéologie aérienne*, Editions Technique, Paris 1978; L. Deuel, *Flug ins Gestern – Das Abenteuer der Luftbildarchäologie*, C. H. Beck, Munich 1977.

4. Mass Graves

4.1. Hamburg, Katyn, and Bergen-Belsen³

The Allied bombing of Hamburg in late July 1943 – “*Operation Gomorrah*”, as the British called it – claimed more than 100,000 lives. Some 40,000 of these victims were buried in the Ohlsdorf cemetery, in four mass graves of 10,000 bodies each.⁴ Each of the graves is some 130 m long, 16 m wide and approximately 3.5 m deep (426ft. × 52ft. × 12 ft.).

In spring of 1940 the Soviets shot about 25,000 Polish officers and intellectuals in a forest near Katyn and at other locations in eastern Poland, and buried them in a number of mass graves.⁵ In 1943 some of them were discovered by the Germans, and investigated by an international delegation. The graves found, containing more than 4,100 bodies, covered a total area of 96 m × 6 m and were roughly 3.5 m deep (315ft. × 20ft. × 12 ft.).

In early 1945 the British established four mass graves near the former concentration camp Bergen-Belsen, to accommodate the countless typhus victims from that camp which had been dreadfully overcrowded near the war’s end.⁶ These graves measured about 20 m × 7 m × 3.5 m (66 ft. × 23 ft. × 12 ft.) each and contained some 1,000 bodies each.

As we can see, these graves mentioned above held approximately 1 to 2.5 bodies per cubic meter (1 to 2.5 per approximately 35 cu.ft.). Under realistic conditions, the maximum possible density would be roughly 8 bodies per cubic meter (10 per 44 cu.ft.), where the top vertical 1 m (3 ft.) of the grave consists only of a covering soil layer – meaning that, for a grave 3.5 m (12 ft.) deep, the greatest possible gross density is about 6 bodies per m³ (6 per approximately 35 cu.ft.). Thus, the mass graves of Katyn, Hamburg and Bergen-Belsen were not even filled to their maximum capacity.

In estimating the surface area required for mass graves, it must be kept in mind that the soil excavated takes up a greater volume than the graves themselves do, due to the loosening of the soil. What is more, the material excavated can be piled up only so steeply. Postulating, for example, rectangular graves of 15 m (50 ft.) width, and allowing 15 m (50 ft.) of space beside each grave to accommodate the excavated material – i.e., 15 m + 15 m, or 50 + 50 ft. breadth per grave (in fact a much too conservative estimate) – then for an excavation depth of 3.5 m (about 12 ft.) and a gross density of 6 bodies per m³ (roughly 6 per 35 cu.ft.) the minimum surface area required for mass graves for a given number of bodies is indicated in Table 1.

Table 1: Surface Area Requirements for Mass Graves		
# BODIES	SURFACE AREA NEEDED	
1,000	10 m × (5+5) m	= 100 m ² (≅ 1,080 sq.ft.)
10,000	50 m × (10+10) m	= 1,000 m ² (≅ 10,800 sq.ft.)
25,000	83 m × (15+15) m	= 2,500 m ² (≅ 26,900 sq.ft.)
100,000	4 × 83 m × (15+15) m	= 10,000 m ² (≅ 108,000 sq.ft.)
1,000,000	16 × 210 m × (15+15) m	= 100,000 m ² = 0.1 km ² (≅ 1,080,000 sq.ft. ≅ 25 acres)

³ For the air photos the reader is referred to my report: J. C. Ball, *Air Photo Evidence*, Ball Resource Services Ltd., Suite 160-7231, 120th St., Delta, BC, Canada, V4C 6P5, 1992.

⁴ M. Caidin, *The Night Hamburg Died*, Ballantine Books, New York 1960; M. Middlebrook, *The Battle of Hamburg*, McMillan, London 1980; D. Irving, *Und Deutschlands Städte starben nicht*, Schweizer Verlagshaus, Zürich 1967; regarding some photos of the victims of this Holocaust against the Germans see the contribution of Udo Walendy in this volume.

⁵ F. Kadell, *Die Katyn-Lüge*, Herbig, Munich 1991; J. Lauck, *Katyn Killings: In the Record*, Kingston Press, Clifton, NJ, 1974; 2nd ed.: *ibid.* 1988; A. Paul, *Katyn, The Untold Story of Stalin's Polish Massacre*, Charles Scribner's Sons, New York 1989; 2nd ed., 1991; W. Anders, *The Crimes of Katyn, Facts and Documents*, Polish Cultural Foundation, London 1965.

⁶ S. Bloch, *Holocaust and Rebirth: Surviving Bergen Belsen*, Holocaust Library, New York 1972.



Illustration 2: Air photo of concentration camp Treblinka B of November 1944.



Illustration 1: Air photo of concentration camp Treblinka B of May 15, 1944.

