



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY

Opening Statement

Chairman Don Beyer (D-VA)
of the Subcommittee on Space and Aeronautics

Space and Aeronautics Subcommittee Hearing:
What Do Scientists Hope to Learn with NASA's Mars Perseverance Rover?

April 29, 2021

Good morning, and welcome to our witnesses. Thank you for being here.

On February 18th, just a few months ago, millions of people waited as the Mars Perseverance rover dove through the Martian atmosphere at speeds of 12,000 miles per hour and implemented a complex sequence of operations leading to the rover's safe landing in Jezero Crater.

The cheers upon confirmation of the rover's successful arrival lifted us as a nation after a year that tried us like no other.

I want to take a minute to celebrate the people who got us to this point.

Completing development, assembly, launch, and then landing all while navigating the challenges of the COVID-19 pandemic is a shining example of the tireless dedication of the NASA, Jet Propulsion Laboratory, and partner teams.

I want to thank them all for embracing the spirit of "Perseverance."

And speaking of the name, "Perseverance", I want to give a plug to Alexander Mather, a middle school student from Burke, Virginia, who won the naming contest for the Mars 2020 rover with the very apropos name, "Perseverance."

Today, we pivot our attention from launch and landing to science and discovery.

Joining us here today are a group of experts who, no doubt, will whet our appetites for science as Perseverance prepares to explore the remains of an ancient lake and delta in Jezero Crater and search for signs of past life.

Perseverance's work isn't the beginning of a scientific journey, it's a continuation of NASA's systematic robotic exploration of the red planet that started over 50 years ago with the Mariner flybys in the 1960s and the Viking landers in the 1970s.

Perseverance is now the fifth U.S. rover and the ninth U.S. landed spacecraft to carry out science operations on Mars—achievements that, to date, only the United States can claim.

Next month, China will attempt its first landing of a spacecraft that will descend from the Tianwen-1 spacecraft orbiting Mars.

NASA spacecraft and others from the United Arab Emirates, India, and Europe are also in orbit around Mars.

But make no mistake, Perseverance is a first.

It's seeking what some might consider the "holy grail" of Mars science—samples that will be collected, stored, and returned by a future mission to Earth for scientific analysis.

A 2007 National Academies report recommended that "The highest-priority science objective for Mars exploration must be the analysis of a diverse suite of appropriate samples returned from carefully selected regions on Mars."

And in 2011, the National Academies recommended the first step in a Mars sample return campaign as the highest priority large-scale planetary science mission.

Perseverance's instruments and the samples it will collect will allow scientists to trace the evolution of Martian climate, geography, and the nature and complexity of any detected organic material.

Martian samples could also tell us more about our own place in the Universe and our very being. Scientists tell us that when stars exploded in death, they dispersed new elements throughout the Universe, elements including carbon, oxygen, and nitrogen, which happen to comprise our own makeup.

They explain that we're made of this very stardust.

Will Perseverance give us the opportunity to see images of our elemental selves in Martian dirt?

Armed with multiple cameras and 7 sophisticated science instruments, Perseverance is about to begin the return on the years of hard work and investment in the nation's most advanced Mars rover to date.

That return is sure to bring scientific discoveries about Mars and its habitability for past life, insights and knowledge to help us prepare for sending humans there, and the inspiration that propels our nation to dream big and our scientists, engineers, and future explorers to embrace ambitious challenges.

I look forward to our witness' testimony.