

Hurricanes of the 1800s

- As the southeast U.S. approached some degree of habitation, hurricane reporting began to improve mainly because of more people, mail and newspapers. Key West was inhabited in 1822 and in early 1829 a post office and newspaper were in business.
- 1831 - Two hurricanes appears to have struck Florida and the one on August 14 came across Cuba and the Tortugas in en route to New Orleans.
- 1835 - The Key West Inquirer had been publishing only a year when this undated hurricane swept through all the Keys onto the mainland. The lightship Florida at Carysfort was severely damaged, but repairable.
- 1841 - A hurricane October 18th and 19th raised the tide in Key West harbor higher than anyone had ever remembered, and wrecked ships along the Lower Keys.
- 1842 - The September 4 hurricane struck the Lower Keys doing damage to the Sand Key lighthouse and numerous navigation beacons.
- 1844 - The October 5 storm, known as the "Cuban Hurricane", moved up the Keys causing considerable damage. Many of the structures built by the Navy on Indian Key and all wharves were reported as washed away.
- 1846 - Some experts estimate that if today's measuring devices had been available, the Great Hurricane of 1846 (October 11 and 12) would have been a category-5 hurricane. The collector of customs, Steven Mallory, wrote that of 600 houses at Key West all but eight were destroyed or damaged. The offshore Sand Key and harbor lighthouses were destroyed. Water rose to about 8-feet in the lower streets. For an amazing in-depth article on this storm read ["Understanding the Key West Hurricane of 1846"](#) by Corey Malcom.
- 1851 - Little specific data is available, but this hurricane reportedly did severe damage at Key West, Tampa and Pensacola.
- 1855 - A "heavy gale" on August 29th and 30th caused the ship Rainbow to bilge near Long Key and the Huntress to run aground near Indian Key.
- 1856 - On August 27 and 28 a hurricane passed to the west of the Keys, causing "very strong winds" at Key Biscayne. Among the larger vessels lost were the Activa at the Dry Tortugas and the Issac Allenton off Sugarloaf Key.

- 1870 - Key West recorded what some call "twin hurricanes" as they were only nine days apart. The first came ashore on October 8 and high winds lasted for four days. Nine days later, the second arrived with hurricane force winds again! No major damage was reported.

- 1878 - A September storm recorded by Fowey Rocks and Alligator Reef lighthouse keepers buzzed through the Upper Keys, slightly affecting Key West, passed through the Middle Keys and on up through the center of the state. Little data is available for this hurricane. See HT, page 122.

- 1894 - The September 26 hurricane skirted past Key West curving to the east to strike Sanibel Island. It caused the Brandon to capsize off the Upper Keys. Her crew of 17 floated ashore at Upper Matecumbe Key, along with the ship's debris. The Theora was lost off Turtle Harbor, her crew saved. One unknown victim was buried on Tavernier.

Hurricanes of the 1900s

For the past 22 years, the Upper Keys were probably spared the destruction of hurricanes. I find NOAA lists 1900s hurricanes in categories hurricane, major hurricane, great hurricane and extreme hurricane. Whether the basis for these labels was wind speed, dollar destruction or some other evaluation is unknown. As we near modern times, there is more data; however, I also find more conflicts. I personally blame the media for some of this. For this summary, I will use the official NOAA data where possible, who also are not without error. (J.W.)

Henry Flagler had begun construction of the Key West Extension when the next three hurricanes made landfall. Two major and one great hurricane over a 7-year project is a little unusual.

- 1906 - In the early morning hours of October 17, a Major Hurricane swept through the Upper Keys from the southwest. Please note that many October hurricanes approach from the southwest. Two large

houseboats firmly moored on the Gulf side of Long Key were torn loose. One with 150 men aboard washed into the Atlantic of which 83 survived. The other houseboat washed into the bay and back to shore with no casualties. The St. Lucie sank off Elliott Key killing 25. On Lower Matecumbe Key, two houseboats with 45 men were carried to sea. As with powerful hurricanes the number of lives lost varies, however 160 is a good estimate.

- 1909 - Another Major Hurricane from the southwest swept through all the Keys on October 11. Key



10-11-1909 at Simonton and Greene Streets in Key West.

