

= Hurricane Alice (December 1954) =

Hurricane Alice is the only known Atlantic hurricane to span two calendar years and one of only two named Atlantic tropical cyclones , along with Tropical Storm Zeta of 2005 , to do so . The twelfth tropical cyclone and the eighth hurricane of the 1954 Atlantic hurricane season , Alice developed on December 30 , 1954 from a trough of low pressure in the central Atlantic Ocean in an area of unusually favorable conditions . The storm moved southwestward and gradually strengthened to reach hurricane status . After passing through the Leeward Islands on January 2 , 1955 , Alice reached peak winds of 90 mph (150 km / h) before encountering cold air and turning to the southeast . It dissipated on January 6 over the southeastern Caribbean Sea .

Alice produced heavy rainfall and moderately strong winds across several islands along its path . Saba and Anguilla were affected the most , with total damage amounting to \$ 623 @, @ 500 (1955 USD) . There was an earlier hurricane named Alice in the season . Operationally , lack of definitive data prevented the U.S. Weather Bureau from declaring the system a hurricane until January 2 . It received the name Alice in early 1955 , though re @-@ analysis of the data supported extending its track to the previous year , resulting in two tropical cyclones of the same name in one season .

= = Meteorological history = =

A cold front moved southeastward from the East Coast of the United States on December 23 , 1954 , and passed over Bermuda two days later . A strong anticyclone developed behind the cold front , and on December 26 a trough extended southward from the cold front . The anticyclone moved southeastward as the trough and cold front moved eastward . The trough gradually decelerated as high pressures altered the upper level flow to that of an easterly flow . Convection increased over the trough as it moved over relatively warm waters , about 1 ° C above normal , and began undergoing tropical cyclogenesis after a circulation began to develop along the northern portion of the trough . The system continued to organize as it moved to the west , and based on three ship reports confirming a closed circulation , it is estimated the system developed into a tropical depression on December 31 while located 770 miles (1245 km) east @-@ northeast of Barbuda in the Lesser Antilles .

With a narrow ridge of high pressure to its north , the depression moved west @-@ southwestward . Atmospheric conditions were unusually favorable for the time of the year due to the ridge of high pressure preventing cold air from reaching the central Atlantic Ocean . This allowed the depression to intensify into a tropical storm later on December 30 , based on direct observations . There were few direct observations for the following days , but it is estimated the storm intensified into a hurricane on December 31 while located about 475 miles (770 km) east @-@ northeast of Barbuda . On January 1 , 1955 , a ship within 10 miles (16 km) of the center reported hurricane @-@ force winds and a pressure of 987 mbar . Based on this report and several other ship reports , the system was recognized as a tropical low by the San Juan Weather Bureau Office . The hurricane continued to the southwest , and entered the Caribbean Sea on January 2 after passing between Saint Martin and Saint Barthélemy . A portion of the eyewall moved over Saint Martin and Saba . Based on near @-@ hurricane @-@ force winds from the affected islands , an information bulletin named the system as Hurricane Alice while in the northeastern Caribbean Sea . Throughout its track , Alice was a small tropical cyclone with a diameter of only around 60 miles (95 km) .

Reconnaissance aircraft flew into Hurricane Alice on January 3 and confirmed the existence of the tropical cyclone by reporting winds between 60 and 65 mph (95 to 105 km / h) and a warm core center . It is estimated Alice continued to intensify as it tracked southwestward in the Caribbean Sea , and attained peak winds of 80 mph (130 km / h) while located about 95 miles (150 km) west @-@ northwest of Montserrat . While near its peak the hurricane developed a ring of convection around its eye , and Alice maintained peak winds for about 24 hours until cold air from the north weakened it . Extratropical cyclogenesis occurred north of Bermuda on January 3 , which weakened the high pressure system to the north of Alice and turned the flow in the Caribbean Sea to that of cold northwesterly winds . Alice turned to the southeast on January 4 and weakened to a tropical

storm shortly thereafter . Convection gradually became disorganized , and after weakening to a tropical depression on January 5 , Alice dissipated on January 6 while located about 100 miles (160 km) west @-@ northwest of Grenada .

= = Impact , naming and records = =

Subsequent to the confirmation of the existence of Hurricane Alice , the U.S. Weather Bureau Office in San Juan , Puerto Rico warned the islands of the northern Lesser Antilles to prepare for strong winds and rough seas . Hurricane Alice produced moderate to strong winds across the islands , peaking at 81 mph (130 km / h) in Saint Barthélemy and 75 mph (120 km / h) in Saba . The hurricane dropped moderate to heavy rainfall across several islands , including a peak of 11 @.@ 27 inches (286 mm) in 48 hours recorded at Saba . Due to its small size , only a few islands received significant effects from the hurricane . Saint @-@ Barthélemy , Saba , Anguilla , Sint Eustatius , and Saint Kitts reported damage from the hurricane , totaling \$ 623 @,@ 500 (1955 USD , \$ 4 @.@ 7 million 2006 USD) . Damage was heaviest on Saba and Anguilla , occurring primarily to shipping facilities and crops . 626 houses were destroyed or severely damaged on Anguilla , as well . The damage was caused mostly by heavy rainfall and rough seas , not the direct action of the wind . The passage of Hurricane Alice greatly troubled the economies of the small affected islands . Additionally , the outer rainbands of the storm alleviated dry conditions on Puerto Rico which had persisted since the previous October . No deaths were reported .

This storm formed on December 30 ; however , in the days before satellites , meteorologists had to rely on reports from ships and islands in the Atlantic to locate and track storms . This information was often sketchy ; two cyclones , including a Category 2 hurricane , operationally went undetected in 1954 . It was officially recognized as a significant tropical cyclone on January 2 , 1955 . At the time , the National Weather Service used the same naming list each year , so the name given to this storm was " Alice " and it was designated as a part of the 1955 Atlantic hurricane season . However , it was found during post @-@ storm analysis that the storm had actually formed on December 30 , and was instead a part of the 1954 season . Therefore , the season had two storms named " Alice " ? the first storm of the season , and the last . Had Alice been discovered before the end of the calendar year , it would have been named Irene , the next name on the 1954 list . Some reports named this storm Alice2 to avoid confusion with the earlier Alice from June 1954 .

Alice formed later in the calendar year than any Atlantic tropical cyclone on record , forming six hours later in the season than Tropical Storm Zeta in 2005 . Alice was one of only eight Atlantic tropical cyclones to form in the month of December . Alice was the first of two Atlantic tropical cyclones to exist in two calendar years , the other being 2005 's Zeta . The hurricane was also one of only six tropical or subtropical cyclones to exist in the month of January and the strongest to do so .