

CLIMATOLOGICAL DATA

INDIANA SECTION

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VOL. XXX INDIANAPOLIS, IND., MARCH, 1925 No. 3

GENERAL SUMMARY

March, 1925, in marked contrast to that of 1924, was a warm, sunshiny month. It was ushered in by a moderately heavy fall of rain and snow, followed closely by near zero temperatures, the 2d being one of the coldest days of March record over the State, but the closing days of the month were pleasant with moderately high temperatures. The maximum on the 7th at Indianapolis was the highest of record for so early a date.

Precipitation was about normal during the first two decades in the southern half of the State and above normal to the northward, due to the heavy rainfall over the northern half of the State on the 13th. During the last decade, however, there were only light showers about the middle of the period, so that, for the month as a whole, there was a considerable deficiency in the southern half and somewhat of an excess in the northern half of the State. After the snowfall of the 1st, which melted within a few days, falls were very light and confined to the middle and northern counties.

Grains and grasses began greening in the southern district the first decade, but little growth was made over the State during the month as the ground became too dry to produce material growth before its close. Plums were in bloom in the south the last week and other fruit buds were swelling rapidly. At its close, the season was about a week in advance of the normal.

As a result of heavy rains over the middle and northern districts on the 13th and 14th and again about the 18th, streams rose rapidly and some bottom lands were flooded in the lower West Fork of the White, and to a considerably greater extent in the middle and lower Wabash Valley. The Maumee and tributary streams in Allen County were above flood stage on the 14-17th and again on the 19th. A number of tornadoes and damaging wind storms occurred on the 10th and 18th, reports of which will be found on other pages. G. W. M.

TEMPERATURE

The mean temperature for the State was 43.4°, or 3.0° above the normal for March. The mean for the northern division was 39.8°; for the central division, 43.6°; and for the southern division, 46.8°. The highest mean temperature was 50.2° at Mount Vernon, and the lowest, 36.8° at Rochester, making a range in mean temperature of 13.4°. The absolute range was 90°, from 83° at Princeton on the 9th to -7° at Wheatfield on the 2d. The average number of days with maximum temperature of 32° or lower was 1; minimum temperature of 32° or lower, 16; minimum temperature of zero or lower, 1. The average daily excess in temperature for the State since January 1, 1925, is 3.6°.

PRECIPITATION

The average precipitation for the State was 3.33 inches, a deficiency of 0.40 inch. In the northern division the average amount was 3.74 inches; in the central division, 3.53 inches; and in the southern division, 2.72 inches. The total amounts received at the several stations ranged from 7.34 inches at Frankfort to 1.60 inches at Farmersburg. The greatest amount falling in 24 consecutive hours at any station was 3.15 inches at Lafayette on the 13th. The snowfall of the month amounted to about 7 per cent of the precipitation. The accumulated deficiency in precipitation for the State since January 1, 1925, is 3.73 inches.

HAIL

Light hail, doing no material damage, fell at the following stations on the dates mentioned: Albion, Huntington, Laporte, Plymouth, Royal Center, Winamac, Winona Lake, Anderson-Farmland, Indianapolis, Martinsville, Mauzy, Muncie, Rock-

ville, Terre Haute, Veedersburg, Whitestown, and Salem, on the 10th; also at Paoli and Princeton on the 11th; Royal Center on the 13th; Royal Center, Rockville, Mount Vernon, Paoli, and Shoals, on the 18th; at Paoli on the 19th; Royal Center on the 24th; Royal Center and Rockville on the 26th; Anderson, Bloomington, Farmland, and Muncie, on the 27th; and at Greensburg on the 28th.

Hail, doing some damage, fell in southern Vanderburg County on March 18, the storm expending most of its energy in Kentucky.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
Auroras.....																															
Dense fogs.....																															
Lunar halos.....																															
Solar halos.....																															
Sleet.....																															
Thunderstorms.....																															

PRESSURE, HUMIDITY, WIND, AND SUNSHINE

Stations	Mean baro- metric pres- sure (sea level)	Humidity			Wind			Sunshine					
		7 a. m.	Local noon	7 p. m.	Prevailing di- rection	Average hour- ly velocity	Maximum			Actual hours	Possible hours	Percentage of possible	
							Velocity	Direction	Date				
	<i>Inches</i>	<i>Perct.</i>	<i>Perct.</i>	<i>Perct.</i>		<i>Miles</i>	<i>Miles</i>						
Fort Wayne...	30.10	81	62	69	s.	10.3	47	sw.	10	245.9	370.8	66	
Royal Center...	30.10	84	62	.....	s.	11.7	54	n.w.	10	252.4	370.8	68
Indianapolis...	30.10	80	59	65	s.	13.3	39	w.	26	261.1	371.0	70	
Terre Haute...	30.10	81	58	62	s.	11.5	37	s.	3	250.7	371.1	68	
Evansville...	30.13	71	51	53	sw.	12.8	60	w.	18	258.0	371.2	70	