4.2. Mass Graves in So-Called Extermination Camps

4.2.1. Treblinka

Illustration 1 shows an air photo of the Treblinka B camp, taken on May 15, 1944.⁷ This is the place where, according to the standard literature, 700,000 to 1.2 million people were killed, buried in the southeastern corner of the camp, later dug up again and burned – all between mid-1942 and autumn of 1943.⁸ The camp was demolished in late 1943.⁹

This and other photos³ reveal the following:

- the surrounding land was cultivated right up to the edge of the camp;
- by virtue of the flat, treeless landscape it was possible to see right into the camp from the fields, as well as from the road running northeastward and from the town of Wolka Okraglik, only half a mile away;
- the place in the southeast area of the camp which the witnesses describe as the location of the mass graves is less than 10,000 m² (108,000 sq.ft.) in area. Therefore no more than 100,000 bodies could have been buried there. Mass graves for about 1,000,000 bodies would have required an area roughly equal to that of the entire camp (about 25 acres);

Illustration 2 shows an air photo from November 1944.¹⁰ Here the area is overgrown fairly uniformly with vegetation (grass, weeds). We can see that:

- except in the northernmost areas, there are no signs of any remnants of building foundations. Even if these had been removed, the vegetation would not grow as well over these areas. The massive concrete gas chamber buildings attested to by witnesses were not present here; at most, there may have been temporary barracks without stone or concrete foundations;
- large-scale movements of the soil and mass cremations in the southeastern part of the camp would have resulted in poorer growth of vegetation there than elsewhere in the camp, due to the destruction of the topsoil, *i.e.*, its mixing with deeper soil layers. Since this is not the case, disturbances of the soil as well as cremations can be ruled out for this area of the camp. The same goes for the surrounding agricultural areas;
- contrary to witness accounts, no trees or bushes were planted on the camp grounds for camouflage purposes.

4.2.2. Belzec, Sobibor, Majdanek¹¹

Much like Treblinka, the Belzec camp could easily be looked into from the nearby rail line and road. The town of Belzec was located about 1 mile north of the camp, which had been built on a hillside, into the forest. Air photos from 1944,¹² in other words from after the camp was dismantled, show that the area of the camp where witnesses claim mass graves containing some 600,000 bodies

⁷ Ref. No. GX 120 F 932 SK, exp. 125.

⁸ Cf. the chapter by A. Neumaier, this volume. Also U. Walendy, “*Der Fall Treblinka*”, *Historische Tatsachen* No. 44, Verlag für Volkstum und Zeitgeschichtsforschung, Vlotho 1990.

⁹ According to S. Werner the reason for that was the retreat of the German army in Russia, making any camps used for the transit of Jews to the East obsolete, see *Die 2. babylonische Gefangenschaft*, 2nd ed., Grabert, Tübingen 1991 (online: vho.org/D/d2bg/l_II.html; English: vho.org/GB/Books/tsbc)

¹⁰ Exact date unknown, Ref. No. GX 12225 SG, exp. 259.

¹¹ For these camps, cf. Y. Arad, *Belzec, Sobibor, Treblinka: The Operation Reinhard Death Camps*, University Press, Indiana 1987; E. Kogon, H. Langbein, A. Rückerl et al. (eds.), *Nationalsozialistische Massentötungen durch Giftgas*, Fischer, Frankfurt/Main 1983; E. Jäckel, P. Longerich, J. H. Schoeps (eds.), *Enzyklopädie des Holocaust*, Argon, Berlin 1993. Due to space limitations these three camps were only briefly mentioned here. For details cf. J. C. Ball, *op. cit.* (note 3).

¹² Ref. No. GX 8095 33 SK, exp. 155.

as well as their later cremation sites were located, had an area of approximately 7,000 m² (75,300 sq.ft.). No more than 70,000 bodies could thus have been buried there – provided that the rocky soil would even have allowed for the excavation of 12-ft.-deep graves in the first place. There is no evidence of any foundations left over from former buildings, nor of any large-scale movements of the soil or of mass cremations. There are no signs of any such activity anywhere in the surrounding area either.

It is claimed that in Sobibor 100,000 of the total 150,000 victims were buried before being exhumed later and being cremated along with the rest of the victims. The air photo from 1944,¹³ also taken after the camp was dismantled, shows this camp as having covered an area of roughly 50,000 m² (12.4 acres). Some 10,000 m² (107,600 sq.ft.) – fully $\pm$ of the total camp area – would have been needed to bury the victims. However, the air photo shows that the ground in the camp area was not disturbed. There are no signs of former building foundations, large-scale movements of earth, or cremation sites.

The Majdanek camp is located at the outskirts of the city of Lublin. Just as for Treblinka, the surrounding fields were cultivated right up to the camp boundary. The alleged gas chambers and the crematorium were outside the camp proper, openly visible and accessible to thousands of people living in the suburbs of Lublin.

4.3. Babi Yar

It is said that after the city of Kyiv was occupied by German troops the Jews of this city were taken to Babi Yar, a ravine at the northwestern edge of the city, near the Jewish cemetery. According to eyewitness accounts, they were shot there, thrown into the ravine, and buried – according to some witness statements, the ravine was also blasted and the bodies buried under the rubble.

