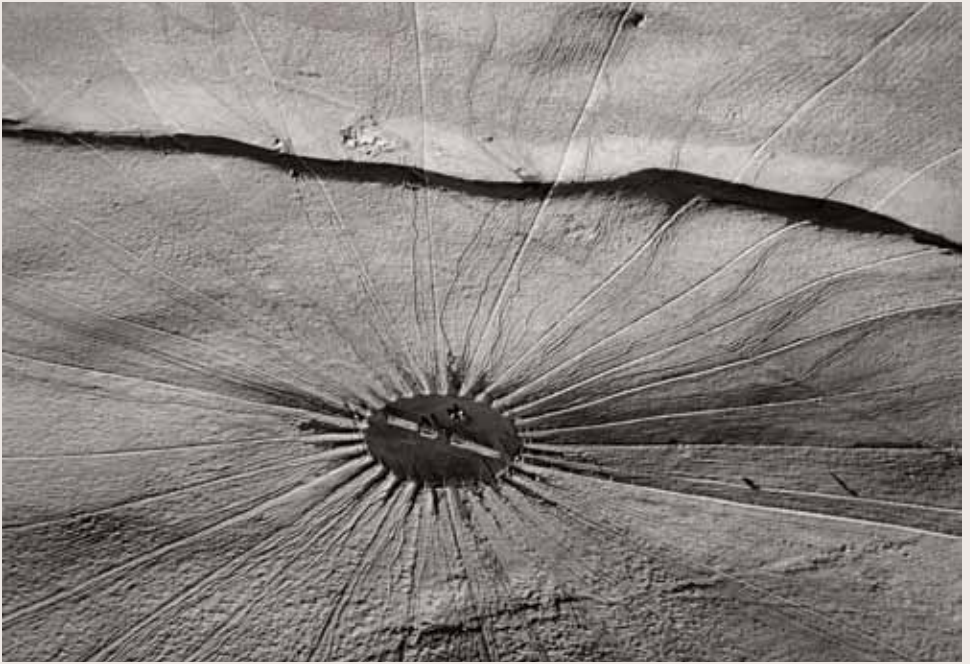
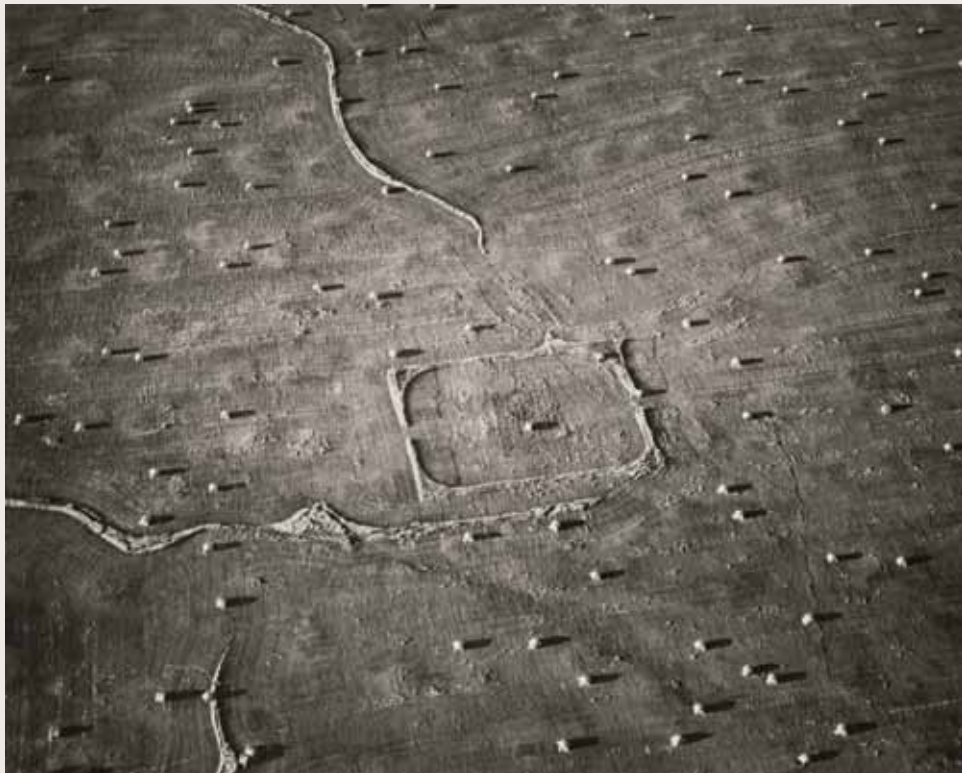