COMPARATIVE DATA FOR MARCH

Year	Temperature				Precipitation				Number of days				Prevailing direction of wind
	State mean	Departure from normal	Highest	Lowest	State average	Departure from normal	Greatest in 24 hours	Total snowfall	With 0.01 inch or more precip.	Clear	Partly cloudy	Cloudy	
°F.	°F.	°F.	°F.	Inch.	Inch.	Inch.	Inch.	4.0	10	10	9	3	sw.
Normals ..	40.4	3.8	78	4	3.73	1.57	2.78	4.0	10	10	9	3	sw.
1887	37.5	-2.9	78	8	2.33	-1.40	3.12	.....	6	10	15	.....
1888	35.4	-5.0	79	0	4.33	+0.60	3.00	4.8	12	9	6	16	nw.
1889	41.3	+0.9	81	14	1.51	-2.22	1.50	0.6	5	13	7	11	nw.
1890	35.1	-5.3	72	-6	5.61	+1.88	5.00	5.3	12	6	9	16	nw.
1891	35.8	-4.6	72	-7	4.92	+1.19	2.10	8.8	14	5	6	20	ne.
1892	37.2	-3.2	78	5	2.32	-1.41	2.00	3.9	10	7	10	14	n.
1893	40.2	-0.2	79	7	2.83	-0.90	2.69	1.9	9	8	11	12	sw.
1894	46.1	+5.7	86	8	2.97	-0.76	2.50	3.4	8	12	9	10	sw.
1895	38.7	-1.7	85	5	1.48	-2.25	1.20	3.3	8	11	9	11	nw.
1896	35.4	-5.0	77	-3	3.10	-0.63	2.12	14.4	10	8	10	13	nw.
1897	42.5	+2.1	82	9	6.66	+2.93	6.96	1.0	13	8	9	14	se.
1898	45.8	+5.4	83	11	8.11	+4.38	4.19	2.4	14	10	7	14	sw.
1899	37.3	-3.1	76	-3	4.42	+0.69	2.03	9.3	13	6	10	15	nw.
1900	35.6	-4.8	75	-6	2.06	-1.67	1.69	3.4	8	10	8	13	nw.
1901	40.4	0.0	83	-1	3.40	-0.33	2.18	2.2	11	7	7	17	sw.
1902	43.6	+3.2	80	4	3.12	-0.61	2.36	1.5	10	10	7	14	sw.
1903	46.7	+6.3	81	12	2.95	-0.78	2.72	0.5	9	9	9	13	sw.
1904	40.7	+0.3	80	11	8.09	+4.36	5.43	2.6	13	6	8	17	s.
1905	46.0	+5.6	86	7	2.52	-1.21	1.64	1.2	6	12	9	10	sw.
1906	31.9	-8.5	67	-8	5.16	+1.43	2.50	16.0	14	6	6	19	ne.
1907	48.3	+7.9	90	12	4.90	+1.17	4.00	3.2	11	11	8	12	sw.
1908	45.2	+4.8	80	12	4.40	+0.67	2.27	1.6	11	9	10	12	sw.
1909	39.6	-0.8	70	10	2.88	-0.85	4.20	1.5	8	10	8	13	nw.
1910	51.0	+10.6	91	12	0.22	-3.51	0.65	T.	2	16	10	5	sw.
1911	40.6	+0.2	89	5	2.22	+1.51	1.27	1.6	8	13	8	10	nw.
1912	32.5	-7.9	78	0	4.46	+0.73	1.95	11.6	13	9	8	14	ne.
1913	40.4	0.0	78	-3	8.97	+5.24	7.00	6.7	14	9	11	11	sw.
1914	37.8	-2.6	76	3	2.58	-1.15	2.60	3.1	9	10	8	13	sw.
1915	35.3	-5.1	61	9	1.15	-2.68	1.30	1.7	6	12	7	12	nw.
1916	47.4	+3.0	79	-3	2.63	-1.10	2.48	5.7	10	9	9	13	ne.
1917	41.3	+0.9	84	0	3.82	+0.09	2.51	3.4	11	11	8	12	sw.
1918	46.4	+6.0	83	12	1.88	-1.85	2.00	0.3	7	19	5	7	sw.
1919	42.7	+2.3	80	5	4.90	+1.17	3.06	2.3	9	15	7	9	sw.
1920	42.4	+2.0	82	1	3.98	+0.25	2.23	1.0	10	15	6	10	sw.
1921	50.5	+10.1	88	13	5.74	+2.01	2.40	T.	13	11	10	10	sw.
1922	43.6	+3.2	77	10	7.06	+3.33	3.70	2.6	14	10	5	16	s.
1923	38.7	-1.7	78	0	3.81	+0.08	2.35	2.2	9	13	9	9	sw.
1924	36.4	-4.0	78	11	3.60	-0.13	2.89	10.8	11	7	6	18	nw.
1925	43.4	+3.0	83	-7	3.33	-0.40	3.15	2.3	9	16	8	7	sw.

