Contributors

Bognor Regis (England). Urban District Council.

Publication/Creation

1914

Persistent URL

https://wellcomecollection.org/works/wnrsmaer

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection 183 Euston Road London NW1 2BE UK T +44 (0)20 7611 8722 E library@wellcomecollection.org https://wellcomecollection.org

BOGNOR URBAN DISTRICT.

ANNUAL REFORT

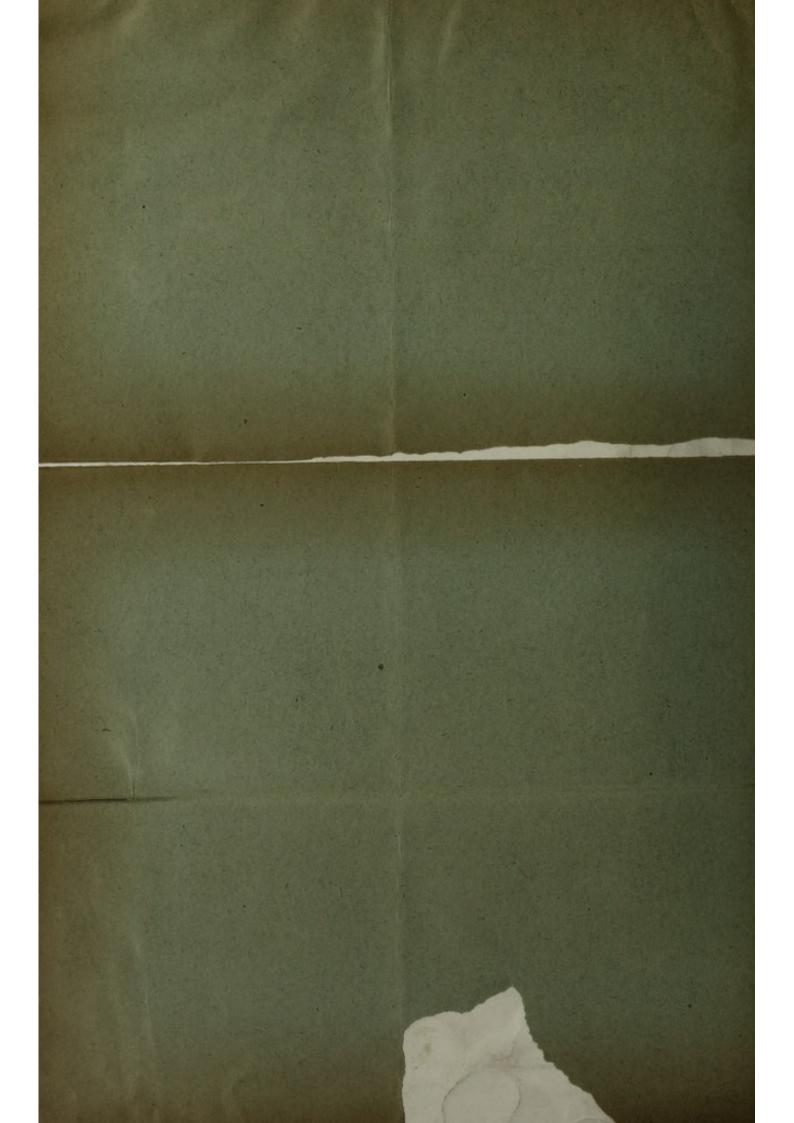
OF THE

MEDICAL OFFICER OF HEALTH.

AND

CLIMATOLOGICAL SOCIETY

FOR THE YEAR 1914.



TO THE CHAIRMAN AND MEMBERS OF THE BOGNOR URBAN DISTRICT COUNCIL.

GENTLEMEN,

I beg to lay before you my 25th Annual Report on the health and sanitary condition of the Urban District of Bognor for the year ended 31st December, 1914.

The area of the District is 865 acres and contains about 2084 inhabited houses.

During the last five years the increase in the number of inhabited houses has been as follows :

In	1910	there	were	1840	Inhabited	Houses.
,,	1911	"	,,	1885	.,	"
••	1912	,,	"	1994	"	"
,,	1913	"	,,	2037	"	"
	1914	, ,	,.	2084	"	.,

Forty-eight plans of new buildings and alterations to old buildings were approved by the Council. Fifty-one buildings were erected during the year and 5 are in course of erection.

