

YEAR 1871

Eight storms were identified as having occurred in 1871. Tracks for these storms are presented in Fig. 1.

Storm 1, 1871 (Jun. 1-5).

The following information was found about this storm: 1) Brig "Nellie Ware". Jun. 1, lat. 24 20 N., long. 84 18 W., experienced a severe gale from E.N.E. to S.E., lasting for 48 hours (The New York Times, Jun. 21, 1871, p. 8, col. 6). 2) The storm in the Gulf has been severely felt in Louisiana and Texas (The New York Times, Jun. 5, 1871, p. 1, col. 4). 3) New Orleans suffered from a deluge. Six square miles of territory submerged. Five hundred blocks in the city submerged (The New York Times, Jun. 6, 1871, p. 1, col. 7). 4) Great storm in Texas. High water on the coast. Galveston partially submerged. Railroads and buildings washed away. Terrible storm at Galveston since Saturday afternoon (Jun. 3). The wind from S.E. pushed the Gulf water over the island. The velocity of the wind Sunday night (Jun. 4) was 39 mph and 6 inches of rain fell from 2 P.M. Saturday (The New York Times, Jun. 7, 1871, p.1, col. 1 and 2). 5) Barometer reached 29.51 inches at Galveston (Tannehill, 1938). 6) Storm was minor. Rainfall 15.57 inches (Dunn and Miller, 1960).

The track for this storm shown in Neumann et al. (1993) was found to be reasonable and, therefore, was kept unchanged and reproduced in Fig. 1.

Storm 2, 1871 (Jun. 8-9).

Not much information was found about this storm: Washington. Weather synopsis and probabilities. The storm center that was Friday (Jun. 9) off the coast of Texas has moved northward with increasing S. wind on the coast and is now approaching Missouri. Brisk southerly winds will probably continue on the Gulf coast and Lower Mississippi (The New York Times, Jun. 11, 1871, p.5, col. 6). Tannehill (1938) and Dunn and Miller (1960) had mentioned this storm before.

The track for this storm displayed in Neumann et al. (1993) was found to be acceptable and, therefore, was kept unchanged and reproduced in Fig. 1.

Storm 3, 1871 (Aug. 14-22).

Abundant information has been found about this storm which life-span has been shown before as Aug. 16-19 (Neumann et al. , 1993). Tannehill (1938) has mentioned it as having affected Florida, Georgia and South Carolina and Dunn and Miller (1960) have referred to it as occurring on the east coast of Florida and "Tide water areas" in Georgia and the Carolinas.

The following information pertaining to the storm was found by the author of this study: 1) Ship "Tybee" (on outward passage). Aug. 13, lat. 27 N., long. 71 32 W., at 10:30 P.M., encountered a severe gale from S.E. which increased to a hurricane during the

