

Yellowstone discovery uses 'new kind of photosynthesis'

The Associated Press

Washington – The wonderland known as Yellowstone National Park has yielded a new marvel – an unusual bacterium that converts light to energy.

The discovery was made in a hot spring at the park where colorful mats of microbes drift in the warmth.

“This thing was just bizarre,” David M. Ward, a professor of microbial studies at Montana State University, said of the bacterium.

Plants use photosynthesis to turn light into energy, of course, and so do some other bacteria.

But, Ward said, the newly discovered type has “a new kind of photosynthesis. It uses the same kind of machinery, but has the parts in a different arrangement”.

The find is going to be important for unraveling the history of photosynthesis, in determining how microbes efficiently harvest energy, he said.

“We’re running out of fossil fuel, so the more efficiently we can harvest light energy the better,” Ward said.

Discovery of the microbe, named *Candidatus Chloracidobacterium thermophilum*, is reported in today’s issue of the journal *Science*.

“Finding a previously unknown, chlorophyll-producing microbe is the discovery of a lifetime,” co-author Don Bryant, a professor of biotechnology at Penn State University, said in a statement. “I wouldn’t have been as excited if I had reached into that mat and pulled out a gold nugget the size of my fist!”

Yellowstone is home to many types of heat-loving bacteria and scientists have studied it for years in search of new organisms that may be useful in biotechnology or medicine.