

Atacama Desert

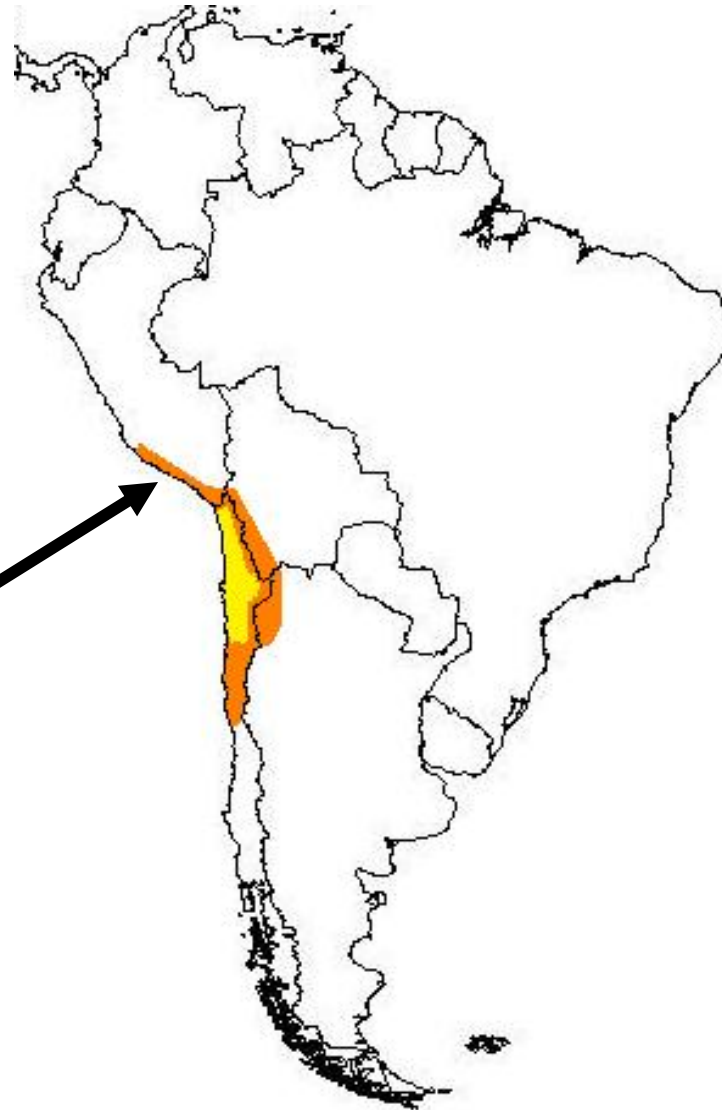
Kathleen Spencer

August 26, 2010

Peru Student Enrichment Trip

Southwestern Peru to 30°S latitude

Also known as the
Sechura Desert

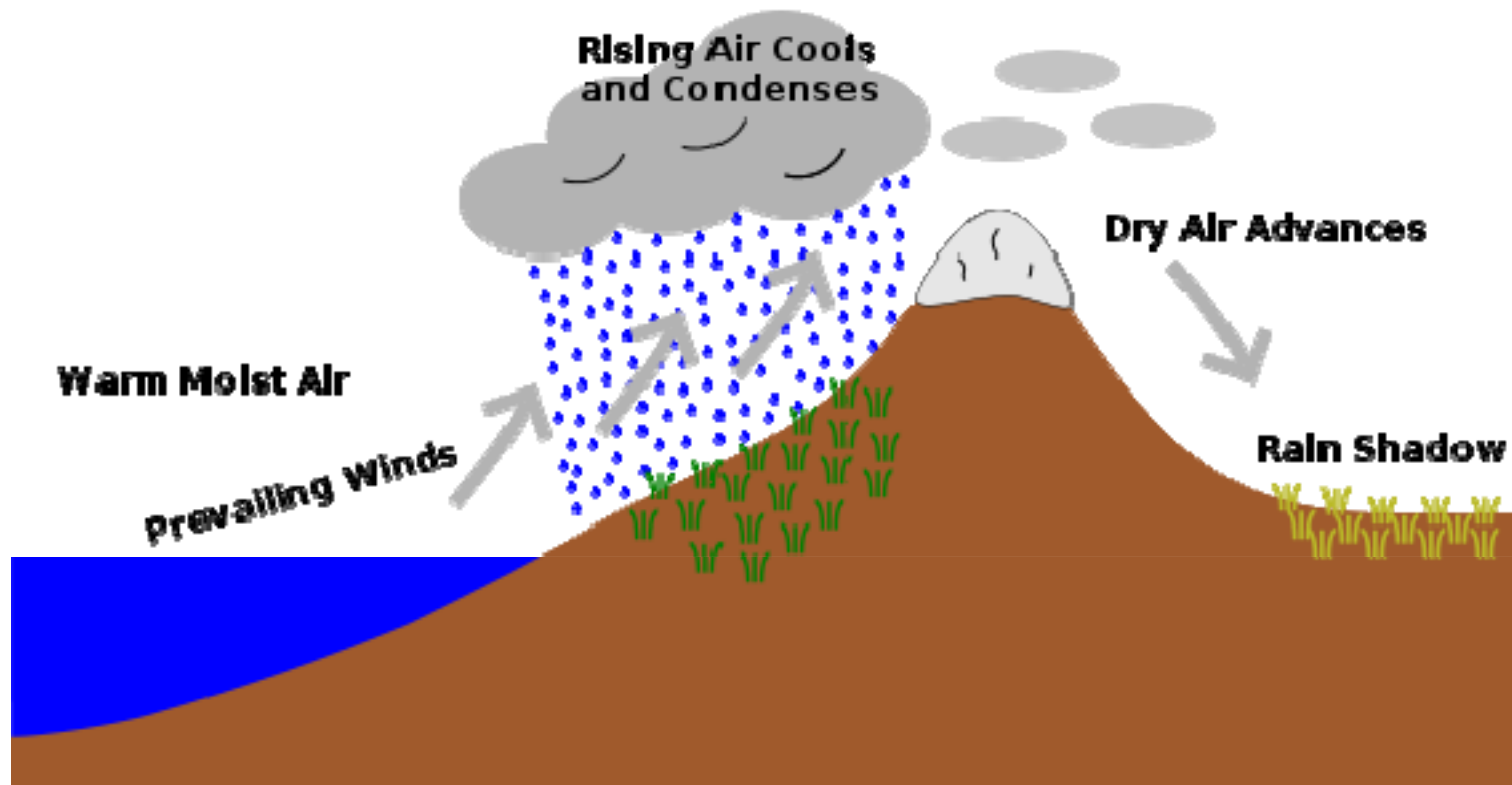


Dry, not Hot

- 600 mile stripe of land, west of the Andes
- Driest desert in the world
- 1570-1971: possibly no significant rainfall
- Elevation: >8,000 ft
- Average temperatures: 32° – 75° F
(0° to 25° C)