night. On Aug. 14 shipped a tremendous sea ((The New York Times, Sept. 4, 1871, p. 8, col. 7). 2) Ship "Victor". Aug. 15 at 8 A.M., off Jupiter, took gale from N.W. increasing to a hurricane at 8 P.M. At midnight wind moderated suddenly. At 1 A.M. (Aug. 16), barometer 28.20 inches. At 2 A.M., sea making a clean breach over the vessel. At 4 A.M. wind commenced to moderate and barometer going up. At 6 A.M. gale moderated (The New York Times, Aug. 22, 1871, p. 8, col. 6). 3) Philadelphia, Aug. 26. Bark "Bridgeport" reported that on Aug. 15, between Matanilla Reef and Jupiter, experienced a terrific hurricane. Barometer 28.10 inches. The cyclone lasted for 20 hours (The New York Times, Aug. 27, 1871, p.8, col.7). 4) Ship "George Cornwell". Aug. 16, lat. 27 N., long. 80 15 W., at 8 P.M. experienced a severe hurricane commencing from N.W. and backing around to S.E., lasting 14 hours (The New York Times, Aug. 21, 1871, p. 8, col. 5). 5) Steamship "General Meade". Aug. 16, off Jupiter, at noon, heavy blow from N. increasng to a hurricane. At 9 P.M. barometer falling to 28.50 inches; wind gradually hauling to N.W. and W., accompanied with rain, continued to 2 A.M. , blowing fearfully, until moderating a little at that time; wind more from the S.W. and S. (The New York Times, Aug. 22, 1871, p. 8, col. 6). 6) Steamship "Tillie". Had a strong N.N.E. wind to Hatteras with a heavy easterly sea running (The New York Times, Aug. 20, 1871, p.8, col.6). 7) Schr. "Molly" (from Fernandina, Fl. in 13 days). From Aug. 16 to 22 experienced severe gales from various points of the compass. Aug. 19, shipped a heavy sea over the stern (The New York Times, Aug. 29, 1871, p.8, col.6). 8) Bark "Morning Star". Aug. 16, lat. 27 40 N., long. 78 30 W., got hove down to beam ends two different times in a hurricane (The New York Times, Sept. 13, 1871, p.8, col.5). 9) Bark "Cremona". Aug. 16, Straits of Florida, encountered a very heavy gale from W. to S.W. (The New York Times, Aug. 26, 1871, p.8, col.6). 10) Jacksonville, Aug. 27. Report of several wrecks near Cape Canaveral, among them, brig "Pamona" went ashore 25 miles S. of that place on Aug. 17 (The New York Times, Aug. 28, 1871, p.1, col.7). 11) Loss of the "Lodona". A narrative of the disaster given by the surviving cook. On the night of Aug. 17 a perfect hurricane came up at about 10 o'clock and by 6 A.M. next day the situation became unmanegeable; the ship struck the beach 7 miles N. of Cape Canaveral (The New York Times, Sept. 8, 1871, p.2, col.4). 12) Schr. "Charles Miller". Aug. 18, lat. 28 N., long. 78 W., had a gale from E.N.E. to S.W. , lasting 40 hours (The New York Times, Aug. 26, 1871, p.8, col.6). 13) Bark "James E. Ward". Aug. 18, lat. 30 N., long. 79 30 W., had a heavy gale from N. to E., lasting 4 days and blowing with great violence (The New York Times, Aug. 26, 1871, p.8, col.6). 14) Steamship "Bolivar" (from Key West, Aug. 16). Experienced strong S.E. wind up the Gulf (Stream) and, off Hatteras, encountered an E. gale lasting 20 hours (The New York Times, Aug. 24, 1871, p.8, col.6). 15) Schr. "Anna M. Dickenson". Aug. 18 to 20, had a heavy gale coming to New York from Corpus Christi in 24 days (The New York Times, Aug. 28, 1871, p.8, col.7). 16) Washington. Weather. The cyclone, after advancing N.W. over Florida, passed N.E. near Savannah and E. of Charleston and is now central (night of Aug. 19) 100 miles S.E. of Wilmington (The New York Times, Aug. 20, 1871, p.8, col.4). 17) Savannah, Ga., Aug. 21.

Steamship "Virgo" arrived this morning, having experienced a terrible gale near Frying Pan Shoals (The New York Times, Aug. 21, 1871, p.8, col.5). 18) Steamship "City of Mexico". Left Havana on Aug. 19. On Aug. 21 and 22 experienced a violent gale commencing from N.W. and, after a brief interval of calm, shifted to S.E. with increased force (The New York Times, Aug. 25. 1871, p.8, col. 6 and 7). 19) Washington, 1 A.M. Aug. 23. Weather. An area of very low barometer has continued to approach the coast of Georgia from the east and a storm has probably prevailed this evening (Aug. 22) over the southern part of that State (The New York Times, Aug. 23, p.1, col.6).

