

TEHUANTEPECER OF FEBRUARY 10-11, 1937

By WILLIS E. HURD

The following account of a Tehuantepecer, experienced during a voyage from San Pedro toward Panama, was prepared by Second Officer N. Clarke of the British Motorship *Skipsea*, Capt. L. Whitehead. The observer has so well described the characteristic preliminary signs of this winter phenomenon of the Gulf of Tehuantepec, as well as the gale itself and the effect of the wind upon the sea, that the account is quoted in its entirety. During the period of the Tehuantepecer the center of a strong high pressure area overlaid the Gulf States, and a considerable pressure slope extended thence southward over the Gulf of Mexico, thus resulting in the spill of air across the isthmus and down the Pacific side of the pass entering upon the Gulf of Tehuantepec. Said Officer Clarke:

Position at noon, February 10, was latitude 15°22' N., longitude 98°25' W. Course S63E., 11½ knots. Wind southeast, force 2, slight sea and swell. Barometer 29.93 (uncorrected). The sunset on this day was brickred with red clouds reaching to the zenith. About 9 p. m. a short steep swell from the eastward was observed

and at 10 p. m. wind backed to north-northeast, force 3. The swell increased rapidly, moving slowly round to north-northeast, and at 2 a. m., February 11, a large arched cloud stretching from north to south made its appearance, its lower arc being very black. It rose slowly toward the zenith and scattered there at 3 a. m., but was seen to have regained its arch-like formation on reaching the western horizon. There was no rain. At 3:30 a. m. wind increased to force 6; vessel by this time laboring heavily in high sea. At 4 a. m. vessel was hove to head to sea, for although wind was only force 6, the sea was very dangerous and vessel was receiving much damage. By 8 a. m. wind had risen to force 10 from north-northeast, with terrific squalls, sea very high, and a haze hung around the horizon. Barometer steady at 29.90. During the gale the sea was very remarkable. After a comparative smoothness of a few minutes, a procession of tremendous seas would strike the ship, generally three or four at a time. Some were observed to be so steep that their crests fell backward to windward. These seas could be seen quite easily for 2 or 3 miles in the heavy swell. Our noon position was 14° N., 95°50' W., wind north-northeast 9, barometer 29.91. Vessel hove to and shipping heavy water. After noon cirrus clouds were observed moving to windward, and at 2 p. m. sea began to subside a little, with wind force 8. At 2:45 p. m. resumed course and full speed. By midnight wind had dropped to force 7, north-northeast, and barometer had risen to 29.97; high sea, heavy swell. At 8 a. m., February 12, wind had veered to southeast, force 5; moderate sea and cross swell, and the haze had left the horizon.

CLIMATOLOGICAL TABLES

CONDENSED CLIMATOLOGICAL SUMMARY

In the following table are given, for the various sections of the climatological service of the Weather Bureau, the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

TABLE 1.—Condensed climatological summary of temperature and precipitation by sections, February 1937

[For description of tables and charts, see REVIEW, January, p. 35]