West was hit hard this time with \$1,000,000 in damages; newspapers stating it was the worst in 39 years. 1909 Simonton and Greene Streets Reportedly, 400 buildings either collapsed or were swept away. Damages to the railroad were not near as great as in 1906. The only large craft damaged was the tugboat Sybil that sank taking 11 lives. A timekeeper in Marathon was also lost.

For this hurricane, the railroad intentionally sank as much equipment as possible before the storm.

- 1910 - A Great Hurricane approached the Gulf of Mexico from the south. It appeared on October 15 to be safely passing far to the west of the Keys. Low and behold, on the 16th it did a three-quarter loop and headed northeast for Key West. It passed Key West to the west into Florida Bay, but this meant the stronger winds on the right side would strike the Lower Keys. Sand Key just off of Key West reported winds of 125 mph. The damage reported did not seem to be as great as in 1909.

Again the railroad was ready and was even better prepared. In September, it had inaugurated many special precautions to prevent loss of life. Only two were reported lost; however, substantial damage to construction facilities was reported.

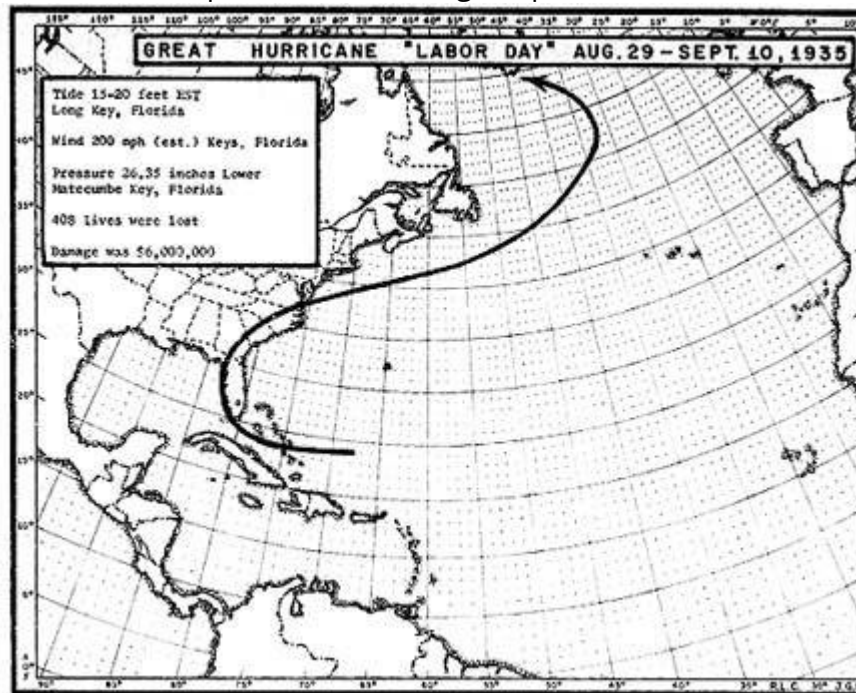
- 1919 - There was only one hurricane during the 1919 hurricane season and it struck Key West. Passing through the Florida Straits from the southeast, the September 9 and 10 Great Hurricane did severe damage to buildings and railroad docks at Key West. The estimated damage was \$2,000,000 and the highest winds were estimated at 110 mph. No deaths were reported on the island; however, the steamer Valbanera was found sunken between Key West and the Dry Tortugas with 488 aboard. All perished.

- 1926 - In 1926, the first Overseas Highway was under construction. In September, a Great Hurricane struck Miami killing 200 and severely damaging the roadway and bridges being built in the Upper Keys. On October 21, a second hurricane passed just east of the Upper Keys doing more damage to the highway in Islamorada and Key Largo areas.

- 1929 - On September 28, a Great Hurricane, of which there is little written, passed through the Upper Keys with estimated winds of 150 mph. Reportedly, storm surges were 6 to 9 feet at Garden Cove. Railroad service was out for a week. Sections of highway were washed out as far as Big Pine Key. The Coast Guard had to provide mail service for Key West.

- 1935 - The Great Labor Day Hurricane had the lowest barometric pressure ever recorded over land in North America (26.35 inches of Hg or 892 Mb) - yet NOAA has it as a Great and not an Extreme. However, much less intense Hurricanes Carol and Edna in 1954 are listed as Extreme Hurricanes.

