

WILL THE AMAZON SURVIVE A WARMER WORLD?

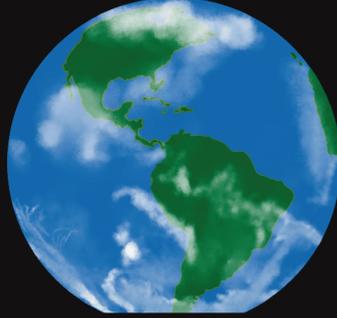
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IT TOOK EARTH 3 BILLION YEARS TO BUILD THE LARGEST TROPICAL FOREST IN THE WORLD: THE AMAZON RAINFOREST. THE FOREST TAKES UP CARBON FROM THE ATMOSPHERE,



HELPING THE GLOBAL CLIMATIC SYSTEM TO COPE WITH THE HUMAN-INDUCED EXCESS CARBON DIOXIDE AND SLOWING DOWN GLOBAL WARMING. HOWEVER, LIKE ALL LIVING ORGANISMS,

TREES HAVE A DIFFICULT TIME SURVIVING WHEN THE CLIMATIC CONDITIONS - SUCH AS TEMPERATURE AND RAINFALL - ARE VERY DIFFERENT.



SO IF WE KEEP WARMING UP THE PLANET, WILL THE AMAZON SURVIVE?"



AREA: 6,740,000 KM (2,300,000 MI) ABOUT 7% OF EARTH'S SURFACE!

COME ALONG, LITTLE ONE! TODAY IS YOUR FIRST BIG FLIGHT! LET ME SHOW YOU OUR HOME!



WOW! IT'S REALLY HUGE!



YES IT IS! THE FOREST AND ITS RIVERS ARE NOT ONLY HUGE, THEY ARE THE HOMES OF OVER 3 MILLION SPECIES.

WHAT ARE THESE WHITE CLOUDS, MOMMY?



THESE ARE THE FLYING RIVERS ON THEIR WAY TO THE SOUTH.



RIVERS WITH WINGS, MOMMY?

NO, DARLING. WE CALL THEM THAT BECAUSE THEY CARRY MOISTURE THROUGH THE ATMOSPHERE, PROVIDING WATER TO SOUTH-EASTERN SOUTH AMERICA.

NOW COME, I WANT TO SHOW YOU SOMETHING...



IN ADDITION TO THEIR ROLE IN CLIMATE, AMAZONIAN TREES TELL STORIES OF A CLIMATE-CHANGE-RESISTANT PAST.



PLIOCENE* (2.6-5.0 MILLION YEARS AGO)

3°C 5°F
— TODAY

MILLIONS OF YEARS AGO, ANCIENT AMAZON TREE LINEAGES SURVIVED TEMPERATURES UP TO 2-3°C (4-5°F) HIGHER THAN WE HAVE TODAY.

TODAY



HOWEVER, WE ARE LIVING IN A CHANGING WORLD, WHERE THE TEMPERATURE IS INCREASING RAPIDLY AROUND THE WORLD, AND HUMANS ARE AFFECTING THE AMAZON MORE THAN EVER BEFORE.

FUTURE (100-YEAR PROJECTION)

3°C 5°F
— TODAY

THE TEMPERATURE INCREASE THAT IS PREDICTED FOR 100 YEARS IN THE FUTURE, IF THE PLANET CONTINUES TO WARM, IS SIMILAR TO THE DIFFERENCE BETWEEN TODAY AND THE PLIOCENE. BACK THEN, THE AMAZON WAS ABLE TO SURVIVE THE HEAT... BUT OUR WORLD IS VERY DIFFERENT NOW!

SO IF THE TREES SURVIVED, WILL OUR SPECIES SURVIVE TOO, MOMMY?

WE CAN LOOK INTO THE PAST TO ANSWER YOUR QUESTION, MY DARLING. FOR EXAMPLE, WHEN PLANTS BURN, THE CHARCOAL LEFT BEHIND TELL US A STORY.

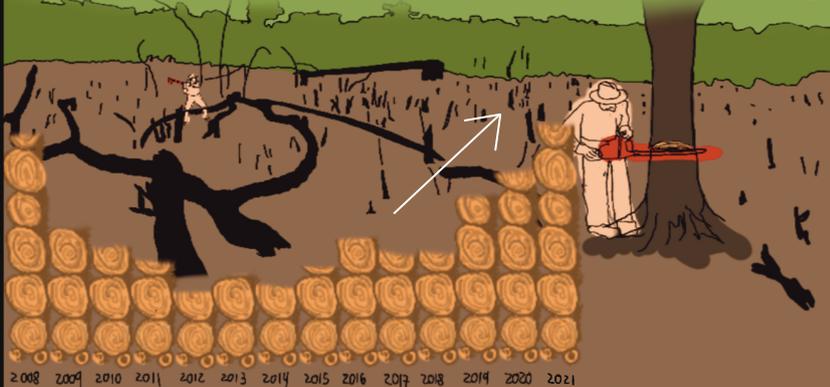
THAT STORY TELLS US THAT OVER THE LAST 370,000 YEARS, FIRE WAS RARE.

NOWADAYS, EVEN OUR HOMES ARE BEING BURNED - IT'S NOT JUST THE INCREASE IN TEMPERATURE THAT IMPACTS THE AMAZON.

FIRES HAVE BECOME MORE AND MORE COMMON IN THE LAST DECADES.



LARGE AREAS OF OUR FOREST HAVE BEEN CLEARED, MAKING IT LESS EFFECTIVE IN OUR FIGHT AGAINST CLIMATE CHANGE. DEFORESTATION AFFECTS THE FLOW OF FLYING RIVERS, DECREASING THE RAINFALL OVER SOUTH AMERICA, AND THE FOREST'S ABILITY TO ABSORB CO₂.



IS THERE STILL TIME TO CHANGE THIS, MOMMY?

THE PAST TELLS US THAT THE AMAZON FOREST HAS RECOVERED FROM A WARMER WORLD, BUT IF THE DEFORESTATION AND FIRES DON'T STOP IN THE NEXT 10-15 YEARS, THE AMAZON FOREST MAY NOT SURVIVE.



THE END