

= Hurricane Ginger =

Hurricane Ginger was the second longest @-@ lasting Atlantic hurricane on record . The eighth tropical cyclone and fifth hurricane of the 1971 Atlantic hurricane season , Ginger spent 27 @.@ 25 days as a tropical cyclone , lasting from September 6 to October 3 . Twenty of those days ( September 11 @-@ September 30 ) , Ginger was classified as a hurricane . The storm formed northeast of the Bahamas , and for the first nine days of its duration tracked generally eastward or northeastward while gradually strengthening to peak winds of 110 mph ( 175 km / h ) . On September 14 , Ginger slowed and turned to a general westward track , passing near Bermuda on September 23 . There , the hurricane produced gusty winds and high waves , but no damage .

While over the western Atlantic Ocean , Ginger became the last target of Project Stormfury , which sought to weaken hurricanes by depositing silver iodide into tropical cyclone rainbands . Ginger ultimately struck North Carolina on September 30 as a minimal hurricane , lashing the coastline with gusty winds that caused power outages across the region . Heavy rainfall flooded towns and left severe crop damage , with 3 million bushels of corn and 1 million bushels of soybean lost . Damage in the state was estimated at \$ 10 million ( 1971 US dollars , \$ 58 @.@ 4 million 2016 USD ) . Further north , moderate precipitation and winds spread through the Mid @-@ Atlantic states , although no significant damage was reported outside North Carolina .

= = Meteorological history = =

Hurricane Ginger originated in a cold @-@ core upper @-@ level low that persisted for several days in early September in the Western Atlantic Ocean . The upper @-@ level low was located within a large , persistent area of convection from the Gulf of Mexico through the central Atlantic , which resembled the Intertropical Convergence Zone but at a higher latitude . The convective feature was influenced by an anticyclone located over northern South America , which was opposite of the typical flow for September . The anticyclone also led to the formation of Hurricane Fern , Tropical Storm Heidi , and two tropical depressions . By September 5 , the low had descended to the surface as its thermal structure warmed , and the next day it developed into a tropical depression about 235 mi ( 375 km ) northeast of the Bahamas .

After forming , the depression moved slowly southeastward for about 24 hours before turning to the northeast , slowly organizing in the process . On September 10 , the depression turned eastward , and later that day intensified into Tropical Storm Ginger , the seventh named storm of the year in the Atlantic , about 325 mi ( 525 km ) south of Bermuda . The storm quickly intensified , and within 24 hours reached winds of 75 mph ( 120 km / h ) , making it a hurricane . It turned to the northeast , passing well to the east of Bermuda . Late on September 13 , Ginger attained its minimum barometric pressure of 959 mbar ( 28 @.@ 32 inHg ) , and early the next day reached peak maximum sustained winds of 110 mph ( 175 km / h ) . After reaching a position about halfway between Bermuda and the Azores , the hurricane 's eastward movement halted due to a building ridge to its north and east . It turned sharply southward before turning and beginning a westerly drift , during which Ginger weakened to minimal hurricane status .

For about six days , Ginger maintained minimal hurricane status . As it meandered over the central Atlantic Ocean , it maintained an unusually large eye , reaching 80 mi ( 130 km ) in diameter . On September 18 , Ginger turned to the south and slowly executed a tight counterclockwise loop within three days . By September 21 , the hurricane was tracking south of due west , and the next day suddenly intensified to winds of 90 mph ( 150 km / h ) . Its westward track briefly posed a threat to Bermuda , although Ginger passed 115 mi ( 185 km ) south of the island on September 23 while slowly weakening . On September 24 , Ginger decelerated before beginning a turn to the southwest . By September 26 , Ginger briefly weakened to minimal hurricane strength , although re @-@ intensification resumed as the track turned to the west and northwest . Around that time , Ginger absorbed the smaller and weaker Tropical Storm Janice to its southeast .

For three days , beginning on September 26 , the National Oceanic and Atmospheric Administration deployed planes into the hurricane as part of Project Stormfury , the fourth hurricane to be a part of

the weather control experiment . The plane dropped silver iodide into the center of the hurricane , although there was no effect due to Ginger 's large eye and diffuse nature ; this was the last seeding done by the project . By September 28 , Ginger was moving northwestward toward North Carolina and was steadily intensifying . At around 06 : 00 UTC the next day , the hurricane reached a secondary peak intensity of 105 mph ( 165 km / h ) , which it maintained for about 18 hours . Afterward , Ginger slowly weakened , and late on September 30 it made landfall near Morehead City , North Carolina , with winds of 75 mph ( 120 km / h ) . It quickly deteriorated over land , weakening first to a tropical storm and then to a tropical depression by late on October 1 . Ginger turned to the north , entered southern Virginia , and later turned to the east . On October 3 , it transitioned into an extratropical cyclone while crossing Hampton Roads into the Atlantic Ocean . The remnants of Ginger continued east @-@ southeastward until being absorbed by a cold front on October 5 .

= = Preparations = =

The threat of the hurricane in Bermuda prompted the British Royal Navy to evacuate a ship , and also resulted in two cruise ships leaving early . The United States military also evacuated some planes and secured the units that remained . Officials closed all of the island 's schools during Ginger 's passage .

