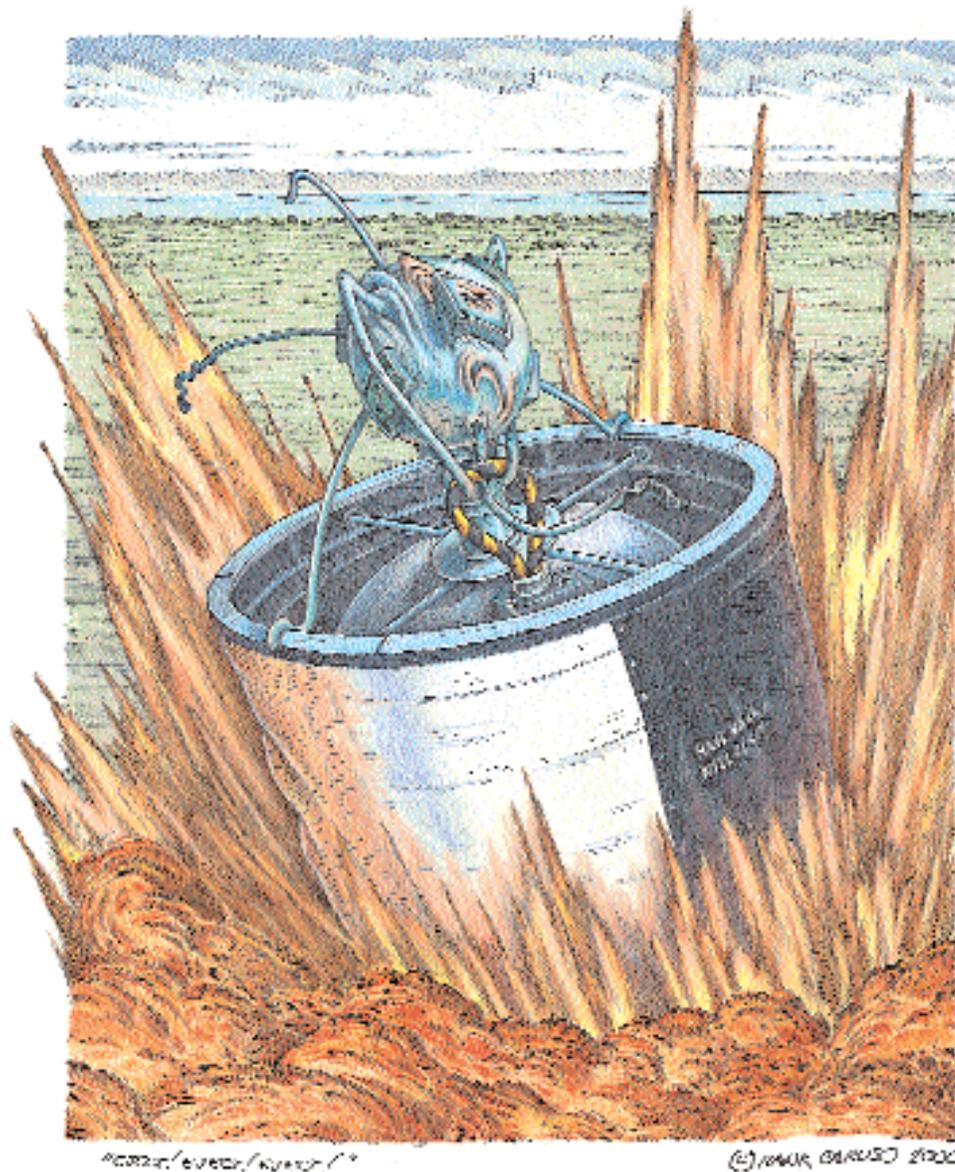


# THE U.S. NAVY IN SPACE



Text and Illustrations © Hank Caruso

**E**ject! Eject! Eject!” The Navy’s assault on outer space did not get off to a good start. After the United States was embarrassed by the launch of the Soviet Sputnik satellite on 4 October 1957, political pressure was applied to the Navy to “save face” by launching the Project Vanguard satellite as soon as possible. Unfortunately, the Vanguard rocket was new and untested. On 6 December 1957, what should have

been an unheralded test flight became a public debacle when the launcher met a flaming death on its launch pad. The three-pound, six-inch diameter satellite somehow managed to escape the carnage and landed—still beeping—in the sand near the launch pad.

