

8 p. m., near 21° N., 126° E., had a low barometer reading of 29.24.

Disturbances of the southeastern North Pacific.—Disturbed weather conditions occurred off the Central American west coast on August 2, and off the Mexican coast on the 3d. Cyclonic circulation, however, appeared only immaturely developed. By the 4th the unsettled condition had proceeded to the entrance to the Gulf of California, and here at 6 a. m. the American steamer *California* had an east-southeast wind of force 7, lowest barometer 29.78. Thereafter the disturbance apparently went seaward and disintegrated.

On August 31 the American steamer *Point Estero*, in connection with an east-southeast wind of force 6 and barometer 29.78 observed off the Mexican coast near Acapulco, reported a tropical disturbance in the vicinity. There were slight evidences of the northward movement of a small unsettled region until September 3, but no further development of it has later been reported.

Radio reports on the 31st from the American S. S. *General Sherman* showed the existence of an intense tropical cyclone west of the Revillagigedo Islands. At 2 p. m., in 18°12' N., 117°30' W., the vessel reported a northeasterly hurricane wind, barometer 29.29, and at 5 p. m., wind of a similar force from a northwesterly direction, barometer 29.12, in the same position. We have no further history of this storm.

Fog.—Fog lessened greatly since July over the northwestern part of the ocean. Along the central part of the northern steamer routes fog continued frequent, occurring on 20 to 30 percent of the days within the region 40°–50° N., 180° and 160° W. Along the Washington-Oregon coasts there were 4 days on which fog was reported; along the California coast, 11 days; and off the coast of Lower California, 2 days.

TYPHOONS AND DEPRESSIONS OVER THE FAR EAST, AUGUST 1937

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[Weather Bureau, Manila, P. I.]

Typhoon July 29–August 5, 1937.—For about 3 days, there was a strong steady current of Southwest monsoon air flowing over the Archipelago toward the ocean regions east of the Balintang Channel before any definite center manifested itself. Then, on July 29, about 300 miles east of Aparri, it was certain that a typhoon was developing. Stationary in this location for 2 days, it then moved slowly and irregularly in a generally northerly direction, inclining somewhat to the north-northwest August 1 and 2, when it was east-southeast of Ishigakijima. On August 3 the storm was quite close to China, after a rapid northwesterly movement across the Eastern Sea, a course which was followed into the continent. August 5 found it degenerated into a mild disturbance central about 300 miles west by north of Shanghai; no indications of it could be found on the following days.

This typhoon manifested its intensity when crossing the southern part of the Nansei (Loochoo) Islands. At noon (Manila time) August 2 Ishigakijima reported pressure of 734.5 millimeters (28.917 inches) with northwest winds, force 2. Winds of force 8 and 9 were reported during these days from ships in the Eastern Sea. Shanghai, August 4, 6 a. m. (Manila time), had a pressure of 743.1 millimeters (29.256 inches) with southeast winds, force 6.

In the Philippines, during the course of this typhoon, heavy rains fell over Central Luzon, resulting in extensive floods. Dikes along the rivers were broken by the high

waters, resulting in the loss of much property and 28 lives, as reported by the newspapers of August 6.

Typhoon August 1–15, 1937.—A low-pressure area was observed August 1 about halfway between Guam and Yap. This apparently mild disturbance moved rather slowly in a northwesterly direction to a location about 600 miles east by north of Manila, where it intensified into a typhoon which began to move rapidly toward the north. It inclined to the northwest on August 12, a course which brought it, at 6 a. m. (Manila time) August 13, about 90 miles west of Naha. Continuing this northwesterly motion, it reached the vicinity of the mouth of the Yangtze River. After August 15 no trace of the storm could be found over the western part of the Yellow Sea, the region toward which it had been moving.

Similar to the typhoon earlier in the month, the Nansei (Loochoo) Islands felt the strength of this storm. August 12 at noon (Manila time) Naha had the pressure value of 746.0 millimeters (29.370 inches) with east-southeast winds, force 6. Ishigakijima at the same time had 746.5 millimeters (29.390 inches) north-northwest winds, force 6. Two days later, Gutsloff reported for the afternoon weather map a value of 749.1 millimeters (29.492 inches) with north-northeast winds, force 6, with the center passing a few hours later, within 100 miles to the east.

Typhoon August 11–16, 1937.—Originating about 180 miles south-southwest of Guam, this typhoon, quite fully developed, moved along a northwesterly course to the ocean regions east of Balintang Channel, where it filled up when over 300 miles from the Philippines. The observations received from the S. S. *Bahreïn* indicate that the center and region of strong winds were very small and that the storm did not exert its influence over an extensive area.

Typhoon August 16–22, 1937.—From the Eastern Caroline Islands a depression appeared August 16, moving in a westerly direction. When it was central about 250 miles south of Guam, a northwesterly course was taken and the morning of August 18 found the storm of sufficient intensity to be called a typhoon. For the next 3 days, it traversed a northwesterly course across the ocean to a position about 250 miles east-northeast of Basco, Batanes Pr., where it recurved to the northeast, filling up during the afternoon after it had changed its course. This typhoon had little influence, if any, upon the weather of the Philippines.

