

# In a time when the world and its phenomena have been photographed many times over, what can we learn by revisiting the early days of photography, when strange, dramatic, and novel images served as both evidence and entertainment?

## Marvels and Spectacles: Photographic Exploration and the "First Glimpse"

Jennifer Tucker

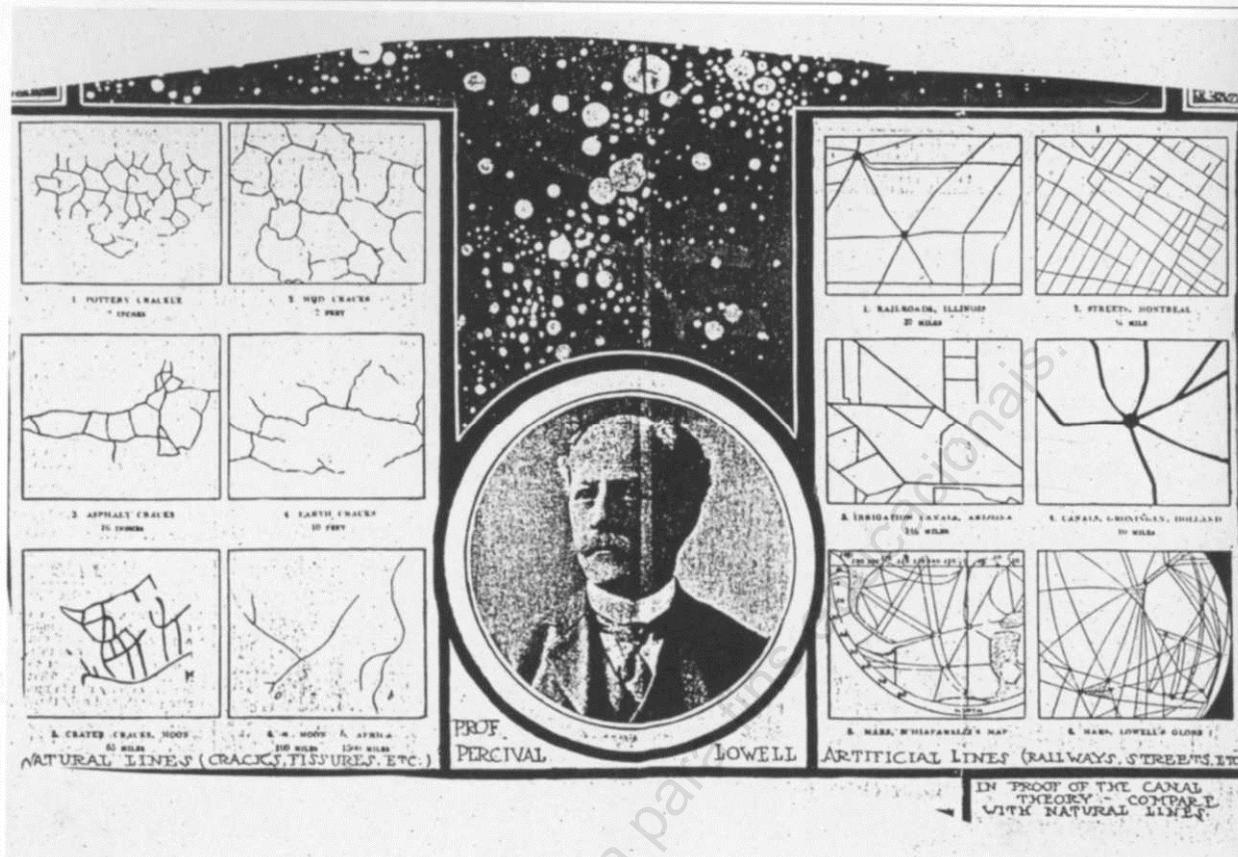
A century and half ago, James Glaisher, astronomer, meteorologist, and longtime president of the Royal Photographic Society, made a series of balloon ascents from London, recording measurements in the upper atmosphere. Although gas leaks from the balloon fogged his plates and spoiled his photographic efforts, Glaisher's vivid accounts of his experience (published with illustrations in his 1871 book *Travels in the Air*) raised both scientific and popular interest in what might be seen if cameras were taken into new places or situations.

