

YEAR 1875

Six storms were identified as having occurred in 1875. Tracks for these storms are presented in Fig. 5.

Storm 1, 1875 (Aug. 16-19).

This is a new storm that the author of this study has recently documented on the basis of the following information: 1) Schr. "J.W. Coffin", from Matanzas for New York, put into Charleston on Aug. 19, leaking badly. She reported having had very heavy weather (The New York Times, Aug. 21, 1875, p.8, col.6). 2) Ship "Anegor" (from Calcutta, May 4). Aug. 17, wind S., blowing a hurricane; lost fore and main lower topsails (The New York Times, Aug. 22, 1875, p.12, col.6). 3) Philadelphia, Aug. 23. Steamship "Illinois". Aug. 21, lat. 40 26 N., long. 69 W., spoke bark "Svanon", from Baltimore to Queenstown, reporting having experienced a hurricane on Aug. 17, which threw her on beam ends. The "Svanon" was then heading to Newport or Boston for repairs (The New York Times, Aug. 24, 1875, p. 8, col. 6 and 7). 4) Bark "Charles L. Leary" (from Liverpool in 25 days). Aug. 19, off Halifax, got the last of a hurricane, blowing S.E. to N.W. for 4 hours (The New York Times, Aug. 26, 1875, p.8, col.6). Author's note: "Last of a hurricane" is a vague statement. 5) Boston, Aug. 26. Barkentine "Sarah", from Baddeck. C.B. for New York, put in for repairs. Aug. 19, lat. 42 10 N., long. 64 30 W., in a hurricane, lost foremasthead and main topmast (The New York Times, Aug. 27, 1875, p.8, col. 5 and 6). 6) Bark "Oscar I." Aug. 20, lat. 42 43 N., long. 64 37 W., spoke bark "Sarah" steering W.S.W. with foremast and main top gallant mast gone (The New York Times, Aug. 27, 1875, p.8, col. 5 and 6). 7) Bark "Electra" (from Sydney, C.B. in 16 days). Aug. 20, lat. 42 24 N., long. 64 23 W., had a violent gale from S.E. veering around to N.W., lasting 6 hours (The New York Times, Aug. 27, 1875, p.8, col. 5 and 6). Author's note: This seems to be an erroneous report because the day and position given by the "Electra" do not appear to fit well a Sydney, C.B.-New York sailing in 16 days.

The author has prepared the track shown in Fig. 5. However, the confidence he has in such a track is not high and he believes that quite large errors are likely for the estimated 7 A.M. positions. These positions, which took into account the information in items 1) through 6), were as follows: Aug. 16, 32.3 degrees N., 73.5 degrees W.; Aug. 17, 35.7 degrees N., 71.3 degrees W.; Aug. 18, 39.5 degrees N., 68.0 degrees W.; Sept. 19, 42.5 degrees N., 64.0 degrees W.

The storm seems to have attained hurricane status for at least a portion of its known life-span.

Storm 2, 1875 (Sept. 3-10).

This is the same storm which is shown as Storm 1, 1875 in Neumann et al. (1993).

The following information was found in relation to this storm: 1) Spanish brigantine "Engracia". Sept. 3, lat. 15 12 N., long. 44 W. of San Fernando, met a hurricane (Vines, 1877). Author's note:

