Report of meteorological observations for the year 1910, with extremes and averages for the preceding years / by John Dover.

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Totland Bay, Isle of Wight.

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Report of . . .

Meteorological & &

for the Year 1910, with Extremes and Averages for preceding years.



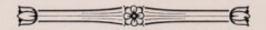
By JOHN DOVER, M.A., F R.Met.S.

Isle of Wight: The County Press, Newport.



Totland Bay Meteorology,

1910.



THE METEOROLOGICAL STATION is situated at Aston, Totland Bay, Isle of Wight, about midway between Ventnor and Bournemouth. The site is 140 feet above the level of the sea, and about 200 yards from the shore.

Every part of this parish is within a mile of the sea. The parish is irregular in shape, with a boundary line of eight miles. Totland is bounded on the East and North-East by the parish of Freshwater; all the other sides are washed by the waters of the Solent or the English Channel. Although a small parish of about 1332 acres, with a population of 1328 at the last census, it has a long coast-line of about six miles, owing to the curves of Colwell Bay, Totland Bay, and Scratchells Bay. The sea has a moderating influence on our temperature. In summer we do not get the extreme heat, nor in winter the extreme cold of an inland parish. The sea is at its coldest about the middle of February, when its temperature is 43° Fah. The sea does not reach its warmest point until the middle of August, when its temperature is up to 64° Fah.

During my absence from Totland the readings are taken by Mr. J. B. Garlick. The averages quoted are deduced from readings taken during the last 24 years, except when stated otherwise. Extreme readings are also given, with the dates on which they occurred.

It is somewhat difficult to estimate the wind here, both as to direction and force, owing to the uneven surface of the surrounding country. The Downs to the south are about a mile distant, rising at the Tennyson Memorial Beacon Cross to about 489 feet above the sea. Headon Hill to the south-west is nearly 400 feet high and about half-a-mile away; thus we are somewhat protected from the strong gales, which are usually from the south-west. With regard to sunshine, it should be remembered that the Campbell-Stokes Burning Recorder

registers only "bright sunshine"; weak sunshine is not powerful enough to burn the recording cards. I frequently note that the sky is quite clear at Totland while the New Forest and the valleys of the Avon and Yar Rivers are clothed in vapour. Owing to surrounding objects it is impossible to measure bright sunshine during the last hour before sunset; therefore sunshine at Totland is rather more than I record.

There is a marked absence of thunderstorms at this station; thus we do not often get the opportunity of watching the glories of a near storm. This is accounted for by the line of Downs rising almost perpendicularly from the sea to the South and coming to a fine point at the Needles to the South-West, thus diverting the storms from the South and West, sending them up the Solent or English Channel. In the north and east there are the attractions of the New Forest and Parkhurst Wilderness.

The prevailing winds here are West 77 days, South-West 66 days, North-West 52 days of the average year.

Humidity is calculated with Glaisher's Hygrometrical Tables, eighth edition (Saturation = 100).

A fall of one inch of rain is equivalent to 101 tons of water to the acre. One ton of water = 224 gallons.

A day is termed wet if one-hundredth of an inch of rain fall.

A day is called foggy if one cannot see two miles, which is rather a stricter test than usual at most stations.

Hurst Castle is two miles due north from this meteorological station.

In this year's pamphlet I give the average of each day of the past 24 years' Maximum, Minimum, and Mean Temperatures. The average of each day is calculated to two places of decimals, and entered to the nearest whole numbers; thus 50.50 Fah. up to 51.49 Fah., would be quoted as 51° Fah., while 51.50 Fah. up to 52.49 Fah. would be entered as 52° Fah.

In conclusion I may add that I should be glad to receive any corrections or suggestions for the further spread of meteorological knowledge, in case I should have the time to bring out a similar work next year.

JOHN DOVER.

Aston House, Totland Bay.

THE INSTRUMENTS.

The Instruments used are nearly all by Negretti and Zambra.

The Barometer and Thermometers, verified at Kew, are tested periodically by an officer of the Meteorological Office.

The Barometer is a Standard; it is on the east wall of the hall, which is on the east side of the house. The Barometer is 144 feet above the sea; it is so hung that sunshine can never reach it.

The Thermometers are in a Stevenson screen 40 yards from the South-East corner of the house. There are four instruments in the screen—a self-recording maximum, a self-recording minimum, a dry bulb, a wet bulb. The Thermometer Screen is repainted annually in the Spring. A self-recording Grass Thermometer is also used for registering the ground frosts; this is placed a few yards from the Stevenson screen.

The Rain-gauge is an "eight-inch" copper Snowdon type, in the open, a few feet from Grass Thermometer.

The Weather Vane is 61 feet from the ground, a few feet above the roof of the turret, constructed for carrying the vane higher than surrounding objects.

The Anemometer is of the Robinson cup pattern, about 50 feet above the ground. This instrument is a guide to the velocity of the wind. The dials of the Anemometer are indoors and can be read at any time without discomfort. The cups are five inches in diameter, and they are placed upon 12-inch arms. The connecting rods, from the cups' axle to the dials, are passed through tubes which are set vertical.

A Campbell-Stokes Burning Recorder is used for measuring the amount of bright sunshine.

The instruments were examined and tested on June 11th by a representative of the Meteorological Office.

BAROMETRIC PRESSURE FOR 1910.

(REDUCED TO SEA LEVEL AND 32° FAH.)

| 35 41 | | Mean Inches, | Extremes. | | |
|-----------|---|-----------------|-----------|---------|--|
| Months. | | | Highest. | Lowest. | |
| January | 7 | 29.913 | 30.585 | 28.823 | |
| February | | 29.681 | 30.330 | 29.052 | |
| March | | 30.166 | 30.553 | 29.786 | |
| April | | 29.876 | 30.405 | 29.071 | |
| May | | 29.895 | 30.356 | 29.573 | |
| June | | 29.911 | 30.364 | 29.535 | |
| July | | 29.919 | 30.183 | 29.678 | |
| August | | 29.938 | 30.311 | 29.581 | |
| September | | 30.258 | 30.664 | 29.920 | |
| October | | 30.019 | 30.568 | 29.452 | |
| November | | 29.670 | 30.186 | 28.954 | |
| December | | 29.719 | 30.515 | 28.892 | |
| Year | | 29.914 | 30.664 | 28.823 | |

Inches.