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes				Section average	Departure from the normal	Greatest monthly		Least monthly			
			Station	Highest	Date	Station			Lowest	Date	Station	Amount	Station	Amount
Alabama.....	48.8	0.0	3 stations.....	83	8	Valley Head.....	14	11	4.93	-0.28	Dothan.....	9.52	Mobile Airport.....	2.32
Arizona.....	45.7	-2.5	2 stations.....	85	24	McNary.....	-7	27	1.59	+3.34	Junipine.....	9.16	Gila Bend.....	T
Arkansas.....	44.2	+7.7	El Dorado.....	84	8	2 stations.....	12	2	2.10	-1.16	Texarkana.....	3.69	Thornburg.....	.22
California.....	44.5	-3.7	2 stations.....	84	18	Bridgeport.....	-28	3	7.13	+2.72	Giant Forest.....	19.85	Brawley.....	.00
Colorado.....	27.0	-1.2	Las Animas.....	77	5	2 stations.....	-33	19	1.22	+2.23	Pagosa Springs (near).....	9.32	2 stations.....	T
Florida.....	60.7	+1.1	Avon Park.....	89	9	Bushnell.....	28	6	5.04	+1.86	St. Petersburg.....	10.93	Belle Glade.....	1.21
Georgia.....	48.6	+1.1	3 stations.....	82	8	Clayton.....	11	26	5.29	+3.37	Blakely.....	8.14	Augusta.....	3.71
Idaho.....	23.4	-4.5	Bungalow.....	66	27	Deadwood.....	-34	19	2.49	+7.76	Roland.....	8.98	Salmon.....	.13
Illinois.....	29.7	+5.5	Harrisburg.....	71	8	White Hall.....	-7	2	1.50	-1.63	Anna.....	3.09	Golden.....	.46
Indiana.....	31.4	+1.0	Seymour.....	80	8	Frankfort.....	0	17	1.86	-1.54	Princeton.....	3.10	Whiting.....	.64
Iowa.....	19.6	-2.6	Keokuk.....	60	8	3 stations.....	-24	10	1.04	-0.05	Washington.....	3.06	Denison.....	T
Kansas.....	32.7	0	3 stations.....	75	15	Healy.....	-11	1	.68	-0.31	Blue Rapids.....	2.93	Atwood.....	.04
Kentucky.....	38.3	+1.4	2 stations.....	78	8	4 stations.....	11	12	2.40	-0.97	Jenkins.....	4.70	Grant.....	1.13
Louisiana.....	53.8	+1.1	do.....	84	8	3 stations.....	22	11	2.76	-1.79	Port Sulphur.....	6.70	Atchafalaya.....	.59
Maryland-Delaware.....	34.9	+1.0	do.....	72	18	Grantsville, Md.....	0	28	3.20	+2.25	State Sanatorium, Md.....	5.06	Princess Anne, Md.....	1.99
Michigan.....	24.1	+3.7	do.....	63	8	Bessemer.....	-25	10	1.71	+0.06	Painesdale.....	5.12	Onaway.....	.44
Minnesota.....	9.6	-2.9	do.....	47	18	Pokegama Falls.....	-43	10	.95	+0.21	Pigeon River Bridge.....	2.63	Tracy.....	2.30
Mississippi.....	49.2	-1.1	Yazoo City.....	84	8	2 stations.....	18	11	3.64	-1.23	Meridian.....	6.78	Biloxi.....	1.16
Missouri.....	32.4	-1.5	Garber.....	74	7	Fulton.....	-15	2	1.38	-0.67	Seymour (near).....	2.80	Dean.....	.38
Montana.....	17.0	-5.2	Grass Range.....	58	16	Outlook.....	-43	9	.72	+0.03	Heron.....	4.95	2 stations.....	T
Nebraska.....	25.1	-1.0	2 stations.....	68	11	Ainsworth.....	-17	1	.23	-0.47	Auburn.....	1.02	Ainsworth.....	.00
Nevada.....	31.2	-2.7	Las Vegas.....	80	24	2 stations.....	-20	1	1.71	+0.65	Lewers Ranch.....	10.80	Las Vegas Airport.....	.06
New England.....	28.6	+6.1	Orono, Maine.....	61	21	Fort Kent, Maine.....	-19	5	2.57	-0.56	Hiram, Maine.....	5.53	Eastport, Maine.....	.64
New Jersey.....	34.1	+3.4	Belleplain.....	65	9	2 stations.....	4	14	2.29	-1.32	Little Falls.....	3.61	Camden.....	1.32
New Mexico.....	35.6	-1.7	Lovington.....	84	17	Selsor Ranch.....	-31	10	.92	+0.21	Aspen Grove Ranch.....	5.08	5 stations.....	.00
New York.....	27.9	+5.6	Fredonia.....	64	9	Indian Lake.....	-21	4	2.35	-0.32	North Lake.....	3.74	Ogdensburg.....	.86
North Carolina.....	42.5	-1.1	2 stations.....	79	8	Mount Mitchell.....	-5	26	4.08	+0.02	Swansboro.....	9.90	High Point.....	2.55
North Dakota.....	6.8	-2.9	Hettinger.....	55	15	Pembina.....	-35	1	.49	+0.03	Cooperstown.....	3.31	Hettinger.....	.02
Ohio.....	31.6	+2.4	Chillicothe.....	75	8	2 stations.....	4	25	1.72	-0.84	Lock No. 23.....	5.23	Lake Milton.....	.67
Oklahoma.....	41.7	+8.8	Fredrick.....	85	5	Boise City.....	5	1	.41	-0.90	Fort Gibson.....	2.42	10 stations.....	T

1 Other dates also.