The population estimated to the 30th June, 1914, is 8779.

The gross number of deaths during the year was 108, viz :--53 males and 55 females. These deaths were distributed over the 12 months as follows :---

	Males.	Females.	Total.
January	6	11	17
February	3	5	8
March	6	5	11
April	1	2	3
May	6	8	14
June	6	3	9
July	1	4	5
August	3	2	5
September	3	3	6
October	7	6	13
November	7	2	9
December	4	4	8
	53	55	108

Included in this number are six deaths of non residents which occurred in the District.

I have received from the County Medical Officer the names of 15 Bognor residents who died in the Royal West Sussex Hospital or in Gralingwell Asylum or in the Workhouse Infirmary during the year and of 5 Bognor residents whose deaths occurred outside the Urban District of Bognor. These deaths, in accordance with the instructions of the Local Government Board, are not included in the figures used in arriving at the death rate of the District, but they are included in Table III which deals with deaths at the various ages of residents whether occurring in or beyond the District.

	The total number of deaths, and the death rates since the increase of the area of the District,
which	ook place on 1st October, 1900, are as follows :

	Total.	Rate.
1901	66	10'5
1902	80	12'4
1903	76	11'4
1904	82	11'9
1905	71	10'0
1906	66	9.0
1907	75	10.0
1908	. 69	8.9
1909	103	13'0
1910	78	9.6
1911	96	117
1912	106	12.6
1913	102	11'8
1914	108	12'3

The estimated death rate is 12'3 per 1000.

The various ages at which death occurred during the year under report were as follows :-

U	nder	1 ye	ar			11
1	year	and	unde	r 5	years	3
5	years	· ,,	,,	15		1
15	,,	,,	,,	25		. 7
25	,,		,,	65	"	41
65	,,	.,	,,	80	"	30
80	"	and	over			15
						108

The ages of death of those of 80 years and upwards were as follows :----

at	80
	81
	82
,,	84
**	87
**	88
,,	89
,,	92
	""

The chief causes of death at the various ages will be found in Table III.

Two of the deaths from accident were caused by fracture of the base of the skull due to falls; the other was due to concussion of the brain, also the result of a fall.

During the year there were in the District, as stated above, 11 deaths of Infants under 1 year of age, which gives an Infantile Mortality rate af 1'2 per 1000 general population, and 67'4 per 1000 births registered.

	Males.	Females.	Total.
January	3	1	4
February	_	1	1
March	-	_	
April	_	_	-
May	_	_	_
June	1		1
July	-	1	1
August		-	-
September	-	-	-
October	1	1	2
November	2	-	2
December	-	-	-
	7		

These were distributed over the 12 months as follows :----

There were no deaths from Diarrhœa among Infants.

Under the Infectious Diseases Notification Act, 1889, adopted by your Council in 1891, I have received 11 Notifications, viz :--Scarlet Fever 5, Diphtheria 2, Enteric Fever 1, Erysipelas 3.

The totals notified during the last 10 years were as follows :---

1905	 34	1910		46
1906	 35	1911	'	43
1907	 38	1912		22
1908	 33	1913		17
1909	 17	1914		11

The above notified cases were spread over the 12 months as follows :---

	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.
January			-	-
February	_		-	-
March	-	-	_	-
April	2	-		-
May	2	-	-	-
June		-	-	3
July	-	1	_	-
August	-	-	-	-
September	-	1		_
October	- 74	- 300	100 m	-
November		-	-	- 10
December	1	-	1	-
	5	2	1	3

This gives an exceptionally small number of cases of notifiable disease.

There was no death from notifiable, or other zymotic, disease.

Three of the cases of Scarlet Fever, and both of the cases of Diphtheria were removed to the Isolation Hospital, and all recovered.

The accommodation at the Isolation Hospital provides 12 beds for Scarlet Fever patients, namely, 6 male and 6 female; and 12 beds for Diphtheria patients, namely, 6 male and 6 female; this accommodation is ample under present circumstances.

