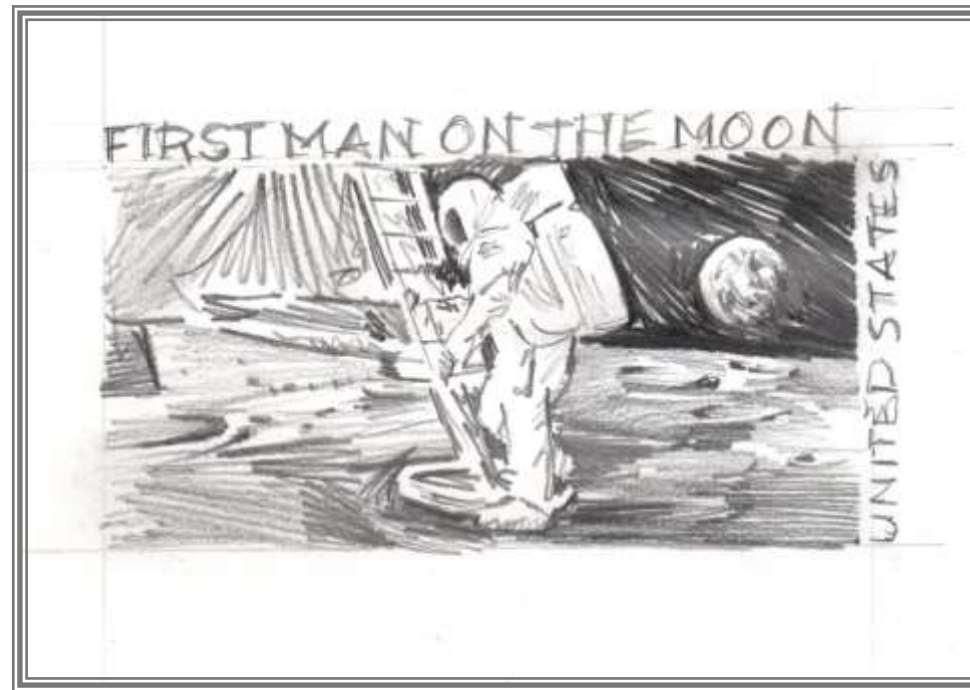


Original Space Art of Paul & Chris Calle



In 1962 NASA Administrator Jim Webb invited artists to record the strange new world of space. Of the original cadre, Paul Calle, an illustrator of science fiction book covers, joined Robert McCall and six others and began to sketch. As commissioned artists they received \$800 and access to draw a blossoming manned space program. Over the years the NASA Art Program would include the works of pop artist Andy Warhol, photographer Annie Leibovitz, and American illustrator Norman Rockwell.

Paul Calle remained associated with NASA from Mercury through Gemini, Apollo, and the Space Shuttle. Over the years, he helped guide his son Chris to become a serious artist in his own right. Paul would design over 50 stamps for the Post Office Department and the US Postal Service including the Gemini space twins in 1967 and the First Man on the Moon issue of 1969.

Chris collaborated with his father on two space stamps to celebrate the 25th anniversary of the Moon landing. He has designed more than 30 stamps for the United States and well over 100 for nations from Sweden to the Marshall Islands. He too is now recognized as an official NASA Artist.

Purpose

Illustrate the precision and beauty of two of America's premiere space artists.

Scope

All material are original sketches and paintings created by Paul and Chris Calle. When a choice of cachets was available, artwork that most closely replicated the postage stamp was chosen.

Plan

Project Mercury 1959-1963
Project Gemini 1962-1966
Project Apollo 1961-1975

"They really wanted to send a dog, but they decided that would be too cruel."



To beat the Soviets in putting a man in space, the US Air Force selected nine pilots for Man In Space Soonest (MISS). During this time the USAF had an equally poorly considered named project called Dyna-Soar nixed prior to implementation. MISS was replaced by NASA's Project Mercury. For the first sub-orbital flight Alan Shepard rode a Redstone booster used by the US Army as an intermediate range missile.