Winds were estimated to exceed 200 mph with storm surges up to 18 feet. Over 400 residents and



World War One veterans building new highway bridges perished. Forty miles of the railroad bed was destroyed. Most structures from Long Key to Plantation Key simply disappeared.

With the railroad destroyed, the Middle and Lower Keys were isolated except by sea and air. The surviving railroad's concrete bridges were later widened for vehicles and a continuous two-lane highway was opened in 1938.

- 1945 - The September 15 Great Hurricane did severe damage to the Homestead-Miami area. Homestead reported gusts to 196 mph. Carysfort Lighthouse measured a 138 mph gust. The Richmond

blimp base in south Dade lost 25 blimps. However, the Upper Keys reported minimal hurricane damage just as it did in Hurricane Andrew. Being on the left side of a hurricane was a definite advantage.

- 1947 - Only one of the two Florida hurricanes of 1947 struck the Keys and it was in the Dry Tortugas' area on October 11. Unfortunately, the anemometer was not oiled properly and stopped at 80 mph. Observers estimated 150 mph winds. It came ashore on the mainland at Cape Sable and dropped a lot of rain. In these earlier hurricanes, the reporting of tornadoes appeared to be rare; however, two were confirmed in the Miami area.

- 1948 - Again, only two hurricanes made landfall on Florida soil and both made contact with the Keys. The first arrived at Key West on September 21 with winds recorded at 122 mph at Boca Chica airport. Gusts were said to have reached 160 mph with a tidal surge of six feet.

Two weeks later on October 5, a second hurricane came ashore at Key West and followed the highway up the Keys. This hurricane was similar to Hurricane Floyd in 1987 which also was not very damaging. Winds were estimated at 100 mph, but were measured at Miami at 90 mph.

- 1950 - This year marked the official naming of hurricanes, but the Major, Great and Extreme descriptions continued until the Saffir-Simpson scale was adopted. Hurricane King came on shore above Fort Lauderdale, so only the uppermost Upper Keys experienced severe winds with a moderate storm surge. Hurricane Easy passed just west of Dry Tortugas, but no significant damage was reported in the Keys.

- 1960 - The Keys had gone a decade with only one tropical storm (1952). Hurricane Donna made up for the lack of tropical activity. Part of a poem reads,

"Donna was a husky lass,

A lusty dame was she,

She kicked her heels and swirled her skirts,

And shrieked in fiendish glee...."

For certain, Donna was no lady as she wreaked havoc in the Middle and Upper Keys. She was already



Tea Table Relief Channel bridge after Donna - 1960

reported as a "Killer Hurricane" while passing northern Cuba. In the early 1960 Donna Tea Table morning hours of September 10, the Keys experienced the worst hurricane since 1935. Reliable sources reported sustained winds of 140 with gusts to 180 mph. Tavernier reported an anemometer "solid against the peg at 120 mph for 45 minutes." Lignum Vitae Key reported 155 mph and Sombrero Lighthouse 150 mph. Tidal surges were from 8 to 13.5 feet. The Tea Table Relief Channel highway bridge and waterline were destroyed, temporarily isolating the Keys farther to the south. Amazingly, only four lives were lost.

- 1964 - Hurricane Cleo barely missed the Keys passing to the east on August 26. The Weather Bureau for the first time used cloud images from a space satellite as a hurricane tracking aid. A southwest hurricane named Isabell struck the Dry Tortugas area to our west on October 14. Key West had wind gusts to 76 mph.

- 1965 - Like Donna, Betsy was no lady either. On September 4, she was well north and east of even the Upper Keys. This was just a tease as on September 5, she "changed her mind" and headed south for the Bahamas where she again changed her mind - heading almost due west for the Keys. Betsy and a second hurricane of 1935 are the only two American hurricanes recorded making landfall from the northeast.

On September 8, Tavernier claimed to have been in the hurricane's eye from 4:30 to 7:10 am. Sustained winds were reported at 125 mph with gusts to 165 mph. The Middle and Lower Keys were also severely damaged by Betsy. Big Pine Key reported gusts as high as 160 mph. Two tornadoes were confirmed - one at Marathon and one at Big Pine Key.

As a side note, Betsy was the hurricane that the government was accused of "seeding." There was project "stormfury" that experimented with spreading silver iodine crystals into clouds; however, this was never proved to be the case with Betsy.