In late summer of 1943, when the Front retreated again, the bodies were allegedly exhumed and cremated on gigantic funeral pyres or in pits. These activities allegedly ended on September 28, 1943, when the Kyiv area was already part of the main battle zone.¹⁴

Illustration 3 shows the ravine of Babi Yar in an air photo taken by the Luftwaffe on September 26, 1943.¹⁵ The part of the ravine (near the Jewish cemetery) where the massacre allegedly took place is shown as enlargement in *illustration 4*. What we see is in fact a placid and peaceful valley. Neither the topography nor the vegetation has been disrupted by human intervention. There are no access roads for the transport of humans or fuel, no fuel depots, no excavations, no burning sites, and no smoke.

We may conclude with certainty that no part of the Babi Yar ravine was subjected to topographical changes of any magnitude during the war years right up to the Soviet reoccupation of the area. The vegetation in this valley was also not disturbed.¹⁶ Hence, there can have been no mass graves in these locations, and the mass cremations attested to can also not have taken place at this time.

¹³ Ref. No. GX 191 F 910 SK, exp. 122.

¹⁴ Cf. the chapter by H. Tiedemann, this volume.

¹⁵ Ref. No. GX 3938 SG, exp. 104 and 105.

¹⁶ This statement can be documented with further air photos showing the valley prior to the war and again after Soviet reoccupation: the vegetation in the valley has grown, but nothing else has changed (May 17, 1939: GX 988 – exp. 48, 49; April 18, 1944: GX 4793 SK – exp. 39, 40). Due to space limitations we have dispensed with showing these pictures here, and chosen one instead that shows the location during the time of the attested-to mass exhumation and mass cremation.



Illustration 3: Luftwaffe air photo of the Babi Yar ravine, taken on Sept. 26, 1943.



Illustration 4: Enlargement of a portion of the Luftwaffe air photo taken of the Babi Yar ravine on Sept. 26, 1943. This portion shows the part of the valley near the Jewish cemetery.

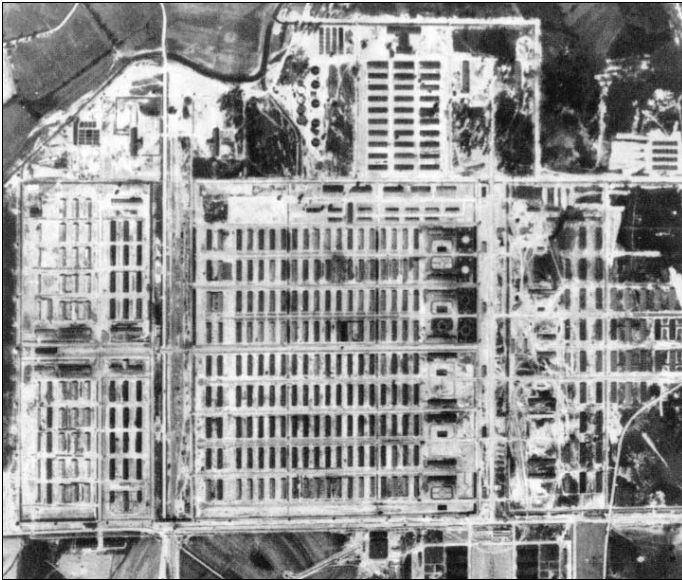


Illustration 5: Concentration camp Auschwitz-Birkenau. This American air photo was taken on May 31, 1944. Ref. No. R G 373 Can D 1508, exp. 3055.

5. Mass Extermination in Auschwitz-Birkenau

5.1. Alterations on Air Photos of Auschwitz-Birkenau

Contrary to the photos of the camps in eastern Poland, the photos of Auschwitz (*illustrations 5 and following*) were taken by the Americans. It took the Allied landing in Italy in autumn of 1943 before the Americans were able to bomb the industrial area of Upper Silesia; Allied reconnaissance flights over this area therefore did not begin until the winter of 1943/44.¹⁷ However, the corresponding air photos were not submitted to the National Archives by the CIA, and thus made accessible to the public, until the late 1970s. It was also the CIA which published the first photos of Auschwitz-Birkenau in 1979, authored by D. Brugnioni, R. Poirer.¹⁸

The Americans took many series of photographs of the Upper Silesian industrial area, and some of them are of excellent quality. Unfortunately, the Auschwitz-Birkenau camp group is shown on only about half a dozen photos, all of which are of mediocre or poor quality. One qualitatively excellent sequence of photos from June 26, 1944, breaks off just before Auschwitz. While it is possible that the cameras were turned off immediately after the plane flew over the main point of interest, namely the synthetic rubber plant in Monowitz, it seems more probable that these photos of excellent quality and resolution were in fact removed before the public could view them. We shall see the grounds for this supposition in the following.

¹⁷ However, bombing the Auschwitz camp itself would have made no sense (what ever was happening there), as James H. Kitchens has shown, “*The Bombing of Auschwitz Re-examined*”, *Journal of Military History*, April 1944, pp. 233-266.