From Above

aerial photography
from the center for creative photography





Neal Rantoul. Martha's Vineyard 12, 2012.

Archival inkjet print. Gift of the artist. © Neal Rantoul

Martin Stupich. Haying near Pass Creek, Carbon County, WY, 1998.

Gelatin silver print. Water in the West Archive. © Martin Stupich

From Above

aerial photography
from the center for creative photography

Doris and John Norton Gallery for the
Center for Creative Photography, Phoenix Art Museum

May 4 to September 22, 2013

The collection at the Center for Creative Photography has an excellent representation of American aerial photography, made throughout the twentieth century and into the twenty-first. To understand the origins of airborne photographs it is necessary to look to Europe. French photographer Gaspard-Félix Tournachon (known as Nadar, 1820–1910) made the first successful aerial photographic image in 1858, from a balloon tethered over the village of Petit-Bicêtre outside Paris, thus mechanizing the popular impulse to present cities from a “bird’s eye view.” In these early years of technical innovation, aerial photography was fueled by an interest in mapping, especially for use in military reconnaissance: in the United States, in 1862, the Union Army used a balloon to observe Confederate troop positions during the Civil War, but Southern soldiers quickly realized that the balloons were vulnerable to a sharp-shooter’s aim, and no extant photographs verify that photography was part of these reconnaissance missions. Kites were an alternative to balloons, such as the twelve-kite system used by Chicago-based photographer, George Lawrence, to capture the devastation wrought by fire following the 1906 San Francisco earthquake. The aerial perspective allowed Lawrence to demonstrate the scope of the event, resulting in photographs that were reproduced in newspapers around the world. Scientists such as Bavarian mathematician and geodetist, Sebastian Finsterwalder, also appreciated the value of the new aerial perspective for collecting data. He started a project in 1888 to make balloon photographs to track the movements and changes in size of Swiss glaciers. In the Center’s collection, we see all of these uses of aerial photography—military reconnaissance, photojournalism, scientific exploration—and, of course, the creation of art works, all included in the exhibition *From Above*.

A study of aerial photography requires an understanding of its unique language. In 2013, we live in an age of ubiquitous photography, and with the omnipresence of photography comes the omnipresence of the photographic language. Photography, speaking more broadly, has its own unique language, which includes a range of visual characteristics, including foreshortening (things closer to the camera look bigger than things further away); the “freezing” of action with a quick shutter speed; the blur of motion during a long exposure; and the way a harsh flash affects a space (makes things near the camera bright and over-exposed, leaving background details in



shadow), to name a few. These characteristics of the photographic language are becoming increasingly familiar and we accept them without consciously identifying them as specific to photography.

Aerial photography, however, has its own language, which is less familiar. Aerial photographs tend to be more abstract than ground-based pictures, as they are made from an atypical perspective and have a scale that is often hard

to judge. Aerial pictures may not show the horizon, thwarting an expectation of how a “picture” of the land is typically organized, with a foreground, middle ground, and distant horizon. The elevated vantage point also allows aerial pictures to encompass a vast and unexpected scope. Aerial pictures can be seen to have a code language, in which objects do not appear as expected, but can be deciphered using visual clues—for instance, a tree photographed from directly overhead may appear only as a spot, but the shadow of the tree may help reveal its identity.

