

# Conservation Corner

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Amid the busyness of the spring planting season, let's take time to explore a few of the latest happenings in outer space. As you know, several astronomers and astronauts have been in the news recently as they discover new planets, send a spacecraft on its last adventure, and set new records.

On April 20, a paper in the journal *Nature* announced the discovery of the fifth life-possible exoplanet to be found this year. Named LHS 1140b, this big, dense planet orbits a dwarf star in the constellation Cetus, the sea monster from Greek mythology. Lying in that Goldilocks Zone that's neither too hot nor too cold, it also receives similar amounts of energy from its sun and may have liquid water on its surface.

It's been over 20 years since the first planet outside our solar system was discovered in 1995. Recently the number of discoveries has exploded as astronomers employ the Kepler telescope and other new techniques. To date over 3,600 exoplanets, including 52 that are potentially habitable, have been identified.

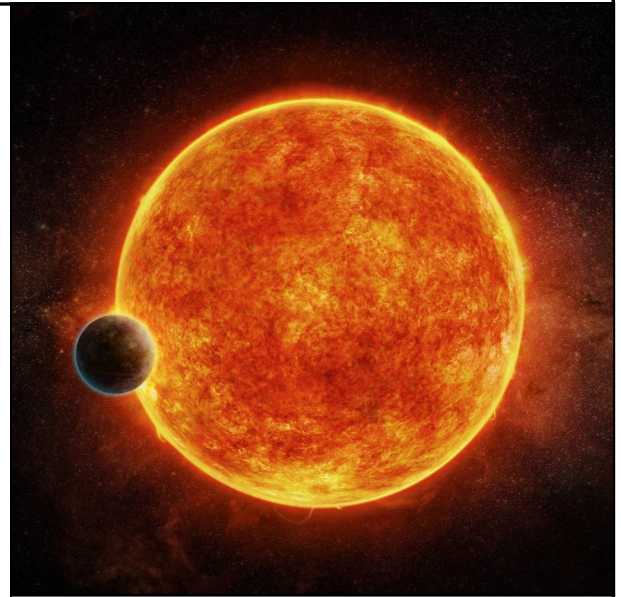
The discovery of LHS 1140b was part of the MEarth project, a group of astronomers that use robotic telescopes to observe nearby M dwarf stars in search of new Earth-like exoplanets. The latest find was discovered by an amateur planet hunter using 8 small telescopes in Chile. And while it's actually 39 light years or 230 trillion miles away, on a cosmic scale it's considered a close neighbor. In fact, LHS 1140b is close enough that scientists on Earth may study its atmosphere for signs of life. As David Charbonneau, Harvard University Astronomer stated, "This is the first one where we actually know it's rocky. We found a planet that we can actually study that might be actually Earth-like."

On April 22, NASA's spacecraft Cassini swung past Saturn's moon Titan for a gravity boost to send it into the gap between Saturn and its rings. Launched in 1997, Cassini reached Saturn in 2004, and since then has been photographing and studying Saturn's atmosphere, rings, and many moons and moonlets. As its fuel tank is on empty, NASA has planned a final 22-week mission. On April 26, Cassini successfully completed its first dive into the gap. While not without risks, hopefully the Grand Finale will unearth new and exciting discoveries as Cassini goes where no man has gone before.



Finally, on April 24, Iowa native Peggy Whitson entered the U.S. record books for the most time in space – a mind-boggling 534 days, 2 hours, and 48 minutes. Upon receiving congratulations from President Trump, she replied that it's a huge honor to break the record and an exciting time as NASA prepares for the first manned expeditions to Mars in the 2030's. Whitson, the world's most experienced spacewoman, described the space station as a "key bridge" between living on Earth and traveling into deep space.

I'll close with this thought: Do you think man or woman will actually travel to Mars in your lifetime?



LHS 1140b by Artist M. Weiss, CFA