

YEAR 1851

Prior to the present study, three storms were known for the year 1851. All of these three cases were listed by Tannehill (1938) and two of them were mentioned by other authors as well. This study has increased the number of storms to six or, in other words, it has provided a 100 percent increase in the number of previously known storms for 1851.

Storm 1, 1851 (before Jul. 7).

This storm was documented by the author to have occurred at Tampico, Mexico, shortly before July 7. Information in *The Times* (London) allowed one to know about this storm. A message from Boston dated on August 25 stated that a very destructive hurricane occurred at Tampico prior to July 7 (*The Times*, Sept. 1, 1851, p.7, col.5). Additional information said that the bar of Tampico was impracticable from heavy freshes, causing the steamer "Great Western" to have remained off that port till July 9 when she sailed for Veracruz, leaving behind the mails and goods that were supposed to have been picked up at Tampico (*The Times*, Aug. 11, 1851, p.6, col.1). This storm most likely occurred during the first few days of July 1851 and its location is shown in Fig. 2.

Storm 2, 1851 (Jul. 10).

This storm has been mentioned by Tannehill (1938) as having affected the islands of Barbados, St. Kitts, and Santo Domingo; the storm has also been mentioned by Garriott (1900) and Alexander (1902) and the date they gave was July 10, 1851. The storm should have been very weak because nothing is said about it in the mails from Barbados (collected on July 14) and from St. Kitts (collected on July 16) which were published in *The Times* (London), Aug. 11, 1851, p.6, col.1. It is extremely unlikely, practically impossible, that the storm had occurred at the three above mentioned places on the same day (July 10). The author suspects that this storm might have never occurred. However, he decided to keep it on record by showing it only in the vicinity of Barbados (12 degrees North, 60 degrees West) on July 10 (Fig. 2).

Storm 3, 1851 (Aug. 16-27).

Tannehill (1938), Garriott (1900), Alexander (1902), Dunn and Miller (1960), Ludlum (1963), Salivia (1972) and Garcia-Bonnely (1958) have mentioned this storm, which undoubtedly attained hurricane intensity along portions of its track. Tannehill (1938) has shown a track for this storm, extending from near 14 degrees North, 51 degrees West on August 16 to the eastern Gulf of Mexico on August 23 and then northeastward until the storm reached Newfoundland on August 27; however, he has extended the storm's life for one more day and has mentioned Aug. 16-28 as its life-span. Tannehill's track was probably based on Redfield's work.

The Times (London), Sept. 24, 1851, p.4, col.6, published a lot of information on the August 17 and 18 hurricane in the Lesser Antilles: Antigua, St. Kitts, St. Lucia, Martinique, etc. and *The Times* (London), Sept. 26, 1851, p.4, col.5, referred to the severe storm in St. Croix on Aug. 18 as well as to shipwrecks at Monserrat, Barbuda and St. Croix which were associated with the storm. This information allowed the author to produce the initial portion of the track shown in Fig. 2.

For the period August 16-18, this track does not differ significantly from the one in Tannehill (1938). However, based on information about the storm in Cuba and Key West, the author has adjusted Tannehill's track about one degree of latitude to the south over the period August 19-20. The track in Fig. 2 was based on the following information: 1) Storm at Baracoa, from 1 P.M. to 10 P.M. August 19. Mayari and Saltadero (eastern Cuba), storm on August 19. Sagua de Tanamo, storm of August 19 calmed on the 20th (Gaceta de la Habana, Sept. 6, 1851). 2) Santiago de Cuba (published in "Orden", Aug. 21). Gusts started in the evening of Aug. 19, coming from N., and rain became heavy. At 10 P.M., the wind was really strong. By daybreak Aug. 20 it had changed to N.E. (Gaceta de la Habana, Sept. 3, 1851). 3) Matanzas (published in "La Aurora", Aug. 22). Wind at 9 P.M. (on the 20th) veered to E. and to S., very gusty and with heavy rain (Gaceta de la Habana, Aug. 24, 1851). 4) At Key West, "August gale" on the 20th with the wind at N.E. blowing heavy squalls (Ludlum, 1963). Information in items 1) to 4) also allowed for significant time differences along the track shown in Fig. 2 and the one in Tannehill's book. Estimated 7 A.M. positions in Fig. 2 are near Port-au-Prince (Haiti), the south-central Cuban coast and about 90 miles northwest of Havana on August 19, 20 and 21, respectively; Tannehill's positions for the same days are over central Dominican Republic, near Nipe Bay (northeastern Cuba) and near Matanzas.