Note.—Highest reading during 1910 ... 30.664 on 11th September. Lowest 1910 ... 28.823 on 24th January.

24th January, 1910, barometer fell 1.173 inches in 24 hours.

Inches.

Extreme Readings: High ... 30.904 on 15th Jan., 1902.
, ... 30.972 on 27th Jan., 1905.
, ... 30.994 on 28th Jan., 1905.
, ... 30.999 on 29th Jan., 1905.
, ... 30.902 on 12th Dec., 1905.
Low ... 28.400 on 8th Dec., 1886.
, ... 28.430 on 11th Nov., 1891.
, ... 28.405 on 29th Dec., 1899.

The barometer on 29th January, 1905, was probably higher than 30.999 inches about 2 a.m., since at that hour my self-recording aneroid was $\frac{1}{20}$ th of an inch higher than at 9 a.m.

HUMIDITY FOR 1910.

(SATURATION = 100.)

| Months. | 1910. | Average since Oct., 1886. | Extreme Readings | |
|-----------|----------|---------------------------------|---|----|
| January | 85.0 | 85.7 | 36 on 3 Jan., 189 |)4 |
| February | 85.0 | 84.5 | 38 11 Feb., 189 |)5 |
| March | 78.8 | 82.5 | 39 3 Mar., 189 | 12 |
| April | 77.7 | 79.3 | $47 = \begin{cases} 26 \text{ April, } 189 \\ 14 \text{ April, } 190 \end{cases}$ | |
| May | 76.6 | 76.1 | 51 6, 8, 9 May, 190 | 9 |
| June | 80.3 | 78.1 | 42 8 June, 190 |)6 |
| July | 80.1 | 77.7 | 41 18 July, 190 |)1 |
| August | 83.3 | 78.1 | 52 16 Aug., 190 |)7 |
| September | 77.7 | 80.5 | 52 2 Sept., 190 |)6 |
| October | 85.6 | 84.0 | 59 (26 Oct., 189 17 Oct., 190 | |
| November | 79.7 | 86.1 | 55 28 Nov., 189 | 0 |
| December | 86.8 | 86.2 | 44 28 Dec., 190 | 18 |
| Year | 79.6 | 81.6 | 36 3 Jan., 189 |)4 |

Note.—Driest atmosphere at 9 a.m. in 1910: Humidity 51 on 27th April; with South-West wind at 8 miles per hour, sky almost cloudless, with temperature 52.7 Fah. and 12.5 hours of bright sunshine during the day.

The dryness of the atmosphere throughout the month of November was very remarkable.

Hitherto November has on average shown the dampest atmosphere, but now December claims that distinction.

Driest Atmosphere since October, 1886.

| | | | | Dry Bulb. | Wet Bulb. | Humid | ity. |
|-----|-------|----------|------|--------------|--------------|-------|------------------|
| Dry | cold, | 3 Mar., | 1892 | 30.0 | 25.0 | 39 | Strong East wind |
| | 11 | | 1894 | | 23.0 | 36 | Strong East wind |
| | 11 | 4 Jan., | 1894 | 24.0 | 21.0 | 39 | Strong East wind |
| | 11 | 11 Feb., | 1895 | 28.0 | 23.8 | 38 | Strong East wind |
| | | 24 Jan., | 1907 | 22.7 | 20.1 | 42 | Light N.E. wind |
| | | 3 Jan., | 1908 | 24.9 | 21.9 | 41 | North-East wind |
| | | 18 July, | 1901 | 76.8 | 61.7 | 41 | East wind |
| | | 8 June, | | | 49.2 | 42 | North-East wind |

WIND DIRECTION IN 1910.

| | | N. | N.E. | E. | S.E. | S. | s.w. | W. | N.W. | Calm. |
|----------------|-----|-----|------|-----|-------|-----|------|-----|------|---------------------------------------|
| | | | | | NUM | BER | of D | YS. | | |
| January | | 2 | 0 | 2 | 2 | 1 | 8 | 10 | 6 | 3 |
| February | | 1 | 0 | 0 | 2 3 3 | 3 | 11 | 8 | 3 | 3 4 7 5 1 3 2 10 |
| March | | 3 | 9 | 2 | 3 | 3 | 3 | 3 | 5 | 7 |
| April | 22. | 2 | 4 | 1 | 3 | 3 | 4 | 6 | 7 | 5 |
| May | | 9 | 7 | 0 | 3 | 0 | 4 | 4 | 4 | 1 |
| June | | 1 | 6 | 0 | 3 | 2 | 4 | 9 | 5 | 3 |
| July | | 2 | 7 | 0 | 3 | 2 | 6 | 8 | 4 | 2 |
| August | | 1 | 2 | 1 | 6 | 1 | 8 | 11 | 1 | 10 |
| September | | 8 | 8 | 2 | 2 5 | 1 | 1 | 4 | 4 | |
| October | | 5 | 5 | 8 | 5 | 1 | 1 | 2 | 4 | 3 |
| November | | 2 | 4 | 2 | 3 | 2 | 2 5 | 9 | 6 | 3 3 4 |
| December | | 1 | 3 | 0 | 5 | 6 | 5 | 8 | 3 | 4 |
| Year 1910 | | 37 | 55 | 18 | 40 | 24 | 57 | 82 | 52 | 48 |
| Total 11 Years | 8 | 363 | 530 | 318 | 400 | 259 | 721 | 852 | 573 | |
| Average Year | | 33 | 48 | 29 | 36 | 24 | 66 | 77 | 52 | |

The greatest amount of wind registered for one day in 1910 was 715 miles for the 24 hours ending 9 a.m. on 20th February.

The greatest amount of wind for one month in 1910 was 9820 miles during December. June was the quietest month with only 3325 miles of wind.

In previous years I have registered-

776 miles for the 24 hours ending 9 a.m. on 13th Dec., 1903. 11,185 miles during month of March, 1903.