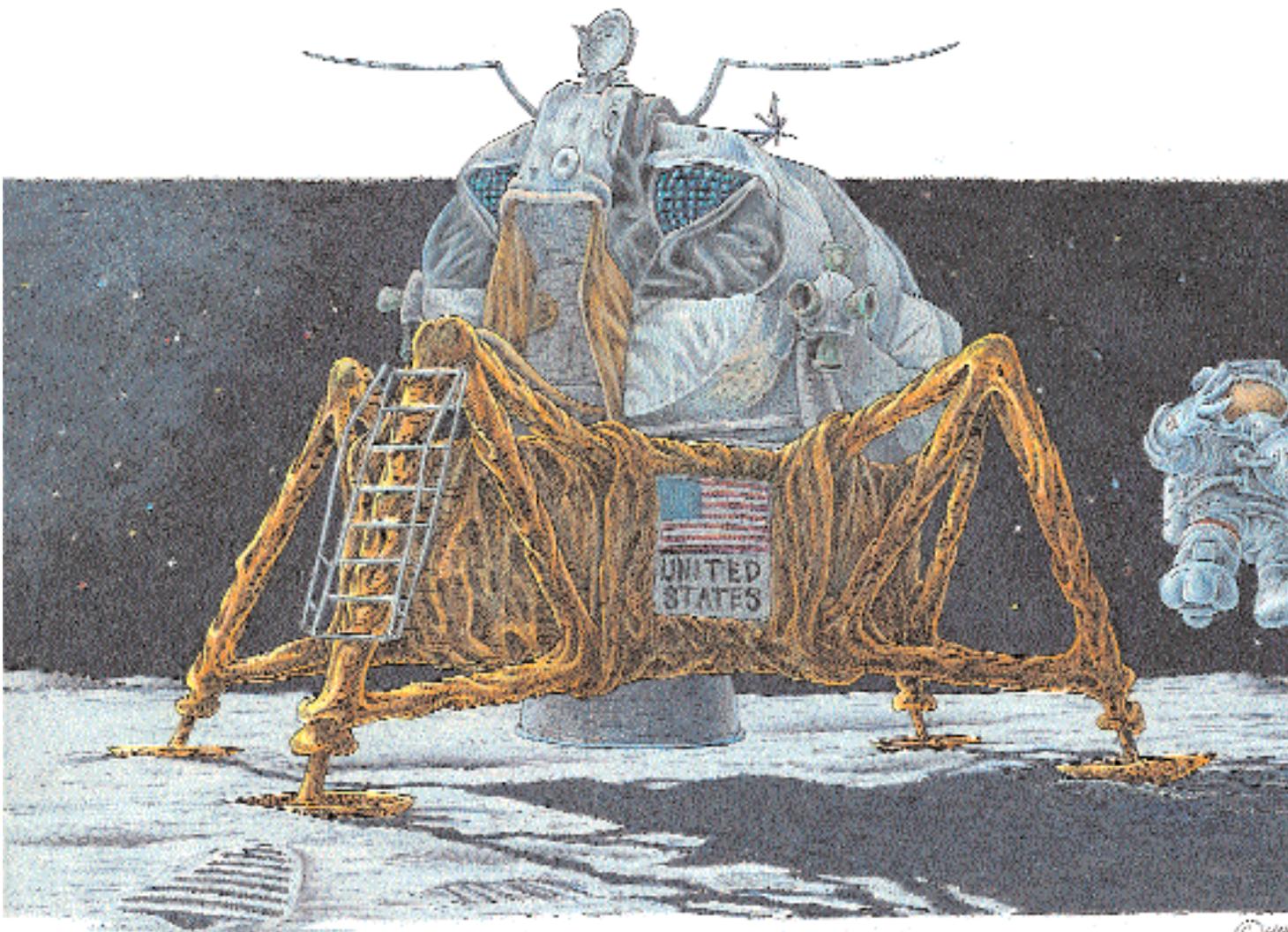
Several months later, on its third attempt, the Vanguard succeeded in launching its diminutive

**“A Spaceship Landed on Earth . . . in 1959!”** The world’s first manned spaceship was the remarkable North American Aviation X-15. Even today, no other aircraft can equal its performance.