Precipitation Prevented

- Andes Mountains
- Humboldt Current



Few Plants and Animals

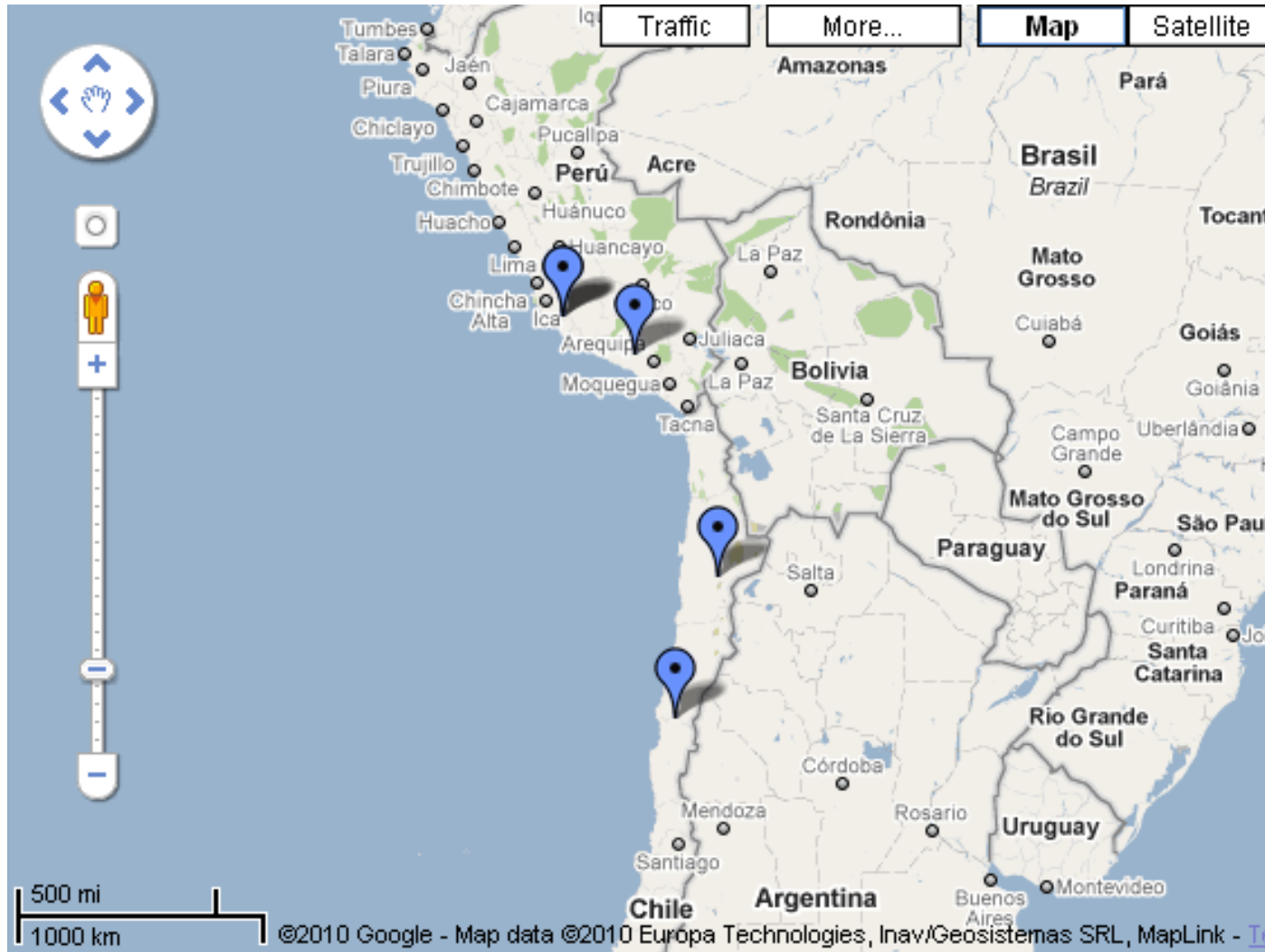
- Interior: no vegetation
- Cacti, brush plants near the coast
- Chilean port city of Antofagasta
~300,000 people



Mars-like Soil

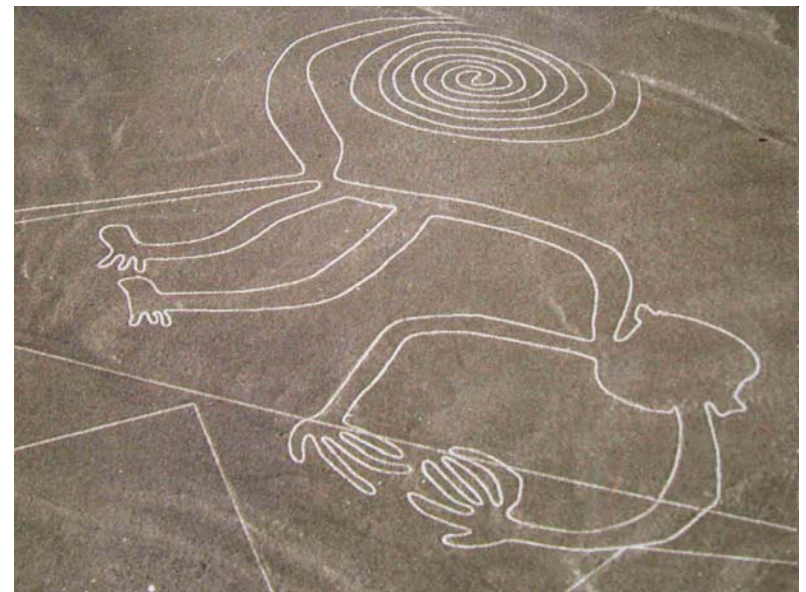
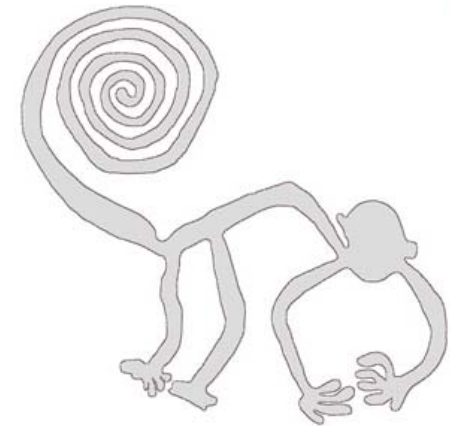
- No signs of life in the Atacama—Science, 2003
- Tested for life with tests used by Viking 1 and Viking 2 Mars landers
- Retested in 2005, previously missed signs of microbial life
- Site for NASA testing of possible Mars equipment