RAINFALL AND WET DAYS FOR 1910.

| RAIN | FALL. | | | | | WET | DAYS. |
|---------|---------------------------------------|-----------|-----|-----|--|-------|---------------------------------------|
| 1910. | Average since October, 1886. | Months. | | | | 1910. | Average since October, 1886. |
| INCHES. | INCHES. | | | | | | |
| 2.48 | 2.15 | January | | | | 17 | 14.9 |
| 3.23 | 1.84 | February | | | | 22 | 12.7 |
| 1.18 | 2.01 | March | | | | 7 | 14.4 |
| 1.85 | 1.80 | April | | | | 17 | 12.6 |
| 1.24 | 1.64 | May | | | | 18 | 11.2 |
| 3.29 | 1.92 | June | *** | | | 12 | 10.7 |
| 3.02 | 1.99 | July | | | | 13 | 11.0 |
| 1.98 | 2.43 | August | | | | 15 | 12.9 |
| 0.12 | 2.05 | September | | *** | | 4 | 11.8 |
| 5.05 | 4.49 | October | | | | 17 | 18.0 |
| 4.14 | 2.88 | November | | | | 17 | 15.1 |
| 4.21 | 2.79 | December | | | | 20 | 18.0 |
| 31.79 | 27.99 | Year | | | | 179 | 163.3 |

Eighteen very wet days during 1910.

| | | | Inches. | | | | | Inches. |
|-------------|-----|------|---------|----|----------|-----|-------|---------|
| 27 January | | 4.44 | 0.59 | 12 | October | | | 1.51 |
| 14 February | | 224 | 0.58 | 13 | | | *** | 0.64 |
| 9 March | | | 0.51 | 6 | November | *** | 4.4.4 | 0.58 |
| 5 June | | | 0.80 | 23 | ** | | | 0.75 |
| 9 June | 222 | | 1.07 | 27 | ** | | | 0.50 |
| 2 July | 227 | | 0.50 | 30 | ** | 144 | | 0.82 |
| 17 July | 444 | | 0.92 | 12 | December | | | 0.66 |
| 28 August | | | 0.67 | 14 | ** | | | 0.63 |
| 11 October | | | 0.88 | 15 | ., | | | 0.65 |

Absolute drought of 17 days terminated on April 4.
,, ,, 15 ,, ,, September 14.

RAINFALL EXTREMES SINCE OCT., 1886.

| Wet Days. | INCHES | Dry Months. | IN | CHES |
|--------------------------------------|------------|-----------------|---------|-------|
| 1891—August 20 | 1.93 | 1891—February | | 0.33 |
| ., —October 21 | 1.75 | 1893—April | | 0.01 |
| 1893—October 18 | 1.65 | 1895—February | | 0.10 |
| 1894—November l | 11 2.44 | " —May | | 0.30 |
| 1909—October 28 | 2.11 | " —Septembe | r | 0.11 |
| 1910—October 12 | 1.51 | 1896—February | 222 | 0.28 |
| | | ,, —May | | 0.41 |
| Wet Months. | | 1897—July | 2.00 | 0.38 |
| 1889—October | 7.81 | 1898—March | | 0.35 |
| 1891—October | 10.45 | " —July | | 0.44 |
| 1896—September | 8.19 | 1905—May | | 0.49 |
| 1903—October | 8.40 | " —July | | 0.25 |
| 1906—January | 6.80 | 1909—February | | 0.32 |
| 1907—October | 7.07 | 1910—Septembe | r | 0.12 |
| 1909—October | 9.12 | | | |
| Wet Quarters. | | Dry Quarters. | | |
| | | 1890—Oct., Nov. | , Dec. | 4.96 |
| 1891—Oct., Nov., | | 1893—April, May | y, June | 1.94 |
| 1898—Oct., Nov., | | 1906—July, Aug. | , Sept. | 2.48 |
| 1903—Oct., Nov., | | 1907—Jan., Feb. | , Mar. | 2.39 |
| 1909—Oct., Nov., 1910—Oct., Nov., | | 1909—Jan., Feb. | , Mar. | 4.95 |
| Wet Half-Years. | | Dry Half-Years. | | |
| | 1 05.10 | 1892—JanJune | | 5.99 |
| 1891—July-Decer | | 1896—JanJune | | 6.53 |
| 1903—July-Decer 1909—July-Decer | | | | 2.22 |
| | nber 25.10 | Dry Years. | | |
| Wet Years. | | 1896 | | 24.70 |
| 1891 | 36.64 | 1899 | | 22.05 |
| 1903 | 35.36 | 1902 | | 24.71 |
| 1909 | 34.43 | 1905 | | 24.65 |
| 1910 | 31.79 | 1908 | | 21.68 |

Longest period without rain—16th March to 29th April, 1893. Greatest number of wet days in one year—187 during 1891. 1909 and 1910 each gave us 179 wet days.

Smallest number of wet days in one year—135 during 1895 and 1899.

| | | | | | Inches. |
|----------|--------|----------|--------------------------|--------|------------|
| Rainfall | during | 1897 at | Shawford, Dominica, West | Indies | 181.46 |
| - 11 | | | V. CI 1 17 117 | | 10.74 |
| ** | ** | 1904 at | Seathwaite, Cumberland | | 130.04 |
| 11 | | 1908, at | Llyn Llydaw, Snowdon | *** | 237.32 |

TEMPERATURE OF THE AIR FOR 1910.

| Mont | he | | Extreme | | Average. | |
|-----------|------|-----|-------------------|------|----------|-------|
| Mone | 115. | | Range | Max. | Min. | Mean. |
| January | | | 52.3— 20.9 | 45.1 | 37.1 | 41.4 |
| February | | | 52.1—31.3 | 47.8 | 39.0 | 43.4 |
| March | | | 56.2—30.6 | 49.5 | 38.0 | 43.7 |
| April | | | 59.0—30.4 | 52.3 | 41.1 | 46.7 |
| May | *** | | 73.9 —34.2 | 60.1 | 46.3 | 53.2 |
| June | | | 72.1—35.8 | 64.2 | 52.5 | 58.3 |
| July | | *** | 69.2—44.7 | 63.5 | 53.7 | 58.6 |
| August | | | 70.3—50.7 | 65.1 | 56.5 | 60.8 |
| September | | | 69.0—40.9 | 63.2 | 50.6 | 56.9 |
| October | *** | | 66.3—42.9 | 59.2 | 49.8 | 54.6 |
| November | | | 54.1—28.4 | 48.3 | 37.3 | 42.8 |
| December | *** | | 54.0-29.7 | 49.4 | 42.5 | 46.0 |
| Year | | | 73.9—20.9 | 55.7 | 45.4 | 50.5 |

Note.—On January 27th the temperature fell to 20.9 Fah.