Add about 6 degrees to convert the longitude to Greenwich. 2) Brigantine "Manuela". Sept. 3, lat. 17 N., long. 43 W. of San Fernando, met a hurricane (Vines, 1877). Author's note: As in item 1), about 6 degrees should be added to convert the latitude to Greenwich. 3) Brigantine "Tres Sobrinas", lat. 18 03 N., long. 45 06 W. of San Fernando, met a hurricane on Sept. 3-5 (Vines, 1877). Author's note: The longitude converted to Greenwich is, approximately, 51 06 W. 4) Bark "Maria". Sept. 4-5, lat. 20 09 N., long. 48 13 W. of San Fernando, met a hurricane (Vines, 1875). Author's note: Add about 6 degrees to convert the longitude to Greenwich. 5) Steamship "Caribbean". Sept. 5, lat. 23 N., long. 50 48 W. of San Fernando, met a hurricane. Wind E. by S., barometer 29.65 inches. The barometer dropped to 29.00 by midnight (Vines, 1877). Author's note: The longitude converted to Greenwich is, approximately, 56 48 W. 6) Schr. "Martinique" arrived in Fort-de-France after suffering damage in a hurricane on Sept. 5 (Vines, 1877). 7) Bark "Monto Tabor". Sept. 10, lat. 41 N., long. 50 W., had a hurricane from S.E. lasting 9 hours, changing to S.W. and W. (The New York Times, Oct. 2, 1875, p.8, col.5). Author note: Based on other data, the author believes that the vessel met the storm on Sept. 9 rather than on Sept. 10. 8) Bark "Dexterous". Sept. 10, lat. 45 15 N., long. 44 20 W., had a hurricane S.W. to N.W, veering back to S.W., lasting 2 days (The New York Times, Oct.1, 1875, p.8, col. 7). 9) Bark "Alpha". Sept. 10, , lat. 50 N. long. 40 12 W., had a hurricane from S.E. changing to S., W. and N.E. (?), lasting 12 hours (The New York Times, Oct. 2, 1875, p.8, col.6). Author's note: N.E. should probably read N.W. 10) Ship "Knoch Train". Sept. 10, lat. 48 N., long. 38 W., had a hurricane from S.S.E. , veering to S., W. and N.W. and lasting 18 hours (The New York Times, Oct. 1, 1875, p.8, col.7).

Based on items 1) through 7), some modifications were proposed along the track shown in Neumann et al. (1993) for the period Sept. 1-6 (track for Storm 1, 1875 in that publication). Instead of starting the track over the eastern Atlantic near the Cape Verde Islands on Sept. 1, the author commenced his track much farther west on Sept. 3. By using information in items 1) through 7), he estimated 7 A.M. storm positions as follows: Sept. 3, 15.0 degrees N., 49.5 degrees W.; Sept. 4, 18.7 degrees N., 53.3 degrees W.; Sept. 5, 21.7 degrees N., 56.5 degrees W.; Sept. 6, 24.3 degrees N., 59.0 degrees W. For the period Sept. 7-9, no modifications were proposed along the track in Neumann et al. (1993), but the track was extended to Sept. 10 in agreement with information contained in items 8) through 10). The author estimated the storm to have been near 46 degrees N., 44 degrees W. at 7 A.M. Sept. 10, and the author's whole track is displayed in Fig. 5. This storm track was not found to be compatible with the idea of being the same storm shown by Neumann et al. (1993) at 12 degrees N., 27 degrees W. where the track for their Storm 1, 1875 began on Sept. 1. It looks like their Sept. 1 and other storm positions in the eastern Atlantic were either a product of erroneous extrapolation or pertained to a different storm.

Storm 3, 1875 (Sept. 8-18).

This storm corresponds to Storm 2, 1875 in Neumann et al. (1993).