- 1966 - Again two hurricanes involved the Keys. First it was Alma who skirted pass the Dry Tortugas on June 8 just to its west, but still winds of 125 mph were measured at the Dry Tortugas weather station. Key West had gusts to 70 mph.

Inez was another hurricane that appeared to be missing the Keys to the east, then on October 3, she reversed herself and came back. During the day of October 4, she traveled the Keys from east to west with minimal damage. Again, Big Pine Key reported wind gusts up to 150 mph. Winds were measured on Plantation Key at 98 mph; therefore, one might suspect that Big Pine Key experienced a tornado like Key Largo did during tropical storm Mitch in 1998.

- 1972 - For the record, in June, hurricane Agnes missed the Keys to the west by hundreds of miles. In spite of this, on June 18 at about 2 am a tornado hit Big Coppitt Key causing \$350,000 of damage and ruining some 80 mobile homes.

- 1987 - After 21 years of no hurricanes, Floyd came up from western Cuba as a tropical storm, then intensified to a minimal category 1 hurricane as it approached the Marquesas. On October 12, it barely maintained hurricane force (74 mph or above) for 12 hours during which time it managed to follow highway U.S. 1 up through the Keys. One tornado touched down in Key Largo doing considerable damage.

- 1992 - Damages attributed to Hurricane Andrew are staggering and elusive - some estimates reach \$30 billion. The Ocean Reef Club and the Anglers Club on North Key Largo were the hardest hit in Monroe County. The power lines bringing power to the Keys were also destroyed, but potable water was maintained.

For the record, Andrew made landfall at 4:30 am on August 24 at about Cutler Ridge. NOAA establishes sustained winds of 145 mph with gusts over 175 mph. Its forward speed was 18 mph.

By 8 am, Andrew had passed over Naples on Florida's west coast. Barometers establish a pressure of 27.23 inches of mercury (922 megabytes) making Andrew the third most intense hurricane making landfall in the U.S. after Camille in 1969 and the Great Hurricane of 1935. I believe the last figures I saw, there were 38 confirmed dead.

- 1998 - If we look at the hemisphere, 1998 was disastrous. Thousands of people perished in Central America from Hurricane Mitch and 602 from Hurricane Georges. The estimated number of victims of Mitch was 9,086 as of the NOAA report dated January 28, 1999.

Hurricane Georges (pronounced Zhorzh) was a classical Cape Verde tropical system. He traveled westerly from just off the west coast of Africa to strike the Keys; well almost, as NOAA says the eye's center was 12 miles south of Key West. Landfall was mid-morning of September 25 with maximum winds of 104 mph. From NOAA, the maximum sustained 2-minute wind at Key West was 55.2 mph at 8:53 am with a peak wind gust of 88 miles per hour (mph). The highest wind gust recorded in the Keys was 110 mph at Marathon. Sombrero Key reported a sustained wind of 94 mph with a gust of 106 mph. Storm surges were reported from 4 to 6 feet in the Lower and Middle Keys. Key West recorded 8.38 inches of rain.

Hurricane Mitch also came off the West Coast of Africa leaving on October 8. After meandering through much of the northern hemisphere, he arrived 5 miles west of Naples at 6 am on 5 November. His sustained winds of 63 mph classified him as a tropical storm at the Keys. The highest wind actually measured during his trip from Africa was 193 mph, the location was not disclosed.

The Upper Keys had a number of tornadoes from Mitch and the NOAA report only states that 645 houses were damaged, or destroyed in Florida. There were two deaths from a fishing boat capsizing in Monroe County.

- 1999 - The preliminary NOAA report for Hurricane Irene indicates she reached hurricane status crossing the Florida Straits. On October 15, her eye passed over Key West at 8 am. Irene made landfall again near Cape Sable later that day at 3 pm. Most of her hurricane force winds were confined to her east at the Lower and Middle Keys. There were eight indirect deaths related to Irene, all on the mainland. Florida's damage is estimated near \$600 million.

We will close with our disclaimer used by the Weather Bureau: "Hurricanes are sometimes unpredictable."

1. [Flood Damage Claims by District](#)
2. [Florida Keys Hurricanes of the Last Millennium](#)
3. [Hurricane Irma](#)
4. [Hurricane Wilma](#)

JOB
OPPORTUNITIES

CIVIC
READY

CITY
CHARTER
AND ORDINANCES

AGENDAS
AND MINUTES