¹⁸ D. Brugnioni, R. Poirer, *The Holocaust Revisited: A Retrospective Analysis of the Auschwitz-Birkenau Extermination Complex*, Central Intelligence Agency, Washington 1979; cf. review by W. Stäglich, *Deutschland in Geschichte und Gegenwart* 27(3) (1979) pp. 10-14 (online: vho.org/D/DGG/Staeglich27_3.html).

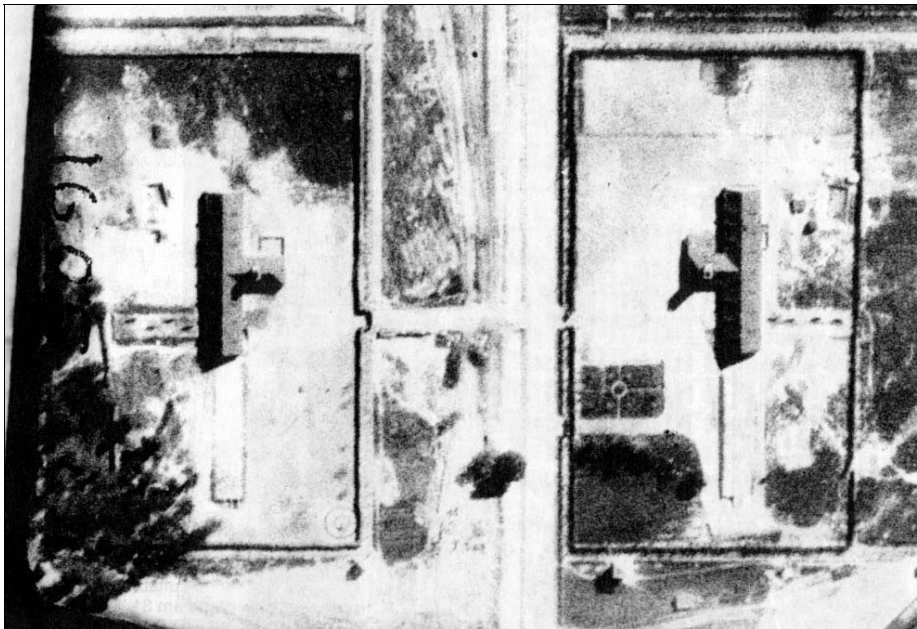


Illustration 6 : Detail enlargement of RG 373 Can F 5367, exp. 3185, Aug. 25, 1944, crematoria II and III.

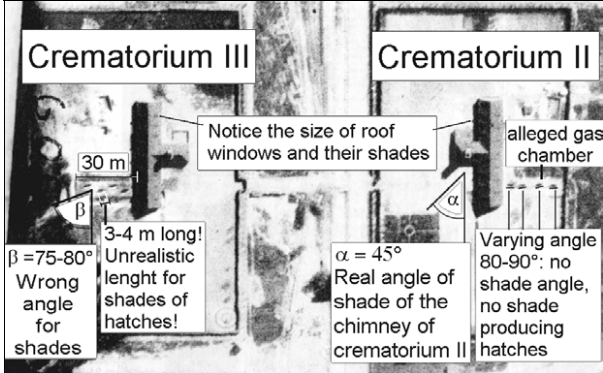


Illustration 7: Schematic drawing of the above air photo. One can easily see that the patches on the mortuaries 1 cannot be input hatches: too large, irregular, alignment incorrect for shadows.

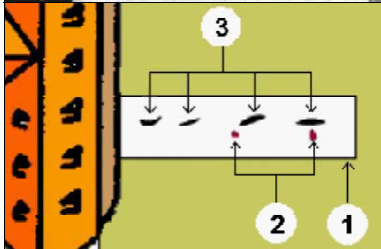


Illustration 8: Schematic drawing of the position and size of the patches (3) on the roof of mortuary 1 (the 'gas chamber', 1) of crematorium II and the location (2) of the only two holes to be found.

First it is interesting to note that in Birkenau as well, the surrounding land was cultivated right up to the edge of the camp, which would have rendered it impossible to keep anything secret that happened inside the camp. I would like to focus attention on two pictures of the Birkenau camp made on August 25, 1944.²³ The second picture was shot just 3.5 seconds after the first. This enables us to make a three-dimensional analysis with the help of a stereo viewer. But first we shall analyze only the first of these two pictures. Illustration 6 is an enlargement of the section around the crematoria II and III. Illustration 7 is a schematic drawing of this picture. The patches visible on the roof of the morgues 1 of both crematoria were identified as Zyklon B input hatches and their shadows by the CIA.¹⁸ However, even without the help of a 3D viewer, it is obvious that these patches cannot be input hatches:

- The alignment of the patches does not agree with the direction of the shadow cast by the crematorium chimney;
- on a photo from September 13, 1944, the patches on crematorium III retain their direction and shape even though the position of the sun has changed;¹⁹
- on that same photo the patches on mortuary 1 of crematorium II are missing;
- the length of the shadows corresponds to input hatches 4.5 ft. wide and rising 10 to 13 ft. above the roof – in other words, large chimneys, not the approximately 20-inch-high hatches attested to by witnesses;
- these jagged, irregular patches cannot be shadows cast by perpendicular, straight input hatches.