"I was panting hard, and every time a wave lapped over me I took a big swallow of water."



After a repeat sub-orbital performance, the capsule hatch inexplicably blew. Water flooded the spacecraft leaving the astronaut pilot just seconds to escape. Without time to set his neck dam, Grissom's suit began to fill with sea water. He was entangled in the parachute risers and was concerned he would be pulled to his death when the capsule sunk.



"I thought the heatshield might be tearing apart, and this concerned me."



Mercury was plagued by erroneous caution and warning lights in the spacecraft. So when the Landing Bag deployment light illuminated on Glenn's flight it was unclear whether he was faced with instrumentation failure or a far more serious loose heat shield. Leaving the retro package on during reentry increased confusion about what was happening but increased the margin of safety.

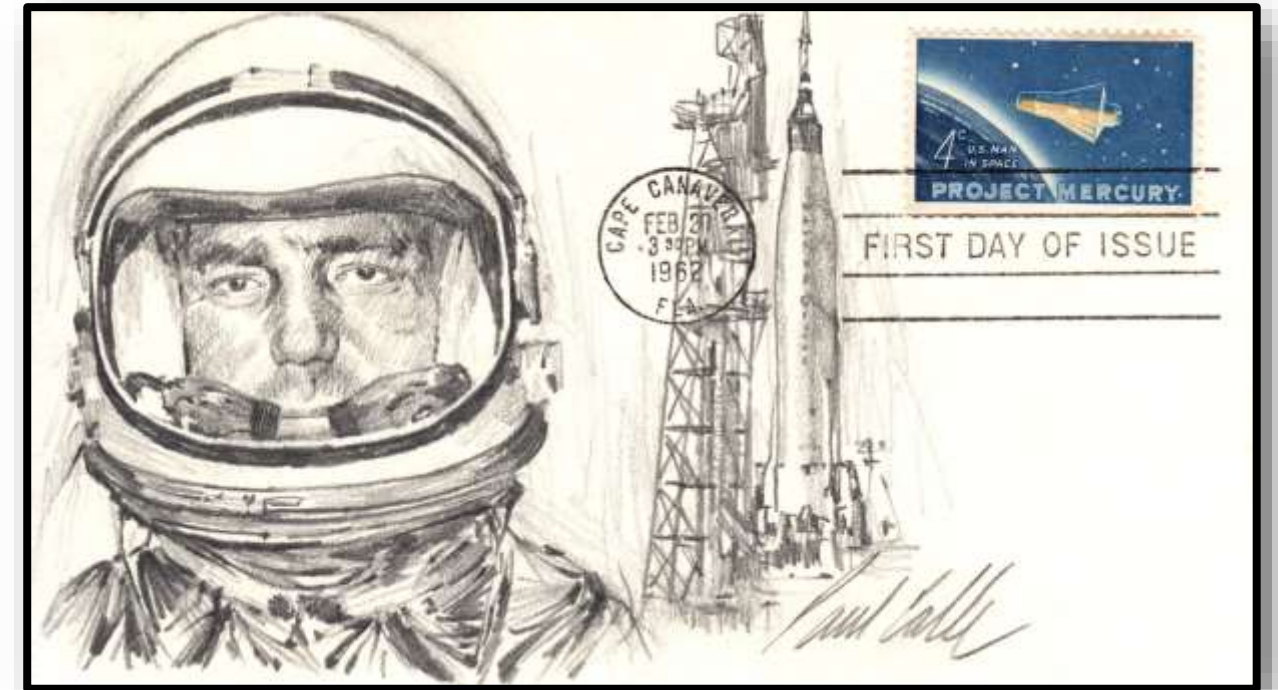


“What is the most stressful part of space flight? The press conference after the flight.”



