

HURRICANE GLADYS
October 13-21, 1968
(preliminary report)

The 1968 hurricane season had been relatively quiet until Gladys formed in the Caribbean on October 15. The formation process was a complex one, involving the interaction of three separate disturbances.

A tropical wave passed through the Lesser Antilles on October 6 and traversed the Caribbean with no appreciable intensification during the next four days. On October 11 a depression formed on the wave near Swan Island. On the following day satellite photographs revealed that a disturbance had developed south of Jamaica. On October 13 still a third disturbed area formed on the ITC near San Andres. Thus the Western Caribbean was the scene of a broad zone of low pressure and extensive shower activity. However it was this third system which, after drifting slowly north-northwestward for forty-eight hours, developed into Gladys.

A Navy investigative flight found winds of 52 mph and a surface pressure of 999 mbs on the morning of October 15. Upon receipt of these data Tropical Storm Gladys was named.

The storm was forecast on a slow northward course and, with further intensification expected, the threat to Florida's keys and lower west coast increased. Gale warnings were hoisted on the keys and a hurricane watch was issued for the keys northward to Clearwater at midnight.

Gladys became a hurricane shortly before crossing the south coast of Western Cuba and continued to strengthen while crossing this narrow but mountainous part of the island. Winds gusted to 80 mph at Gerona on the south coast, and Havana experienced sustained gale force winds for several hours. Reports from Radio Havana told of serious flash floods with heavy damage to crops and industrial installations. The rich tobacco crop was virtually wiped out. One death in Cuba was attributed to Gladys.

At this time the tropospheric mean flow was characterized by a deep trough over the Great Plains with a weak anticyclone between the east coast and Bermuda. Thus

Gladys was embedded in a light southerly environmental flow. It became evident that the hurricane would make landfall someplace along the west central coast, with the location dependent upon the eastward progression of the Plains trough.

Hurricane warnings were ordered from Fort Myers to Clearwater and the watch was extended northward to Cedar Key at noon on October 16 as Gladys emerged into the Florida Straits and continued slowly northward, passing just to the west of Dry Tortugas. Highest winds measured on the island were 64 mph with gusts to 86 and the pressure fell to 997 mbs. The only wind of hurricane force recorded in the keys was an 87 mph gust at Plantation Key. Only minor damage was reported.

Gladys took a temporary jog to the north northwest as it passed abeam of the lower west coast while radars at Tampa, Key West and Miami indicated that the eye was undergoing some internal reorganization. This tended to minimize the effects to extreme south Florida and no significant damage was sustained there.

The hurricane took its expected turn toward the east on October 18 and hurricane warnings were extended northward to Cedar Key with a watch to St. Marks at noon. During its trek through the southeast Gulf of Mexico Gladys maintained only minimum hurricane intensity, mainly because a large portion of the circulation was over land.

The center passed inland between Bayport and Crystal River, very near Homosassa, about midnight Saturday, October 19. Gladys crossed the peninsula at a slightly faster speed, about 15 mph, passing just south of Ocala, and back out to sea near St. Augustine.

Sustained hurricane force winds were confined to the west coastal area from Clearwater to Bayport and maximum gusts were in the 100 mph range. Highest tides were estimated at $6\frac{1}{2}$ feet, causing considerable beach erosion and flooding of coastal areas. Extensive winds damage also resulted, with mobile homes the main casualties. Three motorists died while trying to escape the storm; two from heart attacks and the other in a submerged automobile. As Gladys crossed the state, about 85 per cent of the citrus crop was affected to varying degrees, but no dollar estimate of damage is currently available. On the east coast winds were well below hurricane force and damage was minor. Rainfall amounts were generally less than 6 inches and flooding

from rain was not a serious problem. A two day total of 7.79 inches at Homestead Air Force Base is the greatest amount reported thus far. However, over 12 inches fell at Cape Kennedy between October 14th and 18th, but not all of this can be attributed directly to Gladys.

From the upper east coast of Florida Gladys moved northeastward about 25 mph, skirting the coasts of Georgia and the Carolinas. Hurricane warnings which had been issued north of Charleston to Hatteras were gradually narrowed to the Hatteras area as the central pressure slowly rose and the high winds became confined to the east portion of the storm. Radar reports indicated that the track was somewhat erratic, reminiscent of the cycloidal paths of some past hurricanes.

The center passed very near Cape Hatteras early on October 20 while continuing to accelerate northeastward. Damage along the Carolina coast was minor. Gusts of hurricane force were confined to the Cape Hatteras area. Tides ranged from 2 to 4 feet above normal as the hurricane passed abeam. The damage was more than offset by beneficial rains which broke the worst drought since 1932 in North Carolina.

Gladys gradually became extratropical as it merged with a cold front off the coast of Nova Scotia on October 21. The remnants passed over Cape Breton Island as a deep low pressure area which produced rainfalls of 2 to 4 inches. The benefits resulting from these rains over compensated for the minor damage which occurred. However, one death in Nova Scotia was attributed to the storm.

Gladys attained its maximum intensity on October 19 off the Georgia coast where an Air Force plane found a central pressure of 965 mbs and surface winds of about 90 mph. There were reports of three/^{small}unconfirmed tornadoes in Florida; one each at Boca Raton, Plateka, and Miami.