The following information was found to be related to this storm: 1) The vortex of the storm passed between the islands of St. Vincent and Martinique in the night of Sept. 8; it later passed about 120 miles S. of Puerto Rico (Vines, 1877). 2) Havana, Sept. 16. Reports received from St. Thomas and Puerto Rico indicated that the storm commenced over the Windward Islands near Sept. 8. Many vessels are ashore in Barbados, St. Vincent and Dominica (The New York Times, Sept. 22, 1875, p.4, col.7). 3) The hurricane has been severely felt in Barbados, Martinique, Dominica and St. Lucia. The trading vessel "Codfish" went down at her mooring and the crew of 20 was lost. At Barbados, 13 inches of rain fell on the average, with some reports of 15 inches (The Times, London, Sept. 19, 1875, p.4, col.4). 4) St. Vincent, Sept. 23 (by an occasional correspondent). The island was swept on Sept. 9 by a hurricane which caused loss of life and vast injury to property. About 12 inches of rain fell in 12 hours. At about 11 P.M. (Sept. 8) a smart gale from S.W. set in and about midnight a terrible thunderstorm burst over the island accompanied by a tremendous downpour. Nearly all the inhabitants of St. Vincent passed the night watching the progress of the hurricane. Before 6 o'clock (Sept. 9) 7 out of 10 vessels at Kingstown Bay had been driven ashore. Heavy landslips were seen in all hills around Kingstown (The Times, London, Sept. 19, 1875, p.4, col.4). 5) Havana, Sept. 26. Three vessels were driven ashore at Barbados, 1 in St. Vincent and 2 in Jamaica (The New York Times, Sept. 27, 1875, p.1, col.4). 6) Jacmel (Haiti), Sept. 17. The bad weather commenced Friday night (Sept. 10) with a heavy ground swell and continued till Sunday (Sept. 12) when we had a strong gale from E. (The New York Times, Oct. 3, 1875, p.1, col. 4 and 5). 7) Brig "Pedro" (from Azua, Dominican Republic, in 38 days). Sept. 11, had a revolving hurricane lasting 15 hours (The New York Times, Sept. 29, 1875, p.8, col.7). 8) The "Falcon" (from Azua, Dominican Republic, for Boston). reported encountered a severe hurricane off the coast of Haiti in the night of Sept. 11 and was towed to Santiago de Cuba by bark "Marguerite" (The New York Times, Oct. 2, 1875, p.2, col.2). 9) The brig "Chieftain", which left Jacmel (Haiti) for Halifax on Sept. 9, experienced the hurricane and was dismasted. The steamship "Etna" left Jacmel on Saturday (Sept. 11) and met with very bad weather shortly thereafter. The Royal Mail steamer "Shannon" is reported a total wreck at Pedro Bank (The New York Times, Oct. 3, 1875, p.1, col. 4 and 5). Author's note: Pedro Bank is located off the southeastern coast of Jamaica. 10) Kingston, Jamaica, Sept. 25. There had been a severe blow at different points on the coast and deluges of rain have fallen. Much damage was done at Port Maria and Falmouth. Brig "Express", from Jamaica to Inagua, encountered a heavy gale Sunday night (Sept. 12). Other vessels also met the storm and sustained damages (The New York Times, Oct. 3, 1875, p.1, col. 4 and 5). 11) Brig "Cleta". Sept. 12, lat. 19 N., long. 75 W., had a hurricane from N.E. to S.E. and S., lasting 36 hours (The New York Times, Oct. 26, 1875, p.8, col.6). 12) The hurricane made landfall on the