On May 23rd the temperature rose to 73.9 Fah.—the warmest day of the year.

Latest spring frost in screen occurred on April 3rd, the thermometer falling to 30.4.

Latest spring frost on grass occurred on April 11th, the thermometer falling to 24.0 Fah.

Earliest autumn frost on grass occurred on September 23rd.
.. ,, in screen ,, October 9th.

November this year was so cold that only one month was colder, whereas usually December, January, February, and March are all colder.

This year the thermometer in the screen did not rise above 73.9 Fah. I have not known any previous year in which it has not risen above 74.0 Fah.

EXTREME RANGE OF TEMPERATURE

AND —

AVERAGE TEMPERATURE OF THE YEAR.

From Readings taken since October, 1886.

| 71 | | | Extreme | | Average. | |
|-----------|--------|-----|-------------------|------|----------|--------|
| Mont | hs. | | Range. | Max. | Min. | Mean. |
| January | | | 60.0— 14.0 | 44.5 | 36.4 | 40.5 |
| February | | | 58.0—16.0 | 44.7 | 35.7 | 40.2 |
| March | | | 62.6—19.6 | 47.9 | 37.0 | 42.4 |
| April | | | 74.0-28.0 | 53.4 | 40.9 | 47.1 |
| May | | | 77.0—34.0 | 59.6 | 45.7 | 52.6 |
| June | | | 84.0-41.0 | 64.6 | 51.4 | 58.0 |
| July | | | 86.0 —43.8 | 67.4 | 55.2 | 61.3 |
| August | 25550 | | 83.0 —46.0 | 67.1 | 55.5 | 61.3 |
| September | *** | | 80.5 - 40.6 | 64.3 | 52.0 | - 58.1 |
| October | | | 72.5—28.0 | 57.1 | 46.9 | 52.0 |
| November | (12.5) | *** | 61.7-20.0 | 50.7 | 41.9 | 46.3 |
| December | 5101 | | 59.0—16.1 | 46.5 | 38.2 | 42.3 |
| Year | Gra. | | 86.0—14.0 | 55.7 | 44.7 | 50.2 |

5th and 6th January, 1894, temperature fell to 14.0 Fah. 5th February, 1895, temperature did not rise above 24.0 Fah.

25th August, 1899, temperature did not fall below 67.1 Fah. 19th July, 1900, temperature rose to 86.0 Fah.

Longest period of continuous frost—5th, 6th, 7th, 8th Feb., 1895, during which days temperature did not rise above 30° Fah. Date of latest spring frost in screen—26th April, 1908. Average date of latest spring frost in screen—March 25th. Date of earliest autumn frost in screen—17th October, 1905. Average date of earliest autumn frost in screen—November 21st.

EXTREME HEAT.

| Totland Temper 80°Fah. since C | | | Hot Days in other places. | |
|-----------------------------------|-----|------|---------------------------|-------|
| | | FAH. | | FAH. |
| 1893—June 17 | *** | 81.0 | 1890 - June, Weymouth | 86.5 |
| ., ,, 18 | | 83.0 | ,, ,, Truro | 92.0 |
| ., ., 19 | 444 | 84.0 | " " Ventnor | 82.3 |
| 1898—Sept. 17 | | 80.5 | " June 19, Osborne … | 93.4 |
| 1899—July 20 | | 81.0 | 1893—Aug. 17. Greenwich | 94.2 |
| " —Aug. 3 | | 83.0 | 1898—Sept. 8, Berkhamsted | 90.5 |
| 1900—July 19 | | 86.0 | 1899—Aug. 5, Brighton | 89.4 |
| 1901—July 19 | | 81.2 | 1900-July 16, Greenwich | 94.0 |
| ., —Aug. 20 | | 81.2 | " " 19, Oxford … | 92.0 |
| 1904—July 10 | | 81.1 | " " 19, Salisbury | 91.0 |
| 1906—Aug. 30 | | 80.1 | ,, ,, 20, Cambridge | 95.0 |
| 1908—June 4 | | 82.3 | ,, ,, 20, Paris | 100.0 |
| ., —July 2 | | 80.7 | ,, ,, 25, Madrid | 107.0 |
| 1909—Aug. 9 | | 80.3 | 1901—June 11, Calcutta | 108.7 |
| 7 | | | 18 Loughborough | 90.0 |
| | | | 19 Southampton | 90.0 |
| | | | 19 I landudno | 000 |
| | | | 10 Nowbort I W | 91.8 |
| | | | 90 Manahastan | 93.0 |
| | | | 20 Abayyetwith | 93.0 |
| | | | 1904—Sept. 3, Durban | 101.1 |
| | | | Dog 21 Adolaida | 114.0 |
| | | | 1906—May 27, Madras | 111.5 |
| | | | Ang 90 Dommonanth | 81.6 |
| | | | 91 Doldin | 84.8 |
| | | | 21 Mandata | 90.8 |
| | | | Cant 1 Lawrence | |
| | | | 1 Kam Observations | |
| | | | | 95.0 |
| | | | ,, ,, 1, Maidenhead | 90.8 |
| | | | ,, ,, I, Tunbridge Wells | |
| | | | ,, Pan, I, Winslow, Bucks | 94.0 |
| | | | ,, ,, 2, Bawtrey, Notts | 96.0 |
| | | | ,, ,, 2, Camden Square, | 010 |
| | | | London | 94.0 |
| | | | ,, ,, 2, Dumfries | 89.0 |
| | | | " 2, Nottingham | 93.5 |
| | | | ,, ,, 2, Westminster | 91.3 |
| | | | " " " 3, Cromer | 93.4 |
| | | | 1909—Aug. 9, Weymouth | 86.0 |
| | | | " " 15, Epsom | 92.0 |