During the astronaut candidate process it was observed that Deke Slayton had a heart rhythm anomaly. It was judged as not a problem and Slayton became one of the Original Seven. Following Glenn's flight and just before Slayton was scheduled to fly, however, he was pulled. After consideration by more than two dozen specialist who judged him fine, the original physician who gave him the green light grounded him. Instead, he became the Chief Astronaut until the conclusion of the Apollo Program when he regained flight status and participated in the Apollo Soyuz Test Project (ASTP).

“...Getting some pretty good oscillations now and we're out of fuel.”



Saying his was more interested in where he was (in space) than how he got there, the pilot got behind the schedule making life difficult for ground controllers and possibly contributing to his 250 mile overshoot of the recovery area. By the time Carpenter realized how much maneuvering fuel he was using the tanks were nearly dry. Flight Director Chris Kraft described him as a better poet than pilot. This was his only flight.



“None of us ever used the escape system. It was not an exercise we cared to practice.”



In response to the previous flight, Schirra's charge was a textbook engineering flight in which precise, test pilot skills were required. On his return to Earth Schirra had most of his reaction control consumables remaining. He also landed within sight of the recovery aircraft carrier. Later, while in command of a Project Gemini mission, he had the option to eject when the Atlas booster failed. Instead he kept his cool to fly another day.



“I felt my options were rapidly decreasing.”



When Project Mercury began, the test flights were automated with chimpanzees or an instrumented dummy “robot” as the occupant. On this final mission of the Mercury series NASA had progressed from a 15 minute sub-orbital lobe to a 22 orbit flight lasting more than a day. Over time, however, the equipment degraded to the point that the only things that worked were the radio (hooked directly to the batteries), a wristwatch, and the pilot's eyes. This time success would only be possible with a world-class test pilot.

"I feel red, white, and blue all over."



Like his Soviet counterpart who performed the world's first "space walk", Ed White found getting back into the spacecraft far more challenging than getting out. Floating for 20 minutes and using a handheld maneuvering gun, White described the time he was told to return to the capsule as the saddest moment of his life. By the time these stamps were issued White would be dead, along with rookie Roger Chaffee and veteran Gus Grissom, in a ground fire that swept through their Apollo 1 capsule.



"I am, and ever will be, a white-socks, pocket-protector, nerdy engineer."



In 1955 Armstrong began work as a flight test aeronautical engineer pilot at the NACA High-Speed Test Station in California. When NACA became NASA in 1958 Armstrong became one of the first employees. He had wanted to apply to be a Project Mercury astronaut but had resigned his commission in the Navy. Despite flying the X-15 rocket plane and accumulating 2400 flight hours by the time he left Edwards, only military test pilots were under consideration.

A serious problem came to my attention during my pressure suit work: I got claustrophobia.

Michael Collins came from a military family. His father's first flight occurred in 1911 in the Philippines, perched on the wing of a Wright plane, with Frank Lahm flying the machine. He said they flew over a forest fire and the updraft nearly knocked him off the plane. His dad served as an aide-de-camp to Pershing in the Philippines, during the Mexican Punitive Expedition and in France during World War I. He retired at a two star general. His uncle would also serve in the Army and become a four star general. He was Chief of Staff of the US Army during the Korean War.

In order to make his own way, Collins joined the Air Force. Following his flight to the Moon in 1969 he became the Director of the Smithsonian Air & Space Museum. There, in the same room as the Wright Flyer, The Bell X-1, the Spirit of St Louis, and the X-15, hung Columbia, the Apollo 11 Command Module that Collins piloted to the Moon. Like his father, he would retire from the military as a two star general.

"If I had a choice I would have preferred to go on a later lunar flight."



Edwin Aldrin was detached in 1918 from the Coastal Artillery Corps to the Aviation Section of the Army Signal Corps to teach a cram course set up by MIT in aeronautical engineering. One of his students, LeRoy Grumman, founded the company that built the Lunar Module.