southeastern Cuban coast near Pico Turquino (to the east of Cape Cruz) during the night of Sept. 12-13 and emerged from the northern coast of Cuba into the Gulf of Mexico near Havana, which was in the southern portion of the center from midnight to 2 A.M. Sept. 14. Some reported pressures were as follows: Puerto del Portillo (steamer "Bazan"), 28.88 inches; Santa Cruz del Sur (Spanish gunboat "Conde de Venadito"), 29.36 inches; Havana (Belen College Observatory), 29.28 inches (Vines, 1877). 13) Havana, Sept. 13. The weather here (at Havana) is threatening. A hurricane is reported as having occurred at Santiago de Cuba last night (The New York Times, Sept. 14, 1875, p.1. col.4). 14) Streets got flooded at Santa Cruz del Sur. Waves affected the area from Marina Street to Playaso. All shacks were destroyed and many doors of the strongest buildings were damaged. Sea and wind did much damage at the town of Jucaro (Vines, 1877). Author's note: Santa Cruz del Sur and Jucaro are located on the southern Cuban coast. 15) Storm in Cuba. Only a few vessels could hold their anchorage at Manzanillo. Wharves were destroyed and blown away and all vessels, except the "Conde de Venadito", were driven ashore at Santa Cruz del Sur. (The New York Times, Oct. 2, 1875, p.2, col.2). Author's note: Manzanillo is located on the southeastern Cuban coast. 16) Havana, Sept. 16. The red triangular signal of dangerous weather was raised at the Office of the Captain of the Port. All precautions were taken at Havana harbor. From Cienfuegos and Cardenas falling barometer indicated the storm was approaching. Monday afternoon (Sept. 13) we experienced (at Havana) a heavy gale and rainstorm lasting through the night. The observations made at the Belen College of this city by the Jesuit Fathers indicated a cyclone of "great dimensions" but rather a mild one (The New York Times, Sept. 22, 1875, p.4, col.7). 17) On the morning of Sept. 13, the barometer at Key West had fallen to 29.81 inches with a brisk N.E. wind. By midnight Sept. 13-14, the wind had increased to a N.E. gale and the barometer had fallen to 29.74 inches (Monthly Weather Review, Sept. 1875). 18) New Orleans, Sept. 16. The gale yesterday on the Gulf extended from Key West to the Rio Grande. The tide at Atchafayala Bay is reported the highest it had been in 18 years. There is no telegraph communication with Galveston today. The steamship "St. Mary" (from Havana for Galveston) put into the N.W. Pass with loss of smoke stack and wheelhouse stove (The New York Times, Sept. 17, 1875, p.1, col.6). 19) New Orleans, Sept. 17. The storm continues. Reports from S.W. Pass indicate that it is blowing hard with thick weather. Ship "Marcia Greenleaf" reported encountered a terrific hurricane at lat. 25 28 N., long. 84 40 W. commencing from N.E. and veering to S.E. She lost fore and maintop sails and had other damages (The New York Times, Sept. 18, 1875, p.7, col.2). 20) Some Indianola observations: 1 A.M. Sept. 16, barometer 29.52 inches, wind N.N.E. 56 mph, light rain; 7 A.M., barometer 29.34 inches, wind N.E. 66 mph, heavy rain; 1 P.M., barometer 29.13 inches, wind N.E. 72 mph., heavy rain; 5 P.M., barometer 28.90 inches, wind N.E. 82 mph, heavy rain. Highest registered velocity at Indianola was 88 mph; highest estimated velocity was 100 mph (Monthly Weather Review, Sept. 1875). 21) Weather description at Indianola. On Thursday (Sept. 16) forenoon, wind became more steady and increased to a gale. It blew fearfully. The water was 6 feet on the streets.