The abstraction in aerial photographs has a powerful impact on their legibility, and some photographers use aerial perspective to heighten their subject’s abstraction. A vertical perspective, one in which the camera is pointing straight down at the earth, can produce pictures that are more cartographic (or map-like) which, due to the dramatic angle, can increase abstraction. An oblique view, one made with the camera pointing at the land at an angle less than 90 degrees, can also abstract the landscape, compressing information into startling arrangements. Photographers use light as a compositional element, selecting direct and overhead illumination to decrease contrast and potentially increase abstraction, or choosing early- or late-day sunlight, with long shadows, to heighten the visual impact of distinctions in the earth’s surface.

This aerial photographic language, or aerial vision, can present a puzzle to a viewer. Thus, photographs made from the air create tension between the abstracted view and a viewer’s desire to “crack the code” and understand what they are looking at. William Fox and Dennis Cosgrove, in their book *Photography and Flight*, thoroughly establish that aerial vision is intrinsic to humankind, not something we learn through exposure to an aerial perspective. Our innate ability to conceive an imagined view from above causes us to engage with aerial photographs with vigor, drawn in by the challenge of connecting with an unfamiliar perspective.

Aerial photography plays on another relationship—that between the visual experience of the world and one that is more physical. While aerial photographs suggest an intellectual process of surveying the land, collecting information and creating a visual command of a space—all of which has an objective neutrality—there is a parallel suggestion of an actual plane moving over the land that is photographed. Aerial photographs can conjure the process and physicality of a camera moving through space, along with a related set of questions. How does an aerial camera work? Does someone press the shutter release or does it happen automatically? How fast are the planes moving and at what altitude? When pilots are doing military reconnaissance, are they in danger of being shot at? Is there always risk when making aerial photographs?

These characteristics—the unique qualities of aerial vision, the presence of abstraction, the impact of light, and the dynamic tension between visual and physical experience suggested by the aerial perspective—all combine to create photographs that are intellectually compelling and engaging. In addition, they can be enjoyed for their intrinsically visual appeal as photographic works of art. Despite some similarities among aerial photographs, photographers have worked in different styles to engage the medium to achieve different ends. Following are biographies of some of the aerial photographers from the Center’s collection.

—Rebecca A. Senf, Norton Family Curator of Photography

For more aerial photography, visit the exhibition **DAVID MAISEL/BLACK MAPS** on view at the Scottsdale Museum of Contemporary Art, June 1 to September 1, 2013.

FURTHER READING:

Denis Cosgrove and William L. Fox, *Photography and Flight*. London: Reaktion Books, Ltd., 2010.

William L. Fox, *Aereality*. Berkeley: Counterpoint, 2009.

Rupert Martin, *The View from Above: 125 Years of Aerial Photography*. London: The Photographers’ Gallery, 1983.

Beaumont Newhall, *Airborne Camera: The World from the Air and Outer Space*. New York: Hastings House, 1969.

Kim Sichel, *To Fly: Contemporary Aerial Photography*. Boston: Boston University Art Gallery, 2007.

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Military Reconnaissance and Peacetime Survey