NOTE.—The normals at the head of this table were computed from all available data up to and including 1920.

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.								Precipitation, in inches					Number of days								Prevailing direction of wind	Observers	
				Mean maximum	Mean minimum	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall (accumulated)	With precip. 0.01 inch or more	Clear	Partly cloudy	Cloudy	Max. temp. 32° or lower	Min. temp. 32° or lower	Min. temp. zero or lower				
Northern Division																											
Albion	Noble	919	8	49.1	27.4	38.2		73	26	-4	3	35	2.60	1.11	4.5	8	16	8	7	3	22	2	2	Albert Black.	
Angola	Steuben	1060	27	47.6	26.3	37.0	+2.7	72	26	-4	3	35	3.61	+0.46	1.60	6.0	8	16	6	9	3	23	2	2	nw	John B. Parsell.	
Berne	Adams	849	15	50.9	29.1	40.0	+1.8	74	24	1	2	33	2.89	-0.50	1.76	4.2	10	20	3	8	1	13	0	1	nw	Henry M. Reusser.	
Bluffton	Wells	835	29	51.9	28.8	40.4	+1.9	75	24	1	2	44	4.45	+0.76	2.65	2.7	8	14	3	14	1	18	0	1	sw	George R. Rinehart.	
Collegeville	Jasper	672	29	52.5	28.7	40.6	+1.1	74	26	-6	2	37	3.34	+0.02	1.50	2.0	7	20	7	4	2	21	2	2	sw	John A. Marling.	
Columbia City	Whitley	897	24	49.7	27.4	38.2		73	26	-4	3	35	2.60	1.11	4.5	8	16	8	7	3	22	2	2	William A. Snyder.	
Delphi	Carroll	663	40	54.8	30.9	42.8	+4.9	76	24	-3	2	42	5.22	+2.25	2.00	2.0	9	18	5	8	1	16	1	1	sw	C. M. Kerlin.	
Fort Wayne	Allen	856	37	49.7	29.4	39.6	+1.4	74	26	2	3	34	4.72	+1.40	2.68	4.9	9	15	8	8	1	17	0	1	sw	U.S. Weather Bureau.	
Goshen	Elkhart	798	10	49.7	26.6	38.2		72	26	-4	3	37	1.76	0.45	2.0	7	11	5	3	20	1	1	nw	S. W. Withner.		
Hobart	Lake	621	5	49.9	29.5	39.7		76	26	-1	2	37	2.19	0.63	5.4	8	14	10	1	16	1	1	1	sw	D. H. Boyd.	
Howe	Lagrange	886	19	50.5	26.4	38.4	+3.2	75	26	-4	2	45	2.12	-0.53	0.90	3.0	7	11	14	6	3	23	2	2	C. M. Harding.	
Huntington	Huntington	741	37	52.1	28.3	40.4	+3.5	74	26	-2	2	39	5.43	+2.32	2.88	4.4	7	19	6	6	1	18	2	2	Ivan D. Murphy.	
Kokomo	Howard	840	33	54.5	32.1	43.3	+3.4	75	24	-1	2	36	5.61	+2.47	1.63	3.0	9	19	5	7	2	15	1	1	sw	James W. Brass.	
Lafayette	Tippecanoe	661	46	54.5	32.7	43.6	+5.4	75	24	-2	2	37	5.06	+2.03	3.15	2.5	9	21	2	8	1	15	1	1	Prof. Edw. G. Proulx.	
Laporte	Laporte	742	30	50.3	24.5	37.4	+1.0	80	26	1	2	47	3.74	+0.91	1.35	5.5	9	20	7	4	1	26	0	0	sw	Errett Cooper.	
Logansport	Cass	620	40	50.3	24.5	37.4	+1.0	80	26	1	2	47	3.74	+0.91	1.35	5.5	9	20	7	4	1	26	0	0	sw	F. L. C. Boerger.	
Marion	Grant	850	38	53.3	29.3	41.3	+2.4	75	26	0	3	43	3.74	+0.54	1.15	3.0	9	11	17	3	1	20	1	1	Prof. A. Jones.	
Monticello (near)	White	674	15	53.6	29.6	41.6	+2.4	73	26	0	1	40	3.21	+0.69	1.65	2.0	8	22	3	6	1	12	2	2	Ind. Hydro Elec. Co.	
Notre Dame	St. Joseph	712	13	49.9	29.2																						

