

= Hurricane Greta ? Olivia =

Hurricane Greta ? Olivia was one of six Atlantic hurricanes to cross over Central America into the eastern Pacific while remaining a tropical cyclone . The seventh named storm of the 1978 Atlantic hurricane season , Greta formed from a tropical wave just northwest of Trinidad on September 13 , and despite being in a climatologically unfavorable area , gradually intensified while moving west @-@ northwestward . On September 16 , it became a hurricane south of Jamaica . Two days later , the well @-@ defined eye approached northeastern Honduras but veered to the northwest . After reaching peak winds of 130 mph ( 215 km / h ) that day , Greta weakened while paralleling the northern Honduras coast just offshore . On September 19 , it made landfall on Belize near Dangriga and quickly weakened into a tropical depression while crossing Guatemala and southeastern Mexico . After entering the eastern Pacific , the system re @-@ intensified into a hurricane and was renamed Olivia , which weakened before dissipating over Chiapas on September 23 .

Taking a similar path to Hurricane Fifi four years prior , Greta threatened to reproduce the devastating effects of the catastrophic storm ; however , damage and loss of life was significantly less than feared . In Honduras , about 1 @, @ 200 homes were damaged , about half of which in towns along the coastline . The storm damaged about 75 % of the houses on Roatán along the offshore Bay Islands , and there was one death in the country . In the Belize Barrier Reef , Greta downed trees and produced high waves , while on the mainland , there was minimal flooding despite a high storm surge . In Dangriga where it made landfall , the hurricane damaged or destroyed 125 houses and the primary hospital . In Belize City , a tornado flipped over a truck and damaged four houses . Damage in Belize was estimated at \$ 25 million ( 1978 USD ) , and there were four deaths .

= = Meteorological history = =

A tropical wave exited the west coast of Africa near Dakar , Senegal on September 7 . Moving westward across the Atlantic Ocean , the wave spawned an area of convection three days later , which gradually organized . On September 13 , the wave moved through the Windward Islands , producing wind gusts of 50 mph ( 85 km / h ) on Barbados . Later that day , it is estimated the system developed into a tropical depression about 75 mi ( 120 km ) west @-@ northwest of Trinidad , based on ship and land reports . Though located in a climatologically unfavorable area , the depression intensified and continued to develop . A Hurricane Hunters flight on September 14 indicated that the depression intensified into Tropical Storm Greta to the north of the Netherlands Antilles .

After becoming a tropical storm , Greta intensified slowly due to a strong trough to the northwest , and with the South American coastline located to the south , the southerly inflow was disrupted . With a ridge to the north along the 30th parallel , the storm moved quickly west @-@ northwestward across the Caribbean . On September 16 , Greta intensified into a hurricane about 275 mi ( 443 km ) south of Jamaica . Shortly thereafter , the trough to the northwest weakened , which had been preventing the storm 's intensification . An increasingly well @-@ defined eye developed while approaching the coast of Honduras as the barometric pressure quickly dropped . Early on September 18 , the eyewall passed just offshore Cabo Gracias a Dios , the sparsely populated border between Honduras and Nicaragua . The NHC described the eye as having " literally ricocheted off of the protruding northeast coast of Honduras " , thus sparing much of the country from the strongest winds . At 0710 UTC on September 18 , the Hurricane hunters observed a minimum pressure of 947 mbar ( 28 @. @ 0 inHg ) just off the northern Honduras coast , which was the basis for the estimated peak intensity of 130 mph ( 215 km / h ) . This made it a Category 4 hurricane on the Saffir @-@ Simpson Hurricane Wind Scale .

Despite the proximity to land , Greta initially maintained a well @-@ defined structure . The hurricane continued generally west @-@ northwestward due to the ridge to the north , and initially was expected to enter the Bay of Campeche . After passing through the Bay Islands off northern Honduras , Greta weakened slightly while approaching Belize , and made landfall near Dangriga at

0000 UTC on September 19 , with winds of about 110 mph ( 175 km / h ) . The calm of the eye was reported for three to five minutes there . Rapidly weakening over land , the hurricane deteriorated to tropical depression status over Guatemala within 12 hours of landfall . A large high pressure area from the Carolinas to the central Gulf of Mexico turned Greta southwestward toward the eastern Pacific Ocean . At 0000 UTC on September 20 , the Eastern Pacific Hurricane Center ( EPHC ) took over responsibility for issuing advisories while Greta was 30 mi ( 50 km ) from the coast . Soon after , the depression emerged over the warm waters of the eastern Pacific and re @-@ intensified . At 0600 UTC , the depression re @-@ attained tropical storm status and was named Olivia by the EPHC , due to the storm entering the Pacific basin . After initially moving to the north , Olivia began executing a slow counterclockwise loop . Based on observations from nearby ships and radar , it is estimated Olivia attained hurricane status early on September 22 . While tracking towards the Mexican coastline , the system weakened below hurricane threshold ; between 1900 and 2000 UTC , Olivia made landfall about 60 mi ( 95 km ) east of Salina Cruz . Early on September 23 , Olivia dissipated over the Mexican state of Chiapas .