Edward Steichen (1879–1973) maintained a long and varied career in photography, including working as an avant-garde Pictorialist photographer at the turn of the twentieth century, creating fashion photographs for *Vanity Fair* and *Vogue* in the 1920s and 1930s, and curating the famous *Family of Man* exhibition as photography curator for the Museum of Modern Art in the mid-1950s. He also played a role in military aerial photographic reconnaissance in the First World War. When the United States joined World War I, it found itself totally unprepared for photographic reconnaissance, especially compared with the organized programs of Britain and France. Schools were established at the Eastman Kodak Company in Rochester, New York, and at Cornell University, where students learned to fly reconnaissance planes, take photographs, process and interpret them. Steichen entered active duty as a first lieutenant in the Army Air Service and once the Photographic Section was formed, he chose to work in aerial photography (rather than the ground unit, which did news and publicity photographs). Although there is no evidence that Steichen made aerial photographs during the war, he oversaw the organization and formation of the American aerial photography section. He quoted the number of prints made under his supervision between the beginning of July, 1918 and July, 1919 at 1,300,000. In the first World War, aerial photographers were almost exclusively operating manual cameras, which required releasing the shutter for each exposure, but by the end of the war experiments were being conducted with automated cameras. During World War II, Steichen was ultimately placed in command of all naval combat photography, although he began by overseeing a small unit of photographers to document naval aviation, and by making photographs in the war's Pacific theater.

Photographer unknown. WWI Aerial Reconnaissance glass plate lantern slide.

Edward Steichen Miscellaneous Collection, Center for Creative Photography, University of Arizona



Captain Albert W. Stevens (1886–1949) was trained as an electrical engineer. In January 1918, Stevens volunteered for the U.S. Army Air Service and trained at the Aeronautics Aerial Photography School at Cornell University, in Ithaca, New York. Stevens' work in France, between July and November of 1918, as 1st Lieutenant of the 6th Aerial Photographic Section, was as an aerial observer, operating a camera from the rear open cockpit of a biplane; a job that exposed him to enemy anti-aircraft fire. In November 1918, Stevens was appointed Chief Photographic Officer for the U.S. First Army and spent the post-war months photographing cities and battlefields in France and Germany. Upon his return to the United States, Stevens' aerial work continued under the auspices of the U.S. Army Air Service, and included making an aerial survey of New York City and vicinity (with the aim of making a composite photographic mosaic); testing new Eastman Kodak aerial cameras; conducting an aerial survey of New Hampshire's Mount Washington; making what was then the highest altitude parachute jump from 24,200 feet (in June 1922); completing an aerial survey of the Nashville quadrangle for the U.S. Geological Survey; performing an extended aerial survey of the western U.S. in late 1923; and engaging in another survey of the landmarks and National Parks of the Western U.S. for the Department of the Interior in mid-1925. He achieved his greatest national fame for a series of balloon ascents attempting to reach the stratosphere. On November 11, 1935, Stevens, along with Captain Orvil A. Anderson of the Army Air Corps, made a record balloon ascent near Rapid City, South Dakota, watched by 20,000 spectators and with millions following a live radio broadcast, as their sealed balloon gondola Explorer II climbed to 72,395 feet, nearly 14 miles, a record unequalled in Stevens' lifetime.

Albert Stevens. San Rafael, 1920s. Gelatin silver print.

Gift of Ansel and Virginia Adams. Courtesy of the U.S. Air Service and the Center for Creative Photography



Bradford Washburn (1910–2007) is known as a mountaineer who made eight first-recorded ascents of North American peaks; a cartographer who authored two dozen maps, including the Grand Canyon, Mount Everest and Mount McKinley; and as a photographer who pioneered high-resolution, large-format aerial pictures. Washburn's primary profession was as founding director of the Boston Museum of Science from 1939 to 1980; he transformed it from an outdated natural history museum to a leading science center. With the Museum of Science as his base, Washburn pursued his childhood pastimes of photography and mountain climbing throughout his long life. He was most identified with North America's highest mountain, Mount McKinley. At 20,320 feet, it had been considered among the most difficult to climb before Washburn's exploration. In 1947, Washburn became the first to reach its summit twice and his wife Barbara became the first woman to achieve the summit. Washburn devised a new path to the McKinley summit known as the West Buttress Route based on a decade of creating detailed maps and shooting hundreds of photographs. Between 1981 and 1984, he coordinated aerial mapping flights over Mount Everest, and though he never climbed the peak, additional research in 1999 determined that Everest is 29,035 feet tall, seven feet higher than previously measured. Washburn made his first aerial photographs in the French Alps in 1927, but began using aerial cameras in Alaska in 1934. He was trained to use a Fairchild K-6 (7" x 9") by Captain Albert W. Stevens, who Washburn called "the best aerial photographer in the world." Washburn's photography is characterized by dramatic light just following sunrise or prior to sunset, which transforms his mountain subjects into a three-dimensional relief map. Of his aerial work, Washburn said, "I wasn't taking photographs to make art.... The photographs were indispensable to my geological and mapping research, as well as in my efforts to show the best possible climbing routes for many mountains."