The history of photographing marvels—both natural and artificial—is made up not only of images. While early photographs of microbes, solar eclipses, the lunar surface, fleeting meteorological events, biological specimens, faraway landscapes, and the like today have much value as objects of research and as aesthetic wonders, they also have a story to tell about the making, display, and sensationalizing of "first glimpses" for mass audiences. Like the Eiffel Tower and other feats of Victorian engineering, dramatic "first glimpse" photographs of the period provoked questions and deliberations about the new technologies used to achieve them: Did they bring new understanding? Could they be trusted? How far—and by whom—was their impact felt? And was there a line between knowledge and entertainment, between science and show?



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Professor Percival Lowell, with illustrations contrasting "natural" cracks (geological formations) and "artificial" cracks (railroad tracks and canals). From "Will the New Year Solve the Riddle of Mars?" *New York Herald*, December 30, 1906  
 Press Clippings Collection, Lowell Observatory Archives, Flagstaff, Arizona



Many described the emergent roles of photography in terms of social types: *witness, detective, spy*. Photographs were often referred to as *curiosities* and *specimens*—to be collected and exchanged like interesting rocks or botanical samples.

Photography in the nineteenth century offered a new way of seeing the world, and of sharing unprecedented views with myriad others. Beginning in the 1850s, exploratory expeditions were often accompanied by photographers, and by 1900 virtually every national museum, observatory, and hospital in Western Europe had its photographic operator. Optimists proposed the creation of national archives throughout the world, to house thousands of photographic images, from visual chronicles of scientific travels to records documenting the progress of diseases. Photographs from afar were praised for bringing "to our own fireside pictures from every land"—which came to the public at first in books, and later in magazines and newspapers, as well as in lantern slide shows, popular-science demonstrations, and World's Fairs and similar expositions.

And along with the wonders it brought home to the fireside, the technical phenomenon of photography was of course an attraction in itself. At London's National Gallery of Practical Science, Blending Instruction with Amusement (also known as the Adelaide Gallery), photography and its products were touted as "useful and beautiful" tools. The Gallery was a well-known public venue where inventors could demonstrate their work to patrons and audiences and appear before the public as respectable "men of science." It was a labyrinth of spaces containing working laboratories, lecture halls, a Loom and Lithographic Press Room, a Microscope Room (housing a "Grand Oxy-Hydrogen Microscope"), and at its center a massive Long Room that featured a seventy-foot canal for demonstrating models of paddle-driven steamboats. Associated with optical phenomena from the start, the Adelaide Gallery was also the workplace of French photographer Antoine Claudet, one of the first daguerreotype portraitists in England, who operated a rooftop studio here from 1841 to 1851. The arcade and streets surrounding the Gallery were filled with fashionable shops and vendors competing for attention, displaying everything from waxworks, sculpture, and painting to optical implements showing panoramas, dioramas, and dissolving views.

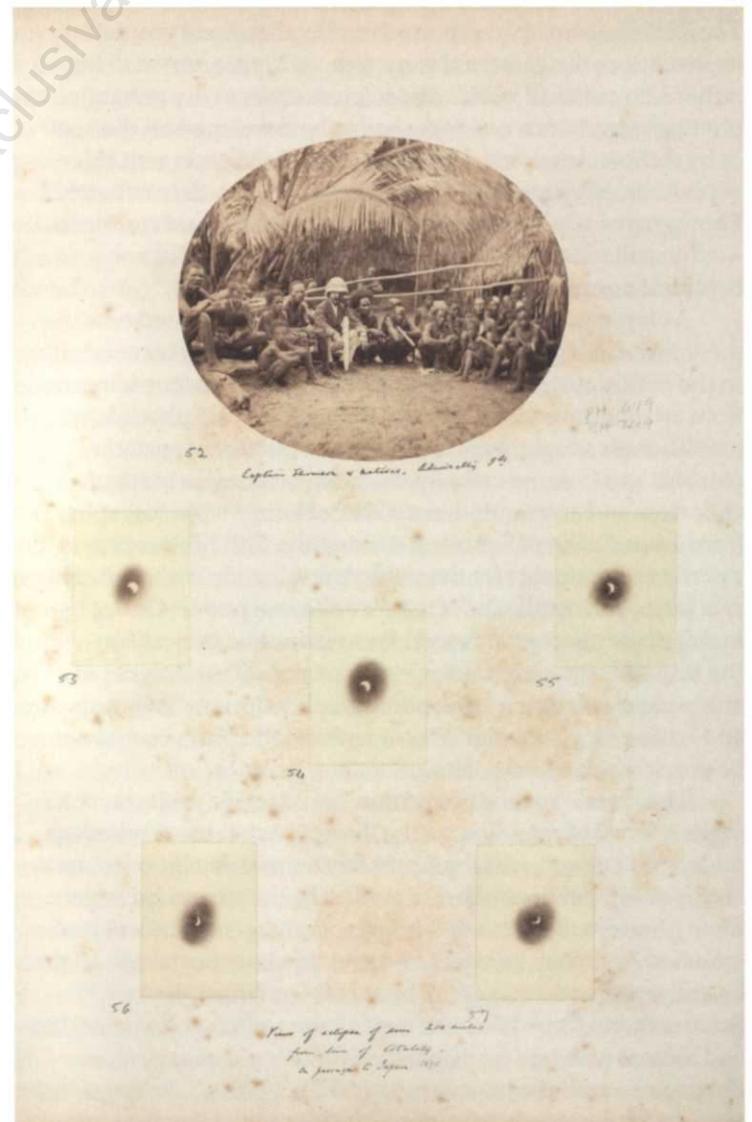
a British Royal Navy ship was refitted for scientific work: guns were removed to make space for laboratories, dredging operations, and specimens of more than four thousand species. During their four-year adventure—encompassing the Cape Verde Islands, Hong Kong, the Cape of Good Hope, Australia, New Zealand, and Japan—the expedition's scientists made discoveries that laid the foundations of oceanography. They also made photographic records of a gamut of subjects, from the botanical to the ethnographic to the astronomical: one page shows a scientist seated with local inhabitants during one of the **Challenger's** stops, with solar eclipse photographs pasted below. The ship's photographer had his own darkroom onboard; the **Challenger** expedition seems to have been the first to use this relatively new technology. The British public was keenly interested in the voyage, and the press kept them apprised— though with drawings and engravings far more than with photographs (only after the ship's return to England were some of the many photographs published).