On Sept. 24, 1996, Brugnioni claimed in a private letter²⁰ that he views

“the marks as including the shadows of the vents, but also including roof discoloration marks perhaps from people walking around the area of the vents, causing discoloration of the roof, which showed up as the marks visible in the photos of the roof of the gas chamber”

As shown, these discolorations have nothing to do with shadows, and any discolorations from people walking around any objects, e.g., by destroying the grass growing on the two feet thick layer of earth on these roofs, would have a circular pattern around these objects, a linear pattern between them, and, as can be seen from other parts of the pictures, areas without proper plants growth cause a lighter color than those with proper plant coverage, and not darker, as they are in this picture.

Illustration 8, an enlarged section of the schematic drawing of *illustration 7*, reveals the discrepancy between the holes actually present in the roof of mortuary 1 of crematorium II and the patches added to the photo by the forgers. The location and size of the real holes, marked with a circle, do not correspond to the patches added.

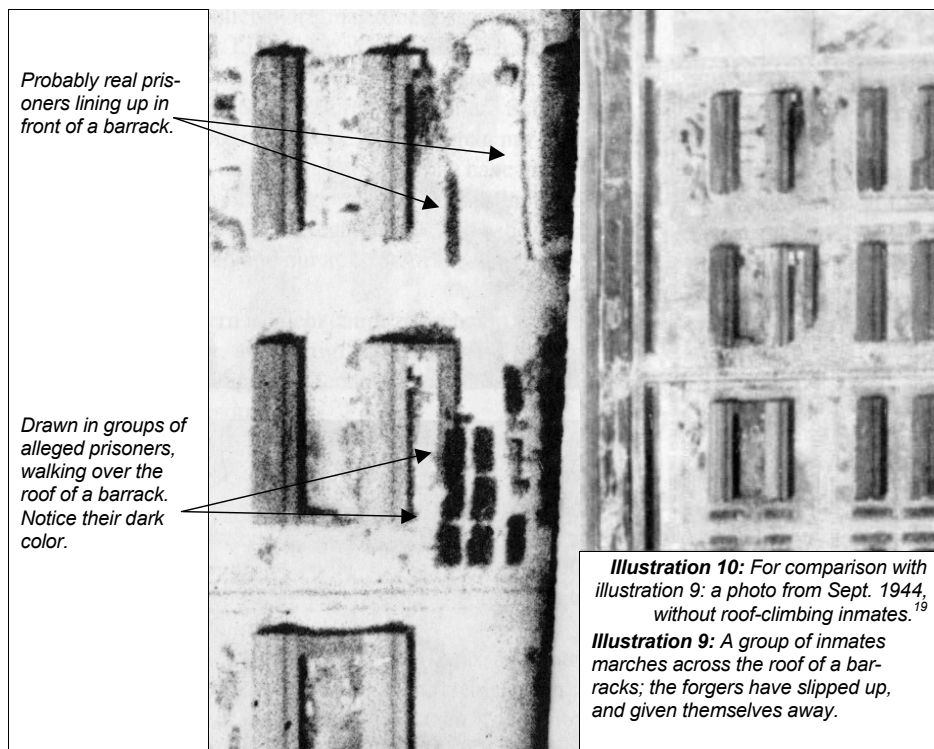
According to the CIA, the dark line surrounding both crematoria II and III was a wall or hedge intended to guard against prying eyes and to prevent attempted escapes. From a vast number of original, ground-based photos of the camp, however, we know that the crematoria were separated from the rest of the camp merely by a wire mesh fence, which would not show up on an air photo.²¹ On a photo of May 31, 1944, these dark lines around crematoria II and III were only incompletely drawn in.²² The same goes for the lines drawn around crematoria IV and V only on the photo of September 13, 1944.

¹⁹ Ref. No. RG 373 Can B 8413, exp. 6V2, J. C. Ball, *op. cit.* (note 3), p. 65.

²⁰ Charles D. Provan, “No Holes? No Holocaust?: A Study of the Holes in the Roof of Leichenkeller I of Krematorium 2 at Birkenau” (www.revisingrevisionism.com).

²¹ Cf. J. C. Ball, *ibid.*, pp. 45, 63; S. Klarsfeld, *The Auschwitz Album*, Beate Klarsfeld Foundation, New York 1980; the fence has partially survived to this day: J.-C. Pressac, *Auschwitz: Technique and Operation of the Gas Chambers*, Beate Klarsfeld Foundation, New York 1989.

²² Ref. No. RG 373 Can D 1508, exp. 3055, J. C. Ball, *op. cit.* (note 3), pp. 52, 64.



