

SCIENCE

# Meteorites point to sky as source of life

By Brian Vastag  
The Washington Post

■ DNA could spontaneously form in space, study suggests

For 50 years, scientists have debated whether the components of DNA — the molecule central to all life on Earth — could spontaneously form in space.

A new analysis of a dozen meteorites found in Antarctica and elsewhere presents the strongest evidence yet that the answer is yes.

Meteorites are space rocks that have fallen to the ground, and the report bolsters the notion that heavy meteorite bombardment of the early Earth may have seeded the planet with the stuff of life.

"Meteorites may have served as a molecular kit providing essential ingredients for the origin of life on Earth and possibly else-

where," write the authors of the report in the Proceedings of the National Academy of Sciences.

Although life has not been found beyond Earth, all earthly plants and animals rely on DNA to store genetic information. At the center of the ladderlike DNA molecule lie ringlike structures called nucleobases. It's these tiny

rings that scientists at NASA and the Carnegie Institution for Science in Washington found in 11 of 12 meteorites they scrutinized.

Since the 1960s, other scientists have reported nucleobases in meteorites, but concerns about contamination always hung over those findings, said Max Bernstein, a NASA scientist who has

studied organic molecules in meteorites but was not involved in the current study.

Scientists have also found other building blocks of life — most notably amino acids, the links that form proteins — inside meteorites.

Bernstein said it's impossible to discern whether the first life on Earth was built on chemicals that fell from the sky, but that possibility is now stronger.

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# Animals running away from global warming

■ Species head north faster, new study says

By Seth Borenstein  
Associated Press

WASHINGTON — Animals across the world are fleeing global warming by heading north much faster than they were less than a decade ago, a new study says.

About 2,000 species examined are moving away from the equator at an average rate of more than 15 feet per day, about a mile per year, according to new research published Thurs-



SCOTT LOARIE / ASSOCIATED PRESS

An American pika sits in Desolation Wilderness in El Dorado County, Calif. Animals across the world are fleeing global warming by moving north, a new study says.

day in the journal Science. Species are also moving up mountains to escape the heat, but more slowly, av-

eraging about 4 feet a year.

The species — mostly from the Northern Hemisphere and including plants — moved in fits and starts, but over several decades it averages to about 8 inches an hour away from the equator.

Federal weather data show the last decade was the hottest on record, and 2010 tied with 2005 for the hottest year on record. Gases from the burning of fossil fuel, especially carbon dioxide, are trapping heat in the atmosphere, warming Earth and changing the climate in several ways, according to the overwhelming majority of scientists and the world's top scientific organizations.

As the temperatures soared in the 2000s, the species studied moved faster to cooler places, said Camille Parmesan of the University of Texas, who conducted a previous study.

It's "independent confirmation that the climate is changing," Parmesan said.

Stanford University biologist Terry Root points to another species, the American pika, a rabbit-like creature that has been studied in Yellowstone National Park for more than a century. The pika didn't go higher than 7,800 feet in 1900, but in 2004 they were seen at 9,500 feet, she said.

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