Depression August 16–17, 1937.—A mild depression, apparently of minor importance, should be mentioned as forming about 120 miles south-southeast of Oshima, August 16, and moving westward across the Eastern Sea, disappearing into the continent late in the afternoon of August 17.

Depression August 21–22, 1937.—Over the western part of the China Sea, a depression formed a short distance east of Hainan Island, and moved westward, first appearing the morning of August 21. A short movement along a northwesterly course placed its center over the northern part of the Gulf of Tong King, where it inclined to the north, thus entering the continent.

Typhoon August 22–30, 1937.—The morning weather map of August 22 indicated a depression central about 120 miles west by south of Yap. The disturbance moved rather rapidly along a west-by-north course, and because of the rapid fall of pressure over the Archipelago, it was considered a typhoon (August 23). It continued along this west-by-north and west-northwest course across the Visayan Islands into the China Sea, not causing very high winds, yet accompanied by a decided fall in pressure.

On the morning of August 27, when in the China Sea about 350 miles west of Manila, there were indications that it was weakening, but the afternoon observations indicated renewed activity. During the next 3 days, the storm moved along a northwest and west course, south of Hainan Island into the Gulf of Tong King, and then entered Indochina. During these 3 days, many ships

navigating over the western part of the China Sea reported winds of force 7 and 8, with pressures of 751.0 millimeters (29.567 inches) or thereabouts. August 29, at 3 p. m. (Manila time) Vinh, Indochina, had northwest winds, force 11, with pressure of 749.2 millimeters (29.496 inches) when the typhoon was about 60 miles northeast of the station.

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, August 1937

[For description of tables and charts, see REVIEW, January, p. 29]