The departures from normal temperature and precipitation are computed only for such stations as had ten or more years of record at the close of the year 1920, but all complete reports have been used in determining section and division means.

†† Post-office addresses of these stations are as follows: Of Hickory Hill, Treviack, Ind.; of Mauzy, R. R. No. 10, Rushville, Ind.; of Elliston, Bloomfield, Ind., R. R. No. 5; of Forest Reserve, Henryville, Ind.; of Vevay (Dam No. 39), Florence, Ind.

§ Instruments not furnished by Weather Bureau, but of standard pattern. † Also on other dates. T. Precipitation is less than 0.01 inch of rain or melted snow.

§§ Temperatures not recorded. Reference letters, a, b, c, appearing in the table, indicate number of days missing, for example, ^b represents two days, etc.

Daily Precipitation for March, 1925

Stations	Drainage basins	Day of month																																Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Albion	St. Joseph	.32	T.						T.	.24	.19			.82	.29				.40	.19					.15			T.						2.60
Angola	do	.30	T.							.13	.45	T.		.10	.52				.60	.31					.20		T.							3.61
Berne	Maumee	.41			T.					.27	.05			.87	.89				.09	.12					.15			.03			T.			2.89
Bluffton	Wabash	.45	.07		T.					.02	.30			2.65	T.				.67						.25			.04	T.		T.			4.45
Collegeville	Kankakee	.02								.15	T.			1.50					.85	.50	T.				.27		.05		T.		T.			3.34
Columbia City	Wabash	.44							T.	.08	T.			2.60	.34				.82						.45		.01	T.						4.74
Delphi	do	.20								.47				2.00	.90				1.20		.05				.10	.15	.15							5.22
Fort Wayne ***	Maumee	.45	.01						T.	.04	.12	T.		2.62	.06				1.20	T.					.10		.02	T.			T.			4.72
Goshen	St. Joseph	.17								.18	.20			.45	T.				.33	.31							.12			T.		T.		1.76
Hobart	Lake Michigan	.36								.16	.22	.11		.63	.07				.30	T.					.14			T.			T.			2.19
Howe	St. Joseph	.30								.14	.31								.36	.90					.09			.02			T.			2.12
Huntington	Wabash	.47		T.						.33	T.			1.68	1.20				.93	.56					.26		T.							5.43
Kokomo	do	.30			T.					.55				1.30	1.63				.80	.38	.07				.38		.20							5.61
Lafayette	do	.25								.07	T.			1.90	1.30				.51	.46	.07				T.	.29	.21							5.06
Laporte	Kankakee	.43	.12							.47	.26	.12			.85				1.35						.19		.04							3.74
Logansport II	Wabash	.32								.05	.35			2.85					1.10	.05					.31									5.03
Marion	do	.30					.07			.15				.87	1.15				.15	.55	T.				.10		.10		.40					3.74
Monticello (near)**	do	.20								.26				1.65	.04				.95	.01					.02		.08							3.21
Notre Dame	St. Joseph	.35	.11							.10	.24			.66	.04				.29	.94					.02	.05		.04						2.84
Plymouth (near)	Kankakee	.20								.45				.37	T.				.43	.97					.11		.07							2.70
Rochester (near)**	Wabash	.30	.10							.18	.06			2.27	.01				.82						.15									3.91
Royal Center ***	do	.31			T.				T.	.12	T.			2.43	.10				.98	.03					.16		.03	.01						4.19
South Bend	Kankakee	.30	.10						.03	.23	.35			.44	.03				.41	.63					.17		T.							3.69
Valparaiso	do	.40	.03						.04	.24	.27			.95	.14				.55	.87	.12				.21	.06	.02	.02						3.92
Wabash II	Wabash	.46	T.							.03	.31	T.		3.09	T.				1.36	.02					.26	.10		.01	T.					5.64
Wheatfield	Kankakee	.40								.09	.16			.62					.60	.47					.09	.04		.10	.04					2.66
Whiting	Lake Michigan	.50							.15	.17	.12			.62	.32				.37	.48								T.						2.73
Winamac	Wabash	.30								.13				1.35	.07				.96	.50	.01				.10	.05	T.	.02						3.49
Winona Lake	do	.45	.05						.35	.10	.51	.02		1.27	.81				.35	T.					.13	.03	T.			.02				4.09
Central Division																																		
Auderson	West Fork White									.59	.44			1.12	1.65				.08		.08				.15						T.			3.33
Bloomington	do	.25			.03					.19	.50			.64		T.			.29	.04	.04				.07	.13	.36							2.54
Cambridge City	Whitewater	.25								1.04	T.			.88				.10	.25	.07								.22						2.81
Crawfordsville	Wabash	.45								.28	.02			1.25	1.65				.48	.20	.03				.06	.19								4.61
Farmersburg	do									.40				.64					.38						.05	.01	.12							1.60
Farmland	West Fork White	.45			T.				T.	T.	1.00			T.	1.05				T.	.12	.08						.12			T.	.10			2.92
Frankfort	Wabash	.46								1.03				2.21	1.03				1.64	.09					.24	.64								7.34
Greencastle	West Fork White	.30								T.	T.			2.30					.55		.07				.20	.89								4.24
Greenfield	East Fork White	.10		.05						T.	.75			1.24					.25		.07											.06		2.52
Hickory Hill	West Fork White	.25			.03					.20	.50			.70					.78	.1	.03				.05	.15	.32							3.01
Indianapolis ***	do	.25		.01						.43	T.			1.44	T.	T.			.13	.01					.06		.54							2.87
Martinsville II	do	.35	.01	T.	T.	.03	T.			.08	.43	T.		T.	.88	T.			.02	.52	.08				.09	.55								3.04
Mauzy	East Fork White	.29								.11	.87			.01	.73				T.	.08	.33	.05	.07				.04	.45						3.01
Muncie	West Fork White	.49								.74				.06	1.10				.07		.07				.08		.20							2.81
Noblesville II	do	.28			T.					.19	.71			1.61	T.				.19	.10					.18		.29	T.						3.55
Richmond ***	Whitewater	.23	.02		T.					.61				.78				.04	.02	.28	.04				.02	.18	.12							2.64
Rockville	Wabash	.74								.55	T.			2.88	T.				.83	.01					.22		.50	T.						5.73
Salamonia	do	.45								.40	.50			.17	.92				.17	.03					.08		.18							2.90
Shelbyville	East Fork White	.11			.05					.98				.65					.87						.09	1.12	T.			.02				3.93
Terre Haute ***	Wabash	.18								.62	T.			1.36	T.				.21	.01			T.		.16		.08	T.						2.62
Veederburg	do	.40								.65				1.60	1.85				.50	.75	.04				.30	.02								5.61
Whitstown	West Fork White	.55								.33	.13			.65	1.42	T.			.11	.27	.04				.22	.23	T.							3.95
Southern Division																																		
Bedford	East Fork White	.27			.05					.15	.45			.05	.55		.05		1.00	T.		.02				T.	.25							2.84
Brookville II	Whitewater	.17	.05		.02					.54				.58				.10	.96	.07						.07	.12	.73						3.22
Butlerville	East Fork White	.24			.05					.17				.55				.10	.56	.44						.07	.12	.30						3.21
Columbus II	do	.17			T.					.57				.40				.10	.70															2.71
Decker II	Ohio	T.	T.							.13	.51	.10		.59				T.	.21	.50					.06		.23							2.33
Edwardsport II	West Fork White	.19								.16	.19	.02		.59	T.		T.		.80	.04					.06		.20	.02						1.77
Ellettsville II	do	.28			T.																													

