

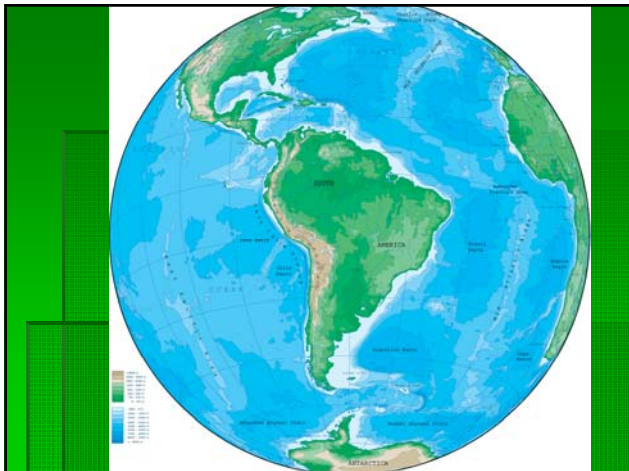
THE PHYSICAL AND CULTURAL GEOGRAPHY OF SOUTH AMERICA





Global location

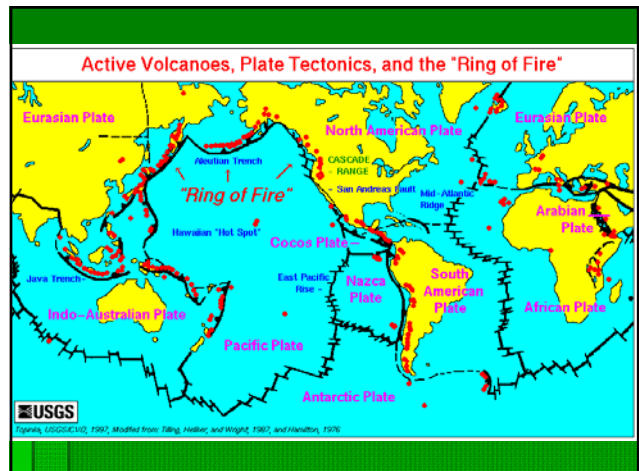
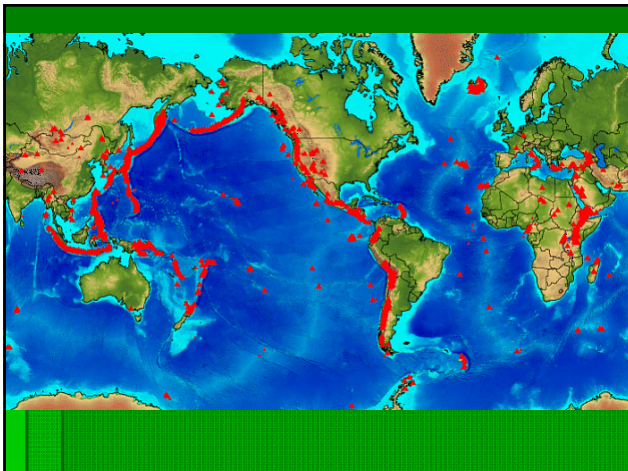
- Relative to European capitals
- Relative to US cities
- Time zones
- Two oceans
- Pacific rim countries - farther to Asia than USA
- Not on main ocean trade routes (generally speaking)





Global location

- Note the % of South America in the tropics/ below the Equator
- Reversal of seasons, water flows, diff. constellations
- 6,884,000 sq. Mi. In size - 12% of world surface area; 6% of the world's population
- Plate tectonics
 - Nazca and South American plates
 - Cocos plate and the Central American Isthmus and the Galapagos hot spot
 - Ring of Fire



Climate issues

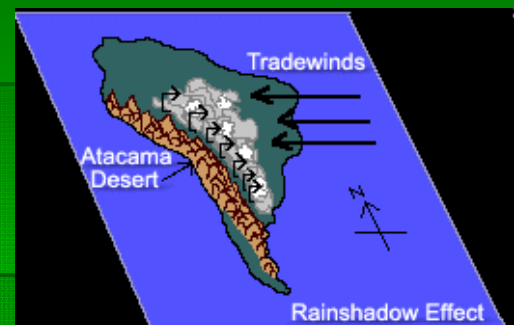
- Vast majority of people live in the tropics, but most of the people live their lives in a temperate climate
- Only Chile and Argentina lie largely within a temperate zone
- Largest tropics in the world, heavy rainfall, though southern tropics have long droughts
- Temps. are uniform, mild winters and summers

Climate issues

- Reversed seasons
- Dry areas: NE Brazil, Peru's Coast, Northern Chile, Gran Chaco of Paraguay, Bolivia and Brazil; Patagonia
- Western coastline varies in rainfall - Colombia and Ecuador
- Deserts in Peru and northern Chile
- Cloud rainforests in southern Chile (Patagonia)

Climate Issues

- Andes play a role, and across the border from southern Chile in Argentina, over the Andes there is less rainfall in Patagonia - high grasslands, scrub forests, and into Tierra del Fuego (Ushuaia)
- Geothermal activity in Patagonia keeps the atmosphere warmer than it ought to be



Topographic features

- **Two main dominant features**
- **Andes**
 - world's longest unbroken chain
 - divides the continent
 - impedes east-west communication



The Amazon

- 2nd longest river - 4000 miles (the Nile River is 4160 mi long), very wide, varies from between 6.8 miles wide in dry season to as much as 24.8 mi wide in wet season.
- Rainy and dry seasons
- Average depth of river during rainy season is 120 ft.
- The Amazon is responsible for a fifth of the total volume of fresh water entering the oceans worldwide.