The storm slowed down its forward speed as it turned northward over the eastern Gulf of Mexico on August 22. It curved to the northeast the next day, reaching N.W. Florida in the afternoon of the 23rd. Ludlum (1963) has mentioned that a S.E. gale started in Tallahassee at noon and that at 2 P.M. the wind was southerly, intensifying. The storm blew very hard from 3 P.M. to 6 P.M. From 6 to 10 P.M. the wind did not increase but abated somewhat. It "piped up again" from 10 P.M. to 2 A.M. and the gale had abated by 4 A.M. August 24. The storm was most severe at Apalachicola on August 23 at night, and at St. Mark Lighthouse the wind veered a little to the westward around 10 P.M. Ludlum (1963) has also mentioned that the wind shifted from E. to N. and N.W. at Griffin County (Georgia) late on August 23 and that a severe storm from the S.E. blew at Charleston during the entire day of August 24. For August 24 to 27, the track for Storm 3, 1851 was basically adopted from Tannehill (1938).

Storm 4, 1851 (Sept. 13-16).

This is a newly documented storm based on information published in The New-York Daily Times: no author had mentioned this storm before. According to The New-York Daily Times, Sept. 18, 1851, p.4, col.6, the bark "Telegraph" (coming to New York from Havana) had a heavy N.E. gale on Sept. 13. Also the bark "Cushnoc" experienced a heavy E.N.E. and N.E. gale off Hatteras on September 14 (The New-York Daily Times, Sept. 24, 1851, p.4, col.5) and the bark "Harriet" (coming to New York from Havana) had a heavy N.E. gale on Sept. 16 (The New-York Daily Times, Oct. 1, 1851, p.4, col.6). Due to the lack of evidence about the storm's motion, the author of this study decided to show Storm 4, 1851 as stationary near 32.5 degrees North, 73.5 degrees West over the period September 13-16 (Fig. 2).

Storm 5, 1851 (Sept. 18).

This storm has been mentioned by Tannehill (1938); no other author has mentioned it. The storm has been cited to have occurred in the Gulf of Mexico on September 18, 1851. The author of this study has not found any additional information about this case and, not knowing any specific