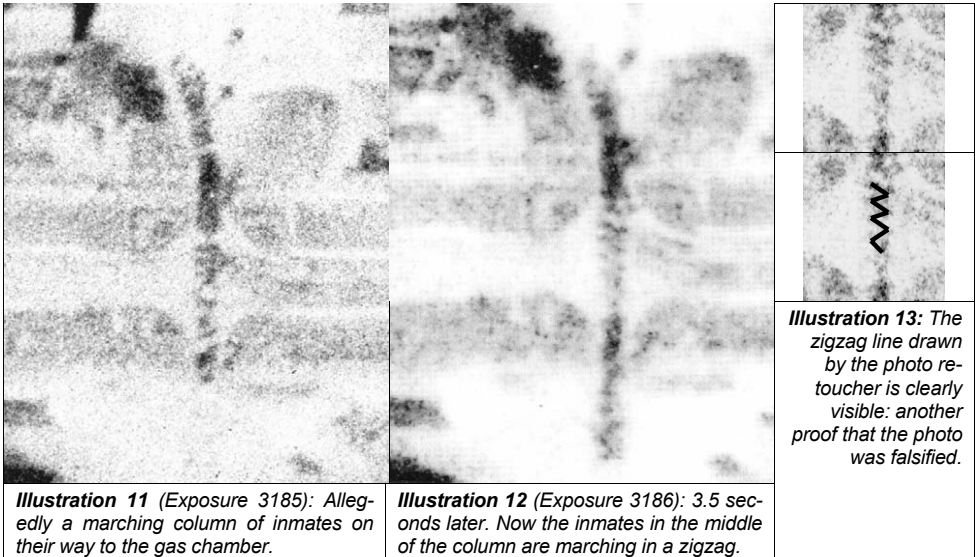
Viewing these pictures in 3-D, one realizes that neither the alleged wall nor the patches on the mortuaries have any elevation. What is more, the overly dark color of such narrow objects proves that what we have here is an instance of photo retouching.

Illustration 9 is another enlargement from the photo used for *illustration 6*. In this picture patches were added which, according to the CIA, represent groups of inmates. In this context one must consider that a group of inmates is not a massive block structure that could cast darker shadows than, for example, the barracks beside them. More than likely, therefore, the picture was ‘helped along a little’ here. This assumption is proven by the fact that some of these ‘groups of inmates’ are evidently marching across the roof of a barracks – a physical impossibility. This is shown clearly by the photo of September 13, *illustration 10*, where the barracks is also clearly visible, but this time without inmates marching across it.

Illustrations 11 and *12* (next page) show enlargements of details of the two photos taken in rapid succession on August 25, 1944.²³ According to the CIA’s interpretation this shows a group of inmates on their way to the gas chambers. What is most interesting is the manner in which this group of inmates moves (*illustration 13*): it moves in a zigzag – in a line added by a clumsy retoucher?

After realizing these facts of the matter, I went to the National Archives and requested to see the originals, since the photos given to me as originals had clearly been altered. And in fact I was then given air photos which I was assured were the originals. These were indeed of better quality than the negatives I had been given first: due to the better focus, the work of the forgers was considera-

²³ Ref. No. RG 373 Can F 5367, exp. 3185 & 3186.



bly more clearly apparent at the same places on the photos. When I pointed this out to the Archives staff, I was told that these were the negatives which the National Archives had received from the CIA in 1979, and that they had always believed that they were in the precise state in which they had been taken from the reconnaissance planes in 1944. I was told that I was the first member of the public ever to have seen these negatives. Now they would be returned to the archives forever, to be handed out only at the request of government agencies such as the CIA.

In light of the poor quality of the forgeries on these air photos, it is not likely that the alterations were added by a government agency or by the CIA itself. These authorities have highly qualified staff and advanced technology at their disposal and would have produced forgeries that were perfect, or at least very difficult to expose. However, it is remarkable that in 1999, Dino Brugnioni, the same author from the CIA who in 1979 published the air photos of Auschwitz,¹⁸ published a book about “*photographic deception and manipulation*”, exposing himself as an expert on making and/or recognizing faked pictures.²⁴ Mysteriously, he discusses the photo criticized here in his chapter on how to detect faked photos – of course without claiming that it was altered. Is that really a coincidence?

5.2. Mass Graves and Mass Cremation

To the immediate north of the Birkenau camp, near the presumed location of the so-called Bunker I, the air photos reveal rectangular patches which may perhaps stem from old, filled-in mass graves (*illustration 15*, right, page 281).²⁵ Their surface area totals approximately 3,600 m² (38,700 sq.ft.). West of the camp, more rectangles are visible, standing out from their surroundings due to their lighter coloring (totaling about 450 m², or 4,800 sq.ft., see *illustration 15*, top).

²⁴ D. Brugnioni, *Photo Fakery: The History and Techniques of Photographic Deception and Manipulation*, Brassey's, Washington, D.C., 1999.

²⁵ Details from air photo, *op. cit.* (note 22).

If one assumes that the patches north of the camp are mass graves, that these were 3 m (about 10 ft.) deep with a 1 m (3 ft.) covering soil layer, and that mass graves have a capacity of at most 8 bodies per m³ (10 per 44 cu.ft.),²⁶ this indicates a maximum of about 55,000 bodies that could have been contained therein.

