

Amazon basin facts information

Continue

THE AMAZON

"The Lungs of the Planet"

The Amazon is the biggest tropical rainforest in the world – covering 2.5 million square miles!

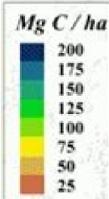
How big is that? As big as the 48 mainland US states!

The Amazon is called the "lungs" because it is our world's biggest supply of oxygen! More than 20% of all the oxygen is produced from this one forest!

GEOGRAPHY

The Amazon rain forest occupies 40 percent of Brazil's total geographical area. It is the drainage basin for the Amazon River and its many tributaries and covers 7,225,000 square miles.

Aboveground Biomass for the Amazon Basin



from Poulter et al. (2010) in Global Change Biology

Facts on the Amazon

- The Amazon River is located in South America. It runs through Guyana, Ecuador, Venezuela, Bolivia, Brazil, Colombia and Peru.
- The length of the Amazon River is approximately 6,992 kilometers (4,344 miles).
- During the wet season, the Amazon River can reach over 300 kilometers (200 miles) in width.
- There are no bridges that cross the Amazon, mostly because there is no need, the majority of the Amazon River runs through rainforests rather than roads or cities.
- The largest city along the Amazon River is Manaus. Located in Brazil it is home to over 1.7 million people.
- There are over 3,000 known species of fish that live in the Amazon River, with more constantly being discovered.
- Anacardus lurk in the shallow waters of the Amazon Basin, they are one of the largest snakes in the world and occasionally attack larger animals such as goats that get to close the water.
- The Amazon River is also home to the piranha, a meat eating type of fish. Being carnivores, piranhas are known to attack in groups, preying on livestock that strays into the water.

AMAZON BASIN

- The Amazon Basin (Amazonia) is covered by the largest tropical rain forest in the world.
- The Amazon River runs through the rain forest.
- The overall basin covers about one-third of the South American landmass.



Amazon river basin information. Amazon river basin facts.