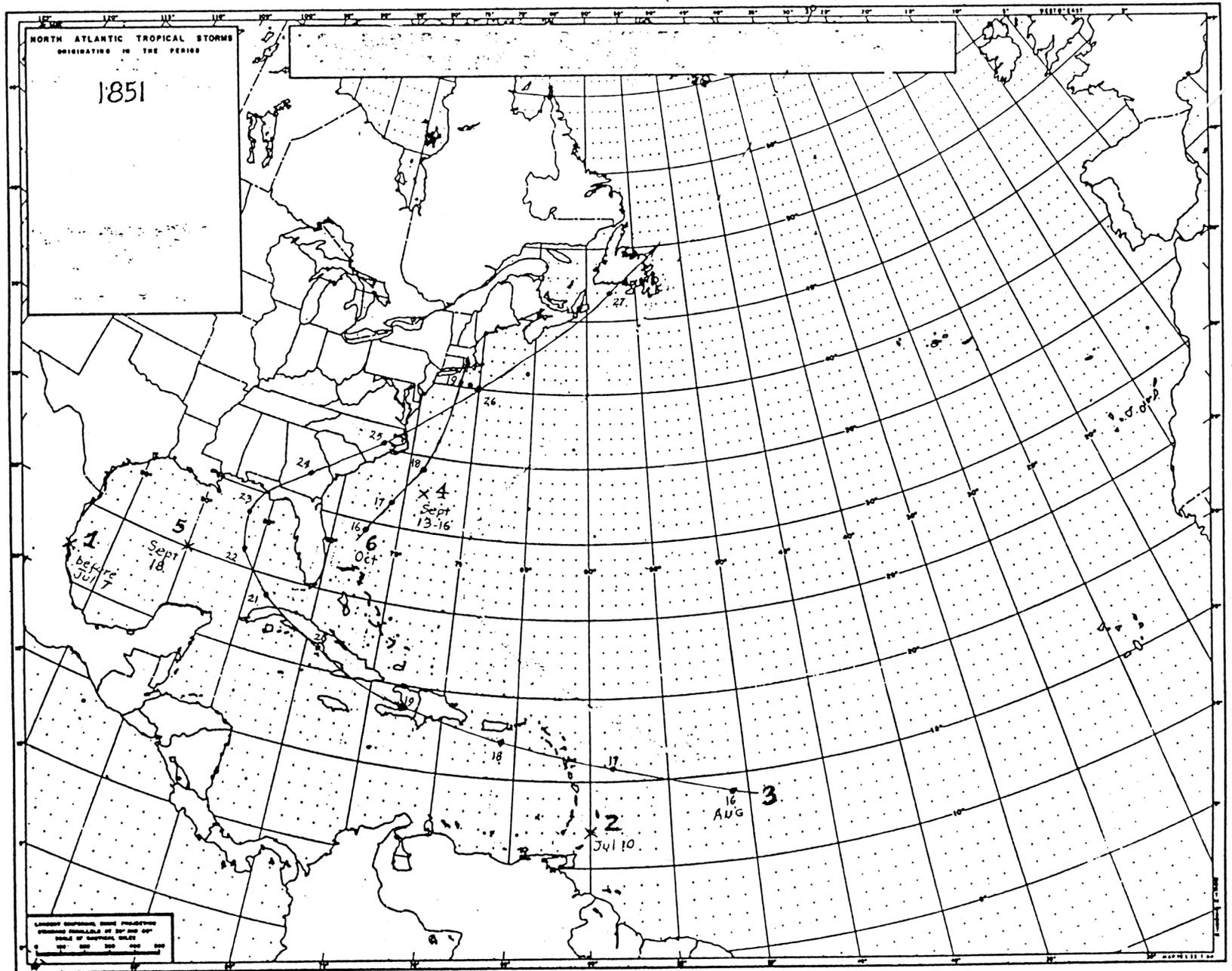


Fig. 2

location in the Gulf where the storm might have occurred, he has made the decision of arbitrarily denoting the storm's presence right at the geographical center of the Gulf of Mexico, near 25 degrees North, 90 degrees West (Fig. 2).

Storm 6, 1851 (Oct 16-19).

This is another storm which had not been previously documented. The New-York Daily Times provided the necessary support for documenting this storm. According to The New-York Daily Times, Oct. 25, 1851, the brig "Linden" had a severe N.E. gale at lat. 32 30, long. 78 13 on October 16 and 17, which lasted for two days (p.1, col.6) and the bark "Zyden" experienced a very heavy gale from N.E. to E. at lat. 31 30, long. 77 00 on Oct. 16, 17 and 18 (p.4, col.5). In addition, the brig "Vulcan", lat. 39 44, long. 71 55, had a S.W. gale on October 19 (The New-York Daily Times, Oct. 23, 1851, p.4, col.6). A tentative track for this storm has been derived and shown in Fig. 2; part of the information given by the "Zyden" was discarded for track purpose. It is possible that Storm 6, 1851 might have been subtropical rather than tropical in the beginning, and that the system might have gradually become extratropical as it accelerated northward off the U.S. east coast.