Daily Temperatures for March, 1925

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Albion.....	Maximum	32	14	31	34	38	53	62	56	45	71	47	50	40	34	37	51	59	48	43	55	51	49	57	72	64	73	62	49	42	54	50	49.1
Albion.....	Minimum	14	0	-4	25	12	30	36	31	-33	41	27	18	82	25	18	25	31	36	31	27	39	25	29	41	29	42	39	30	25	34	27	27.4
Angola.....	Maximum	31	12	31	41	38	52	59	50	43	70	46	45	37	33	34	47	58	50	46	50	52	49	55	69	60	72	58	50	38	51	49	47.6
Angola.....	Minimum	12	-2	-4	23	11	29	35	31	31	36	25	17	30	21	17	26	35	35	30	26	35	25	27	40	30	45	36	28	25	32	27	26.3
Bluffton.....	Maximum	37	20	33	33	41	55	68	38	58	58	75	52	62	41	52	38	51	60	49	49	55	52	52	60	75	75	65	53	45	50	52	51.9
Bluffton.....	Minimum	21	0	1	29	13	33	38	33	35	49	28	20	33	27	20	26	36	40	43	28	30	27	29	42	31	44	35	28	27	38	26	28.8
Collegeville.....	Maximum	35	20	30	35	45	65	72	60	62	70	48	54	45	39	40	53	55	47	50	56	51	55	55	75	69	74	61	55	47	59	54	52.5
Collegeville.....	Minimum	20	-6	0	20	22	32	37	33	35	37	20	37	25	16	28	30	38	29	27	40	30	32	45	32	41	37	27	26	30	27	28.7	
Fort Wayne***	Maximum	34	13	34	35	38	54	66	54	55	73	39	50	42	40	36	53	58	53	47	53	53	49	58	73	65	74	48	50	41	53	49	49.7
Fort Wayne***	Minimum	12	2	2	21	17	32	39	32	33	39	26	24	33	24	21	30	39	35	33	31	36	32	40	32	46	36	33	27	35	31	29.4	
Howe.....	Maximum	32	17	29	35	41	54	62	58	47	70	48	60	43	34	37	51	60	53	45	55	51	50	58	72	72	74	66	50	42	57	53	50.5
Howe.....	Minimum	17	-4	-2	23	10	31	33	31	32	38	26	17	32	25	14	26	32	38	30	24	36	23	28	43	27	41	38	27	25	34	24	26.4
Huntington.....	Maximum	34	18	33	38	40	53	67	59	54	72	50	51	42	46	38	52	60	53	49	54	54	52	59	72	70	78	65	52	46	51	52	52.1
Huntington.....	Minimum	18	-2	-2	30	10	30	35	33	34	42	28	19	34	28	20	26	33	40	33	27	44	26	30	42	31	41	31	20	27	35	24	28.6
Kokomo.....	Maximum	35	20	35	37	40	56	70	69	62	75	57	53	50	35	38	54	60	56	48	56	54	52	61	75	70	75	63	55	52	55	55	54.5
Kokomo.....	Minimum	19	-1	4	33	20	32	39	34	35	56	31	25	37	28	20	29	39	40	32	31	46	32	48	34	52	40	34	29	35	30	32.1	
Lafayette.....	Maximum	38	20	34	40	41	55	72	71	66	71	56	52	52	52	36	52	56	54	48	55	54	53	63	75	69	71	61	56	54	57	56	54.5
Lafayette.....	Minimum	20	-2	4	32	23	35	42	34	37	55	29	26	39	28	22	31	38	42	31	32	43	33	38	49	34	52	39	34	30	33	30	32.7
Laporte §§.....	Maximum	33	17	37	38	44	56	68	36	57	68	38	53	43	32	40	55	59	50	45	57	46	55	64	70	68	80	49	54	45	53	50	50.3
Laporte §§.....	Minimum	13	1	1	7	13	17	33	31	31	34	26	19	26	26	13	19	29	31	30	23	32	25	29	37	28	33	38	28	28	32	24	23.5
Marion.....	Maximum	38	22	34	37	40	52	68	63	60	73	56	49	50	52	37	52	59	58	58	53	53	51	59	74	67	75	60	52	47	54	54	53.3
Marion.....	Minimum	22	3	0	30	15	31	36	34	33	52	23	20	22	28	20	27	37	37	32	29	44	29	31	31	38	48	36	31	27	34	27	29.3
Plymouth (near).....	Maximum	28	20	33	36	38	48	56	56	56	66	42	43	42	34	36	50	58	42	50	60	50	53	60	68	63	72	47	50	40	55	55	48.4
Plymouth (near).....	Minimum	4	-3	2	10	15	28	36	31	35	36	28	20	34	21	15	28	33	35	30	54	52	50	60	74	68	72	48	52	45	56	58	49.5
Royal Center***	Maximum	31	8	34	36	39	54	70	40	61	70	37	51	41	44	18	28	33	35	30	54	52	50	60	74	68	72	48	52	45	56	58	49.5
Royal Center***	Minimum	8	-4	0	23	18	33	38	32	35	36	24	21	37	22	18	28	33	35	32	30	32	32	38	48	35	31	27	31	26	27	26	27.6
South Bend.....	Maximum	33	15	32	38	40	53	66	60	53	65	49	50	46	36	34	48	55	51	44	51	53	52	59	70	65	60	54	49	44	56	51	51.2
South Bend.....	Minimum	15	3	3	26	15	37	37	31	34	44	26	20	33	24	14	29	34	39	30	28	36	28	32	40	29	30	28	24	34	25	27.8	
Valparaiso.....	Maximum	34	18	33	37	41	56	60	60	53	65	49	50	46	36	34	48	55	51	50	42	55	51	55	62	68	75	64	50	42	47	45	50.0
Valparaiso.....	Minimum	18	-3	1	30	17	28	37	32	33	46	26	20	33	23	13	28	29	33	28	25	35	24	31	41	29	37	33	29	32	29	27.6	
Wheatfield.....	Maximum	37	27	34	38	43	55	68	64	62	68	51	52	50	38	37	47	53	54	47	57	53	56	62	74	68	75	67	54	50	51	53.1	
Wheatfield.....	Minimum	21	-7	3	31	19	33	35	32	33	51	26	20	36	23	13	28	30	37	28	28	38	26	34	43	30	45	36	29	24	36	24	28.5
Whiting.....	Maximum	35	19	34	34	44	58	70	48	56	78	50	51	47	35	33	53	56	49	43	55	52	58	63	67	78	63	47	45	45	43	50.8	
Whiting.....	Minimum	19	-3	7	30	23	34	35	32	37	50	26	24	33	23	15	30	31	33	23	28	35	31	41	43	32	42	37	32	35	34	29.8	
Winona Lake.....	Maximum	33	15	33	37	40	55	66	57	49	72	47	52	44	39	37	53	59	49	47	56	50	51	60	73	66	74	60	53	46	58	55	51.2
Winona Lake.....	Minimum	14	-1	-2	26	14	30	37	31	33	46	28	19	33	26	18	27	33	38	31	26	39	27	30	44	29	47	37	30	26	35	28	28.4
Central Division																																	
Anderson.....	Maximum	37	15	35	38	41	56	72	68	67	65	59	53	55	45	43	55	59	57	58	53	52	57	62	76	71	74	65	54	52	53	54.7	
Anderson.....	Minimum	15	-2	2	30	18	32	43	41	35	52	31	24	36	29	21	25	40	37	34	31	31	31	31	46	37	53	40	40	29	29	31.2	
Bloomington.....	Maximum	40	23	39	40	49	62	73	73	78	73	69	58	76	69	45	55	53	57	59	58	69	63	67	77	75	72	62	54	52	52	57	59.3
Bloomington.....	Minimum	20	-2	7	28	21	26	37	52	38	55	32	25	38	29	20	23	41	36	32	26	39	32	34	39	45	42	40	33	32	34	30	31.9
Crawfordsville.....	Maximum	44	24	38	40	49	64	76	72	75	76	57	69	58	57	46	59	56	54	51	59	60	60	69	79	70	74	62	59	64	56	60	59.5
Crawfordsville.....	Minimum	20	-5	2	30	31	15	32	33	35	54	23	21	34	27	22	38	27	35	30	27	45	34	35	46	32	44	37	30	29	31	26	29.5
Farmland.....																																	

TORNADOES AND WINDSTORMS DURING MARCH, 1925

The month was remarkable for the number of tornadoes and windstorms that occurred on the 10th and 18th, and particularly for the severity of the great tornado on the latter date, which entered the southwestern part of the State after crossing Illinois from southeastern Missouri. In each case the storms occurred on the east side of troughs of low barometric pressure that swept across the Mississippi and Ohio valleys and traversed Indiana during the days of occurrence. There was a considerable area of comparatively high temperatures to the eastward of the axes, and a marked drop to the westward, so that in each case the cause apparently is attributable to the under-running of the cold currents. A number of the storms on the 10th did not assume tornadic form.