Bradford Washburn. Ice Cliff about 200 Ft. High Where Miles Glacier Tumbles into Miles Lake, 40 Miles East Northeast of Cordova, Alaska, Aug. 10, 1938. Gelatin silver print. Purchase. © Bradford Washburn, courtesy Decaneas Archive, Revere, MA



W. Eugene Smith (1918–1978) is best known for his contribution to the photographic essay form, especially as presented in the pages of *Life* Magazine, with stories like 'Country Doctor' (20 Sept 1948), 'Spanish Village' (9 April 1951), 'Nurse Midwife' (3 Dec 1951), a series on Albert Schweitzer called 'Man of Mercy' (15 Nov 1954), and his work on the effects of mercury poisoning in Japan, published as 'Minamata' (2 June 1972). Prior to his position as *Life* staff photographer, Smith was invited to join Edward Steichen's World War II group of photographers recording the Navy's airmen, but his poor eyesight and broken eardrum left him unfit for service. The publishing firm Ziff-Davis hired Smith as a naval correspondent in the Pacific theater of the war and, by September 1943, Smith was at sea. In November, after short stints on several carriers, he joined the USS *Bunker Hill* aircraft carrier, from which he made many flights. Smith was able to have hatches cut in the airplanes' plexiglas cockpit canopies, so that he could get unobstructed photographs, and often communicated with the pilots about where he wanted to make pictures. In some cases, he was even able to request that the fighter pilots suspend bombing while he made photographs. About his time on the *Bunker Hill*, the ship's chronicler wrote: "One day in the South Pacific, a young photographer joined the ship. He came to be a permanent fixture on board, and members of the crew soon came to think of him in terms of what it takes to make an excellent photographer: crazy as hell." Smith, thinking as a photojournalist, was often making pictures to help illustrate a story: his images relate to specific events and would have been accompanied by titles and detailed captions. He was also working with pilots in battle, so he did not always have the freedom to make the pictures he envisioned. Smith's dramatic and evocative results are thus all the more astonishing.

W. Eugene Smith. Over Tinian, 1944. Gelatin silver print. W. Eugene Smith Archive. © The Heirs of W. Eugene Smith

Aerial Photography as Art



William Garnett (1916–2006) was born in Chicago, Illinois, but grew up in Pasadena, California. After high school, he studied one year at Los Angeles' Art Center School and then, beginning in 1938, worked as a graphic designer and independent commercial photographer doing product advertising, portraiture and architectural views. In 1940, Garnett became the Pasadena Police Department photographer in charge of crime scene documentation. In 1944, drafted by the U.S. Army, Garnett trained as a motion picture cameraman for the Signal Corps. After leaving the Army in 1945, Garnett pursued a career in aerial photography. He cited the cross-country transport flight home, during which he was impressed by the beauty and grandeur visible from the navigator's seat, as his inspiration. Garnett used the G.I. Bill to pay for flight instruction and by 1947 had purchased his first plane. In 1950, the Lakewood Park Corp hired Garnett to document the "instant city" they were building near Long Beach, with 500 houses constructed per week, and a total of 17,500 within 3 years. Garnett's photographs emphasized the efficiency and regularity of the housing development, characteristics that reflected Lakewood's success; over time, however, critics saw in Garnett's pictures evidence of the ills of mass development. Their subsequent prominent use to symbolize development at the cost of natural habitat, earned Garnett exhibitions and photojournalism assignments. In 1953, he was awarded the first of three Guggenheim fellowships and in 1955, bought a Cessna 170B which, with small modifications, he used for decades for his photography. In 1968 he joined the College of Environmental Design at the University of California, Berkeley, where he served as a professor until his 1984 retirement. With a 1954 portfolio of his "Over California" aerial photographs in *Fortune* magazine; his inclusion in Edward Steichen's 1955 Museum of Modern Art *Family of Man* exhibition; and a solo exhibition at the George Eastman House International Museum of Photography that same year, Garnett was the first aerial photographer to be widely celebrated as an art-maker.