Section	Temperature								Precipitation					
	Section average ° F.	Departure from the normal ° F.	Monthly extremes				Section average In.	Departure from the normal In.	Greatest monthly		Least monthly			
			Station	Highest ° F.	Date	Station			Lowest ° F.	Date	Station	Amount In.	Station	Amount In.
Alabama.....	80.9	+1.2	Decatur.....	103	10	2 stations.....	62	3	5.04	+0.51	Highland Home.....	14.78	Sylacauga.....	1.38
Arizona.....	81.8	+2.1	Quartzsite.....	119	4	Bright Angel.....	35	8	1.83	-.53	Nogales.....	8.16	2 stations.....	.00
Arkansas.....	82.3	+2.3	Conway.....	111	10	Lead Hill.....	55	13	3.45	-.13	De Queen.....	12.69	Corning.....	.22
California.....	73.0	+4	2 stations.....	124	11	Boca.....	19	30	.01	-.09	South Lake.....	.72	247 stations.....	.00
Colorado.....	70.0	+4.5	Las Animas.....	110	19	2 stations.....	22	20	1.43	-.53	Crested Butte.....	4.62	Trinidad.....	T
Florida.....	81.3	-.1	2 stations.....	100	11	Hastings.....	60	5	8.68	+1.62	Carrabelle.....	18.91	Merritts Island.....	1.66
Georgia.....	79.7	+2	Hawkinsville.....	100	20	Blairsville.....	57	11	6.33	+1.07	Glennville.....	13.50	Moultrie.....	2.95
Idaho.....	65.2	-1.1	2 stations.....	108	14	Warren.....	18	29	.34	-.31	Kellogg.....	2.16	36 stations.....	.00
Illinois.....	78.1	+3.9	Quincy.....	103	16	Freeport.....	50	22	2.39	-.93	Wheaton.....	6.38	Harrisburg.....	.17
Indiana.....	76.3	+2.8	Johnson.....	102	3	Marengo.....	49	1	3.56	+1.18	Williams.....	7.15	Fort Wayne.....	.96
Iowa.....	77.8	+5.7	Logan.....	108	16	Postville (near).....	49	23	3.99	+4.45	Algona.....	10.22	Keosauqua.....	.72
Kansas.....	83.5	+5.8	4 stations.....	113	9	Tribune.....	52	22	2.06	-1.05	Kingman.....	8.04	Ulysses.....	.09
Kentucky.....	78.0	+2.4	5 stations.....	100	13	2 stations.....	53	11	3.63	-.07	Jenkins.....	7.70	Fords Ferry.....	.46
Louisiana.....	82.2	+4	Shreveport.....	104	10	Ruston.....	64	11	5.53	+4.47	Reserve.....	12.63	Grand Cane.....	1.56
Maryland-Delaware.....	75.6	+2.5	Cumberland, Md.....	100	19	Grantsville, Md.....	44	2	7.05	+2.46	Chestertown, Md.....	12.18	Hancock City, Md.....	3.44
Michigan.....	71.5	+4.7	Petoskey.....	98	15	Sidnaw.....	26	22	2.99	+1.29	Lapeer.....	9.73	Grand Marais.....	.46
Minnesota.....	74.0	+6.5	2 stations.....	108	15	3 stations.....	40	21	4.20	+1.01	Redby.....	9.84	Ada.....	1.43
Mississippi.....	82.2	+1.5	2 stations.....	107	10	Batesville.....	61	11	4.76	+1.51	Fruitland Park.....	9.87	Holly Bluff.....	1.39
Missouri.....	80.5	+4.1	do.....	105	19	2 stations.....	51	6	2.05	-1.75	Crittton Hill.....	6.10	Fisk.....	.34
Montana.....	66.4	+1.6	Rock Springs (near).....	103	13	Wisdom.....	18	29	.55	-.57	Sherburne Lake.....	1.73	4 stations.....	.00
Nebraska.....	80.2	+7.0	2 stations.....	112	19	Mullen.....	42	22	1.89	-.87	Hartington.....	5.36	Sheep Creek Camp No. 5.....	T
Nevada.....	73.7	+3.1	Logandale.....	119	11	San Jacinto.....	27	31	.08	-.42	Sharp.....	1.20	29 stations.....	.00
New England.....	72.2	+5.2	Chelsea, Vt.....	100	30	Greenville, Maine.....	35	24	4.14	+1.28	Otis (near) Mass.....	10.55	St. Albans, Vt.....	.34
New Jersey.....	75.3	+3.5	Flemington.....	100	20	Charlottesville.....	45	15	6.82	+2.07	Belvidere.....	12.35	Newton.....	3.64
New Mexico.....	73.4	+3.1	Orogrande.....	103	8	Elizabethtown.....	31	20	1.56	-1.03	White Tail.....	6.88	Horse Springs.....	.00
New York.....	72.4	+4.9	Port Jervis.....	99	20	Indian Lake.....	37	15	4.98	+1.18	Bedford Hills.....	9.64	Lockport.....	1.03
North Carolina.....	76.9	+1.0	2 stations.....	99	19	Banners Elk.....	46	1	7.40	+1.86	Rock House.....	15.32	Belhaven.....	2.05
North Dakota.....	72.9	+6.6	New England.....	109	6	3 stations.....	40	120	1.52	-.49	McLeod.....	7.23	2 stations.....	.04
Ohio.....	74.7	+3.1	Gallipolis (near).....	103	17	2 stations.....	48	2	3.20	-.18	Mt. Healthy.....	7.00	Mansfield.....	.92
Oklahoma.....	85.1	+3.7	3 stations.....	114	19	Boise City.....	53	21	3.08	+1.16	Atoka.....	8.80	Pryor.....	.26
Oregon.....	63.7	-1.6	Hermiston.....	102	4	Seneca.....	13	28	.45	+1.03	Seaside.....	4.16	11 stations.....	.00
Pennsylvania.....	73.5	+3.3	Ephrata.....	101	20	Hyndman.....	40	30	5.43	+1.17	Lawrenceville.....	11.29	Claysville.....	1.42
South Carolina.....	79.0	+2	3 stations.....	98	19	Long Creek (near).....	57	1	6.93	+1.23	Caesars Head.....	15.66	Blairs.....	.96
South Dakota.....	78.2	+7.4	do.....	114	14	Camp Crook.....	40	3	1.86	-.27	Vermillion.....	9.90	Hopewell.....	T
Tennessee.....	79.3	+2.6	2 stations.....	106	10	Crossville.....	50	1	4.71	+1.70	Copperhill.....	10.70	Union City.....	.93
Texas.....	85.3	+2.5	do.....	115	10	Mount Locke.....	55	16	2.18	-.13	Paducah.....	10.21	3 stations.....	.00
Utah.....	71.8	+2.1	St. George.....	111	12	2 stations.....	32	20	.75	-.30	Escalante.....	3.25	Richmond.....	.00
Virginia.....	75.5	+1.4	Lincoln.....	102	21	Mountain Lake.....	48	1	7.49	+3.10	Stuart.....	12.11	Mendota.....	3.14
Washington.....	63.1	-2.5	Wahluke (near).....	106	4	Deer Park (near).....	23	29	1.31	+1.50	Quinalt.....	7.22	Lost Creek.....	.00
West Virginia.....	74.4	+2.6	Martinsburg.....	101	19	Bayard.....	40	2	5.83	+1.71	Wardensville.....	14.44	Ravenswood.....	1.06
Wisconsin.....	73.5	+5.9	Wisconsin Dells.....	104	16	Laona.....	30	22	2.74	-.48	Mellen.....	6.59	Plum Island.....	.24
Wyoming.....	67.4	+3.5	3 stations.....	105	16	West Yellowstone.....	20	30	.55	-.54	Seminol Dam.....	2.64	7 stations.....	.00
Alaska (July).....	56.0	+6	Nenena.....	88	11	Portage.....	27	28	2.65	+1.13	Yakutat.....	17.66	Barrow.....	T
Hawaii.....	74.8	0	Haika.....	94	12	Kanalohuluhulu.....	50	19	10.35	+3.97	Nauhi Gulch.....	47.48	Olowalu.....	.29
Puerto Rico.....	78.9	+1	2 stations.....	97	24	2 stations.....	60	14	10.69	+3.24	Rio Blanco.....	22.42	Mona Island.....	3.55

¹ Other dates also.