^{*1817—}At Gloucester the thermometer stood, at noon, in the shade, at 103, June 21.
*1818—Oppressive heat of the weather; thermometer 2 degrees above fever heat,
July 25.
* "Elements of General History (Ancient and Modern)," by Edward Nares, D.D.; 10th Ed. 1831,

EXTREME COLD.

| Totland Temper 20° Fah. since | | | Cold days in other places, |
|---|--|-------------------------|--|
| 1890—Dec. 31 1891—Jan. 18 ., 19 1894—Jan. 5 ., 6 1895—Jan. 11 ., —Feb. 6 ., , 7 ., , 8 ., , 9 1908—Dec. 30 1909—Mar. 3 | FAH 19.0 19.0 19.0 14.0 14.0 17.0 17.0 17.0 19.6 | 1885- 1890- 1891- | -Jan. 15, Verkhoyansk* -90.6 -Dec., Rugby 1.6 -Jan. 19, Torquay 14.6 19, Southampton 13.6 -Feb. 17, Loughborough 0.6 -Jan. 5, Eastbourne 14.7 5, Brighton 13.5 Ventnor 15.6 Weymouth 15.4 -Jan. 28, Llandovery2.6 Feb. 7, Bath 7.6 7, Cambridge 3.8 8, Greenwich 6.9 8, Oxford 7.6 8, Croydon 0.7 8, Halifax1.6 8, Halifax1.6 9, Osborne 13.9 9, Salisbury 4.4 11, Braemar17.6 11, Buxton11.1 Tunbridge Wells 4.5 -Jan. 26, Dawson60.8 May 16, Cape Armitage42.6 Nov. 24, Oundle 9.4 30, Liphook, Hants1.6 30, Liphook, Hants1.6 13.6 40 30, Liphook, Hants1.6 13.6 13.7 13.7 14.7 15.8 15.8 15.8 16.8 16.8 16.9 17.0 |

^{*} Verkhoyansk in Eastern Siberia.

 $^{^{+}}$ Cape Armitage in Ross Island, Antarctic, 167 E., 77_{4}° S.

Average Daily Maximum Temperature for 24 Years.

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|------|------|------|------|------|-----|------|------|------|------|------|------|------|
| 1 | 45 | 44 | 45 | 51 | 55 | 62 | 67 | 67 | 66 | 62 | 54 | 47 |
| | 45 | 43 | 45 | 51 | 55 | 64 | 67 | 68 | 65 | 60 | 55 | 48 |
| 2 3 | 44 | 44 | 44 | 51 | 56 | 65 | 66 | 68 | 66 | 60 | 51 | 47 |
| 4 | 44 | 44 | 44 | 51 | 56 | 65 | 67 | 68 | 65 | 59 | 53 | 48 |
| 5 | 44 | 44 | 45 | 51 | 57 | 64 | 67 | | 66 | 59 | 53 | |
| 0 | ** | 11 | 40 | 91 | 91 | 04 | 0, | 87 | 00 | 99 | 90 | 48 |
| 6 | 44 | 45 | 46 | 53 | 58 | 63 | 66 | 68 | 66 | 59 | 52 | 49 |
| 7 | 44 | 44 | 47 | 53 | 57. | 64 | 68 | 68 | 66 | 58 | 52 | 48 |
| 8 | 45 | 45 | 47 | 54 | 59 | 65 | 67 | 69 | 67 | 59 | 52 | 48 |
| 9 | 45 | 45 | 48 | 54 | 59 | 64 | 67 | 68 | 65 | 59 | 53 | 48 |
| 10 | 45 | 45 | 47 | 54 | 59 | 64 | 67 | 68 | 64 | 58 | 52 | 47 |
| 11 | 44 | 44 | 47 | 53 | 59 | 64 | 68 | 67 | 64 | 58 | 52 | 48 |
| 12 | 44 | 44 | 47 | 52 | 61 | 64 | 67 | 67 | 66 | 58 | 52 | 48 |
| 13 | 44 | 44 | 47 | 52 | 60 | 64 | 67 | 68 | 64 | 58 | 52 | 48 |
| 14 | 44 | 45 | 48 | 52 | 61 | - 63 | 68 | 69 | 63 | 57 | 51 | 47 |
| 15 | 44 | 46 | 48 | 52 | 60 | 63 | 69 | 68 | 64 | 57 | 51 | 47 |
| 16 | 45 | 45 | 49 | 53 | 59 | 63 | 68 | 68 | 65 | 57 | 51 | 48 |
| 17 | 44 | 46 | 48 | 54 | 59 | 64 | 68 | 67 | 63 | 57 | 49 | 47 |
| 18 | 45 | 45 | 47 | 53 | 59 | 64 | 69 | 67 | 64 | 58 | 48 | 46 |
| 19 | 45 | 46 | 48 | 54 | 60 | 64 | 69 | 67 | 64 | .57 | 48 | 46 |
| 20 | 45 | 45 | 50 | 54 | 59 | 64 | 68 | 67 | 64 | 56 | 50 | 46 |
| 21 | 45 | 45 | 49 | 55 | 60 | 64 | 67 | 67 | 64 | 56 | 49 | 45 |
| 22 | 44 | 45 | 49 | 55 | 61 | 65 | 67 | 67 | 63 | 56 | 49 | 45 |
| 23 | 44 | 44 | 49 | 55 | 63 | 66 | 67 | 67 | 62 | 56 | 49 | 45 |
| 24 | 45 | 45 | 49 | 55 | 62 | 66 | 67 | 68 | 64 | 56 | 49 | 44 |
| 25 | 44 | 45 | 49 | 56 | 63 | 66 | 66 | 66 | 63 | 55 | 48 | 43 |
| 26 | 45 | 45 | 49 | 55 | 62 | 67 | 67 | 66 | 63 | 55 | 49 | 43 |
| 27 | 46 | 45 | 50 | 54 | 61 | 67 | 68 | 66 | 64 | 55 | 49 | 44 |
| 28 | 45 | 45 | 50 | 55 | 62 | 68 | 68 | 66 | 63 | 56 | 48 | 45 |
| 29 | 45 | 44 | 51 | 54 | 62 | 67 | 68 | 67 | 62 | 55 | 47 | 45 |
| 30 | 44 | | 52 | 54 | 62 | 67 | 69 | 66 | 62 | 54 | 47 | 43 |
| 31 | 44 | | 52 | | 62 | | 68 | 65 | | 54 | | 43 |
| Mean | 45 | 45 | 48 | 53 | 60 | 65 | 67 | 67 | 64 | 57 | 51 | 46 |

Average Daily Minimum Temperature for 24 Years.