After a careful evaluation of all items above, the author of this study found the track for this storm displayed in Neumann et al. (1993) to be in error and, therefore, a new corrected track is presented in Fig. 1. The new track was started near 26.7 degrees N., 73.7 degrees W. at 7 A.M. Aug. 14 on the basis of information contained in item 1). Estimated 7 A.M. positions along the track are as follows: Aug. 15, 27.0 degrees N., 77.7 degrees W.; Aug. 16, 27.3 degrees N., 79.3 degrees W.; Aug. 17, 27.7 degrees N., 80.0 degrees W.; Aug. 18, 29.0 degrees N., 80.5 degrees W.; Aug. 19, 31.5 degrees N., 80.5 degrees W.; Aug. 20, 32.7 degrees N., 76.7 degrees W.; Aug. 21, 31.5 degrees N., 76.5 degrees W.; Aug. 22, 31.0 degrees N., 79.5 degrees W., making landfall on the Georgia coast during the evening or night of Aug. 22. The storm skirted the northwestern Bahamas and then moved along the east coast of Florida and Georgia before making a loop off the Carolinas and returning to the Georgia coast.

The lowest surface pressure of 28.10 inches reported in item 3) allows one to infer that the storm was indeed an intense hurricane.

#### Storm 4, 1871 (Aug. 17-30).

Quite abundant information was found about this storm which had been cited by Tannehill (1938), Salivia (1972) and Garcia-Bonnely (1958) before. The following data were available along the path of the storm extending from the Lesser Antilles to Florida and Georgia and then to the waters off Nova Scotia: 1) Barometer at St. Kitts began to fall about 1 A.M. Aug. 31 (it should read Aug. 21); wind E.N.E. At 5 A.M., barometer 29.60 inches, wind N. At 8:30 A.M. barometer 28.50 inches, calm for 22 minutes, then wind S.W. and barometer rising. The center also passed over Antigua and St. Eustatius (Garriott, 1900). 2) The barometer dropped to 28.40 inches at St. Thomas at 5:30 A.M. Aug 21; calm lasted for half an hour. In Puerto Rico, the minimum pressure was 29.53 inches at 10 A.M. (Salivia, 1972). Author's note: The times are obviously wrong because the storm could not have possibly affected St. Thomas earlier than St. Kitts. The times were in fact P.M. instead of A.M. 3) St. Thomas, Aug. 22, via Halifax, Aug. 31. Another hurricane swept the island yesterday (Aug. 21). The gale broke from the E., shortly afterwards shifted to N.E., veering around to N. about noon, then shifted to N.W. until 5 P.M. From 5 to 6 P.M. there was a lull, then it blew from S. but not as long as in the previous visit (The New York Times, Sept. 1, 1871, p.1, col.7). 4) Havana,

Sept. 5. Report about ships lost at St. Thomas in the hurricane. Some of the vessels mentioned are: "Ionora", "Florida", "Hayti", "Axlestar", "Heliosa", "James Lamb", "Dos Amigos", "Lizzie" and "Harriet Douglas" (The New York Times, Sept. 6, 1871, p.1, col.4).

5) Ship "St. Lawrence", laying at Turks Is., Aug. 23. At sundown (Aug. 22) barometer 29.80 inches. At 8 P.M. barometer falling gradually, wind N. by E. At 12 o'clock (midnight), barometer 29.30 inches, the sea made a clean breach over the vessel. At 2 A.M. (Aug. 23), wind S.S.W. , moderated s little, barometer 29.42 (The New York Times, Sept. 16, 1871, p.8, col.5).

6) Havana, Sept. 4. Advices indicate a fearful hurricane in the Bahamas on Aug. 22. American vessels "D.C. Rulre", "C.V. Williams" and "Carolina" and British vessels "Lady Bird", and "Nellie Mowe" were wrecked (The New York Times, Sept. 5, 1871, p.1, col.7). Author's note: Aug. 22 is a wrong date, it should be Aug. 23-24.