Until early 1943, the Auschwitz-Birkenau camp group had only the old crematorium in the Auschwitz Main Camp at its disposal, so that during this time probably not all the dead could be cremated, but had to be buried in mass graves instead. D. Czech reports that as of approximately mid-September 1942 the mass graves in Birkenau were opened and emptied so as to prevent contamination of the ground water supply.²⁷ From November 1941 to September 1942 some 45,000 inmates died in Birkenau, mostly of typhus.²⁸ On the basis of the coke fuel deliveries, for which documentation exists, it can be determined that the Main Camp crematorium, having only 349.1 metric tons of coke delivered during this period, could have cremated a maximum of 11,400 bodies,²⁹ not all of which came from Birkenau, of course, but also from within the Main Camp itself. Thus one may expect that roughly 40,000 bodies were buried in Birkenau in mass graves between November 1941 and September 1942. This figure corresponds quite well with our calculations regarding the maximum capacity of the presumed former mass graves whose outlines we can detect on the air photos.³⁰

If Czech's statements regarding the opening of mass graves in September 1942 are correct, it seems quite plausible that from this time on until the new crematoria were put into operation in spring/summer 1943, there were indeed open-air funeral-pyre cremations of old, partially decomposed corpses. This work, which was likely performed by inmates, might represent the factual basis of greatly exaggerated and highly embellished eyewitness statements about perpetual, gigantic mass cremations on pyres and in deep pits. These witness statements generally place the open-air cremations in pits located behind crematorium V and west of the camp on a meadow near Bunker II,³¹ a former farmhouse allegedly renovated to serve as gas chamber. In the process, it is claimed, the great quantities of smoke emanating from the burning sites swathed the camp in dark clouds.³² Particularly from May to August 1944, during the time of the alleged destruction of the Hungarian Jews and the Jews from the Lodz ghetto, fires are said to have been burning in the fire pits day and night.³³ But the air photo of May 31, 1944, is the only one to show even relatively small drifts of smoke rising behind crematorium V.³⁴ Nothing even remotely similar is to be found at any other place, nor on any other photo. There are no considerable quantities of smoke issuing from the chim-

²⁶ Cf. the chapter by A. Neumaier, this volume.

²⁷ D. Czech, *Auschwitz Chronicle, 1939-1945*, Henry Holt, New York 1989, pp. 108, 242, 275.

²⁸ Cf. J.-C. Pressac, *Les Crématoires d'Auschwitz, la Machinerie du meurtre de masse*, CNRS, Paris 1993, pp. 144ff.

²⁹ Cf. the chapter by C. Mattogno and F. Deana, this volume.

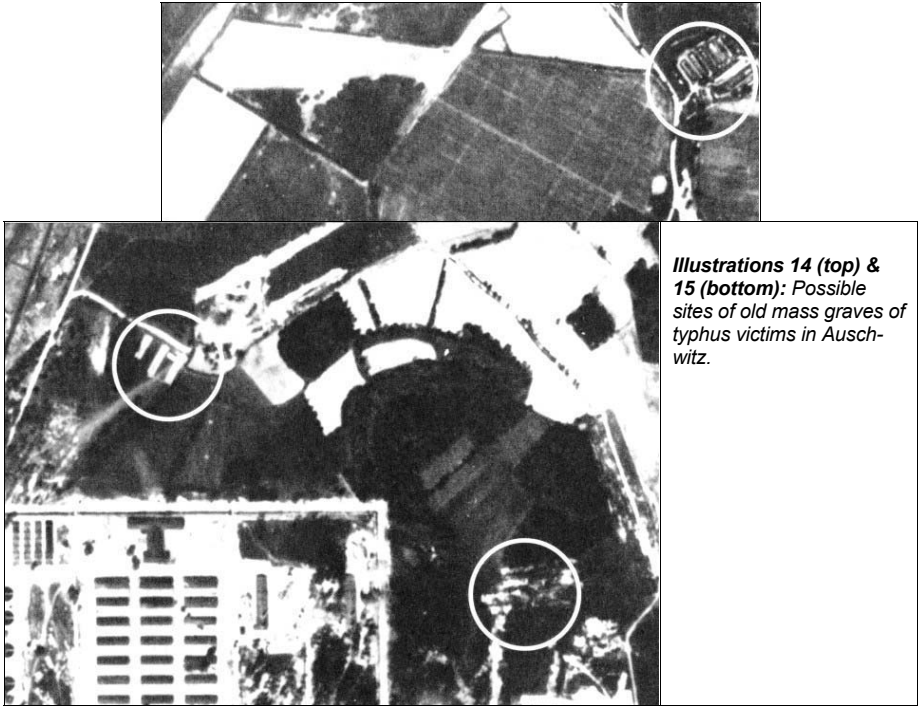
³⁰ Some time ago the Polish firm Hydrokop carried out drillings in Birkenau at the sites where, according to witnesses, mass graves and/or burning pits had been located. A few parts of the report based on these drillings have been published by U. Walendy in *Historische Tatsachen* No. 60, Verlag für Volkstum und Zeitgeschichtsforschung, Vlotho 1993. According to this report, charred wood as well as bones and hair were found at some points. A correct interpretation, however, would require access to the entire report. Also, the fragments of the report which are available fail to specify the exact location of the drill sites.

