

Announcements:

- Looking to fill secretary position
- Other board positions have been filled

Dr. Valeria Souza

“Cuatro Ciénegas an Endangered Precambrian Park”

- Cuatro Ciénegas is the only site on earth where stromatolites are still the main source of nutrients
- 15 hours from Mexico City by car
- Jurassic sea – the creatures of Cuatro Ciénegas were in there since Precambrian times, the seaways closed but the creatures existed because they were never buried – sediment never buried them so they were still able to receive sunlight, water, and nutrients
- Precambrian – ocean was anoxic, extremely low phosphorus, sulfuric rich ocean was microbe-dominated
- 2.2 billion years ago, the sea froze for 400 million years – life survived
- 1 billion years later, the oxygen level increased – ocean changed from sulfuric to oxygen
- Same ecological conditions as early earth – microbial mat from red pools with an extremely biased Redfield ration = low amount of phosphorus
- Two ponds that are 100m apart do not share a single creature
- New species are there eating nothing
 - Very little photosynthesis (little original food)
- Can help test the theory of what we will miss in cases of global warming – if we miss the cycles of life then it can lead to extinction
- Torreon (city nearby) had high levels of arsenic in their water, so they began to pump water from Cuatro Ciénegas – if they continued, then they would lose Cuatro Ciénegas
 - Cuatro Ciénegas was drained in 2006
 - Valeria’s research stopped 220 of the wells from being built
- President of Mexico from 2002-2006 was businessman and made deals with Lala (dairy corporation) and prevented conservation
- This changed in 2006 when a new president was elected

- Valeria began to get a lot of press and saving Cuatro Ciénegas became a national issue – people began to stop buying Lala products
- Lala announced that they would close all the wells and wouldn't do any business with anyone else that was damaging Cuatro Ciénegas
- President announced that he would protect Cuatro Ciénegas with 300 million pesos
- Had to teach children in the area why conservation is important – Lala paid for the educational projects
- Teaching the north of Mexico how to use their water
- Published a book of artwork by children about Cuatro Ciénegas – now every school in Mexico will receive the book for free
- Biotech for the People – virtuous revolution to change the economy and save Cuatro Ciénegas