Disinfection of premises occupied by patients suffering from notifiable diseases was carried out to the satisfaction of the Sanitary Authority in all cases.

Under the Public Health (Tuberculosis) Regulations, 1912, which requires notification of all cases of Tuberculosis, and which came into force 1st February, 1913, I have received 24 certificates which were classified as follows :---

	Males.	Females.
Pulmonary	11	7
Non-pulmonary	5	1

A dispensary is provided at Chichester for the treatment, when necessary, of these cases.

There is no accommodation for these cases in the Urban District of Bognor.

The number of births registered in the District was 163, namely 78 males and 85 females.

This gives a Birth Rate of 18'5 per 1000 estimated population.

The births were distributed over the 12 months as follows :----

	Males.	Females.	Total.
January	9	6	15 ΄
February	5	11	16
March	6	8	14
April	8	12	20
May	6	8	14
June	9	6	15
July	3	5	8
August	4	11	15
September	8	4	12
October	5	4	9
November	6	5	11
December	9	5	14
	78	85	163

The figures for the previous five years were as follows :---

	Males.	Females.	Total.	Rate.
1909	73	59	132	167
1910	58	72	130	16.0
1911	81	71	152	18'5
1912	65	63	128	15.2
1913	76	73	149	17'3
1911 1912	81 65	71 63	152 128	1 1

The Sea fishing forms the principal industry of the town and no trade is carried on which could have any prejudicial influence on the public health. For years the locality has been a resort for persons seeking rest and restoration to health.

The aspect of Bognor is almost due South; it is sheltered from the East and North-east winds by the South Downs. The air is remarkably pure, balmy, and bracing, having the mildness of the Southern, and the dryness of the East, Coast. The surface soil is gravelly and very porous, the roads dry rapidly after rain. Fogs are rare, and in summer few days occur without sea breezes tempering the heat. The prevailing wind is South-west. Snow is rarely seen and when it falls it disappears rapidly. The sands decline gradually from the parade, constituting a safe playground for children. At high tide the sea reaches up to the parade, the foreshore thus getting well washed twice daily.

The Water supply of the town is ample in quantity and still maintains its high standard of purity as shewn by the accompanying report. It is drawn from deep wells at the foot of the downs about 7 miles distant, where there is a pumping station which fills a covered service reservoir on the side of the hill, from which the water falls by gravitation to the town.

The Company have recently improved their supply by laying a New Supply Main through Walberton and Yapton, which joins on to the Felpham mains. This gives more pressure (which was needed) to the Bognor mains and it also gives the additional security that, should the main in the Shripney Road be at any time broken or unusable, the water could still reach the town by way of Walberton, Yapton, and Felpham.

> THE LABORATORY, 11, BILLITER SQUARE, LONDON, E.C.

REPORT ON A SAMPLE OF WATER RECEIVED ON JAN. 29TH, FROM MR. F. J. MARTIN, ON BEHALF OF THE BOGNOR WATER CO., LONDON ROAD, BOGNOR.

The sample to which the following report referred was quite clear and, when viewed through a stratum 2-ft. in thickness, it showed a faint blue tint. Its composition in parts per 100,000 was as under :---

Chlorine			2.20
Sulphurie Acid (S0)	3)		0'92
Nitrie Acid (N2 O5))		2'40
Phosphoric Acid			None
Free Ammonia			0'0009
Albuminoid Ammon	nia		0'0022
Oxygen absorbed fro	om permanganate at 80°H	. in 15 mins.	0.008
Ditto	ditto	4 hours	0.012
Total solids dried at	212°F.		32'00
Loss on Ignition			312
Appearance of solids	s on heating		No visible change.
Hardness Permanen	it		4.4
" Temporar	у		21'8
" Total			26.2

BACTERIOSCOPIC EXAMINATION :--

B. Coli-not detectable in 36 cubic centimetres.

Both chemically and bacterially the water is in excellent condition. It is of a very high degree of purity and admirably suited for a public supply.

OTTO HEHNER.

The milk supply is chiefly imported from the neighbouring farms.

DAIRIES, COWSHEDS AND MILK SHOPS ORDER.