Marilyn Bridges (b. 1948) is an American photographer known for her fine art black-and-white aerial images of ancient sites and contemporary landscapes. She has worked in over 20 countries on five continents. In 1976, she took her first aerial photographs, of the prehistoric Nazca Lines in Peru. She then enrolled in the Rochester Institute of Technology to study photography, earning a Master of Fine Arts. Her photographs of Nazca were featured in a solo exhibition at the American Museum of Natural History in New York. In 1982 she used a Guggenheim Fellowship to hire a pilot and single engine plane to fly from upstate New York to the Yucatán, where she photographed ancient Mayan ruins in the jungle. In the 1980s she photographed prehistoric Native American sites, and megalithic monuments in Britain and Brittany. Her first book, *Markings: Sacred Landscapes from the Air*, was published in 1986. Two years later she used a Fulbright Scholarship in Peru to photograph Machu Picchu and other Inca sites. In 1993 she obtained unprecedented permission to fly over and photograph dozens of ancient Egyptian sites along the Nile. The results appeared in her book *Egypt: Antiquities from Above*. Her photographs of the United States are featured in her 1997 book *This Land is Your Land: Across America by Air*. In the last decade, Bridges has worked on major projects to photograph Classical ruins in Greece and Turkey, and Minoan sites in Crete. Bridges has a pilot's license, although she flies with a co-pilot in order to concentrate on photographing through an open door. She has published eight books of her aerial work, and is a Fellow of the Explorers Club.

A Landmark Photography Partnership

In 2006, Phoenix Art Museum and the Center for Creative Photography at the University of Arizona in Tucson inaugurated a highly innovative and unprecedented collaboration to bring the finest in photography to the Museum's visitors. It established a vibrant new photography exhibition program at the Museum, while bringing the Center's world-renowned collections to new and larger audiences.

The Center is one of the world's largest repositories of materials chronicling photography. Founded in 1975, it now houses four million archival items and 90,000 fine prints by photographers including Ansel Adams, Edward Weston, Harry Callahan, Aaron Siskind, Frederick Sommer, W. Eugene Smith, Louise Dahl-Wolfe and Garry Winogrand.

One of the nation's leading art museums, Phoenix Art Museum presents international exhibitions of the world's greatest art and features a collection that spans the centuries and the globe—American, Asian, contemporary, European, Latin American and Western American art, and fashion design. Not to be missed are the Thorne Miniature Rooms, the interactive family gallery PhxArtKids, great shopping and dining, and a variety of public events.

Now, through the combined efforts of these two organizations, the Museum's visitors experience unparalleled excellence in the field of photography in the Doris and John Norton Gallery for the Center for Creative Photography.

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This brochure and the related e-book are produced with support from INFOCUS.

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Front cover, top: Marilyn Bridges. Cattle Feeding, Parker Ranch, Hawaii (detail), 1990. Gelatin silver print. Gift of Steven Soter. © Marilyn Bridges 1990.

Bottom: Bradford Washburn. West Face of Mt. McKinley, Alaska, June 1977. Gelatin silver print. Gift of the artist and Ansel and Virginia Adams.

© Bradford Washburn, courtesy Decaneas Archive, Revere, MA.