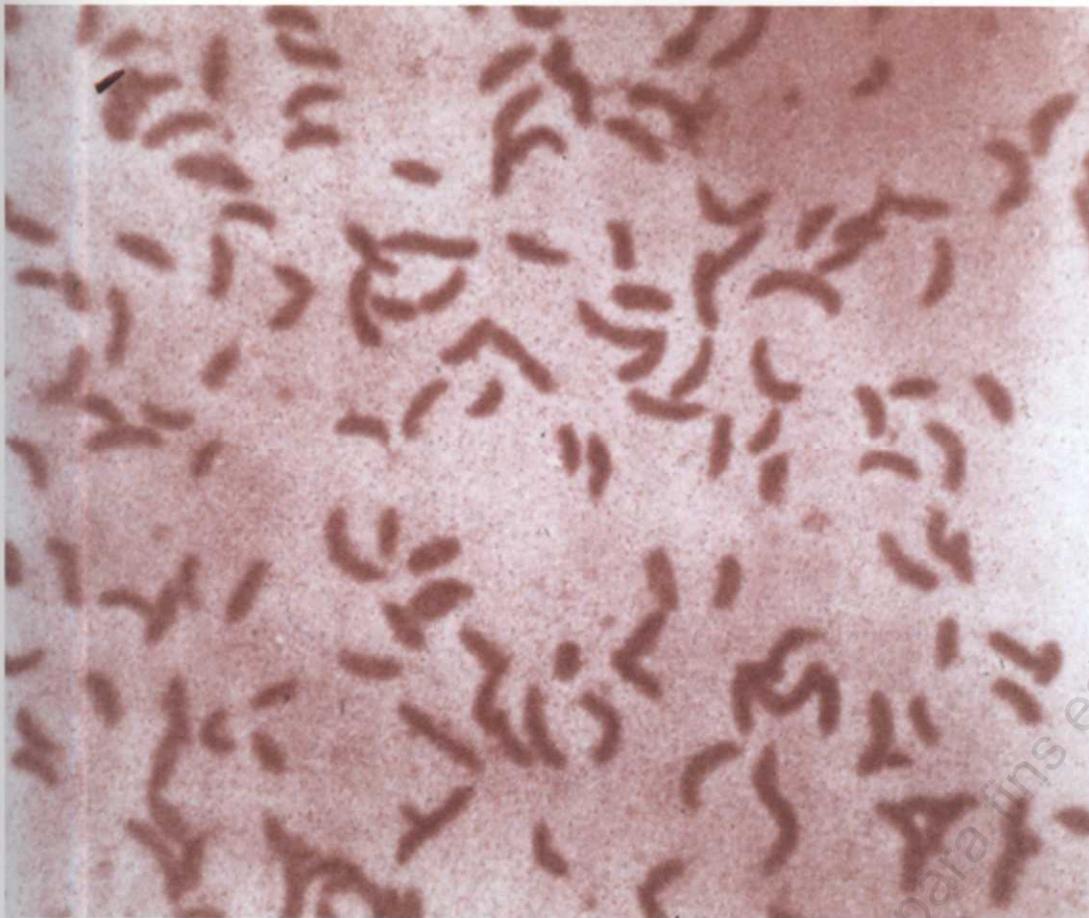
Salons and other meetings of the scientific literati offered forums for "first glimpse" images within the academic community. One photomicrograph of bacteria by Victorian microscopist Andrew Pringle, from around 1890, shows us how scientific photography occasionally borrowed aesthetic conceits from other areas of photographic practice: in this case the "portrait frame," used popularly for commercial photographs. Pringle was a member of the Royal Microscopical Society as well as an expert photographer; his images of bacteria and other microscopic phenomena were circulated in scientific atlases, textbooks, and prints. Microbiologist Edgar Crookshank's striking image of bacteria magnified twenty-five hundred times was published in his 1887 book **Photographs of Bacteria**—the first text in English devoted solely to photographs of bacteria.