The vast and vibrant Amazon rainforest is the largest rainforest in the world, and it plays a critical role in our fight against climate change. Here are our top facts about this magical place. Learn about the Amazon rainforest 3 ways you can help the Amazon Rainforest Top 10 facts about Jaguars Become a member The Amazon Biome, is defined as the area covered predominantly by dense moist tropical forest, with relatively small incursions of several other types of vegetation such as savannas, floodplain forests, grasslands, swamps, bamboos, and palm forests. The biome encompasses 6.7 million km² and is shared by eight countries (Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana and Suriname), as well as the overseas territory of French Guiana. The complete watersheds expand beyond the biome and sometimes include adjacent biomes (dry forest, cerrado and puna). Not just green wilderness So is the Amazon River Basin merely a huge, uniform expanse of rainforest, bisected by a massive river? Such a perception of the area merely scratches the surface of what is in reality a highly complex and dynamic environment. The basin actually encompasses a variety of landscapes and ecosystems. These include: Rainforests Floodplain forests Savannas Rivers How the Earth's movements created today's Amazon River Basin Millions of years ago, the Amazon River once flowed from east to west, emptying into the Pacific Ocean. When the Andes Mountains began to rise (due to great pressure on the tectonic plates) along the eastern side of the South American continent about 20 million years ago, this emerging mass blocked the flow of the Amazon River. Freshwater lakes formed as a result, and the flow of the river gradually reversed to its current eastern course. About 10 million years ago, the river reached the Atlantic Ocean, close to the city of Belem in Brazil.7 Every year, the Amazon rainforest receives torrential rainfall - between 1,500 mm and 3,000 mm.9 Where does all that water come from? Eastern trade winds that blow from the Atlantic Ocean account for about half of the rainfall, with the other half due to evapotranspiration - the loss of water from the soil by evaporation and through transpiration from plants10 - in the Amazon River Basin.11 If evapotranspiration and its role in maintaining ecological balance is disrupted, the climate throughout region - and well beyond - will be significantly impacted. Rainforest in South America "The Amazon" and "Amazonia" redirect here. For the river, see Amazon River. For other uses, see Amazon and Amazonia (disambiguation). Amazon rainforestPortuguese: Floresta amazônicaSpanish: Selva amazónicaAerial view of the Amazon rainforest near ManausMapMap of the Amazon rainforest ecoregions as delineated by the WWF in dark green[1] and the Amazon drainage basin in light green.GeographyLocationBolivia, Brazil, Colombia, Ecuador, French Guiana (France), Guyana, Peru, Suriname, and VenezuelaCoordinates3°S 60°W / 3°S 60°W / -3; -60Coordinates: 3°S 60°W / 3°S 60°W / -3; -60Area5,500,000 km² (2,100,000 sq mi) The Amazon rainforest, Amazon jungle[1] or Amazonia is a moist broadleaf tropical rainforest in the Amazon biome that covers most of the Amazon basin of South America. This basin encompasses 7,000,000 km² (2,700,000 sq mi), of which 5,500,000 km² (2,100,000 sq mi) are covered by the rainforest. This region includes territory belonging to nine nations and 3,344 formally acknowledged indigenous territories. The majority of the forest is contained within Brazil, with 60% of the rainforest, followed by Peru with 13%, Colombia with 10%, and with minor amounts in Bolivia, Ecuador, French Guiana, Guyana, Suriname, and Venezuela. Four nations have "Amazonas" as the name of one of their first-level administrative regions, and France uses the name "Guiana Amazonian Park" for its rainforest protected area. The Amazon represents over half of the planet's remaining rainforests,[2] and comprises the largest and most biodiverse tract of tropical rainforest in the world, with an estimated 390 billion individual trees divided into 16,000 species.[3] More than 30 million people of 350 different ethnic groups live in the Amazon, which are subdivided into 9 different national political systems and 3,344 formally acknowledged indigenous territories. Indigenous peoples make up 9% of the total population with 60 of the groups remaining largely isolated.[4] Etymology The name Amazon is said to arise from a war Francisco de Orellana fought with the Tapytus and other tribes. The women of the tribe fought alongside the men, as was their custom.[5] Orellana derived the name Amazonas from the Amazons of Greek mythology, described by Herodotus and Diodorus.[5] History See also: History of South America § Amazon, and Amazon River § History Bates's 1863 The Naturalist on the River Amazons In the Amazonas, there has been fighting and wars between the neighboring tribes of the Jivaro. Several tribes of the Jivaron group, including the Shuar, practised headhunting for trophies and headshrinking.[6] The accounts of missionaries to the area in the borderlands between Brazil and Venezuela have recounted constant infighting in the Yanomami tribes. More than a third of the Yanomamo males, on average, died from warfare.[7] During the Amazon rubber boom it is estimated that diseases brought by immigrants, such as typhus and malaria, killed 40,000 native Amazonians.[8] Geography Location Nine countries share the Amazon basin—most of the rainforest, 58.4%, is contained within the borders of Brazil. The other eight countries include Peru with 12.8%, Bolivia with 7.7%, Colombia with 7.1%, Venezuela with 6.1%, Guyana with 3.1%, Suriname with 2.5%, French Guiana with 1.4%, and Ecuador with 1%.