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The Scale of Those First Few Footsteps

On July 20, 1969, Neil Alden Armstrong and Edwin Eugene ‘Buzz’ Aldrin, Jr. landed on the Moon while their crewmate, Michael Collins, orbited in the Apollo 11 Command Module. Their mission was an extraordinary achievement. Yet, it represented only the first few steps in our exploration of the Moon.

As illustrated here, the astronauts explored about 100 meters of the lunar surface, which is not a very large portion of a planet-size body. If someone were to land on the National Mall and explore a similar-size region, one would be hard-pressed to argue that he/she had explored Washington, much less the rest of the world. After walking a few steps on the National Mall would one know anything about the Amazon basin, the Sahara, the Australian outback, or the South Pole? No. To argue that we have explored the Moon based on six brief Apollo missions is similarly incorrect.

There are vast regions of the Moon about which we know nothing. There are impact craters that dwarf the Grand Canyon in depth and mountain ranges that rival the Rockies. Within that dramatic landscape we will find clues about the earliest stages of Earth history and perhaps even rocky remnants of the primitive Earth that were blasted from our planet during a catastrophic bombardment of asteroids and comets. The details of that bombardment and its effect on the origin and evolution of life on Earth are waiting to be discovered on the lunar surface.

Our nearest neighbor, the Moon, is the best and most accessible place in the solar system to study the planet-altering processes that have shaped our corner of the universe, including the origins of our own home planet Earth.

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