Rumors of Flight: The photographic record of the Wright Brothers at Huffman Prairie

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Today, one hundred years after the Wright Brothers conducted their research leading to powered flight, we can revisit the period between 1900 and 1905. We know what the brothers did, and how they did it, largely because the Wrights conscientiously recorded their work both visually and verbally. In this sense, they showed an extraordinary dimension of their inventiveness.

The camera was an important instrument of their research. The Wright Brothers as inventors had a unique understanding of the power of photography to make an accurate representation of reality (Nolan, 1984). As a result, the Wright Brothers have left us a huge collection of photographic images that include an enormous amount of information. This record is a part of the Wright legacy that has not been explored extensively.

The purpose of this report is to discuss the photographs from the Wright Brothers' collection that document the Huffman Prairie experiences of 1904 and 1905, with special emphasis on two questions:

- First, what do the photographs say about flying at Huffman Prairie in 1904 and 1905?
- Second, who were the photographers and, as an extension of that question, what were the shooting styles and strategies of the photographers, as evidenced by the photographs?

Background

Among the photographic records of the Wrights' accomplishments in aeronautics from 1900 through 1905, the photos from Huffman Prairie, especially the 1905 images, can be seen as their capstone work. Concerning the Wright photo collection, which covers the period from 1898 well into the twentieth century, Ron Geibert (1984) has noted an "aesthetic improvement from year to year, moving from staid centered images to more innovatively presented frames" (p. 15). After 1905, the brothers' work turned more toward flying exhibitions and courtroom fights, with far fewer images of flight.

In fact, the Wrights' interest in photography predates their serious interest in aeronautics. There is considerable evidence of their visual sense, from early notebooks through records of the newspapers they published and other publications (Nolan and Zamonski, 1977).

In addition, the Wrights utilized high-quality cameras and equipment. Their Korona view camera and equipment, now in the Carillon Park Collection in Dayton, Ohio, was purchased from the Grundlach Optical Company of Rochester, New York, in 1902 for $55.55 (Wright State University Special Collections and Archives), and used from that point on to record their experiments at Kitty Hawk, and at Huffman Prairie. It produced a large 5x7 image on glass plate negatives that they processed in their home darkroom, and their recorded notes indicate they used high-quality orthochromatic and non-halation plates (Wright, O., 1902-03). A comparison of their images in the Wright State University Special Collections with those of Octave Chanute, also in the WSU collection, shows the Wright images are of higher quality in composition, clarity, focus, and processing.
The photographic record of the Wrights prior to Huffman Prairie

Photos of 1900-1901 include a visual survey of the Kitty Hawk surroundings, static frames of the gliders and a few images of the gliders in flight. The best of these were assembled into a "lantern slide" show by Wilbur on Sept. 18, 1901, for the Western Society of Engineers in Chicago.

Kitty Hawk photos of 1902, shot with the Wrights' new Korona camera, include an assortment of high-quality images of gliders in flight. The 1903 photos include frames depicting the interior of the Wright hangars, an assortment of photographs that record the flying machine, the "First Flight" image, and a frame of the 1903 Flyer in its longest flight on December 17, 1903, just before the machine was wrecked.

The photographic record of the Huffman Prairie experience

Because the Wrights chose to work alone, without the various assistants who had joined them in Kitty Hawk, they were less able to organize their photography during their work at Huffman Prairie. On the other hand, the brothers were working closer to home, with easier access to their darkroom, photographic equipment and supplies.

Existing images indicated the Wrights took approximately 32 glass plate photographs during their Huffman Prairie experience, and the quality of the photos mirrored the extent of their flying at Huffman Prairie. In 1904, although they began their efforts in May, there are no images clearly showing flight until a plate shot on August 5, which Wilbur recorded as flight number 19, of 356 feet. That is followed by about a half dozen flight photos, generally shot at takeoff, and spread over the period between mid-August and mid-November.

The flight 19 frame is important, because its background clearly helps locate the flight on the field. This was a beginning for the project reported here.
Viewers should note the house and barns clearly visible in the background behind the airborne Flyer. In addition, the original prints show a horse and buggy in front of the house. A map drawn by Orville Wright from memory in 1928 exists in the Wright State collections.
Are the buggy and the house on Dayton-Yellow Springs Road? A check of county maps indicates that there was a farm house on that road, at that location (Greene County Records Center and Archives).

The map, drawn before 1890, does not include the Dayton, Springfield and Urbana electric interurban railway that bordered the flying field to the west. However, an assortment of Huffman Prairie photos in the archive do show what appear to be the power poles and lines that would be typical along the interurban line. One photograph from a 1910 celebration shows a gathering at Simms Station, with an interurban car, and the poles and lines.