[9] Natural Amazon rainforest in Colombia Aerial view of the Amazon rainforest, near Manaus The rainforest likely formed during the Eocene era (from 56 million years to 33.9 million years ago). It appeared following a global reduction of tropical temperatures when the Atlantic Ocean had widened sufficiently to provide a warm, moist climate to the Amazon basin. The rainforest has been in existence for at least 55 million years, and most of the region remained free of savanna-type biomes at least until the current ice age when the climate was drier and savanna more widespread.[10][11] Following the Cretaceous-Paleogene extinction event, the extinction of the dinosaurs and the wetter climate may have allowed the tropical rainforest to spread out across the continent. From 66 to 34 Mya, the rainforest extended as far south as 45°. Climate fluctuations during the last 34 million years have allowed savanna regions to expand into the tropics. During the Oligocene, for example, the rainforest spanned a relatively narrow band. It expanded again during the Middle Miocene, then retracted to a mostly inland formation at the last glacial maximum.[12] However, the rainforest still managed to thrive during these glacial periods, allowing for the survival and evolution of a broad diversity of species.[13] Aerial view of the Amazon rainforest During the mid-Eocene, it is believed that the drainage basin of the Amazon was split along the middle of the continent by the Purus Arch. Water on the eastern side flowed toward the Atlantic, while to the west water flowed toward the Pacific across the Amazonas Basin. As the Andes Mountains rose, however, a large basin was created that enclosed a lake; now known as the Solimões Basin. Within the last 5–10 million years, this accumulating water broke through the Purus Arch, joining the easterly flow toward the Atlantic.[14][15] There is evidence that there have been significant changes in the Amazon rainforest vegetation over the last 21,000 years through the last glacial maximum (LGM) and subsequent deglaciation. Analyses of sediment deposits from Amazon basin paleolakes and the Amazon Fan indicate that rainfall in the basin during the LGM was lower than for the present, and this was almost certainly associated with reduced moist tropical vegetation over the basin.[16] In present day, the Amazon receives approximately 9 feet of rainfall annually. There is a debate, however, over how extensive this reduction was. Some scientists argue that the rainforest was reduced to small, isolated refugia separated by open forest and grassland,[17] other scientists argue that the rainforest remained largely intact but extended less far to the north, south, and east than is seen today.[18] This debate has proved difficult to resolve because the practical limitations of working in the rainforest mean that data sampling is biased away from the center of the Amazon basin, and both explanations are reasonably well supported by the available data. Sahara Desert dust windblown to the Amazon More than 56% of the dust fertilizing the Amazon rainforest comes from the Bodélé depression in Northern Chad in the Sahara desert. The dust contains phosphorus, important for plant growth. The yearly Sahara dust replaces the equivalent amount of phosphorus washed away yearly in Amazon soil from rains and floods.[19] NASA's CALIPSO satellite has measured the amount of dust transported by wind from the Sahara to the Amazon: an average of 182 million tons of dust are stripped out of the Sahara each year, at 15 degrees west longitude, across 2,600 km (1,600 mi) over the Atlantic Ocean (some dust falls into the Atlantic), then at 35 degrees West longitude at the eastern coast of South America, 27.7 million tons (15%) of dust fall over the Amazon basin (22 million tons of it consisting of phosphorus), 132 million tons of dust remain in the air, 43 million tons of dust are windblown and falls on the Caribbean Sea, past 75 degrees west longitude.[20] CALIPSO uses a laser range finder to scan the Earth's atmosphere for the vertical distribution of dust and other aerosols. CALIPSO regularly tracks the Sahara-Amazon dust plume. CALIPSO has measured variations in the dust amounts transported – an 86 percent drop between the highest amount of dust transported in 2007 and the lowest in 2011. A possibility causing the variation is the Sahel, a strip of semi-arid land on the southern border of the Sahara. When rain amounts in the Sahel are higher, the volume of dust is lower. The higher rainfall could make more vegetation grow in the Sahel, leaving less sand exposed to winds to blow away.[21] Amazon phosphorus also comes as smoke due to biomass burning in Africa.[22] Human activity Manaus, with 2.2 million inhabitants, is the largest city in the Amazon basin The Yanomami are a group of approximately 32,000 indigenous people who live in the Amazon rainforest.[24] Members of an uncontacted tribe encountered in the Brazilian state of Acre in 2009 Based on archaeological evidence from an excavation at Caverna da Pedra Pintada, human inhabitants first settled in the Amazon region at least 11,200 years ago.[25] Subsequent development led to late-prehistoric settlements along the periphery of the forest by AD 1250, which induced alterations in the forest cover.