Hurricane Greta ? Olivia was a rare crossover storm from the Atlantic to the Pacific , one of six to maintain tropical cyclone status during the crossing .

= = Impact = =

Early in its duration , Greta produced heavy rainfall in the Netherlands Antilles , but the strongest winds remained north of the island .

Late on September 17 when Greta 's eye was just offshore Honduras , the country 's government issued a hurricane warning for the eastern coastline . Around the same time , the Mexican government issued a hurricane warning for the eastern Yucatán peninsula , and on September 18 a hurricane warning was issued for the Belize and Guatemala coastlines . These advanced warnings helped reduce fatalities . In Puerto Castilla , Honduras , about 2 @, @ 000 people were evacuated in advance of the storm . The Honduran government put its military , police , and Red Cross on standby in advance of the storm , due to fears of a repeat of Hurricane Fifi in 1974 . However , unlike Fifi , which caused deadly floods in the region four years prior and took a similar track , Greta did not cause as significant river flooding in Honduras .

Across much of Greta 's track in Central America , the hurricane dropped locally heavy rainfall . When Greta passed just offshore northeastern Honduras , it produced sustained winds of 80 mph ( 130 km / h ) in Puerto Lempira , with gusts to 115 mph ( 185 km / h ) . Winds along the northern Honduras coast were diminished due to the eyewall passing to the north . In Honduras , meteorologists estimated that upwards of 15 in ( 380 mm ) of rain fell in mountainous regions . Many villages were isolated and communication with them was severely hampered . In Puerto Lempira , roughly 1 @, @ 500 of the town 's 7 @, @ 000 residents sought refuge in five large structures during the storm . In twelve communities along the coastline , military officials reported that 656 homes were destroyed , of which 278 were in Punta Potuca . In the offshore Bay Islands , the hurricane destroyed 26 houses on Guanaja , where many roofs were lost and several boats were destroyed . On nearby Roatán , about 75 % of the houses lost their roofs after experiencing wind gusts of 80 mph ( 130 km / h ) . There was one death in Honduras , and nationwide , the hurricane damaged about 1 @, @ 200 homes , washed out roads and bridges , and wrecked coconut and rice crops .

At Greta 's final landfall in Belize , the highest sustained winds were 55 mph ( 89 km / h ) in Belize City , with gusts to 115 mph ( 185 km / h ) at Dangriga near the landfall location . On the offshore Ambergris Caye , winds reached 60 mph ( 97 km / h ) , and there was heavy rainfall . On Half Moon Caye , the hurricane damaged the base of a lighthouse and knocked over several coconut trees . Along the Belize Barrier Reef , the hurricane downed palm trees and produced high waves , with significant wave heights of about 33 ft ( 10 m ) along Carrie Bow Caye . On the mainland , storm tides in Dangriga were 6 to 7 ft ( 1 @. @ 8 to 2 @. @ 1 m ) above normal , which did not cause much flooding . The strong winds destroyed 50 houses there and unroofed a further 75 , including damage to the hospital . There were also disruptions to power and water service . About 90 % of the grapefruit crop was destroyed , and 50 % of the orange crop was lost . Tides were 2 to 4 ft ( 0 @. @

61 to 1 @. @ 22 m ) above normal in Belize City , which caused flooding in conjunction with swollen rivers . The United States embassy was flooded with about one foot of mud . There was little damage in the city , although a tornado in Belize City that damaged four houses and flipped over a truck . During the storm , the Belize International Airport was closed . Farther inland , strong winds caused heavy damage at Guanacaste National Park . Damage throughout Belize was estimated at \$ 25 million ( 1978 USD ) , and there were four deaths . Three of the deaths were on offshore islands in areas without radios , and the other was due to electrocution .

= = Aftermath = =

Following the storm damage in Honduras , the country requested help from the United States . The Tactical Air Command had sent two squadrons to Central America in the middle of 1978 , and in response to the request from Honduras , two aircraft delivered over 100 @, @ 000 lb ( 45 @, @ 000 kg ) of cots , water , and generators ; the units also deployed a 13 ? person crew who specialized in disaster relief . The aid was distributed by the Military of Honduras .

In late October 1978 , the United Methodist Church sent books and other supplies via aircraft to Belize , after a youth group rode out the storm there and desired to help residents . Despite the hurricane damage , the economy of Belize continued to grow after Greta struck , including an increase in banana production .

Although the National Hurricane Center does not consider it retired , the World Meteorological Organization lists Greta in its retired hurricane name list .