The Council have reason to congratulate themselves upon the Policy which they adopted in 1912 when they appointed a Veterinary Surgeon to make periodical inspections of the Dairies, Cowsheds and Milkshops and Slaughter Houses of the Town. From his Annual Report for the year 1914 it is apparent that as a result of such inspections, considerable improvements have taken place in the sources of milk supply of the Town. He reports that during the year a number of changes have taken place in the milk supplies of the Town and that as a result thereof more up-to-date apparatus for the cleansing of the milk utensils and milk-cans and better arrangements for sanitation in the cow-stalls and adjoining buildings have been adopted. The general conclusion of the report is that the majority of the Cowkeepers and Dairymen are making every effort to comply with his suggestions and instal up-to-date sanitary methods both with regard to their cowsheds and their dairies. So far as tuberculosis is concerned where animals suffering from this have been detected by him on the fact being pointed out to the farmer the latter has in every case consented to remove such animal from the Herd, and it is satisfying to learn that at the end of the year all the herds from which the various milk supplies for the Town of Bognor were obtained "As regards the town dairies I have nothing to report, with the exception of saying that they are of a very high standard and a credit to the town and as long as such is maintained there is little fear of impure or adulterated milk being purposely or accidentally sold to the public of Bognor."

The Veterinary Inspector also reported that generally speaking the Slaughter Houses of the Town were kept in a cleanly condition, and that all the meat inspected by him and intended for the food of man, had been entirely free from tuberculosis or any other disease.

Under the Sale of Food and Drugs Act, 27 samples were taken during the year for the purpose of analysis by the Public Analyst.

Samples.	Number Analysed.	Genuine.	Adulterated.
New Milk	9	8	1
Cream	4	4	0
Butter	4	4	0
Spirits	3	3	0
Flour	2	2	0
Olive Oil	2	2	0
Confectionery Sweet	s 3	3	0
	27	26	1

No fish, fruit, or other foods have been condemned during the year.

The sanitary condition of the premises where foods are prepared, stored, or exposed for sale is satisfactory.

There are no underground bakehouses in the District.

There has been, I regret to say, very little progress made during the year with the contract entered into for the construction of the pumping station ; and the works of the new outfall scheme mentioned in my last Annual Report are now standing still through litigation. The sewerage system during 1914 has worked very well and there have been very few complaints of any kind. During the summer months there was very little rainfall and consequently the sewers had to be continually and systematically flushed. In November and December very heavy rainfalls were experienced but the district was almost entirely free from flooding, although the sewers and surface water drains were very heavily taxed.

During the season the house refuse is collected (in covered carts provided by the Council) twice a week; during the rest of the year it is collected once a week. Sanitary dustbins with covers have been provided where necessary.

The Destructor, which has been working since October, 1911, still continues to be working satisfactorily. A new Shed has been erected; this allows the carts to be unloaded under cover; it also affords protection to the workmen in wet weather. Two men are employed as firemen or stokers.

During the year under report, 3378 loads of refuse have been burnt. 532 loads of clinkers, and 136 loads of ashes have been used by the Council in road construction; and 287 loads of ashes valued at £43 1s., have been sold to brickmakers. The sale of bottles, old iron, &c., realised £32 2s. 7½d., during the year. It is satisfactory to note that there have been no complaints concerning the smoke from the chimney.

During the year 27 nuisances were reported to the Sanitary Authority. In 12 of these cases notices were served for the abatement which have all been complied with. The other 15 cases were dealt with without it being necessary to serve notices. It was not necessary to serve statutory notices in any of the cases.

Two cases of overcrowding were reported which were dealt with.

The Public Elementary Schools are supplied with town water and are in a sanitary condition. During the vacations they are thoroughly cleansed and disinfected.

A special School Medical Officer is appointed by the County Council for the inspection of the children in the Public Elementary Schools.⁴

The Factories on the register at the end of the year, under the supervision of the Council, are 11 in number, and are classified as follows :--

Steam Laundry	1	Printers	2
Mineral Water Works	1	Shoemakers	1
Stone Mason	1	Motor Works	3
Forage Contractors	2		

In every one of these a copy of the Factory Act is hung in a conspicuous position.