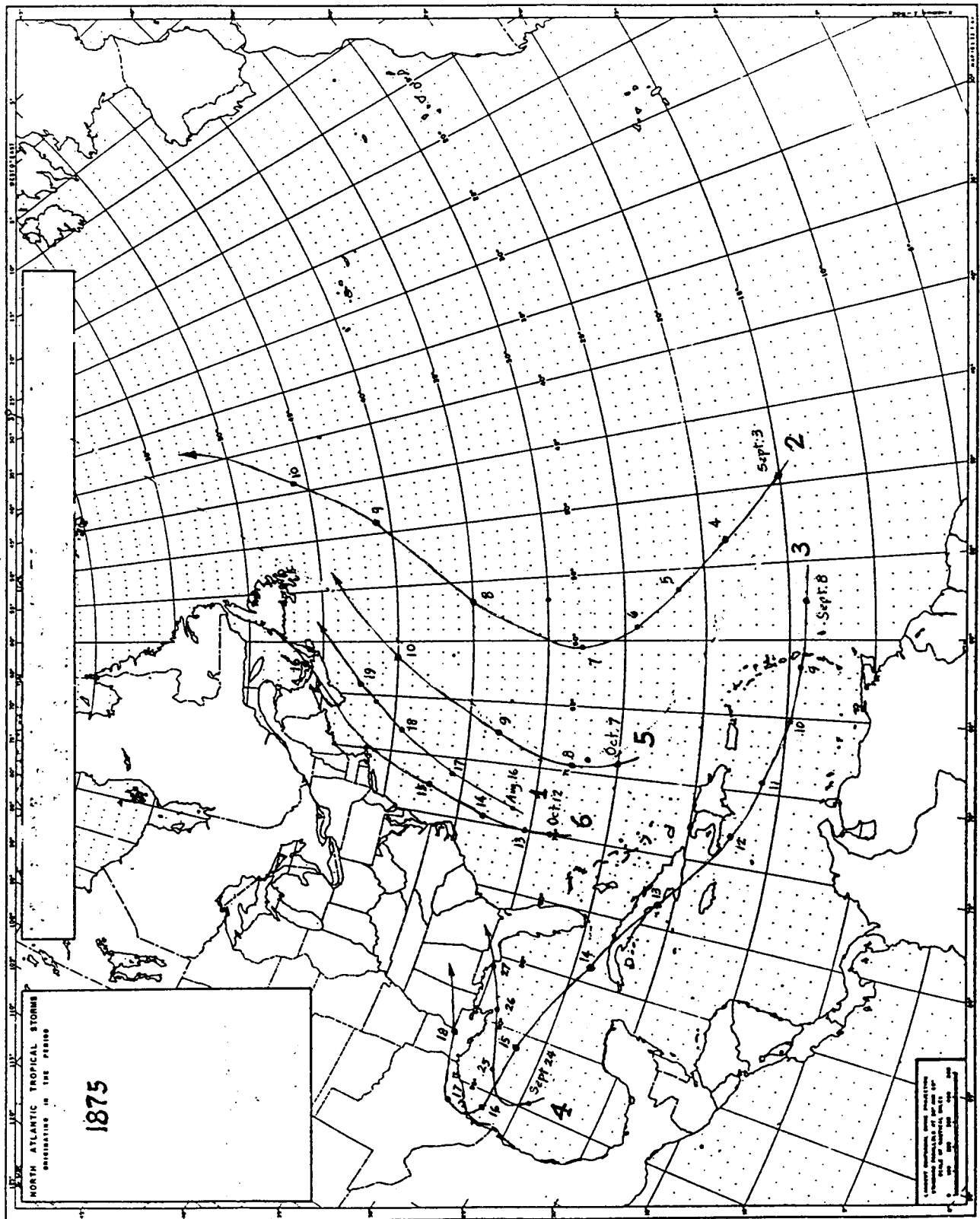


Fig. 5

At 2 A.M. Friday morning (Sept. 17) it veered to N.W. The waves then came chopped, and the houses were washed away or tumbled to pieces (The New York Times, Sept. 22, 1875, p.1, col. 1 and 2). 22) At Galveston, Friday (Sept. 17) between 1 and 5 A.M. was the most trying period of the storm. At about 10 A.M., the wind shifted to S.W. (The New York Times, Sept. 22, 1875, p.1, col. 1 and 2). 24) Storm at Galveston. The East end houses were destroyed. Estimated losses: 5 million dollars. Over one-half of Galveston was inundated. Loss of 200 homes and 30 lives was reported (The New York Times, Sept. 20, 1875, p.1, col.2). 25) St. Louis, Mo., Sept. 17. A dispatch from Houston indicated that Galveston is partially submerged, the water being several feet deep in several streets (The New York Times, Sept. 18, 1875, p.7, col.2). 26) Galveston, Sept. 17. Minimum barometer: 29.04 inches at 2 P.M. Maximum wind velocity: 60 mph from S.W. and W. at 4:50 P.M. (Monthly Weather Review, Sept. 1875). 27) Corsicana, Texas, Sept. 18. Wind and rain storm from the N. set in at 10 o'clock Thursday night (Sept. 16). Latest from Highland station, 4 P.M. Sept. 16 reported wind of hurricane force and great deal of damage (The New York Times, Sept. 19, 1875, p.1, col.5).

The track for this storm, which is displayed in Neumann et al. (1993) as for Storm 2, 1875, was found to be reasonable as far as direction of motion for the storm is concerned. However, some adjustments were proposed for the timing along that track. In accordance to information contained in items 1) through 4), the storm was relocated to 14.0 degrees N., 57.5 degrees W. at 7 A.M. Sept. 8 and to 14.3 degrees N., 61.7 degrees W. at 7 A.M. Sept. 9. Based on information contained in several other items, particularly in item 6), the author's estimated position for 7 A.M. Sept. 12 was 17.5 degrees N., 73.0 degrees W., which is roughly 150 miles to the S.E. of the corresponding position given in Neumann et al. (1993). The author estimated 7 A.M. positions at 21.0 degrees N., 78.5 degrees W. and at 24.0 degrees N, 84.0 degrees W. for Sept. 13 and Sept. 14, respectively. These positions, which roughly coincided with those shown in Neumann et al. (1993), were based on information given in item 12) and, to a lesser extent, in other items. 7 A.M. positions shown in Neumann et al. (1993) for Sept. 10-11 and for Sept. 15-18 were kept unchanged along the author's track which is displayed in Fig. 5.