7) Steamship "Wilmington". Aug. 26, lat. 26 24 N., long. 79 51 W., picked up a boat with survivors of bark "Linda" which foundered in the hurricane of Sept. 25; same day, lat. 28 25 N., long. 79 45 W., spoke brig "Delphire" with loss of maintopmast and yards during the hurricane of Aug. 25 (The New York Times, Aug. 30, 1871, p.8, col.6).

8) The "Clyde", which arrived in Key West on Sunday (Aug. 27) experienced heavy gales. She reported the steamship "Mississippi" was a total wreck 70 miles N. of Cape Florida (The New York Times, Sept. 1, 1871, p.8, col.7).

9) Steamship "Juniata" was wrecked 15 miles N. of Cape Florida on Aug. 24 (The New York Times, Sept. 1, 1871, p.1, col.7).

10) Washington, D.C. Fierce gale on S. Atlantic coast. Bark "Ada Carter" (from Philadelphia for Havana) encountered a terrific gale from Aug. 25 to Aug. 28 (The New York Times, Sept. 3, 1871, p.1, col.4).

11) Washington , 1 A.M. Aug. 26. The cyclone announced Thursday (Aug. 24) is probably central in northern Florida but no reports are received from that state (The New York Times, Aug. 26, 1871, p.1, col.4).

12) Brig "Winfield" (from Havana in 10 days). Aug. 26 and 27, had a very heavy gale from E. to S.E. (The New York Times, Aug. 31, 1871, p.1, col.6).

13) Washington, 7 P.M. Aug. 26. The cyclone Friday afternoon (Aug. 25) in northern Florida is reported to have passed over Tallahassee into western Georgia and as far as our reports have been received they indicate it is now between Montgomery and Knoxville. There has been a severe storm in the line of the Atlantic and the Gulf and Jacksonville, Pensacola and Mobile Railroads. The telegraphs are down and no trains are running (The New York Times, Aug. 27, 1871, p.1, col.5).

14) Washington, 1 A.M. Aug. 28. The cyclone which has passed northward through Georgia, gradually spread out and dissipated as such (The New York Times, Aug. 28, 1871, p.1, col.6). Author's note: It still produced gales off the Carolina coast on Aug. 28 and either reformed or moved over ocean waters off the Carolina coast on Aug. 29.

15) Schr. "J.P. Auger". Aug. 28, lat. 31 27 N., long. 78 31 W., had a very heavy gale from S.S.E. (The New York Times, Sept. 7, 1871, p.8, col.7).

16) Steamship "Volunteer". Aug. 29, off Frying Pan Shoals, had a heavy N.E. gale, coming from Wilmington in 82 hours (The New York Times, Sept. 2, 1871, p.8, col.4).

17) Brig "Scotland". Aug. 29, lat. 35 N., long. 77 30 W. (?), had a heavy gale from S.E. (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). Author's note: The

Bark "Agir". Sept. 2, lat. 41 30 N., long. 67 W. , had a hurricane from S.E. (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). 9) Bark "Galatea". Sept. 2, lat. 41 30 N., long. 67 30 W., had a hurricane from S.E. to S.W. lasting 8 hours (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). 10) Ship "Meron". Sept. 2, lat. 42 33 N., long. 66 35 W., wind coming in gusts from S. and W., shipped a heavy sea (The New York Times, Sept. 9, 1871, p.8, col.6). 11) Ship "Sir Robert Peel". Sept. 2, in a heavy gale, shipped a sea (The New York Times, Sept. 9, 1871, p.8, col.6). 12) Bark "Jens Lassen". Sept. 2, lat. 40 30 N., long. 65 W., had a hurricane from S.E. to S. (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). 13) Brig "T.H. Haviland". Sept. 2. George's Shoals, had a hurricane from S.E. to S. (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). 14) Bark "Mary". Sept. 2, lat. 42 06 N., long. 65 49 W., had a hurricane from E.S.E. lasting 8 hours (The New York Times, Sept. 9, 1871, p.8, col.6). 15) Brig "Da Capo". Sept. (?), 60 miles S.W. of George's Shoals, had a hurricane S.E. to N.W. lasting 6 hours (The New York Times, Sept. 7, 1871, p.8, col. 6 and 7). Author's note: The date could not be clearly read; however, it makes sense to believe that the hurricane-brig encounter should have occurred on Sept. 2. 16) Ship "Armstrong". Sept. 1, lat. 42 N., long. 64 W. Heavy gale blew hard, commencing from E.N.E., veering to E.S.E and hauling again to W.S.W.; at 10 A.M. was struck by a heavy sea (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7). Author's note: Sept. 1 appears to be a wrong date; it should read Sept. 2 in lieu of Sept. 1. 17) Bark "M.E. Corning". Sept. 2, had a heavy gale commencing from S.E. and veering to S.W. and lasting 6 hours (The New York Times, Sept. 10, 1871, p.8, col. 6 and 7).

