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Storms of 1894 - 1897

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Introduction.

This report describes results of the author's continuing effort of improving historical knowledge of Atlantic tropical cyclones. Such results are planning to be used in determining the cyclone frequency variation during the second half of the nineteenth century and early this century. The present report covers the period 1894-1897. The storm documentation in Neumann et al. (1993) has already covered this period, but the study of individual storms corresponding to those years has been undertaken in order to check the tracks for correctness in the light of information contained in other sources and, at the same time, trying to identify some new storms to be added to the ones in their above mentioned publication.

Sources and methods.

Sources that were used in checking the tracks in Neumann et al. (1993) were available cyclone lists such as those published in Tannehill (1938), Dunn and Miller (1960), Garriott (1900), Mitchell (1924) and Garcia-Bonnely (1958), books and articles about storms such as Salivia (1972), Sarasola (1928), Martinez-Fortun (1942), Gutierrez-Lanza (1904), Academia de Ciencias (1970) and Tucker (1982), and meteorological information contained in sections of marine and general news published in newspapers, primarily The New York Times and The Times (London) but also The Morning Tribune (Tampa) and The Miami Metropolis. Each storm in Neumann et al. (1993) for the period 1894-1897 was checked against the above information sources and appropriate modifications were implemented for the tracks which were found to be in error. The above sources were also used in trying to identify new storms and some weather systems which seem to have had a possibility to have reached tropical storm or hurricane intensity.

For each year in the period 1894-1897, if new storms were documented, their tracks were combined with those of previously known storms after having applied the necessary modifications to the latter ones; then, storms were numbered in chronological order in accordance to the date they were first detected. Tracks are displayed in Figs. 1 through 4. Estimated 7 A.M. (E.S.T.) positions were denoted by black dots along the tracks, with adjacent numbers indicating the day of the month. The month was indicated only for the starting day of each track and, in addition, for the first day of the month when the track was found to continue from one month to the next. The storm number was indicated by a large size number near the beginning of the track. Tracks for tropical storms were denoted by dashed lines and tracks for hurricanes were denoted by solid lines.

Results.

The detailed study of the storms for the period 1894-1897 is presented in the Appendix. The appendix presents 26 storms on a one-by-one basis. These storms are listed in Table 1. Three new storms were found for the above mentioned period; these storms occurred in 1894, 1896 and 1897, respectively. The 3 new storms represent an 11.5 percent of the total number of storms which was found for the period 1894-1897. Some changes along the track were implemented for 13 out of the 23 storms shown in Neumann et al. (1993) for the above mentioned period. This means that, as a result of the present study, a 56.5 percent of the tracks was not found to be entirely correct. The maximum number of tracks that were modified for an individual year was 5 in 1894, and the minimum was 2 in 1895. Two tropical cyclones of 1897 which were classified as tropical storms in Neumann et al. (1993) were upgraded to hurricanes as a result of this study.

Table 1
List of Storms
(1894- 1897)

List No.	Ident. # & Date (s)	New Case	Track Modified
1	Storm 1, 1894 (Jun. 6-9)	yes	---
2	Storm 2, 1894 (Aug. 5-9)	no	yes
3	Storm 3, 1894 (Aug. 30 - Sept. 9)	no	no
4	Storm 4, 1894 (Sept. 18-30)	no	yes
5	Storm 5, 1894 (Oct. 1-12)	no	yes
6	Storm 6, 1894 (Oct. 11-20)	no	yes
7	Storm 7, 1894 (Oct. 21-31)	no	yes
8	Storm 1, 1895 (Aug. 14-17)	no	no
9	Storm 2, 1895 (Aug. 22-29)	no	yes
10	Storm 3, 1895 (Sept. 28- Oct. 7)	no	no
11	Storm 4, 1895 (Oct. 2-7)	no	no
12	Storm 5, 1895 (Oct. 12-26)	no	yes
13	Storm 6, 1895 (Oct. 13-16)	no	no
14	Storm 1, 1896 (Jul. 4-12)	no	yes
15	Storm 2, 1896 (Aug. 30 - Sept. 11)	no	yes
16	Storm 3, 1896 (Sept 18-28)	no	no
17	Storm 4, 1896 (Sept. 22-30)	no	yes
18	Storm 5, 1896 (Oct. 7-16)	no	no
19	Storm 6, 1896 (Oct. 26-Nov. 9)	no	no
20	Storm 7, 1896 (Nov. 27-29)	yes	---
21	Storm 1, 1897 (Aug. 31- Sept 10)	no	no
22	Storm 2, 1897 (Sept. 10-13)	no	yes
23	Storm 3, 1897 (Sept. 20-25)	no	yes
24	Storm 4, 1897 (Sept. 25-29)	yes	---
25	Storm 5, 1897 (Oct. 10-22)	no	yes
26	Storm 6, 1897 (Oct. 23-31)	no	no

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Captions

- Fig. 1 Storms of 1894. Estimated positions shown by black dots along the tracks are for 7 A.M. (E.S.T.). Tracks for tropical storms are denoted by dashed lines and tracks for hurricanes are denoted by solid lines.
- Fig. 2 Same as Fig. 1 but for 1895.
- Fig. 3 Same as Fig. 1 but for 1896.
- Fig. 4 Same as Fig. 1 but for 1997.