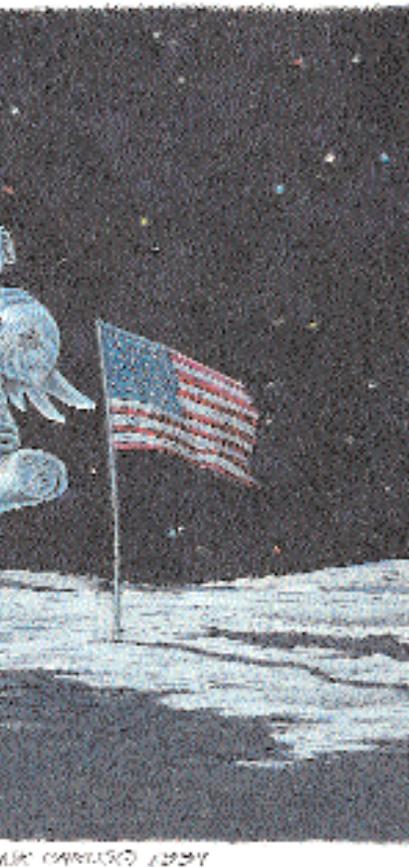
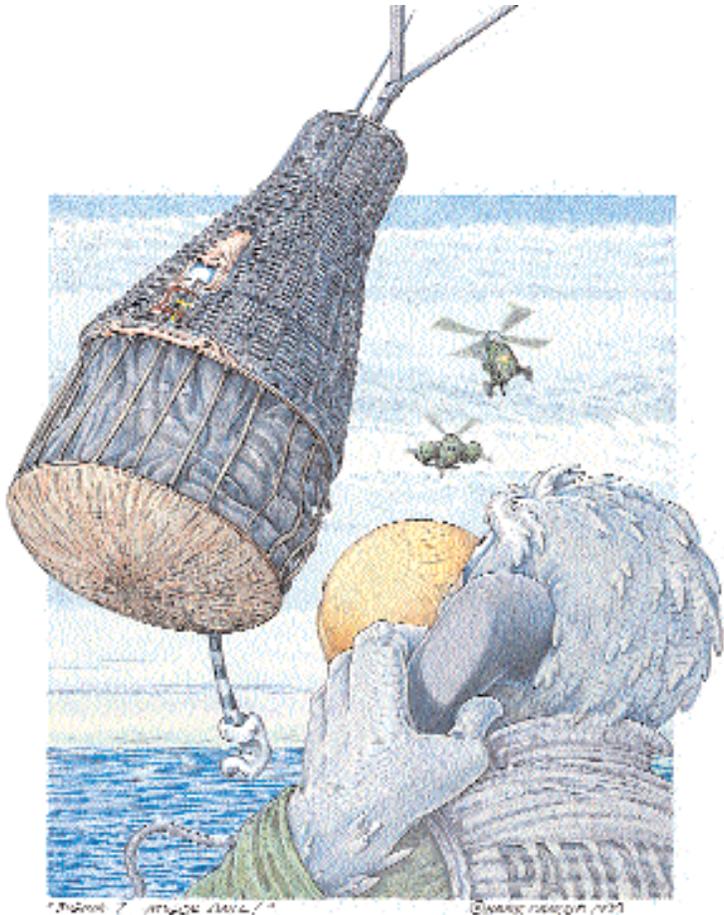
During its 199 flights, the X-15 reached a speed of 4,535 mph (Mach 6.72) and climbed to an altitude of 354,200 feet. Thirteen flights exceeded an altitude of 50 miles, qualifying its pilots for astronaut wings. But after each spectacular flight into the heavens, the X-15 plowed its way to a glamorless stop through a crust of desert dirt.

The X-15 is usually thought of as a joint U.S. Air Force/NASA project. However, Naval Aviators played an important role in developing the X-15 as well as the Navy’s Mark IV space suit worn by the X-15 pilots—and later by NASA’s Project Mercury astronauts.



**“Sigma 7 . . . Roger Ball!”** As impressive as its performance was, the X-15 could not go into orbit. That job fell to the first U.S. orbital spacecraft, Project Mercury and its two-man successor, Gemini. Of the original seven Mercury astronauts, four were Naval Aviators. On 5 May 1961, LCdr. Alan Shepard became the first American in space with a 15.5-minute, 303-mile suborbital flight in Freedom 7. Lt. Col. John Glenn, USMC, became the first American to orbit the Earth with a three-orbit flight on 20 February 1962 in Friendship 7. On 24 May 1962, Lt. Scott Carpenter flew a similar mission in Aurora 7.