Aldrin organized the Army's Air Service Engineering School at McCook Field, the flight test mecca that predated Edwards Air Force Base. He was friends with Orville Wright and was posted as an aide to the airpower prophet Billy Mitchell. He became a pilot and earned a doctorate from MIT. While working for Vice Admiral Emory S. Land of the Guggenheim Foundation he introduced Charles Lindbergh to Robert Goddard. This resulted in funding for Goddard's liquid fueled rocket research. When his son Edwin Jr was three years old he took him for his first airplane ride.

Edwin's son would also become a pilot and earn a doctorate from MIT. Using liquid fueled rocket technology, Edwin Jr. blasted off from Florida for the Moon in 1969. In attendance at the launch were Mrs. Robert Goddard and Charles Lindbergh. Edwin Jr. became the Lunar Module Pilot on the first LM, built by Grumman, to land on the Moon. Edwin Jr, and his Commander, Neil Armstrong, brought with them swatches of wing fabric and slivers of propeller from the first aircraft, flown a scant 70 years earlier, by Orville Wright.

"We believed a successful lunar landing could inspire the world that the impossible was possible."



On the morning of the launch Paul Calle was invited to join the astronauts as they had breakfast and suited up. Calle enjoyed comparing notes with amateur artist Michael Collins as he sketched the crew. Calle had been front row and center since Gordo Cooper became the last American to fly in space alone. Following the successful conclusion of the Apollo Program in 1975, the artist would continue to sketch and paint into the first flights of the Space Shuttle.

"That's one small step for a man, one giant leap for mankind."

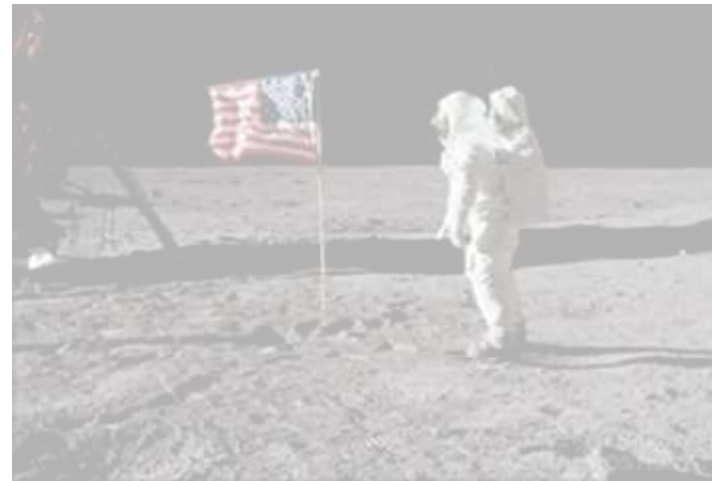
Neil Armstrong



To clarify whether he said, "That's one small step for man" or "That's one small step for a man", the exhibitor's father-in-law, Bill O'Donnell, interviewed the astronaut upon his return from the Moon. As the Public Affair Officer (PAO) for NASA Headquarters, it was O'Donnell's responsibility to document the famous quote. Armstrong reported that he said, "a" but it was not received or transcribed. Radio communication was spotty and Armstrong believed the word was clipped.