Although the lowest pressure report from Indianola was 28.90 inches (item 20), the minimum central pressure of this storm should have been significantly lower, suggesting the possibility of a major hurricane status.

Quoting Rev. Walter M. Drum, S.J., Calvert (1935) has mentioned that Father Benito Vines, the director of the Belen College Observatory at Havana, issued his earliest authenticated storm warning on Sept. 11, 1875. Such a warning was in connection with this hurricane. Based on observations he received from the eastern Caribbean islands and pressure variations at Havana, the warning, which was printed in Cuban newspapers, anticipated the continuation of the hurricane motion towards the W.N.W. when it was still to the south of Hispaniola, indicated a threat to Cuba by the storm and saved many lives. This forecast by Vines was the first one for a tropical cyclone in the West Indies and, apparently, for

all around the world's tropical belt (Fernandez-Partagas, 1989).

Storm 4, 1875 (Sept. 24-27).

This storm is the same one Neumann et al. (1993) show as Storm 3, 1875.

The only information that the author of this study found in connection with this storm was a brief statement indicating heavy rains on the coast and dangerous winds in the Gulf of Mexico and a track for the storm. Both were published in the Monthly Weather Review, Sept. 1875. The track was started on Sept. 25 near the Texas coast and showed the storm moving to the E.N.E. reaching a position about 28.5 degrees N., 86.5 degrees W. in the morning of Sept. 26 and then making a clockwise loop over the northeastern Gulf on Sept. 26-27. Such a track exhibited some differences from the one shown in Neumann et al. (1993) which showed no loop. The author has adopted the track displayed in Neumann et al. (1993) as for Storm 3, 1875 and has reproduced it in Fig. 5.

Apparently this was a rather wet storm since 6 inches fell at Mobile and 3 inches were recorded at New Orleans on Sept. 25 (Monthly Weather Review, Sept. 1875).

Storm 5, 1875 (Oct. 7-10).

The author of this study has recently documented this storm which existence was not known before. The documentation was based on the following information: 1) Schr. "Pilot's Pride" (from St. Kitts in 28 days). Oct. 7, lat. 25 34 N., long. 70 27 W., had a hurricane from N.W. to S.E. (The New York Times, Oct. 29, 1875, p.8, col.6). 2) Ship "Thomas Lord". Oct. 8, lat. 27 30 N., long. 66 55 W., experienced a violent hurricane from S.E. lasting 36 hours and veering to S. and S.W. (The New York Times, Oct. 22, 1875, p.8, col.6). 3) Bark "Marie". Oct. 8, lat. 38 25 N., long. 67 25 W., experienced a heavy gale from S.E. to S. with a heavy sea. The bark had left New York on Oct. 2 and returned for repairs (The New York Times, Oct. 12, 1875, p.8, col.6). Author's note: The position and/or the date appear to be wrong. 4) Bark "Tancook" reported that the schooner "Aura" was struck by a hurricane at lat. 41 50 N., long. 60 W. on Oct. 10 (The New York Times, Sept. 22, 1875, p. 8, col.6)

Based on items 1) through 4), the author estimated the following 7 A.M. storm positions for the days indicated: Oct. 7, 25.0 degrees N., 69.0 degrees W.; Oct. 8, 28.0 degrees N., 69.5 degrees W.; Oct. 9, 33.0 degrees N., 67.5 degrees W.; Oct. 10, 40.0 degrees N., 61.5 degrees W. The author's track for this storm is shown in Fig. 5.

Indications are that this storm attained hurricane intensity.

Storm 6, 1875 (Oct. 12-16).