Storms of March 10

The tornado of this day originated at McKeen, Ill., and pushed northeastward into Indiana in a path varying from $\frac{1}{2}$ to $\frac{3}{4}$ mile wide, which terminated on the college grounds at St. Mary-of-the-Woods, in Vigo County. The total length of the path was about 10 miles and the damage, which was chiefly to roofs, small buildings, fruit and shade trees, amounted to about \$50,000 in each State, and was due entirely to wind, although hail accompanied the tornado. No lives were lost but slight injuries were sustained by three persons. The tornado was short lived, as is indicated by the fact that persons along the entire path have given the time as about 3 p. m.

At 1:45 p. m. a windstorm of straight line blow, from southwest to northeast, traversed the region from Lincoln in Cass County to past Bunker Hill in Miami County, with a width of 1 to $1\frac{1}{2}$ miles. The storm blew down traction wires and did considerable damage to roofs of houses and barns along its path, but estimates of amounts of such damage were not obtainable.

At about 3 p. m. a straight line storm from southwest to northeast struck parts of Lafayette in Tippecanoe County, doing damage to buildings to the extent of \$1,000.

Between 2 and 3:30 p. m., as given by various reporters, a windstorm or a series of windstorms moved from northwestern Cass County through the central part of Fulton County and the southern part of Kosciusko County, extending from Royal Center to past Sidney, doing damage to buildings, trees and other property to an amount estimated at between \$75,000 and \$100,000. The width of this blow varied from about $\frac{1}{2}$ mile in Fulton County to between 2 and 3 miles in Kosciusko County, and was generally of southwest to northeast direction. At Royal Center the wind reached a velocity of 60 miles an hour for 3 minutes. While reports indicate mostly straight line blows, several freak occurrences were noticed, and the water of a small lake near Akron was sucked up and the nearby territory drenched and strewn with moss and weeds from the bottom.

At other points in the State, particularly Anderson and Kendallville, threatening storms with hail occurred, but the accompanying wind gusts did not reach damaging velocities.

Storms of March 18

On this day the main storm was that of the great tornado which entered Posey County in the southwest part of the State at about 4 p. m. and moved northeastward, destroying Griffin and occasioning severe damage at Owensville and Princeton, as well as along its entire path, to a point beyond the latter city, a distance of 36 miles in Indiana. Its movement was extremely rapid for storms of this type, averaging about 70 miles an hour in Indiana territory, after maintaining a translation of about 60 miles an hour in the Missouri and Illinois parts of its path. At Oatsville in Pike County, where it lost its identity, it had covered a total length of 214 miles, but if its path be projected about 85 miles at the same rate of progress a region is reached near Dudleytown and Marling in Jackson County where a straight line blow from southwest to northeast on a front of about $\frac{1}{2}$ mile occurred at 6 p. m. Between these two points, however, there was no trace of the storm so far as any damage is concerned.

At a conservative estimate, value of property destroyed in the

Indiana path of the tornado reached \$2,675,000, and there was an additional \$20,000 damage caused by the Jackson County storm. Latest figures obtainable as to dead and injured were: Griffin, 52 dead, 200 injured; Owensville, 17 dead, 65 injured; Princeton, 24 dead, 200 injured. A detailed description of the tornado's action in its entire course is expected to appear in the Monthly Weather Review for March, 1925.

The following description is from the notes of Mr. Albert Brand, Meteorologist in Charge of the office of the Weather Bureau at Evansville, Ind., who made trips of observation over the devastated area:

"There was a great diversity of opinion among the sufferers and eye witnesses in regard to the exact time that the storm struck at the different points in the path of destruction; also, in regard to the character of the noise made by the tornado cloud during its approach or passage, and in reference to the time consumed in doing the damage. From the best information available, supplemented by my own observation, the path of destruction, which varied in width from $\frac{1}{2}$ to $\frac{3}{4}$ of a mile, extended in Indiana from the Wabash River, in the northwestern corner of Posey County, in a northeasterly direction, directly over Griffin, over at least a part of the farming country between Griffin and Owensville, over the outer edges of Owensville, again over parts of the farming country between Owensville and Princeton, over the southern part of Princeton, and finally over about 10 miles of farming country to a point northeast of Princeton, where the tornadic conditions appear to have subsided. It will thus be seen that the tornadic conditions traveled a path having the rather unusual length of approximately $35\frac{1}{2}$ miles in Indiana alone. As the tornado, or funnel-shaped clouds, appear to have been first observed to the southwest of Griffin about 4 p. m., and last seen to the northeast of Princeton about 4:30 p. m., the total time consumed by the tornado in moving over the $35\frac{1}{2}$ -mile stretch of country was about 30 minutes.

"At some points all of the damage was believed to have been done in less than 30 seconds, while at others the work of destruction was thought to have extended over a period of two or three minutes. All agree that all of the damage was done, at every place throughout the area destroyed, before the rain and hail began; the heavy rain, which was in some places accompanied by a 2 or 3-minute heavy fall of hail (stones about the size of medium sized marbles), is believed to have started about 4:30 p. m. and ended at about 5 p. m. throughout all of the devastated area.

"Funnel-shaped clouds were also observed during the late afternoon of March 18 at Fort Branch and Haubstadt, Ind.

