

= Hurricane Irene ? Olivia =

Hurricane Irene ? Olivia was the first actively tracked tropical cyclone to move into the eastern Pacific Ocean from the Atlantic basin . It originated as a tropical depression on September 11 , 1971 , in the tropical Atlantic . The cyclone tracked nearly due westward at a low latitude , passing through the southern Windward Islands and later over northern South America . In the southwest Caribbean Sea , it intensified to a tropical storm and later a hurricane . Irene made landfall on southeastern Nicaragua on September 19 , and maintained its circulation as it crossed the low @-@ lying terrain of the country . Restrengthening after reaching the Pacific , Irene was renamed Hurricane Olivia , which ultimately attained peak winds of 115 mph (185 km / h) . Olivia weakened significantly before moving ashore on the Baja California Peninsula on September 30 ; the next day it dissipated .

In the Atlantic , Irene produced moderate rainfall and winds along its path , although impact was greatest in Nicaragua where it moved ashore as a hurricane . A total of 96 homes were destroyed , and 1 @, @ 200 people were left homeless . The rainfall resulted in widespread flooding , killing three people in Rivas . In neighboring Costa Rica , Hurricane Irene caused more than \$ 1 million (USD) in damage to the banana crop . Later , the remnants of Hurricane Olivia produced rainfall in the southwest United States . Flooding was reported near Yuma , Arizona , which closed a major highway , and the moisture produced snowfall in higher elevations in the Rocky Mountains .

= = Meteorological history = =

The origins of the hurricane were from a tropical wave that exited the west African coast on September 7 . It moved rapidly westward , developing into a tropical depression on September 11 about 800 miles (1300 km) east of the Windward Islands . It was one of seven active tropical cyclones in the Atlantic basin that day , one of the most active single days on record . It existed at a fairly low latitude and failed to intensify due to the unfavorable combination of Hurricane Ginger and a long trough to its northwest . On September 13 , the depression passed just south of Barbados and subsequently entered the Caribbean Sea . Interacting with the terrain of South America , the center became broad and ill @-@ defined , although Curaçao reported winds of near tropical storm force as it crossed the island on September 16 . It later moved near or over northern Venezuela and Colombia . As it approached the western Caribbean , the depression was able to organize more , with less influence from landmass or the trough to its north . At 0000 UTC on September 17 , it is estimated the depression attained tropical storm status ; that day , it was named Irene about 350 miles (560 km) east of San Andrés . Initially , the storm was expected to track west @-@ northwestward toward the northwest Caribbean , similar to the track taken by the destructive Hurricane Edith two weeks prior .

Tropical Storm Irene gradually intensified as it continued across the southwestern Caribbean Sea . Late on September 18 , the storm attained hurricane status a short distance off the coast of Central America , with 80 mph (130 km / h) winds , its peak intensity in the Atlantic Ocean . As it strengthened , it developed an eye and spiral rainbands that extended across Panama into the Pacific Ocean . Hurricane Irene weakened slightly as it approached the coast , although its pressure dropped to 989 mbar . On September 19 , the hurricane made landfall in the Nicaraguan South Caribbean Coast Autonomous Region ; it was the first tropical cyclone of hurricane intensity since 1911 to strike Nicaragua south of Bluefields . Irene quickly weakened , deteriorating to tropical depression status within 18 hours of moving ashore . The circulation remained organized over the low @-@ lying terrain of southern Nicaragua , possibly due to it crossing Lake Nicaragua . After reaching the Pacific Ocean on September 20 , the depression restrengthened to attain tropical storm status ; upon doing so , it was re @-@ designated by a new name , Olivia . It was the first time an Atlantic hurricane was tracked as a tropical cyclone while crossing Central America into the Pacific Ocean ; subsequent research indicated there were earlier storms that accomplished the feat , although they were not known at the time .

