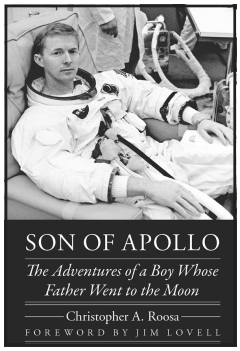

Essential Reading

Important New Strategic Literature

Truly, Son of Apollo

Son of Apollo: The Adventures of a Boy Whose Father Went to the Moon. *By Christopher A. Roosa. Foreword by Jim Lovell. Lincoln, Nebraska, USA, 2022: University of Nebraska Press. 176 pages, 29 photographs. Hardcover. ISBN 978-1-4962-3334-9. $29.95.*

National prestige is a hard-earned, precious commodity; a force multiplier in diplomacy and strategic positioning. Christopher A. Roosa's new book, *Son of Apollo: The Adventures of a Boy Whose Father Went to the Moon*, invites us to consider the prestige which the space program conveyed on the US, and those other nations which embarked on space exploration.

It is a story of the incredible lunar exploration, and the family life of astronauts as fathers and husbands.

The author is the son of US astronaut Stuart Roosa, a US Air Force test pilot, who was the command module pilot of the *Apollo 14* moon mission. Along with his two crewmates who landed on the moon, *Apollo 14* also saw the distinctly unscientific, but entertaining first golf shot on the moon by Alan Shepard, who was the first US astronaut to reach space in a sub-orbital flight during the *Mercury* program in 1961, and the only one of the original seven *Mercury* astronauts to walk on the moon.

Twelve US astronauts walked on the moon between 1969 and 1971, and 14 other men, including Roosa, flew in orbit or around the Moon. The landings ended with *Apollo 17*.

Shepard, Neil Armstrong (first man to walk on the moon), and Gene Cernan, the last man (for now) to walk on the moon, are gone. Only a few of those who walked on the moon are still alive, including the second man to walk its surface, Dr Buzz Aldrin, and Jim Lovell.

The fact that Lovell wrote the foreword to Chris Roosa's book is remarkable, as Lovell's second lunar journey, commanding *Apollo 13,* led to a miraculous and resilient return voyage after an explosion on board had destroyed much of the spacecraft's ability on the way to the moon.

So it was critical to the moon program for the subsequent *Apollo 14* flight to be a success, if the others were to get the chance to fly.

Retired US Marine Corps Col. Roosa's book humanizes these now-famous and iconic men who made these journeys, and provides a human picture of the US space program's astronauts, who were the most accomplished military pilots.

One day his father's duties as a test pilot at the remote desert facility at Edwards Air Force base was to fly the chase aircraft for the first Lockheed SR-71 reconnaissance aircraft which flew so fast and so high that it could avoid being shot down.

All the astronauts become public icons, but to Christopher Roosa, Stu Roosa was "Daddy", who taught his sons and daughter to hunt and fish. Jim Lovell and Roosa Sr. together took their sons for their first hunt.

Astronauts sometimes got divorced (but not Roosa or Lovell), and all of them had to prepare their children for such events as the one which had taken the lives of the *Apollo 1* crew in a fire during a test exercise in 1967. Stu Roosa was on duty as the capsule communicator the day the *Apollo 1* fire occurred and heard the cries for help of the doomed crew.

The families needed to be prepared for the day when the big rocket or Shuttle spacecraft could catastrophically end as a fireball during the myriad pressures of launch, or such episodes as the destruction of the US Shuttle *Challenger*, in 1986, and the *Columbia* on re- entry, in 2003, killing all seven aboard each of the craft.

Today, *Artemis* lunar crews are in full training mode in Houston, Texas. The first unmanned *Artemis* vehicle is currently in high lunar orbit, but by 2024, if all goes well, *Artemis II* will orbit four astronauts around the moon. Then, *Artemis III*, with its *Orion* spacecraft, is planned to land a crew at the moon's south polar region in 2025. That crew is speculated to include the first women, the first African-American man, (who will likely command the craft), and possibly a Canadian astronaut. A Canadian is also scheduled to be on *Artemis II*.

But the People's Republic of China is leaning in. Its massive new booster rockets have placed three modules of the PRC space station in orbit, and a crew of three is now aboard. The PRC, too, has lunar plans, but the US-led international *Artemis III* mission, with its *Orion* capsule and *Starship* Human Landing System, will likely precede a PRC lunar landing.

This past year, the PRC has launched more than 120 rockets into space, more than the rest of the world combined, and most of those were for military purposes. The PRC decision to ignore the US practice of having sufficient fuel and a program to have the massive booster rocket make a safe re-entry to earth is a statement of national will which some other space-faring nations deem unimportant.

The Russian space program has been starved for funds, but Moscow has said it will loft a new Russian space station in the latter part of the decade. Maybe.

Russian cosmonauts still fly and rotate command of the jointly-operated space station, *Freedom*, and not even the Ukraine war ended that single aspect of US-Russia cooperation. Similarly, the Cold War saw uninterrupted US-Soviet space cooperation persist regardless of other tensions.

The *Apollo* era Stu Roosa clan has produced three military sons: a battle-tested Marine who fought in the first Gulf war; an Army tank commander; and an Air Force colonel who commanded squadrons of F-16s, including helping Singapore's F-16 squadron be launched.

As the new Cold War spreads in space, the US, its allies, and the PRC will face each other in new and different ways.

— Steve Ryan