The press naturally played an important role both in bringing such images to the public and in deploying photography as a forceful tool in convincing readers of the veracity of certain scientific—and sometimes unorthodox—theories. In 1905 the first photographic pictures of Mars were made at the Lowell Observatory in Flagstaff, Arizona. Percival Lowell, an American astronomer—and a believer in life on Mars—felt that his photographs revealed a network of canals, thus providing "objective proof" that there was intelligent life on the planet. (He later referred to the images as "doubt-killing bullets from the planet of war.") But even with this photographic "proof" in hand, Lowell had to get the images out to the world in order to get his message across. The original photographs were small and the canals difficult to discern in them; mechanical reproduction in print would pose serious challenges. To overcome this hurdle, Lowell followed a path well trod by entertainers, science popularizers, and tradespeople alike: he toted his original photographs of Mars from place to place, making them available for public inspection at natural-history museums and scientific societies throughout the United States and Europe. His efforts were wildly successful; indeed, it seems that the maverick scientist himself was sometimes of more interest to audiences than his canals: the December 30, 1906, **New York Herald** shows "Professor Percival Lowell" as the central image, framed on either side by illustrations contrasting "natural" and "artificial" planetary fissures.

Lowell's campaign hit its mark, at least for a moment. In 1907 the editors of the **Wall Street Journal** asked readers: "What has been in your opinion the most extraordinary event of the [past] twelve months?" As the paper reported, it was "not the financial panic which is occupying our minds" (it had been a bad year for the stock market), but rather "the proof afforded by astronomical observations... that conscious, intelligent life exists upon the planet Mars."

Photographs of a solar eclipse pasted below a group portrait (titled *Captain Thompson with Natives, Admiralty Islands*), showing a scientist seated with inhabitants of the South Pacific Admiralty Islands, made during the expedition of the H.M.S. *Challenger*, 1872–76, from an album of photographs belonging to Alfred Carpenter, a lieutenant who traveled on the *Challenger*. Courtesy Picture Library, The Natural History Museum, London





Comma-bacilli, stained with fuchsin. Enlargement (2,500 times) from a photographic negative. Plate from Edgar Crookshank's *Photography of Bacteria* (London: H. K. Lewis, 1887)

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Such was the power of the photographic image in that era of spectacle—a power that was sometimes compounded by tabloid rhetoric. NASA's 2012 Mars photographs, by contrast, came nowhere near to trumping the world's economic news or other headlines for public attention—despite assurances from the press that we had never before seen anything like this: "**Curiosity** Rover Snaps 1st Photos of Mars at Night" (NBC News) and "NASA Reveals Stunning New Images from Mars **Curiosity**" (in London's *Daily Mail*). In our age of image inundation, there is perhaps no longer such a thing as a "first glimpse"—or if it exists, the public's interest in it is quickly diverted.

It has been often observed that the impact of photography in the nineteenth century was in many ways as revolutionary to the public mind as the advent of the Internet has been for today's generations. And the questions raised back in the era of mechanical reproduction pertain in new ways now: Do new technologies bring new understanding? Can they be trusted? How far—and by whom—is their impact felt? Is there a line between knowledge and entertainment, between science and show? To these questions we may add another: Are we capable still of experiencing the exhilarating shock of amazement that once accompanied images of discovery?

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