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|------|------|------|------|------|-----|------|------|------|------|------|------|------|
| 1 | 35 | 37 | 35 | 39 | 44 | 50 | 54 | 55 | 54 | 50 | 45 | 39 |
| 2 | 34 | 34 | 35 | 38 | 43 | 51 | 54 | 55 | 55 | 51 | 45 | 39 |
| 3 | 36 | 35 | 33 | 40 | 44 | 50 | 54 | 56 | 52 | 50 | 45 | 39 |
| 4 | 37 | 35 | 33 | 40 | 44 | 50 | 53 | 57 | 53 | 50 | 45 | 39 |
| 5 | 36 | 35 | 35 | 40 | 44 | 51 | 54 | 56 | 54 | 50 | 44 | 40 |
| 6 | 35 | 36 | 36 | 40 | 44 | 51 | 54 | 56 | 56 | 50 | 41 | 41 |
| 6 7 | 37 | 36 | 37 | 40 | 45 | 50 | 54 | 55 | 55 | 48 | 42 | 40 |
| 8 | 37 | 36 | 38 | 39 | 44 | 49 | 54 | 56 | 54 | 49 | 42 | 40 |
| 9 | 38 | 36 | 39 | 40 | 45 | 51 | 55 | 55 | 54 | 49 | 44 | 39 |
| 10 | 38 | 36 | 38 | 41 | 45 | 51 | 55 | 56 | 53 | 48 | 43 | 40 |
| 11 | 35 | 38 | 37 | 41 | 45 | 50 | 54 | 55 | 51 | 49 | 43 | 39 |
| 12 | 36 | 34 | 36 | 40 | 45 | 51 | 54 | 56 | 51 | 47 | 44 | 38 |
| 13 | 36 | 34 | 36 | 41 | 45 | 49 | 54 | 56 | 50 | 46 | 44 | 39 |
| 14 | 37 | 35 | 37 | 41 | 46 | 50 | 55 | 57 | 52 | 45 | 44 | 40 |
| 15 | 38 | 36 | 36 | 40 | 46 | 49 | 56 | 56 | 50 | 48 | 43 | 39 |
| 16 | 37 | 35 | 36 | 40 | 45 | 51 | 56 | 56 | 51 | 48 | 42 | 39 |
| 17 | 37 | 36 | 37 | 40 | 46 | 50 | 56 | 55 | 53 | 48 | 41 | 38 |
| 18 | 37 | 36 | 38 | 40 | 46 | 51 | 55 | 56 | 52 | 47 | 41 | 38 |
| 19 | 37 | 37 | 37 | 40 | 45 | 51 | 55 | 56 | 51 | 46 | 39 | 38 |
| 20 | 36 | 36 | 38 | 41 | 46 | 52 | 56 | 56 | 51 | 45 | 40 | 37 |
| 21 | 37 | 36 | 37 | 44 | 45 | 52 | 55 | 55 | 50 | 45 | 40 | 37 |
| 22 | 38 | 36 | 37 | 43 | 47 | 53 | 57 | 54 | 51 | 44 | 41 | 35 |
| 23 | 36 | 35 | 38 | 42 | 47 | 53 | 57 | 55 | 51 | 45 | 40 | 37 |
| 24 | 35 | 35 | 38 | 43 | 48 | 54 | 57 | 56 | 52 | 45 | 40 | 37 |
| 25 | 36 | 35 | 39 | 41 | 48 | 54 | 57 | 55 | 51 | 44 | 40 | 37 |
| 26 | 37 | 36 | 38 | 41 | 47 | 54 | 56 | 55 | -52 | 44 | 40 | 37 |
| 27 | 37 | 37 | 37 | 42 | 46 | 53 | 56 | 56 | 52 | 45 | 39 | 37 |
| 28 | 37 | 34 | 38 | 43 | 47 | 54 | 56 | 56 | 52 | 45 | 40 | 37 |
| 29 | 37 | 32 | 39 | 43 | 49 | 54 | 57 | 56 | 51 | 47 | 40 | 36 |
| 30 | 36 | | 38 | 43 | 50 | 53 | 55 | 56 | 51 | 46 | 39 | 35 |
| 31 | 36 | | 39 | | 49 | | 56 | 55 | | 44 | 1 | 35 |
| Mean | 36 | 36 | 37 | 41 | 46 | 51 | 55 | 55 | 52 | 47 | 42 | 38 |

