

## = Hurricane Gracie =

Hurricane Gracie was a major hurricane that formed in September 1959 , the strongest during the 1959 Atlantic hurricane season and the most intense to strike the United States since Hurricane Hazel in 1954 . The system was first noted as an area of thunderstorms east of the Lesser Antilles which moved just north of the Greater Antilles , quickly intensifying into a hurricane on September 22 . Gracie was a storm that was very difficult to forecast , with its movement unpredictable . After five days of erratic motion , Gracie became a major hurricane which struck South Carolina , and weakened as it moved up the Appalachians , bringing much needed rain to a drought @-@ plagued region . Much of the destruction related with Gracie was centered on Beaufort , South Carolina . Gracie became an extratropical cyclone on September 30 while moving through the Eastern United States .

## = Meteorological history =

An area of squally weather was first noted a few hundred miles east of the Lesser Antilles on September 18 . The convective area organized into a tropical depression near the north coast of Hispaniola on September 20 . After moving west @-@ northwestward for a day , it turned northeastward , where upper level winds were very favorable and steering currents were very weak . On September 22 Gracie was named as a tropical depression before it developed into Tropical Storm Gracie , followed by reaching hurricane strength later that night . It turned to the east on September 25 , and turned back west to west @-@ northwest on September 27 as a stable anticyclone built in to its north .

Gracie quickly strengthened and reached its peak of 140 mph ( 230 km / h ) winds on September 29 , but cooler air and land interaction weakened it to a 120 mph ( 190 km / h ) Category 3 major hurricane at the time of its landfall at 1625 UTC over St. Helena Sound near the south end of Edisto Island in South Carolina . After landfall , Gracie moved inland and north and became extratropical on September 30 .

## = Preparations =

A hurricane watch was issued for the coast of the United States from Savannah , Georgia to Wilmington , North Carolina at 1600 UTC on September 28 , which were quickly updated to hurricane warnings by 1900 UTC the same day . By 1900 UTC , gale warnings were in effect from Daytona Beach , Florida to Savannah , Georgia as well as from Wilmington to Morehead City , North Carolina . At 1200 UTC on September 29 , gale warnings were dropped south of Brunswick , Georgia . At 2200 UTC , gale warnings were extended northward to Cape May , New Jersey , including Chesapeake Bay and Delaware Bay . At 0400 UTC on September 30 , all warnings south of Cape Hatteras were dropped , leaving gale warnings in effect from Cape Hatteras northward . At 1000 UTC , small craft were advised to remain in port from Cape May northward to Block Island , Rhode Island . By 1600 UTC , due to Gracie 's continued weakening , all remaining gale warnings were downgraded to small craft warnings .

## = Impact =

### = = Georgia and South Carolina = =

Storm surge flooding was minimal due to the storm 's landfall near the time of low tide . However , Charleston still recorded their highest tide since 1940 . Along the coast of southern South Carolina , the storm tide was measured up to 11 @.@ 9 feet ( 3 @.@ 6 m ) above mean lower low water ( the average level of the lowest low tide each day ) . The United States Coast Guard vessel Bramble evacuated people stranded in Savannah and Charleston on September 30 . Gracie killed 10 people

in South Carolina and Georgia , mainly due to wind and rain @-@ induced automobile accidents , falling trees and electrocution by live wires . The Garden Club of South Carolina replaced numerous trees after the storm . Wind damage was quite significant across South Carolina , particularly the city of Beaufort , South Carolina , with many downed trees , telephone poles , and streetlights . Also , numerous windows were shattered and shingles were torn off of roofs . A number of creeks overflowed causing floodwaters that , in areas , were several feet deep . The opening of the Beaufort Center of the University of South Carolina was delayed due to Gracie . It would be 30 years before another major hurricane struck South Carolina ; Hurricane Hugo in September 1989 .

= = = Elsewhere in the United States = = =

Heavy rains fell well ahead of the storm along an inverted trough extending north of the storm , causing 6 @.@ 79 inches ( 172 mm ) between the mornings of September 28 and September 29 at Norfolk , Virginia . The highest rainfall amount measured during the storm was 13 @.@ 20 inches ( 335 mm ) at Big Meadows . The storm spawned seven tornadoes in all . A few of the tornadoes which accompanied the dissipating storm through Virginia killed twelve people near Charlottesville , Virginia . Other tornadoes touched down in the Carolinas and Pennsylvania . For the most part , rainfall from Gracie was beneficial as it moved up the Appalachians since the area had been in a drought preceding the cyclone .

= = Long @-@ term impact = =

Edisto Beach , South Carolina was changed forever by Gracie , due to human efforts to renourish the beach after its passage . Most of the shell hash beach currently at Edisto was placed there after Gracie . In order to expand the beach , an inland marsh was excavated and moved to the shoreline . This created highly desirable beach front property which led to new development along the coast seaward of Palmetto Boulevard , but also created an environmental catastrophe along the nearby ocean floor . A species of isopod which grows in coastal estuaries , the *Cyathura Polita* , disappeared after the passage of this hurricane from the Ashepoo River in South Carolina . The Kermadec petrel , a bird , was swept to Lookout Mountain Sanctuary in Pennsylvania during Gracie , marking the first time it appeared in North America .