Estimated 7 A.M. positions for this newly documented storm,, which is not included in Neumann et al. (1993) are the following: Aug. 30, 28.5 degrees N., 67.5 degrees W.; Aug. 31, 33.5 degrees N., 70.3 degrees W.; Sept. 1, 37.0 degrees N., 70.0 degrees W.; Sept. 2, 41.3 degrees N., 67.5 degrees W. These estimated positions were based on a careful evaluation of items 1) through 17) and allowed the author to produce the track shown in Fig. 1.

The storm is believed to have attained hurricane intensity over at least a part of its known life-span.

#### Storm 6, 1871 (Sept. 5-8).

This storm is the same one which is identified as Storm 5, 1871 in Neumann et al. (1993). The following information was found about this storm: 1) Schr. "Robert Myhan". Sept. 5, lat. 26 44 N., long. 85 45 W.,. had a hurricane from N.W. lasting 36 hours (The New York Times, Sept. 25, 1871, p.8, col.5). 2) Brig "Lizzie M. Merrill". Sept. 6, lat. 25 51 N., long. 83 W., had a hurricane lasting for 13 hours (The New York Times, Sept. 27, 1871, p.8, col.5). 3) Weather synopsis. The disturbances of the past two days in the eastern Gulf have been probably due to a small cyclone which has today passed northward into South Carolina, rapidly losing its violence and spreading into a general rain (The New York Times, Sept. 7, 1871, p.1, col.4). 4) Inmense damage sustained in Georgia by the rain. A dispatch from Macon, Sept. 18, stated that up to

Documentation of this storm was based on the following information: 1) Brig "Nellie Antrim" (from Rio Grande do Sul in 56 days). Oct. 10, lat. 24 40 N., long. 62 40 W., encountered a hurricane from N.N.E. veering around to N.E. and E., lasting about 1 hour (The New York Times, Oct. 31, 1871, p.8, col.3). Author's note: The report that the hurricane lasted 1 hour appears to be in error. 2) Brig "Armida" (from Italy in 82 days). Put into New York in distress. Oct. 11, lat. 29 30 N., long. 69 W., experienced a hurricane from E.N.E. to W.S.W. lasting 12 hours (The New York Times, Oct. 29, 1871, p.8, col.4). 3) Hurricane in Nova Scotia (taken from The New York Herald). An account from Halifax of the hurricane of October 12. At 5 P.M. the wind came in sudden gusts from S.E. The culminating point was at 6 P.M. when wind and tide were highest. Large vessels broke moorings at their wharves. Every wharf was submerged and the basements of water side houses were flooded. There were 30 vessels ashore in the harbor alone. Some vessels were high and dry and others dismasted (The Times, London, Nov. 6, 1871, p.4, col.5).

The proposed track for this storm (Fig. 1) took into account the content of items 1) through 3). Estimated 7 A.M. positions along the track are as follows: Oct. 10, 23.5 degrees N., 62.0 degrees W.; Oct. 11, 29.5 degrees N., 69.0 degrees W.; Oct. 12, 37.7 degrees N., 68.7 degrees W.

Indications are that the storm attained hurricane status.