

THE AMERICAN BIOLOGY TEACHER



About Our Cover

The cover photo showing Utah's Great Salt Lake was taken by NASA astronauts from the International Space Station, 222 nautical miles above the Earth's surface. From this vantage, half of the lake looks bright red, and the other half ocean-blue. The sharp line visible across the lake results from a railroad causeway, which limits water flow between the two parts. The red color stems from blooms of tiny "extremophiles" (salt-loving microbes) in the northern, hypersaline part of the lake, which is 8x saltier than the oceans.

As detailed in the feature article by Priya DasSarma et al. on pages 7–13 of this issue, the vibrancy of one such spectacular extremophile can now be brought into the classroom. Using the brightly colored model microbe *Halobacterium* sp. NRC-1, many modern principles of biology become accessible to students.

Halobacterium sp. NRC-1 is a member of the third Domain of life, the *Archaea*, and is utilized in research labs all over the world. It is well known for its tolerance of multiple environmental stressors on Earth and its ability to survive Mars and space-like conditions, with potential applications in biotechnology.

The striking cover image was taken during International Space Station's Expedition 40 on July 6, 2014, using a Nikon D3S camera with a 200 mm focal length lens at f/14.0 aperture, 1/800 second shutter speed, and ISO 200.

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