North to South



Nazca Lines

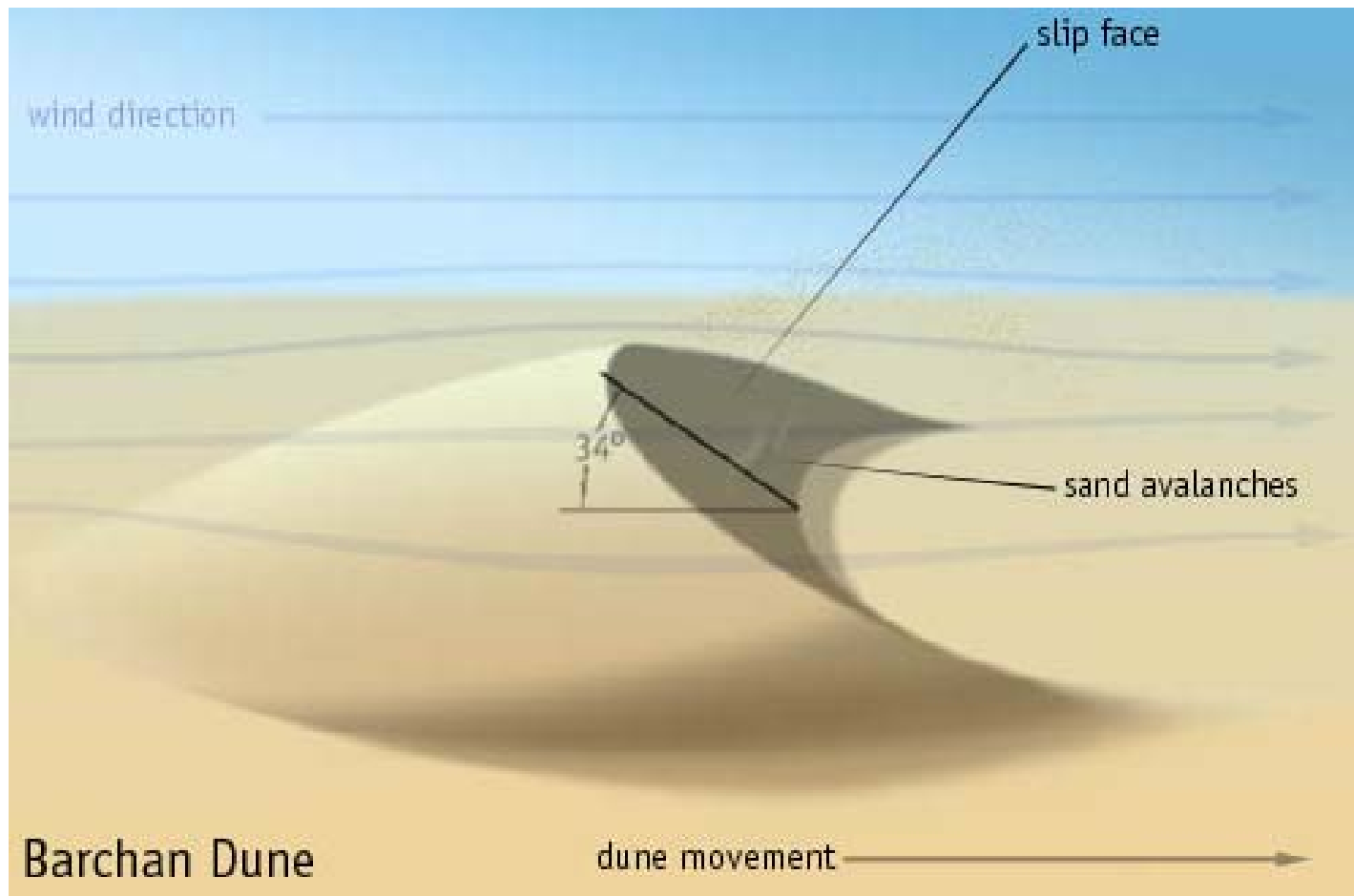
- 400 – 650 AD by the Nazca culture
- 190 sq. miles (500 sq. km)
- Largest: 890 ft (270 m)