This storm corresponds to Storm 4, 1875 in Neumann et al. (1993).

The following information has been found about this storm: 1) Schr. "Lillie Taylor". Oct. 12, encountered heavy N.E. weather

(Monthly Weather Review, Oct. 1875). 2) Schr. "George K. Hatch". Oct. 13, lat. 29 38 N., long. 78 W., had a heavy gale from N.N.E. lasting 20 hours (The New York Times, Oct. 22, 1875, p.8, col.6). 3) Schr. "Tampico" put into this port in distress having had heavy N.E. gales at lat. 30 N., long. 77 50 W. on Oct. 13 (The New York Times, Oct. 23, 1875, p. 10, col.5). 4) Brig "John Welsh". Oct. 12, lat. 29 40 N., long. 79 25 W., had a gale from N. lasting until Oct. 14, veering to W. (The New York Times, Oct. 22, 1875, p.8, col.6). Author's note: Backing to W. seems to be more likely than veering to W. 5) Brig "Nellie Antrim". Damaged by a N.W. gale off Cape Fear on Oct. 13 (Monthly Weather Review, Oct. 1875). 6) Schr. "E.E. Ruckett", from the Bahamas, encountered a hurricane on Oct. 14 (Monthly Weather Review, Oct. 1875). 7) Schr. "J.B. Marshall". Oct. 14, lat. 44 10 N., long. 76 03 W., had a heavy gale (Monthly Weather Review, Oct. 1875). Author's note: Lat. 44 10 N. is obviously in error; it is likely to have been 34 10 N. 8) Afternoon reports on Oct. 14 suggested and the night reports that day confirmed that a hurricane was moving northward between Bermuda and the American coast (Monthly Weather Review, Oct. 1875). 9) Weather. The South Atlantic storm center is now (night of Sept. 14-15) north of Cape Hatteras (The New York Times, Oct. 15, 1875, p.1, col.6). 10) Wind at New York, sunset Oct. 14, moderate E., cloudy (The New York Times, Oct. 15, 1875, p.8, col.7). 11) Brig "Lady Mary". Oct. 15, off Hatteras, encountered a gale from E.S.E. backing to E. and E.N.E., lasting 14 hours (The New York Times, Oct. 19, 1875, p.8, col.6). 12) Brig "Sarah K. Kennedy". Oct. 15, lat. 38 11 N., long 69 42 W., had a heavy gale from W.S.W., lasting 10 hours (The New York Times, Oct. 21, 1875, p.8, col.6). 13) Storms centers of Friday (Oct. 15) have united in Maine, with N.W. and S.W. winds, cooler weather and rain in the Middle and Eastern States (The New York Times, Oct. 16, 1875, p.1, col.5). 14) Wind at New York harbor, sunset Oct. 15, light W.N.W.; hazy and cloudy (The New York Times, Oct 16, 1875, p.10, col.5). 15) Oct. 13-15, 1875 storm. Atlantic Ocean, Halifax (Tannehill, 1938).

The author of this study proposed some modifications to the track shown in Neumann et al. (1993) as for Storm 4, 1875. Such a track was found to be quite similar to a previous track shown in the Monthly Weather Review, Oct. 1875. Both tracks show the storm to have moved northward roughly along the 72 degrees W. meridian. However, it was acknowledged that "the longitude of its track could not be accurately determined" (Monthly Weather Review, Oct. 1875).

Based on information contained in items 1) through 10), the author of this study produced a track for the period Oct. 12-14 which is 150-200 miles to the west of the one shown in Neumann et al. (1993); however, after examining items 11) through 15), the author just adopted and reproduced the track in Neumann et al. for the period Oct. 15-16. The author estimated the following 7 A.M. positions for the period Oct. 12-14: Oct.12, 28.7 degrees N., 75.0 degrees W.; Oct. 13, 30.3 degrees N., 75.0 degrees W.; Oct. 14, 33.3 degrees N., 74.5 degrees W. The author's track for this storm is displayed in Fig. 5 and it should be noted that this track was started one day earlier than the track contained in Neumann et al. (1993) as for Storm 4, 1875.