As an Eastern Pacific tropical cyclone , Olivia maintained well @-@ defined outflow and inflow . It

gradually intensified as it paralleled the southern Central America coastline . Late on September 21 , a Hurricane Hunters flight reported winds of 80 mph (130 km / h) and an eye 23 miles (37 km) in diameter ; based on the readings , Olivia was upgraded to hurricane status . For several days , Olivia moved west to west @-@ northwestward off the coast of Mexico , although its exact intensity fluctuations were unknown , due to lack of significant observations . On September 25 , the eye became very pronounced on satellite imagery , and based on a report from the Hurricane Hunters , it is estimated Olivia reached peak winds of 115 mph (185 km / h) , about 245 miles (395 km) southwest of Manzanillo , Colima . The Hurricane Hunters also reported a pressure of 948 mbar , which was the lowest reported pressure during the 1971 Pacific hurricane season .

The intensity of Hurricane Olivia fluctuated for two days as it turned westward away from land , due to a blocking ridge over northwestern Mexico . Early on September 26 it weakened to winds of about 105 mph (165 km / h) , before it quickly restrengthened to its previous peak intensity . Subsequently , dry air became entrained in the circulation , and Olivia began to weaken as it moved over cooler waters . The eye became disorganized and eventually dissipated . Late on September 28 it weakened to tropical storm status , after beginning a turn to the northwest and later to the north . About 24 hours later , Olivia weakened to tropical depression status as it approached the coastline of the Baja California Peninsula . Most of the thunderstorm activity dissipated by the time the depression moved ashore on September 30 ; the next day , Olivia dissipated near the border of Baja California and Baja California Sur .

= = Impact and records = =

As a tropical depression , the cyclone produced a wind gust of 43 mph (69 km / h) in Barbados . The system also dropped 3 @.@ 35 inches (85 @.@ 1 mm) of rainfall in Trinidad . Prior to its arrival , officials noted the potential for the depression to bring flash flooding to northern Venezuela , as well as heavy rainfall to the ABC islands . Later as a tropical storm , Irene brushed San Andrés island in the western Caribbean with gale force winds ; no major damage was reported there .

Prior to the hurricane 's landfall in Nicaragua , the country 's army evacuated about 500 people from a settlement near Bluefields , and along the coastline , boats were advised to remain at port . When it moved ashore , the hurricane produced sustained winds of 46 mph (74 km / h) in Bluefields . The winds destroyed 27 houses in the region . Observations were not available in the sparsely populated region near where Irene moved ashore , although winds were believed to have reached hurricane force there . Reconnaissance planes reported heavy structural and tree damage in southeastern Nicaragua . Satellite imagery suggested that heavy rainfall occurred from Panama through Honduras , and one location in Nicaragua reported more than 6 @.@ 3 inches (160 mm) of precipitation . The rainfall caused flooding in many communities , killing three people in Rivas . At least five rivers reported flooding ; along one of the rivers , 35 houses were inundated , and along another , the floodwaters swept away all of the crops and personal belongings of three villages . Across the country , the hurricane destroyed 96 homes , and 1 @,@ 200 people were left homeless . In Costa Rica , Irene 's passage resulted in more than \$ 1 million (USD) in damage to the banana crop .

Late in its duration , Hurricane Olivia brought increased moisture into the southwest United States . More than 2 inches (50 mm) of rainfall were reported across Arizona and New Mexico . Light precipitation was also reported in western Texas and southeastern California . The National Weather Service issued flash flood warnings throughout the region . Near Yuma , Arizona , thunderstorms caused three major power outages and produced flooding that resulted in the closure of a portion of U.S. Route 95 . In Navajo and Pinal counties , the rainfall damaged roads , bridges , sewers , and homes , which amounted to about \$ 250 @,@ 000 in repair work for the state of Arizona . The storm 's moisture also produced locally heavy snowfall in higher elevations in the Rocky Mountains .

Irene ? Olivia is unusual in that it survived passage from the Atlantic to Pacific Ocean . Only seven other storms are known to have done so . Irene was the first of three Atlantic @-@ to @-@ Pacific crossover tropical cyclones in the 1970s , all three of which took eastern Pacific names starting with

the letter O.