LCdr. Wally Schirra piloted the Sigma 7 spacecraft on the fifth Mercury flight on 3 October 1962. His flight was textbook perfect. As he began his descent from orbit, Schirra quipped, “I think they’re gonna put me on the number-three elevator.” In fact, he landed within five miles of his recovery carrier, *Kearsarge* (CVS 33). Any closer and he would have trapped aboard the carrier, as shown in this Aerocature™.

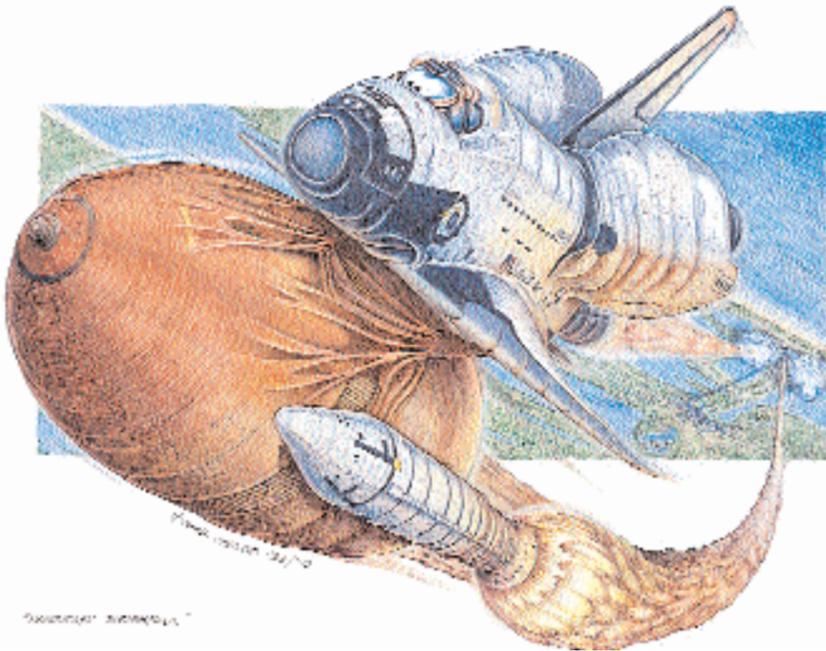


**“Out on a LEM.”** The United States landed two men on the moon within 10 years of President John F. Kennedy’s “go-ahead” speech.

Paradoxically, getting to the moon required the most massive, robust launch vehicle in history, the Saturn V, carrying the most fragile spacecraft in history, the lunar lander, originally called the Lunar Excursion Module (LEM). The LEM was the first of a new breed of spacecraft. Since it would operate only in the airless vacuum of space, it did not need the structural robustness or elegant streamlining necessary for air vehicles operating within the Earth’s dense atmosphere. The LEM’s spindly legs, insect-like stance and oddly shaped crew compartment earned it the nickname “Bug,” as depicted here. Each “bug” had a flying career that consisted of one landing . . . and one very important takeoff.

**“Nantucket Sleighride.”** Since its first launch on 12 April 1981, NASA’s space shuttle is the E-ticket ride into space. Pushing the Earth away with a total thrust of more than 6,000,000 pounds, the space shuttle is one of the most powerful machines ever built.

More than a century ago, New England whale hunters pitted the power of their oars against the awesome power of the mighty sea creatures they pursued. They coined the term “Nantucket Sleighride” to describe their wild ride in a boat being dragged through the waves by a harpooned whale. Today, the space shuttle, riding atop its enormous expendable fuel tank, is dragged through the atmosphere into space by the incredible power of its solid rocket boosters.



**“AOK-3.”** Proponents of the “Doing More with Less” school of thought insist that manned space flight is a frivolous diversion of money that would be better spent on many less expensive unmanned spacecraft. Ultimately, however, we have to ask: If men and women cannot experience and contribute to space flight firsthand, what’s the point? So far, nearly all of the firsthand participants have been highly trained astronauts. Most of those who came from the Navy and Marine Corps graduated from the U.S. Naval Test Pilot School at NAS Patuxent River, Md.