[26] For a long time, it was thought that the Amazon rainforest was never more than sparsely populated, as it was impossible to sustain a large population through agriculture given the poor soil. Archeologist Betty Meggers was a prominent proponent of this idea, as described in her book Amazonia: Man and Culture in a Counterfeit Paradise. She claimed that a population density of 0.2 inhabitants per square kilometre (0.52/sq mi) is the maximum that can be sustained in the rainforest through hunting, with agriculture needed to host a larger population.[27] However, recent anthropological findings have suggested that the region was actually densely populated. Some 5 million people may have lived in the Amazon region in AD 1500, divided between dense coastal settlements, such as that at Marajó, and inland dwellers.[28] By 1900, the population had fallen to 1 million and by the early 1980s it was less than 200,000.[28] The first European to travel the length of the Amazon River was Francisco de Orellana in 1542.[29] The BBC's Unnatural Histories presents evidence that Orellana, rather than exaggerating his claims as previously thought, was correct in his observations that a complex civilization was flourishing along the Amazon in the 1540s. It is believed that civilization was later devastated by the spread of diseases from Europe, such as smallpox.[30] This civilization was investigated by the British explorer Percy Fawcett in the early twentieth century. The results of his expeditions were inconclusive and he disappeared mysteriously on his last trip. His name for this lost civilization was the City of Z. Since the 1970s, numerous geoglyphs have been discovered on deforested land dating between AD 1–1250, furthering claims about Pre-Columbian civilizations.[31][32] Ondemar Dias is accredited with first discovering the geoglyphs in 1977, and Alceu Ranzi is credited with furthering their discovery after flying over Acre.[30][33] The BBC's Unnatural Histories presented evidence that the Amazon rainforest, rather than being a pristine wilderness, has been shaped by man for at least 11,000 years through practices such as forest gardening and terra preta.[30] Terra preta is found over large areas in the Amazon forest; and is now widely accepted as a product of indigenous soil management. The development of this fertile soil allowed agriculture and silviculture in the previously hostile environment; meaning that large portions of the Amazon rainforest are probably the result of centuries of human management, rather than naturally occurring as has previously been supposed.[34] In the region of the Xingu tribe, remains of some of these large settlements in the middle of the Amazon forest were found in 2003 by Michael Heckenberger and colleagues of the University of Florida. Among those were evidence of roads, bridges and large plazas.[35] Biodiversity, flora and fauna See also: List of plants of Amazon Rainforest vegetation of Brazil and Amazonian manatee Scarlet macaw, which is indigenous to the American tropics. Deforestation in the Amazon rainforest threatens many species of tree frogs, which are very sensitive to environmental changes (pictured: giant leaf frog) A giant, bundled liana in western Brazil Wet tropical forests are the most species-rich biome, and tropical forests in the Americas are consistently more species rich than the wet forests in Africa and Asia.[36] As the largest tract of tropical rainforest in the Americas, the Amazonian rainforests have unparalleled biodiversity. One in ten known species in the world lives in the Amazon rainforest.[37] This constitutes the largest collection of living plants and animal species in the world. The region is home to about 2.5 million insect species, [38] tens of thousands of plants, and some 2,000 birds and mammals. To date, at least 40,000 plant species, 2,200 fishes,[39] 1,294 birds, 427 mammals, 428 amphibians, and 378 reptiles have been scientifically classified in the region.[40] One in five of all bird species are found in the Amazon rainforest, and one in five of the fish species live in Amazonian rivers and streams. Scientists have described between 96,660 and 128,843 invertebrate species in Brazil alone.[41] The biodiversity of plant species is the highest on Earth with one 2001 study finding a quarter square kilometer (62 acres) of Ecuadorian rainforest supports more than 1,100 tree species.[42] A study in 1999 found one square kilometer (247 acres) of Amazon rainforest can contain about 90,790 tonnes of living plants. The average plant biomass is estimated at 356 ± 47 tonnes per hectare.[43] To date, an estimated 438,000 species of plants of economic and social interest have been registered in the region with many more remaining to be discovered or catalogued. [44] The total number of tree species in the region is estimated at 16,000.[3] The green leaf area of plants and trees in the Amazon varies by about 25% as a result of seasonal changes. Leaves expand during the dry season when sunlight is at a maximum, then undergo abscission in the cloudy wet season. These changes provide a balance of carbon between photosynthesis and respiration.[45] The rainforest contains several species that can pose a hazard. Among the largest predatory creatures are the black caiman, jaguar, cougar, and anaconda. In the river, electric eels can produce an electric shock that can stun or kill, while piranha are known to bite and injure humans.[46] Various species of poison dart frogs secrete lipophilic alkaloid toxins through their flesh. There are also numerous parasites and disease vectors. Vampire bats dwell in the rainforest and can spread the rabies virus.[47] Malaria, yellow fever and dengue fever can also be contracted in the Amazon region. The biodiversity in the Amazon is becoming increasingly