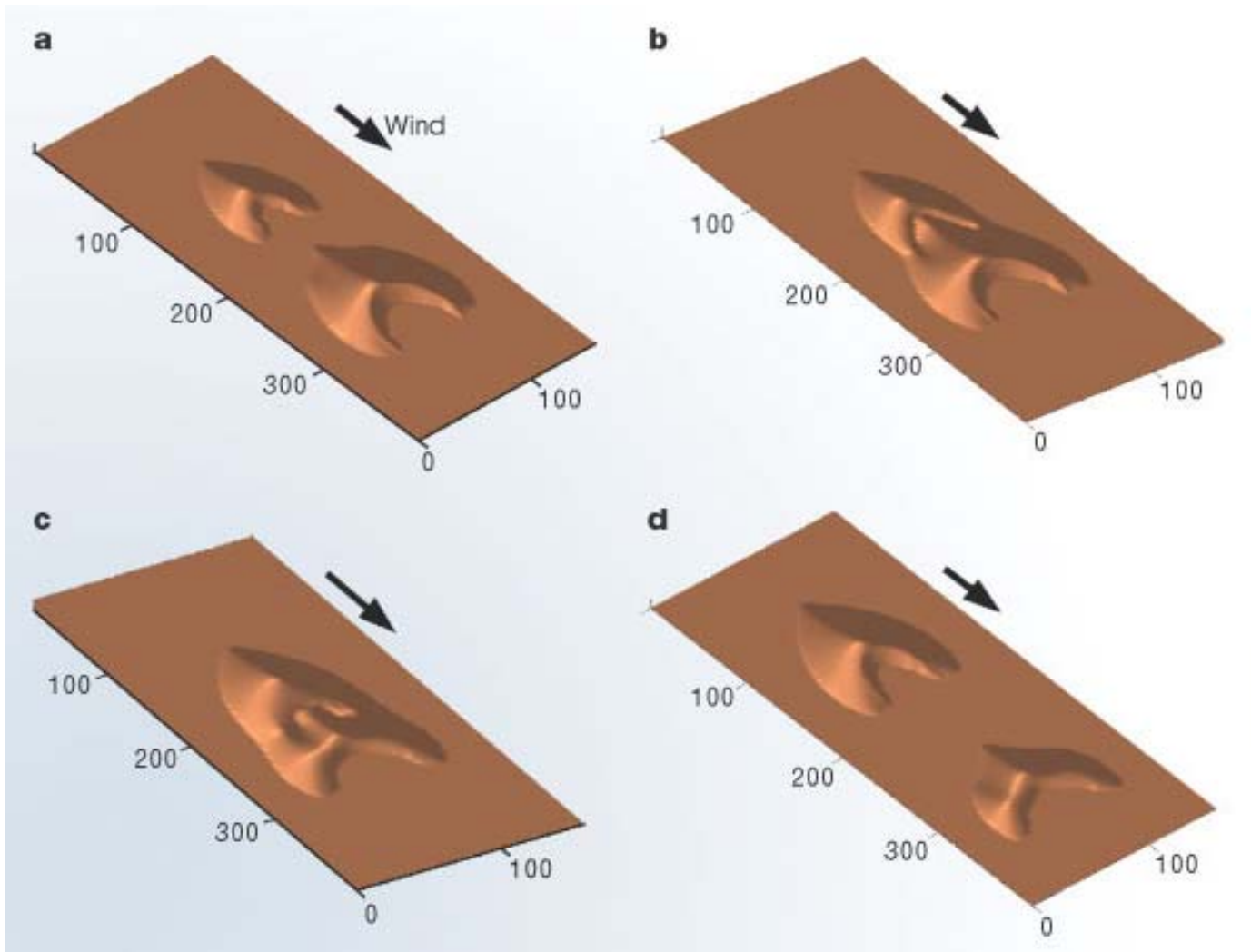
Barchan Sand Dunes



Dune Details



Dune Migration



a. Initial forms

b. 6 months

c. 8 months

d. 18 months

(relative to a.)

Copper mines

Minera Escondida

- Highest producing copper mine in the world
- 2007: 1.5 million tons
\$10.12 billion

Chuquicamata (Chuqui)

- Largest open pit in the world
- 4.3 km long, 3 km wide, and over 850 m deep
- One of the largest known copper reserves in the world



Escondida Mine

Observatories



La Silla Observatory

- One of the largest in the Southern Hemisphere
- 18 telescopes

The Paranal Observatory

- Very Large Telescope
- Very Large Telescope Interferometer

Popular Culture