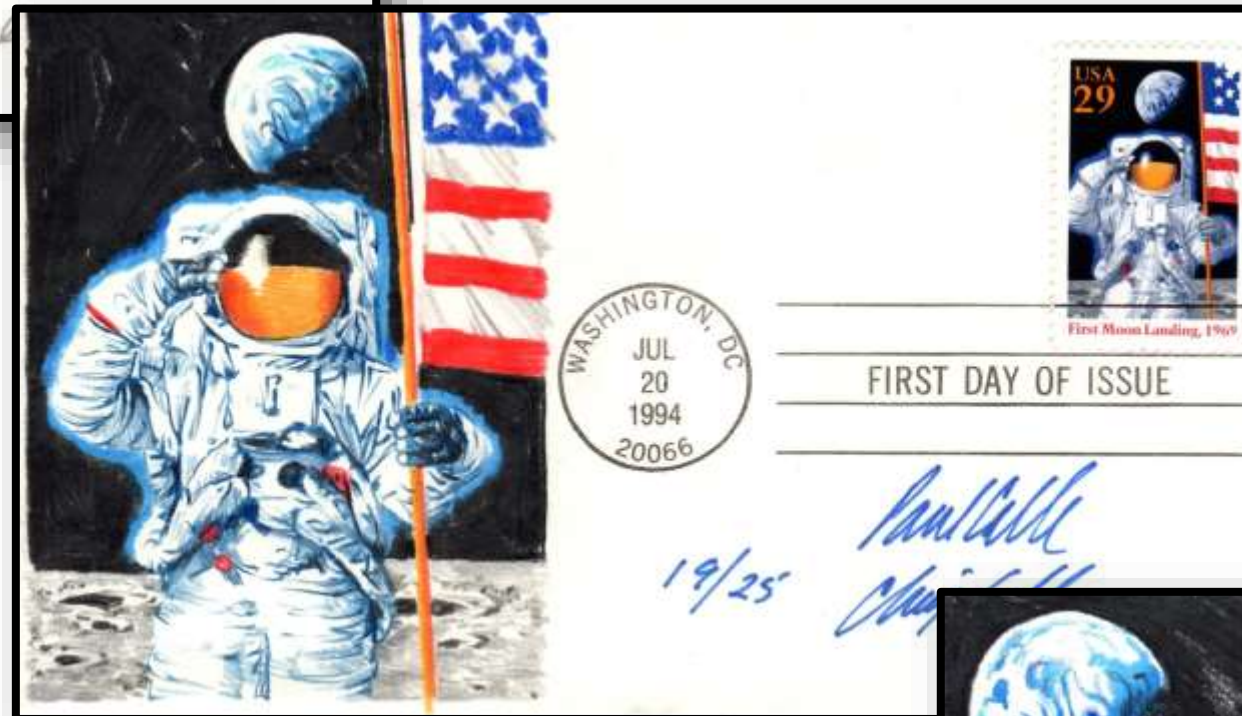


"My salute to the American flag on the moon was my proudest moment."



He was always driven. When it wasn't his relentless father pushing it was Buzz himself. State champions in high school football. Ranked third in his class at West Point. Downed Migs in the Korean War. Earned his Doctorate in orbital mechanics from MIT. Pivotal in making useful EVA work outside spacecraft possible. Then first to land on the Moon with Neil Armstrong.

Aldrin had reached the pinnacle of his career. He would go on to lead the test pilot school at Edwards and then retire as a Colonel but after shooting for the Moon everything seemed decidedly down hill. He suffered from depression and alcoholism. He divorced his wife of 20 years.



He still likes the limelight. He is sober but two subsequent marriages have also resulted in divorce. Aldrin is a NASA critic and head cheerleader for a manned mission to Mars. He continues to marshal his considerable mathematic and aeronautic prowess toward that end. He holds a patent on construction of a permanent space station and his Aldrin Cycler flight path promises to reduce the mass required to get to Mars by 15%.

"It has a stark beauty all its own, like the high desert of the United States."

Following his Moon flight Armstrong went on a world tour. He would be asked to speak about the couple of days the mission took for the rest of his life. While he was grateful to be part of the Gemini and Apollo programs, he would really light up if you talked about aeronautical challenges. After leaving NASA he returned to Ohio to teach Engineering at the University of Cincinnati.

It is incorrect to refer to Armstrong as a recluse. Like Lindbergh, the engineer/pilot/astronaut spoke when he had something to say. He was no NASA cheerleader and while he had strongly held views on the future of manned spaceflight he was no zealot like Buzz. His fondest memories were of the cabin, absent electricity and running water, that Jan shared on the mountainside near Edwards and piloting the X-15.