Bakehouses	10	Dressmakers	14
Tailors	6	Laundries *	5
Carpenters	9	Shoemakers	7
Plumbers	5	Coach Builders	2
Horse Farriers, &c.	6	Watchmakers	4
Undertakers & Cabinet Makers	4	Cycle Manufacturers	4
Harness Makers	2	Brick Makers	1

All the above Factories and Workshops have been inspected during the year,

Systematic inspectious of the District have been made from time to time, or as occasion required, by myself, or the Sanitary Inspector. Regular monthly reports of the work have been laid before the Sanitary Committee. Besides this general supervision, I have paid 39 special visits in cases where required.

The scavenging and watering of the streets under the control of the Council have been thoroughly and systematically carried out. The work in this department is greatly increased during the excursion season. As many as 8000 excursionists visited the town on one day, thereby almost doubling the population. On some other days also there were very large influxes, amounting to several thousands.

Under the provisions of the Housing and Town Planning Act, 1909, and the Housing (Inspection of Districts) Regulations, 1910, 57 inspections have been made. Closing orders were made in 22 of these cases as the premises were considered to be in a state so dangerous or injurious to health as to be unfit for habitation. One of these 22 houses has been properly repaired; in 14 the work has been substantially commenced; in the remaining 7 nothing so far is reported as having been done.

The defects generally found to exist were :-Bad drainage, damp walls, leaking roofs, insanitary paving in the yards and sculleries, and no proper provision for the storing of food. In many cases the food is kept in a cupboard under the stairs. In some cases the place for storing coals is only separated from the food by a thin partition of wood. It follows that the food is contaminated by the dust working through the joins on the stairs, and by the coal and other dust from the adjoining fuel supply.

During the year the Council have erected 16 cottages in Gravitt's Lane. These have cost about £154 each and they are let at 4/6 per week. The work was done departmentally by the Surveyor's workmen. The sites for these cottages cost £5 each and were secured some few years ago. The cottages are in an excellent position, not far from the Town, and with a South-west aspect.

The undermentioned cottages have now been built and are all occupied :----

1898.	2 0	ottages	let at	5/6 &	5/- per week each.	Cost	£250	each	(about).
1912.	13	"	"	5/6	"	"	£205	"	"
1913.	12	,,	"	4/6	"	,,	£145	"	"
1914.	16	.,,	"	4/6	"	33	£154	,,	"

Application for a loan is now before the Local Government Board to build 4 cottages on land already purchased by the Council, for the better class of workmen, and to be let at 7/6 per week each. The Council hope to erect about 40 cottages of this class, on a site named Linden Avenue.

Application has also been made for sanction to purchase a field adjoining Sheepwash Lane which would give space for about 107 cottages, to be built as occasion requires.

It will therefore be seen that your Council has vigorously attacked the problem of the Housing of the Working Classes so far as it affects the District. On comparing with the growth of the population the number of dwellings already erected, or already planned, it may be safely assumed that if all the schemes under consideration are carried out there will be no lack of dwelling houses for the Working Classes for many years to come. During the year under report your Council has carried out a very great improvement at the East End of the Town by the widening of the Promenade in front of Colebrook Terrace. At this point the promenade is now 67 feet in width.

The Council has also carried out a very extensive system of bull-nosing the Sea Wall from the slipway opposite the Beach Hotel to Clarence Road. So far this bull-nosing has answered admirably and has withstood the winter gales. By the addition of this work the sea water has been prevented from falling on to the promenade in such large quantities as heretofore, and the flooding in York Road has been minimised. The Bullnose, which is surmounted by a massive galvanized iron railing, has been constructed in ferro concrete, from the design, and under the personal supervision of our Town Surveyor who is to be complimented upon this very excellent and necessary improvement.