Average Daily Mean Temperature for 24 Years,

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec |
|------|------|-------|------|------|-----|------|------|------|------|------|------|-----|
| 1 | 40 | 41 | 40 | 45 | 49 | 56 | 60 | 61 | 60 | 56 | 50 | 43 |
| 2 | 40 | 39 | 40 | 45 | 49 | 57 | 60 | 61 | 60 | 55 | 50 | 43 |
| 3 | 40 | 39 | 38 | 46 | 50 | 57 | 60 | 62 | 59 | 55 | 50 | 43 |
| 4 | 40 | 40 | 39 | 46 | 50 | 58 | 60 | 62 | 59 | 55 | 49 | 43 |
| 5 | 40 | 40 | 40 | 45 | 51 | 57 | 61 | 61 | 60 | 54 | 48 | 44 |
| - 6 | 40 | 40 | 41 | 47 | 51 | 57 | 60 | 62 | 61 | 54 | 47 | 45 |
| 7 | 41 | 40 | 42 | 46 | 51 | 57 | 61 | 61 | 61 | 53 | 47 | 44 |
| 8 | 41 | 40 | 43 | 46 | 52 | 57 | 60 | 62 | 60 | 54 | 47 | 44 |
| 9 | 42 | 41 | 43 | 47 | 52 | 58 | 61 | 61 | 60 | 54 | 48 | 44 |
| 10 | 41 | 41 | 43 | 47 | 52 | 58 | 61 | 62 | 59 | 53 | 47 | 44 |
| 11 | 40 | 41 | 42 | 47 | 52 | 57 | 61 | 61 | 58 | 54 | 48 | 43 |
| 12 | 40 | 39 | 41 | 46 | 53 | 57 | 61 | 62 | 58 | 53 | 48 | 43 |
| 13 | 40 | 39 | 41 | 46 | 52 | 57 | 61 | 62 | 57 | 52 | 48 | 43 |
| 14 | 40 | 40 | 42 | 47 | 54 | 57 | 61 | 63 | 58 | 51 | 48 | 43 |
| 15 | 41 | 41 | 42 | 46 | 53 | 56 | 63 | 62 | 57 | 52 | 47 | 43 |
| 16 | 41 | 40 | 43 | 47 | 52 | 57 | 62 | 62 | 58 | 52 | 46 | 43 |
| 17 | 41 | 41 | 43 | 47 | 52 | 57 | 62 | 61 | 58 | 53 | 45 | 42 |
| 18 | 41 | 41 | 43 | 47 | 53 | 57 | 62 | 62 | 58 | 52 | 44 | 42 |
| 19 | 41 | 41 | 43 | 47 | 52 | 57 | 62 | 62 | 57 | 51 | 43 | 42 |
| 20 | 41 | 41 | 43 | 48 | 53 | 58 | 61 | 61 | 57 | 51 | 45 | 41 |
| 21 | 41 | 41 | 43 | 49 | 52 | 58 | 61 | 61 | 57 | 51 | 45 | 41 |
| 22 | 41 | 40 | 43 | 49 | 54 | 59 | 62 | 61 | 57 | 50 | 45 | 40 |
| 23 | 40 | 40 | 43 | 49 | 55 | 59 | 62 | 61 | 57 | 50 | 44 | 41 |
| 24 | 40 | 40 | 43 | 49 | 55 | 60 | 62 | 62 | 58 | 50 | 44 | 40 |
| 25 | 40 | 40 | 44 | 49 | 55 | 60 | 62 | 61 | 57 | 49 | 44 | 40 |
| 26 | 41 | 41 | 43 | 48 | 55 | 60 | 62 | 61 | 58 | 49 | 44 | 40 |
| 27 | 41 | 41 | 44 | 48 | 54 | 60 | 62 | 61 | 58 | 50 | 44 | 40 |
| 28 | 41 | 40 | 44 | 49 | 55 | 61 | 62 | 61 | 58 | 51 | 44 | 41 |
| 29 | 41 | 38 | 45 | 48 | 55 | 60 | 62 | 61 | 56 | 51 | 44 | 41 |
| 30 | 40 | 1 745 | 45 | 49 | 56 | 60 | 62 | 61 | 56 | 50 | 43 | 39 |
| 31 | 40 | | 46 | | 56 | | 62 | 60 | | 49 | | 39 |
| Mean | 40 | 40 | 42 | 47 | 53 | 58 | 61 | 61 | 58 | 52 | 46 | 42 |

Average Weekly Temperature for 24 years.

| First Q | UARTER. | | THIRD Q | UARTER. | |
|--------------|----------|-------|----------------|---------|-------|
| Week Max. | Min. | Mean. | Week Max. | Min. | Mean. |
| Jan. 7 44.1 | 35.8 | 40.0 | July 7 66.7 | 53.9 | 60.3 |
| ,, 14 44.5 | 36.6 | 40.6 | ,, 14 67.4 | 54.4 | 60.9 |
| ,, 21 44.9 | 37.0 | 40.9 | ,, 21 68.2 | 55.5 | 61.8 |
| -,, 28 44.7 | 36.4 | 40.5 | ,, 28 67.2 | 56.6 | 61.9 |
| Feb 4 44.1 | 35.7 | 39.9 | Aug. 4 67.9 | 55.9 | 61.9 |
| ,, 11 44.5 | 36.1 | 40.3 | ,, 11 67.6 | 55.6 | 61.6 |
| ,. 18 44.8 | 35.2 | 40.0 | ,, 18 67.9 | 56.0 | 61.9 |
| ,, 25 45.0 | 35.7 | 40.4 | ,, 25 67.1 | 55.3 | 61.2 |
| Mar. 3 44.6 | 34.6 | 39.6 | Sept. 1 66.0 | 55.4 | 60.7 |
| ,, 10 46.2 | 36.6 | 41.4 | ,, 8 65.9 | 54.2 | 60.1 |
| ,, 17 47.6 | 36.6 | 42.1 | ,, 15 64.5 | 51.7 | 58.1 |
| ,, 24 48.6 | 37.4 | 43.0 | ,, 22 63.8 | 51.4 | 57.6 |
| ,, 31 50.4 | 38.3 | 44.4 | 8days 30 62.9 | 51.5 | 57.2 |
| 45.7 | 36.3 | 41.0 | 66.4 | 54.4 | 60.4 |
| Second (| Quarter. | | Fourth (| Quarter | |
| April 7 51.8 | 39.4 | 45 6 | Oct. 7 59.7 | 49.8 | 54.8 |
| ,, 14 53.0 | 40.4 | 46.7 | ,, 14 58.1 | 47.7 | 52.9 |
| ., 21 53.6 | 40.9 | 47.3 | ,, 21 57.0 | 46.7 | 51.8 |
| ,, 28 55.0 | 42.2 | 48.6 | ,, 28 55.3 | 44.5 | 49.9 |
| May 5 55.4 | 43.6 | 49.5 | Nov. 4 54.3 | 45.3 | 49.8 |
| ,, 12 58.8 | 44.8 | 51.8 | ,, 11 52.3 | 42.7 | 47.5 |
| ,, 19 59.6 | 45.6 | 52.6 | ., 18 50.6 | 42.7 | 46.7 |
| ,, 26 61.4 | 47.0 | 54.2 | ,, 25 48.9 | 40.1 | 44.5 |
| June 2 62.2 | 48.8 | 55.5 | Dec. 2 48.0 | 39.5 | 43.7 |
| ,, 9 64.3 | 50.4 | 57.4 | ., 9 47.8 | 39.8 | 43.8 |
| ,, 16 63.5 | 50.2 | 56.9 | ,, 16 47.5 | 39.1 | 43.3 |
| ,, 23 64.5 | 51.6 | 58.1 | ., 23 45.7 | 37.0 | |
| ,, 30 66.8 | 53.8 | 60.3 | 8 days 31 43.8 | | 40.1 |
| 59.2 | 46.1 | 52.7 | 51.5 | 42.4 | 46.9 |

It should be noticed that the mean temperature of each week, during the 13 warm weeks, varies from 58.1 Fah. to 61.9 Fah.—less than 4 degrees.