Before Ginger struck North Carolina , the American Red Cross set up 28 emergency shelters in six counties , where about 5 @, @ 500 people stayed during the storm . The National Hurricane Center issued a hurricane watch from Wilmington , North Carolina , to Virginia Beach , Virginia , with gale warnings extending northward to Rehoboth Beach , Delaware . United States military officials evacuated planes and ships from the Norfolk , Virginia , region , in addition to flying planes down the coast to warn boaters of the approaching storm . Ferry services around the Outer Banks were canceled during the storm 's passage , while the Coast Guard ordered the evacuation of workers in three lighthouses .

= = Impact = =

As the hurricane passed south of Bermuda on September 23 , it produced heavy waves , as well as gale force winds for 17 hours . Naval Air Station Bermuda reported peak gusts of 75 mph ( 120 km / h ) . There was no reported damage , and the hurricane 's passage failed to alleviate persistent drought conditions .

While Ginger was still in the vicinity of Bermuda , it produced high swells and riptides along the East Coast of the United States , prompting the issuing of small craft warnings from Florida to North Carolina . Wave heights reached 8 ft ( 2 @. @ 4 m ) in Sebastian , Florida , and one person was killed in St. Augustine from drowning . There were also initial reports of two missing people in Neptune Beach , Florida , but they were not listed as casualties in the year @-@ end hurricane summary .

As it moved ashore in North Carolina , Ginger produced a storm tide of around 6 ft ( 1 @. @ 8 m ) along the Outer Banks and up to 7 ft ( 2 @. @ 1 m ) in Pamlico Sound . The storm dropped heavy rainfall peaking at 15 @. @ 58 in ( 396 mm ) in Bodie Island along the Outer Banks , making Ginger among the wettest tropical cyclones in the state . Rainfall from the storm extended southwestward into South Carolina , where precipitation reached 4 @. @ 98 in ( 126 mm ) in Cheraw . In Atlantic Beach , North Carolina , wind gusts reached 92 mph ( 148 km / h ) , the highest associated with Ginger in the United States . The hurricane had a large wind field upon moving ashore , affecting a large portion of North Carolina ; one county official considered Ginger the largest storm in the region since 1936 .

Strong winds from Ginger damaged store fronts and windows , and also downed power lines and trees . Morehead City , where the hurricane moved ashore , lost power and had debris strewn across the streets . The nearby cities of New Bern , Beaufort , and Atlantic Beach also lost power , and one company had 6 @, @ 000 customers without power . Heavy rainfall caused the Neuse and Trent rivers to exceed their banks , resulting in flooding . Several oil tanks along the rivers broke

open , creating dangerous boating conditions . Up to 4 ft ( 1 @. @ 2 m ) of water from the Pungo River flooded most of the city of Belhaven , and similar flooding occurred in Washington , entering dozens of buildings and houses . Across the region , the combination of high winds , tides , and flooding closed several bridges and roads , including a portion of U.S. Highway 70 . The winds also destroyed several mobile homes , although coastal damage was less than expected . During Ginger 's passage , the Salvation Army and Red Cross provided more than 3 @, @ 000 people with food assistance .

Further inland , the combination of strong winds and rains left heavy crop damage , destroying 3 million bushels of corn and another million bushels of soybeans ; losses to the corn crop were mitigated due to about half of the crop having been harvested before the storm 's arrival . Heavy damage was also reported to the peanut crop as well as to various fruits and vegetables . In some locations , up to 15 % of the cotton crop was lost , particularly in the northeastern portion of the state . In 45 counties in the eastern portion of the state , farmers affected by the hurricane were eligible for loans from the Farmers Home Administration , following federal approval from United States President Richard Nixon . Governor Robert W. Scott requested federal disaster aid for 24 counties , which was denied . Damage in North Carolina was estimated at \$ 10 million ( 1971 USD , \$ 58 @. @ 4 million 2016 USD ) , of which about \$ 1 million ( 1971 USD , \$ 5 @. @ 84 million 2016 USD ) was from coastal flooding . One death occurred in Washington when a vehicle accident was possibly caused by a wind gust ; however , it was not conclusively linked to Ginger .

As the storm crossed into Virginia , it continued to produce heavy rainfall , including a total of 7 @. @ 61 in ( 193 mm ) in Norfolk . Near the border between Virginia and North Carolina , the storm produced tides of up to 4 ft ( 1 @. @ 2 m ) above normal . Gusty winds of over 50 mph ( 80 km / h ) downed a few trees , causing scattered power outages . Above @- @ normal tides and waves caused moderate to heavy beach erosion in Virginia Beach . Further north , Ginger produced above @- @ normal tides , light winds , and scattered rainfall along the Delmarva Peninsula and northward through New York .

= = Record longevity = =

Hurricane Ginger formed on September 6 and lasted until October 3 , for a total of 27 @. @ 25 days . Its duration surpassed that of Hurricane Inga in 1969 , which was the previous record @- @ holder , by three days . In 2003 , it was discovered that the 1899 San Ciriaco hurricane lasted as a tropical cyclone longer than Ginger , although its duration as a tropical cyclone was not continuous . This made Ginger the second longest @- @ lived of any Atlantic hurricane , but it remains the storm that lasted the most consecutive days as a tropical cyclone in the basin .

Ginger spent 20 days as a hurricane from September 11 to September 30 , one of the longest durations on record at that intensity . In addition , Ginger co @- @ existed with several other tropical cyclones , including on September 11 when there were four named storms at the same time , a rare occurrence ; the others were Hurricane Edith , Hurricane Fern , and Tropical Storm Heidi .