"Griffin, Ind., in the northwestern corner of Posey County, about $3\frac{1}{2}$ miles east of the Wabash River, which had a population ranging between 350 and 400, and about 80 to 90 buildings in the form of private residences (small to medium sized), school, churches, railway depot, stores, elevator, etc., in addition to the usual out-buildings, was completely destroyed in less than 45 seconds, 52 people were killed (a number of whom died from injuries two or three days after the storm), and between one and two hundred were injured. Not a house was left in a habitable condition; in fact, all residences, stores, etc., as well as all out-buildings, throughout most of the town were completely flattened out and partially blown away; some of the side walls of about a half dozen buildings, including parts of those belonging to a two-story brick school, were the only structural features in the entire town that remained standing. Two rows of maple and box elder shade trees, ranging from 12 to 16 inches in diameter, extending along both sides of Main Street, running due north and south from one side of the town to the other, a distance of about three-quarters of a mile, were practically destroyed, most of the trees being broken off at distances ranging between 20 and 30 feet from the ground. To add to the havoc wrought by the irresistible winds of the tornado, fire broke out in the debris of what had been a restaurant facing Main Street, about 100 to 150 feet northeast of where the I. C. Railway depot had stood, and burned a number of people

to death. In the basement under the ruins of this restaurant, the bodies of 5 men and 2 women were found; under the ruins of the post-office nearby, 7 more bodies were found; the remainder of the dead were found in various parts of the town. Fortunately, the heavy rain which fell for about 30 minutes after the wind had done the damage, had filled most of the ditches in the town to such a depth that when the fire broke out in the other parts of the town, it could be dipped out with buckets, etc., and used to advantage in putting out the fires. Practically the entire town will have to be rebuilt. A wagon which was hauling from 20 to 25 children to their homes in outlying sections, from the school which had been dismissed at 3:45 p. m., was wrecked and the driver killed; one of the boys who had been riding in the wrecked school wagon, walked to New Harmony, a distance of about 6 miles, for medical assistance, and returned with a doctor. Numerous horses, cows and barnyard fowls were killed. A conservative estimate places the property damage at Griffin, Ind., between \$700,000 and \$725,000.

"Mr. George Westheiderman, chairman of the town council of Griffin, Ind., whom I personally interviewed, and who was found unconscious after the tornado had passed over and wrecked the town, pinned to a tree across the street from his smithy and garage, by a half-inch iron bolt which had passed through his lower right arm, furnished most of the information not obtainable from eye observation, contained in the preceding paragraph. Mr. Westheiderman also stated that he saw, while busy in front of his garage, in Main Street, about 50 feet south of the I. C. Railway tracks, distinctly three funnel-shaped clouds; that the three clouds were very close to the town when he first observed them; that the three clouds, the first of which in the southwest, the second in the northwest, and the third in the northeast, appeared to be moving in toward the town; that the funnel-shaped cloud (2d) in the northwest had a tip which seemed to extend nearly down to the ground, and that this tip near the ground was twisting and winding; the northwestern (2d) cloud also had a white streak, about 15 feet wide, extending all the way from above down to its tip; that the southwest cloud (1st) was very dark, with a whiplash tip apparently touching the ground; that the northeast (3d) cloud was also very dark, but the tip of same did not appear to touch the top of the buildings, and that the three funnel-shaped clouds appeared to merge into one near the edge, or just over, the town; after which he imagines he heard a terrific crash, just before being knocked unconscious. Mr. Westheiderman also stated that he believed that the tornado struck Griffin some time between 4:10 and 4:15 p. m.

"At Owensville, Ind., located in the southwestern part of Gibson County, about 13 miles north-east of Griffin, where several funnel-shaped clouds were observed moving in from a southwesterly direction, the tornado struck with a rumbling roar, it is believed at about 4:15 p. m. While the Christian Church in Owensville, a frame building costing about \$12,000, was completely destroyed, the other damage done within the limits of the town proper, was comparatively slight, and confined mainly to the northern edge. When driving toward Owensville over the country road from Princeton, the storm track was again entered about $3\frac{1}{2}$ miles northeast of Owensville; at this point the path of destruction appeared to range from $\frac{1}{4}$ of a mile to 1 mile wide; it appeared that the tornado (or tornadoes) swept over this section in full force; houses, barns, and out-buildings, some quite large and substantial before the storm, were completely wrecked and blown away; farming implements of all kinds, automobiles, etc., wrecked and scattered over the nearby fields; fences, both wire and rail, blown down and scattered over the fields in tangled masses for miles; many horses, cows, swine, and barnyard fowls, killed or seriously injured; numerous large trees, ranging from 1 to 2 feet in diameter, were broken off, blown over, or uprooted. About $2\frac{1}{2}$ to 3 miles out of Owensville, to the northeast, on this country road, several woodlots, possibly ranging from 6 to 10 acres in area, were noticed wherein

the trees, ranging from 10 to 14 inches in diameter, had been broken off clean at a distance of 30 or 40 feet above the ground.

"While the devastated area observed to the south and west of Owensville for a distance of 4 or 5 miles presented even more evidence of the irresistible power of tornado winds than was noted to the north or northeast of the town, probably due to the fact that the farmhouses to the south of the town were closer to one another, as well as of a more pretentious character, than those to the north, conditions were found to be very similar to those described in the preceding paragraph. Several fine orchards were also destroyed just south of Owensville. Property damage in farming sections around Owensville will probably exceed \$100,000.

"From the best information obtainable, it appears that while no people were killed within the limits of the town of Owensville, about 17 were killed, and numerous injured, throughout the surrounding farming section, within a radius of 5 or 6 miles.

"At Princeton, Ind., in the north-central part of Gibson County, about 9 miles northeast of Owensville, the tornado struck some time between 4:15 and 4:20 p. m.; it entered the town from a southwesterly direction, swept over and practically ruined everything in the section lying to the south and east of Monroe Street, and moved out over the northeastern edge of the town, over a farming section to a point about 10 miles northeast of Princeton, where it appears to have subsided. The path of destruction in Princeton averaged about $\frac{1}{4}$ of a mile in width, and all of the damage was done in less than two minutes. Within the town limits proper, 24 people were killed, and about 200 injured more or less seriously. Property losses at Princeton are estimated to be somewhere in the neighborhood of \$2,000,000. While the ruined section was built up mainly with small frame dwellings having from 3 to 5 rooms, and valued at from \$2,000 to \$3,500 each (300 to 400 dwellings), the section also contained the Southern Railway shops, warehouse, roundhouse, etc.; the Heintz Co. canning plant and greenhouses, warehouses, workshop, etc.; the Baldwin Joint Township School, the Memorial Methodist Church, and the Franklin Public School, all large plants or buildings of substantial and expensive construction. Every one of the buildings in the storm track was more or less damaged; most of the dwellings will have to be entirely rebuilt, and hundreds of thousands of dollars will have to be expended to place the larger buildings, or plants, in their former condition.