This leaves for modern viewers a pretty clear picture of that "station". Paying attention to the pattern of trees, viewers can see an emerging horizon. With another pair of existing images, a wide view of the scene, looking approximately north in 1904, can be assembled, and from it the viewer can tell that flight 19 was headed in a northwest direction.
Other frames continue to show the house and barn, and horse and buggy witnesses to the flights. Viewers can move west and south now, using the railway and trees, along the railway and Dayton-Springfield Pike.

In another example, it is possible to examine one of the better-known images, of a crash in August, '04.

Some things to note:

- It's August and hazy.
- Wilbur is in the foreground, looking rather concerned.
- The plane has crashed nose-down. You can see the propellers, the top and bottom wings, and upon close inspection, the white of the crushed front elevators can be seen.
- The background includes power lines. This plane was headed west on takeoff--note launch rail--when it veered northwest and crashed.

Look closely at the trees. Orville's map indicates several smaller trees and a large tree that in
his notes he called a thorn tree. We have a photographic record of these trees, further placing the action on the field. By observing the unique appearance of several trees visible among the row along the interurban line to the west, another horizon line can be established.

The thorn tree was of special interest, because the Wrights used it as a pylon when they began controlled flights, and Orville even brushed its branches once during a flight on Sept. 28, 1905. We have a picture, dated October, 1904, of an airplane launch, and the foreground includes a large tree.

( It appears to have some leaves, but in late October in Ohio that's getting less likely. A close inspection of the original print image indicates the "leaves" are seed pods typical of honey locust trees, and the large tree around which the Wrights flew was a honey locust (Howard, 1987). So probably this is the big tree at the far end of the field around which the Wrights flew, and the image indicates a view looking approximately northeast.
This picture is of special interest, because it clearly shows the hangar. Close inspection of the original print also shows the launch tower the Wrights developed and began to use in September, 1904. McFarland (1953) says the first photo of 1905 is the first image that includes the tower, but the tree photo is dated Oct. 14, 1904. Also note that the image includes a few hills that rise off toward the east horizon, as well as the farmhouse along Dayton-Yellow Springs Road.

This begins to establish a more complete panorama of Huffman Prairie. The photos show it obviously was not like today's busy Air Force base, but it was not desolate, either. There are a few farm houses, traffic on Dayton-Yellow Springs Rd., interurban traffic, and some people watching.

The evidence indicates there were other people at Huffman Prairie, but it is not possible to identify them individually. For example, we have the photos of Sept. 29, 1905, when Wilbur Wright flew 14 circuits of the field. His notes say Mr. Huffman, the field's owner, witnessed the flight, and a close inspection of the lower right corner of the frame shows Mr. Huffman, or perhaps Wright mechanic Charlie Taylor.

The Wright diary on this day says "12 pictures," probably shot by Orville. In an article by the author published in Spring, 2001, in Visual Communication Quarterly, it is shown that the brothers' pictures generally are in groups of six, probably because they carried their glass plates in typical plate holders that held six photographic plates (McFarland, 1953, p. 255). It's not until September of 1905, however, that the brothers were in the air long enough to reload the camera and shoot more than one frame per flight. Therefore we can assume Orville shot two carriers full of plates as the plane circled overhead on September 29.

For many frames, it's a pretty safe assumption that the brother who wasn't flying shot the pictures. But for many frames, the photographer must for now remain unknown. For example, the first picture from Huffman Prairie may have been shot by brother Lorin Wright, who
visited Huffman Prairie with their father, Bishop Milton Wright, in May 1904, according to the bishop's diary. In addition, the first photo shot in 1905 shows both Orville and probably Wilbur, as well as an assistant. Perhaps this also was shot by Lorin.

Other interesting observations include the shot from below the tree. It may have been taken by their benefactor Octave Chanute, who was visiting the Wrights that day. Chanute was aware of the value of a pictorial record, and had urged the brothers to "take plenty of snapshots" (McFarland, 1953, p. 83).

Conclusions and recommendations

This project has shown that by examining the evidence in the Wright photos taken at Huffman Prairie, the images can be reassembled to put the viewer in a "virtual prairie" of 1904-05. The complete view shows typical Ohio farmland.

Unfortunately, the photographers for many of the images shot at Huffman Prairie can't be determined. It is possible to make educated guesses, based on the record of visitors to the flying field, but the scant evidence doesn't reveal shooting styles and strategies.

Lastly, scholars can learn a lot from the Wright brothers photos, but the collections at WSU, the Library of Congress and elsewhere need to be organized to eliminate duplications, to standardize the numbering and to preserve these historic images.

Bibliography

Bath Township map, (circa 1890). Greene County Records Center and Archives, Xenia, Ohio.


Wright State University Special Collections and Archives. The Wright Brothers Collection, Box 4, MS.1. Dayton, Ohio: Dunbar Library, Wright State University.