³¹ It is claimed that there was another farm house (Bunker I), but its exact location is unknown. It is not visible on any air photos, and so it will not enter into this discussion. It is alleged to have been located at the place where the aforementioned traces of possible mass graves are detected.

³² Aside from E. Jäckel et al. and E. Kogon et al., *op. cit.* (note 11), cf. also D. Czech, *op. cit.* (note 27), *passim*.

³³ Cf. J. S. Conway, "Der Holocaust in Ungarn. Neue Kontroversen und Überlegungen", *Vierteljahrshefte für Zeitgeschichte* 32 (1984) pp. 179-212; J. Wulf, "Lodz. Das letzte Ghetto auf polnischem Boden", *Aus Politik und Zeitgeschichte* 10(42) (1960) pp. 675-694; cf. also F. Piper, *Die Zahl der Opfer von Auschwitz*, Verlag Staatliches Museum Oswiecim, Auschwitz 1993, pp. 52, 69, 119ff.

³⁴ May 31, 1944, *op. cit.* (note 22).



neys, none in the vicinity of Bunker II, none anywhere else. The photo from September 13, 1944, is the only one to show any large smoke clouds at all, and these have drifted in from the surrounding industrial establishments which the Allies had just bombed. Establishment Professor G. Jagschitz's theory, proposing that perhaps the Allies had used filters that resolved the smoke on the photos,³⁵ is not even close. Smoke cannot be resolved by optical filters; at best, one could use film that is sensitive to a specific range of the electromagnetic spectrum which the smoke does not absorb. This, however, would have required a homogeneous and known composition of the smoke, as well as highly advanced technology at the Allies' disposal at the time. Neither factor is given. The Allied air photos were taken with perfectly normal, simple black-and-white film. If there are no smoke clouds visible on the photos, then there were no incinerations to cause them. Further, in light of the absence of any pits, pyres, fuel depots and heaps of corpses it is downright irrelevant whether the smoke might have been visible or invisible, since there was nothing that could have caused it in the first place. Filters to render fuel depots, burning pits, heaps of corpses etc. invisible have yet to be invented, even today.

³⁵ Transcript of the report of Prof. G. Jagschitz, 3rd-5th day of the trial of G. Honsik, April 29 and 30, May 4, 1992, Ref. 20e Vr 14184 and Hv 5720/90, District Court Vienna, p. 478 of the transcript.

6. Conclusions

<i>Hamburg, Katyn, Bergen-Belsen</i> The mass graves of Hamburg, Katyn and Bergen-Belsen demonstrate how great the area requirements are for mass graves. Due to the area required for the excavated material, which in realistic terms is much greater than the theoretical minimum areas calculated in Table 1, 10,000 bodies need at least 4,000 m² (43,000 sq.ft.).	<i>Treblinka</i> Mass graves for the alleged 700,000 to 1.2 million victims of this camp would have required 40 times as much space as the witnesses state was available. The ground in the camp area shows no traces of former building foundations, large mass graves or burning pits.
<i>Sobibor, Belzec, Majdanek</i> As in the case of Treblinka, it would have been impossible in Majdanek or Belzec to keep any mass murder secret; the close proximity of settlements and roads, and the cultivation of surrounding farm land right up to the camp fences, saw to that. In no case is there any evidence for mass graves or burning pits.	<i>Babi Yar</i> The ravine of Babi Yar underwent no noticeable changes in topography or vegetation up to the end of the war. There are no signs of human intervention during the time of German occupation. There was no human activity there at the time of the mass cremations attested to by the witnesses.
<i>Auschwitz-Birkenau</i> The few air photos of Auschwitz-Birkenau known to date from the period of December 1943 to February 1945 show no signs of fuel depots, smoke from chimneys or open fires, burning pits or pyres. The photos were altered: Zyklon B input hatches, groups of inmates, and walls around crematoria were retouched onto the photo negatives. Insofar as they still exist, photos of good quality are being kept from the public. One must assume that any actual mass murder activities would not have escaped the notice of the air photo interpreters. This would have resulted in the bombing of the camp – which, however, was carefully refrained from.³⁶	
<i>The Bottom Line</i> To this day there is no air photo evidence to support the alleged mass murder of the Jews at any location in Europe occupied by the Germans during World War Two. Further, air photo analysis refutes the claim that the ‘Nazis’ had intended, at whatever time, to keep events in the alleged extermination camps secret. In many cases the air photos provide clear proof that some of the events attested to by witnesses, such as the destruction of the Hungarian Jews or the mass executions at Babi Yar, did not in fact take place. We may hope that the release of Soviet air photos dating from the time the camps were in operation will shed further light on these issues. The fact that these photos have not been published to date may already speak for itself. That the photos in western hands were altered in order to incriminate Germany, and were first published by the CIA, is also very significant indeed.	

³⁶ Cf. also J. Konieczny, *The Soviets, but not the Western Allies, should have bombed the Auschwitz Camp*, Polish Historical Society, PO Box 8024, Stamford, CT 06905, 1993.