The mean temperature of each week, during the 13 cold weeks,

varies from 42.1 Fah. to 39.6 Fah.; only 2½ degrees,

CLOUD, FOG, FROST, SNOW, HAIL, IN 1910.

| | Cloud Amount | Fog. | Ground Frost | Frost in Air. | Snow | Hail | |
|----------------|-----------------|-------------|-----------------|---------------|-------|-------|--|
| | 0—10 | | NUMBE | R OF | DAYS | DAYS. | |
| January | 6.4 | 5 | 12 | 6 | 2 | 2 | |
| February | 6.6 | 2 | 7 | | 444 | 4 | |
| March | 4.5 | 2 3 1 | 16 | 5 | 1 | | |
| April | 5.5 | 3 | 7 | 1 | 4.4.4 | 1 | |
| May | 6.0 | 1 | 4 | | | 2 | |
| June | 6.1 | 4 | | | | 1 | |
| July | 7.1 | | | 1.22 | | 1 | |
| August | 7.3 | 1 | | | | | |
| September | 6.1 | 2 | 3 | | | | |
| October | 7.4 | 2 | 1 | | | | |
| November | 5.6 | | 22 | 3 | 2 | 1 | |
| December | 6.8 | 1 | 2 | 2 | | | |
| Year | 6.3 | 23 | 74 | 17 | 5 | 11 | |
| Total 11 Years | 60.6 | 311 | 787 | 305 | 113 | 89 | |
| Average Year | 5.5 | 28 | 72 | 28 | 10 | 8 | |

Note.—March 28th, Tortoiseshell Butterfly seen.

April 11th, House Martins first seen.

April 11th, Swallows first seen.

April 23rd, Cuckoo first heard.

April 30th, Sand Martins first seen.

May 7th, Swifts first seen.

November 1st, Swallows last seen.

November 3rd, House Martins last seen.

HALOS, GALES, LIGHTNING, THUNDER, IN 1910.

| | Sol. Hale | | | Light- ning. | Thun- der. |
|----------------|--------------|------|--------|-----------------|---------------|
| January | 1 | 1 | 2 4 | | 1 |
| Talamana | 3 | 1 | 4 | 1 | 1 |
| March | 1 | 1 | | | *** |
| April | . 2 | | 2 | *** | |
| May | 2 | 1 | -9.4.6 | 1 | 1 |
| June | | | 11.11 | 5 | 6 |
| July | . 1 | | (4.4.) | 1 | 2 |
| August | | | | 1 | 1 |
| September . | | | *** | | *** |
| October | | | 1 | 1 | 1 |
| November . | . 1 | | 8 7 | 100 | |
| December . | . 6. | 2 | 7 | 4 | *** |
| Year | . 11 | 6 | 24 | 14 | 13 |
| Total 11 Years | 17 | 6 38 | 293 | 118 | 123 |
| Average Year . | 16 | 3 | 26 | 11 | 11 |

May 4th—Hawthorn in full bloom. September 30th—Apple tree in full bloom.

HOURS OF BRIGHT SUNSHINE, IN 1910.

| | OF BRIGHT SHINE. | | | | SUNLESS DAYS. | | | |
|--------|---------------------|-----------|-----|-----|---------------|-----------------------|--|--|
| 1910. | Average since 1901. | Months. | | | 1910. | Average since 1901 | | |
| 76.6 | 76.4 | January | | | 11 | 10.7 | | |
| 92.1 | 91.5 | February | | | 5 | 6.2 | | |
| 188.1 | 136.8 | March | | | 3 | 6.9 | | |
| 139.8 | 172.9 | April | | | 3 | 2.9 | | |
| 227.6 | 223.5 | May | | | 0 | 1.8 | | |
| 211.3 | 210.4 | June | | | 1 | 2.3 | | |
| 163.9 | 237.7 | July | | | $\frac{3}{3}$ | 1.2 | | |
| 151.7 | 204.1 | August | | | 3 | 1.3 | | |
| 182.0 | 156.2 | September | | *** | 2 | 2.3 | | |
| 76.3 | 105.5 | October | | *** | 8 | 5.7 | | |
| 102.7 | 88.2 | November | | | 6 | 8.0 | | |
| 53.4 | 55.6 | December | *** | | 11 | 12.6 | | |
| 1665.5 | 1758.7 | Year | | | 56 | 61.9 | | |

For part of the year, owing to adjacent houses, I am unable to register any bright sunshine during the hour before sunset. Therefore the true amount of bright sunshine at Totland is greater than my return of 1665.5 and 1758.7 hours respectively.

There was a remarkable amount of bright sunshine at Totland this year during March and November, with a great deficiency in April, July, August, and October.

The Meteorological Office receive and check bright sunshine

recording cards from 146 of their 220 meteorological stations.

During the year 23 stations of the 146 registered more bright supshine than Totland Bay.

| Hours. | Hours. | Hours. |
|-----------------|------------------|-----------------------------------|
| Douglas 1667 | Bognor 1726 | Penzance 1713 |
| Lowestoft 1667 | Portsmouth 1689 | Newquay 1716 |
| Felixstowe 1768 | Sandown 1672 | Guernsey— Brooklyn 1773 |
| Folkestone 1727 | Bournemouth 1715 | Brooklyn 1773 Villa Carey 1794 |
| Hastings 1719 | Weymouth 1695 | Jersey 1739 |
| Bexhill 1675 | Paignton 1746 | #crse; 1100 |
| Eastbourne 1752 | Torquay 1770 | |
| Brighton 1690 | Salcombe 1745 | |
| Worthing 1731 | Falmouth 1730 | |

June 14th with 15.6 hours of bright sunshine was the sunniest day I have ever recorded here,