Manaõs

- Manaõs is the farthest inland city that can be reached by ocean-going vessels (900 mi)
- Rubber boom city
- Wild place until bust
- Opera houses (“Fitzcarraldo”)



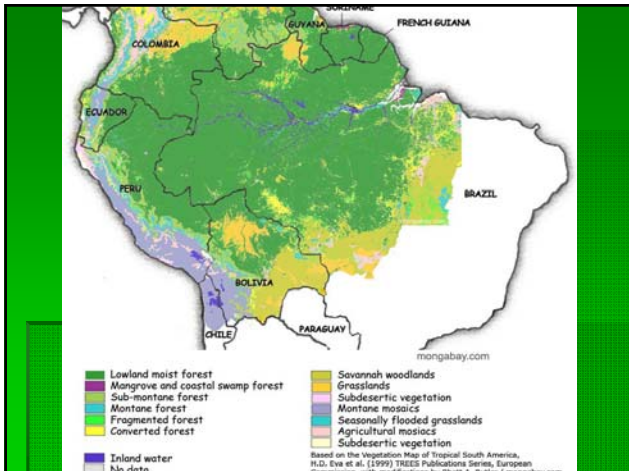
Central Amazonian Basin

- The Amazon drains an area of some 2,722,000 sq. mi. – or so 40% of S.A.
- Floodplain waters carry from white to black depending on silt load



Amazon Basin: Largest Tropical Forest in S. A.

- Blackwaters (low banks, high foliage decay, low biotic output)
- Clearwaters (higherbanks, less foliage, less than useful biotic output)
- Whitewaters (drainage from Andes bring mountain silt, fertilizing the banks of the Amazon during the high rainy season.
 - soils of the *varzea* have high agro output
 - Soils of the *terra firme* require long fallow periods



Principal Topographical Zones of South America - Wilson

- Caribbean
 - Eastern – semi-arid, high, up to 16,000 ft
 - Western – two parts, highest coastal mtn - 18,996
 - Sta Marta rainforest – up to Isthmus, flooding
- Orinoco Basin – distinct dry/wet seasons
 - Guiana Shield
 - Los Llanos – grassy savannas
 - Venezuelan coastal range – facing Caribe
 - Colombian (eastern) Andes
 - Coastal escarpment
- Andes

Environmental Zones

- Patagonia
 - Western - wet, humid, heavy vegetation and cold
 - Eastern – dry, low vegetation and cold
- Pampas – grasslands, mild climate, some rain
- Gran Chaco – dry, scrub lands
- Brazilian Highlands
 - Caatinga (Sertão) – very dry, uneven years of rainfall, NE Brazil
 - Southern highlands –
 - Mato Grosso (northern) very dry, poor soils, cattle
 - São Paulo area with good rainfall, poor soil- coffee, heavy agro production
 - Coastal escarpment -
 - the vast majority of Brazil's population (186,112,794 - 2004 est.) lives in the highlands or on the narrow coastal region immediately adjacent
- Amazon basin

Other long rivers of South America

- Rio Paraná (2485 mi), 13th longest in world, 2nd in South America
 - passes through 4 countries (Brazil, Paraguay, Uruguay and Argentina)
- Rio Purús (2100 mi) is 3rd, Rio Madeira is 4th (2013 mi)
- Rio São Francisco, 5th (1998 mi)
- Rio Orinoco (1498 MI) - drains eastern and interior Venezuela and the llanos of Colombia
- Rio Salado del Norte (1242 mi) Salta, Arg.

Major islands

- Tierra del Fuego (Straits of Magellan, Drake Passage) 18605 sq mi.
- Marajo is. Amazonia delta (15,500 sq mi)
- Falkland is (Islas Malvinas 4700 sq mi) 1982 war between UK and ARG.
- Galapagos Is. (Ecuador)
- Easter Is – Chile
- San Andrés – Colombia
- Devil's Island



Mountains: Andes

- 4400 miles long
- up to 500 mi wide
- 13,000 ft - ave. altitude
- Mt. Aconcagua - highest peak is 22,841 ft (in Argentina)

Mountains: Other High Peaks

- Ojos del Salado- 22,637 (active volcano) (Argentina)
- El Huascaran – 22,205 (Peru)
- Illimani – 21200 (La Paz, Bolivia)
- Cotopaxi 20,577 (Ecuador)
- Chimborazo – 19,344 (active) (Ecuador)

More on the Ecuadorian Andes

- Summit of Chimborazo is the point on the earth's surface most distant from its center, due to equatorial bulge.
- Pichincha 15,700 (active) (Quito, Ecuador)
- Other Ecuadorian active Volcanoes - Tungurahua, Guagua



Mountains

- Parima mountains, Venezuela in the Orinoco basin
- Brazilian highlands (eastern, southern & central – Brazil
- in all – approx. half of the Brazil's land area, or some (1,544,000 sq mi)
- major agricultural areas of Brazil, esp. Coffee

Lakes



- Lake Maracaibo (Venezuela) brackish water in the oil-producing area (Maracaibo basin) of Va. (And one of the oldest lakes in the world)
- Lake Titicaca (Peru/Bolivia) 12,507 ft high, highest navigable lake in world)
- Lake Poopó (Bolivia) very salty, 11,000 ft high
- Lago Argentino (Patagonia)

Waterfalls



- Angel Falls at 3000 feet is the highest in the world, Venezuela in the Guiana Shields
- Iguazú Falls
 - Taller than Niagara Falls
 - twice as wide with 275 cascades spread in a horseshoe shape over nearly two miles of the Iguazu River,
 - During the rainy season of November - March, the rate of flow of water going over the falls may reach 450,000 cubic feet (12,750 cubic m) per second.

