

Storms of 1881 - 1883

STORMS OF 1881-1883

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Introduction.

The present report describes results of the author's continuing effort of improving historical knowledge of tropical cyclones which is planned to be used in determining their frequency variation during the second half of the nineteenth century and early this century. The present report covered the period 1881-1883. The storm documentation by 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 to document the evolution of 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 tropical cyclone lists such as those published in Tannehill (1938) and Dunn and Miller (1960), books about storms such as Sarasola (1928) and Barnes (1995) and meteorological information contained in the Monthly Weather Review and in sections of marine and general news published in newspapers, primarily in The New York Times and The Times (London). Each storm in Neumann et al. (1993) for the period 1881-1883 was checked against the above information sources and appropriate modifications were proposed for the tracks which were found to be in error. The sources above also allowed the author of this study to document some new storms cases which, of course, are not shown in Neumann et al. (1993). Information published in the above mentioned newspapers made the documentation of the new storms possible.

Tracks of newly documented storms were then combined with those for previously known storms after having applied to them the proposed corrections along their tracks, and the storms for each year in the period 1881-1883 were finally numbered in chronological order in accordance to the day they were first detected. Tracks for each individual year are displayed on maps in Fig. 1 through Fig. 3. 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.

Results.

The detailed study of the 1881-1883 storms is presented in the Appedix. The appendix presents 17 storms on a one-by-one basis. These storms are listed in Table 1. Four of these 17 storms (23.5 percent) are new cases which are not included in Neumaan et. al. (1993). Note in the table that 2 of the new cases were found for 1881 and that the other 2 cases were found for 1882. In regard to the number of knowm cases in Neumann et al. (1993) for which a track

modification was proposed, Table 1 shows that some changes along the track were implemented for 7 out of the 13 storms displayed in Neumann et al. (1993) for the period 1881-1883. This means that, as a result of the present study, the majority (53.9 percent) of the tracks for the above mentioned 13 storms was not found to be entirely correct. The maximum number of storm tracks to be modified for an individual year was 4 in 1883 and the corresponding minimum was 1 in 1882.

No attempt was made to formally identify the storms as hurricanes or tropical storms. In that regard, this study is consistent with the policy observed in Neumann et al. (1993) for the period 1881-1883. However, the author of this study has referred to the intensity reached by many of the storms in an informal basis.

Table 1
List of Storms
(1881-1883)

List No.	Ident. & Date(s)	New Case	Track Modified
1	Storm 1, 1881 (Aug. 1-4)	No	No
2	Storm 2, 1881 (Aug. 11-14)	No	No
3	Storm 3, 1881 (Aug. 11-18)	Yes	---
4	Storm 4, 1881 (Aug. 16-21)	No	Yes
5	Storm 5, 1881 (Aug. 21-29)	No	Yes
6	Storm 6, 1881 (Sept. 7-11)	No	No
7	Storm 7, 1881 (Sept. 18-24)	Yes	---
8	Storm 8, 1881 (Oct. 5-6)	No	No
9	Storm 1, 1882 (Aug. 24)	Yes	---
10	Storm 2, 1882 (Sept. 2-12)	No	Yes
11	Storm 3, 1882 (Sept. 21-23)	No	No
12	Storm 4, 1882 (Sept. 24-28)	Yes	---
13	Storm 5, 1882 (Oct. 5-15)	No	No
14	Storm 1, 1883 (Aug. 18-28)	No	Yes
15	Storm 2, 1883 (Aug. 24 - Sept. 2)	No	Yes
16	Storm 3, 1883 (Sept. 4-13)	No	Yes
17	Storm 4, 1883 (Oct. 22-28)	No	Yes

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Captions

Fig. 1 Storms of 1881. Estimated positions shown by black dots along the tracks are for 7 A.M. (E.S.T).

Fig. 2 Same as Fig. 1 but for 1882.

Fig. 3 Same as Fig. 1 but for 1883.