"While most of the trees and other debris in the center of the path of destruction, throughout the entire devastated area, were blown and lay from southwest toward the northeast, to the north of the path they were lying toward the east, southeast, and south, while to the south of the path, they were lying toward the north, north-east, and southwest.

"The usual freak happenings, such as straws driven into timbers, laths and palings through house walls or partitions, or into trees or posts; walls of houses blown away or falling outward, leaving the contents of rooms exposed and undisturbed, etc., were noticed in connection with this tornado in various parts of the path of destruction; and I wish to record one, which I believe to be a stranger among the list of freak happenings actually observed heretofore in connection with tornado winds: At Griffin, Ind., my attention was called to a small piece of wall paper, about the size of a visiting card, having only one thickness, but slightly stiffened by having the remains of some dried paste on one of its sides (the north), which was driven edgewise into the southwest side of a box elder tree, about $5\frac{1}{2}$ or 6 feet above the ground. This tree stands in Main Street, in front of the home of Mr. E. D. Galbraith, and the piece of wall paper referred to remained in the tree, and was handled and examined by myself on March 25."

Another tornado later in the day had its origin in southern Harrison County about 4:45 p. m. and moved northeastward to the south of Elizabeth, crossing the Ohio River into Kentucky at

Stephens Landing and reaching Pewee Valley, Ky., about 6:10 p. m. The length of the path was about 40 miles, and the width varied greatly, from 400 to 900 feet in the Indiana county, but narrowing considerably throughout most of its path in Kentucky. The funnel cloud of tornadoes was observed by many persons and the other usual phenomena, including hail, grinding roar, and freak occurrences, were reported. On the Indiana side 4 persons were killed and about 20 were injured. Thirty-five farm homes, with furniture and implements, were destroyed. The damage to property of this kind is estimated as \$100,000 to \$200,000, while much additional damage, with loss of life and injury, occurred in Kentucky.



Jumble of furniture, household goods, pieces of buildings and tree limbs and trunks, at Griffin, Ind.

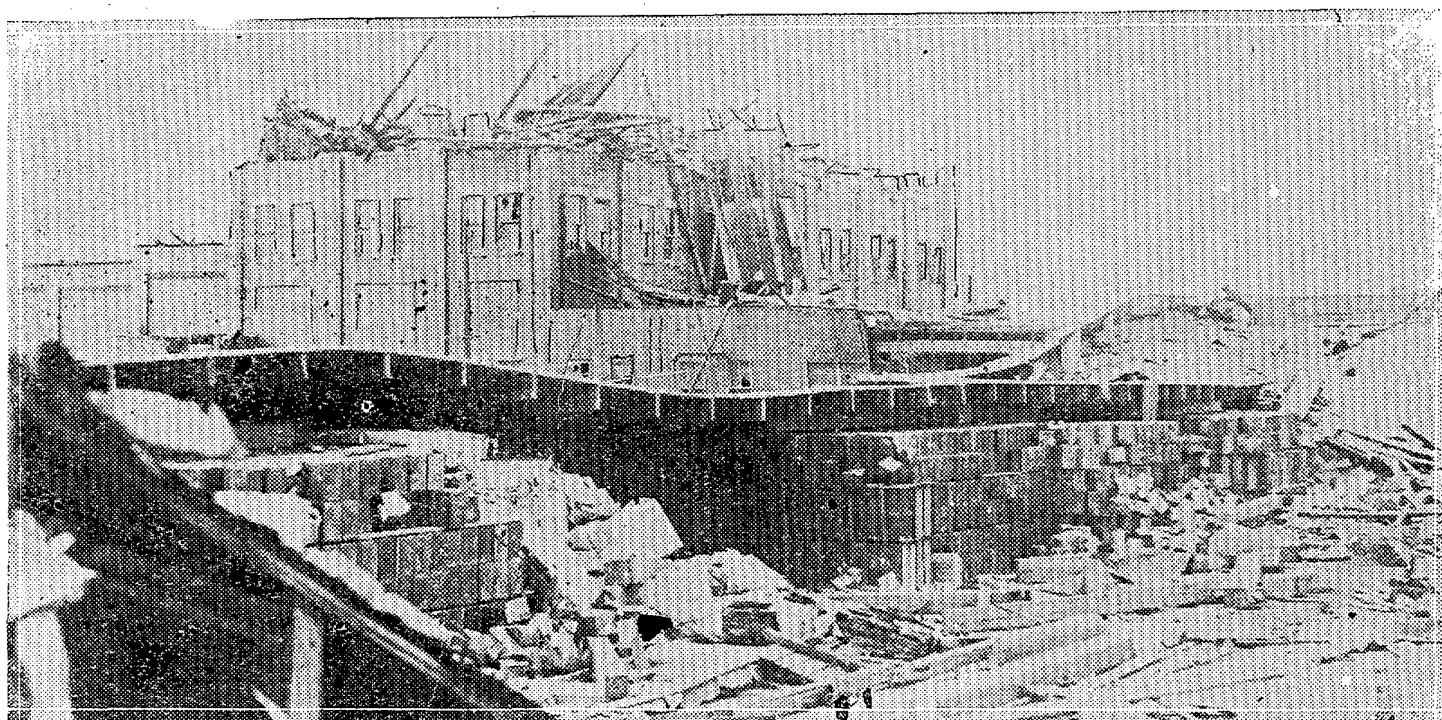


Griffin, Ind., showing how walls of some of the houses were blown out by explosive force, leaving articles of furniture in position on the room floors.

SCENES OF DESTRUCTION CAUSED BY TORNADO OF MARCH 18, 1925
(Courtesy of Indianapolis Star. Joseph Craven, Staff Photographer)



Residence section of Griffin, Ind. Not one habitable structure was left standing in the entire village



H. J. Heinz plant at Princeton, Ind. Several bodies were found in the debris, and damage is estimated at more than \$500,000