The Lavatory accommodation in the Town has been very much improved. Two Lavatories have been constructed under the Parade at the East End of the town. Some difficulty was experienced in carrying out this work owing to the ground in which the Lavatory was constructed being "made up" ground; and in the foundations running sand was encountered ; therefore every precaution had to be taken to insure the buildings being watertight when completed. The accommodation in the Ladies' lavatory is ample and includes a spacious well lighted room furnished with 4 lavatory basins with hot and cold water and with dressing table and mirrors. The accommodation in the Gentlemen's lavatory is also ample, including likewise a spacious room furnished also with 4 lavatory basins with hot and cold water, dressing table, &c. There is an attendant's room in each lavatory. The inside walls are of white glazed bricks, with a dado of brown glazed bricks, from the Leeds Fireclay Company. The floors are of marble known as "Terrazzo" and laid by Messrs. Marchette, Ltd., Portsmouth. The ceilings are formed with cement concrete, in which are bedded steel girders; and the buildings are lighted by 16 semi-prism lights let into the parade. The ventilation is thoroughly adequate. The drains are all laid on modern lines. Special means are provided, by tanks sunk into the roadway, for flushing each portion from a water-cart. The buildings are also lighted by gas and the town water is laid on.

The Ladies' Lavatory which stood until recently on the parade near Clarence Road has been taken down and re-built in a new position at the western end of the parade, and now provides the necessary accommodation at that end of the town.

Three New Roads have been under construction during the year, namely :-Bassett Road, Cavendish Road, and Gravitt's Lane. In all of these surface water drains and sewers have been laid.

Good roads are very essential in a seaside town and with the view of giving the Surveyor every facility for constructing and maintaining these, the Council has purchased an 8 ton Steam Roller, fitted with a scarifier, from Messrs. Steevens, Wallis, & Co., Basingstoke. This is housed in an engine shed recently built in the Council's Depot.

The day for repairing the roads with flints has gone by and I am pleased to note that the Surveyor is now using tarred granite for all road making. A long length of this material has been laid down from Lansdowne Mansions to Victoria Drive with apparently excellent results as it gives a very even surface and is practically dustless. About four years ago, before this material was finally chosen by the Council, a length of it was laid down in front of the Pier Hotel. This has been found to have stood the winter gales and very heavy traffic without showing any signs of wear. The road surfaces in all the principal thoroughfares were tarred during the summer months; 13,729 gallons of tar being used for this purpose. The tarring is applied by manual labour, and with large brushes, in preference to tar spraying, and the results have been very good, the roads in the town having been maintained in a clean and good condition in spite of the unfavourable weather and persistent rains of this last winter.

A spacious Chair Store has been erected at the depot for the storage of the chairs belonging to the Council which are let out on hire in the Council's grounds and enclosures and on the promenade during the summer months.

At the extreme eastern end of the town the Council has erected a large Bathing station for the accommodation of bathers of limited means. An efficient Instructor is always in attendance.

Nearly 200 hut sites are let by the Council each year to the owners of bathing huts; at fees from £2 2s. per annum upwards.

I would draw your attention to the fact that the work of the Public Health Department steadily increases, as year by year Parliament throws greater and more extended responsibilities upon Local Authorities.

I enclose Tables I, II, III, and IV, specially required by the Local Government Board, and I take this opportunity of thanking the Members of the Sanitary Committee and the Inspector of Nuisances for the courtesy and help they have extended to me during the year.

I beg to remain,

Your obedient Servant,

W. CONWAY-COOKE,

Associate of King's College, London, Fell. Royal Institute of Public Health, Medical Officer of Health.

Bogner,

5th March, 1915.

TABLE I.

Vital Statistics of Whole District during 1914 and previous Years.

	Population		BIRTHS.			DEATHS ED IN THE RICT.		ERABLE THS.	NETT	DEATHS DE THE DIST.	LONGING RECT.	TO
YEAR.	estimated to Middle of each		Ne	tt.			of Non-	of Resi-	Under 1 Y	ear of Age.	At all	l ages.
	Year.	Un- corrected Number.	Number.	Rate	Number.	Rate.	residents registered in the District.	dents not registered in the District.	Number.	Rate per 1,000 Nett Births	Number	Rate.
1	2	3	4	3	6	7	8	9	10	11	12	13
1909.	7892	132		16.7	103	13.0					105	13·3
1910.	8100	130		16.0	78	9.6					82	10.1
1911.	8191	152	153	18.6	96	11.7	10	19	15	98.0	105	12.8
1912.	8387	128	133	15.8	106	12.6	9	13	16	120.0	110	13.0
1913.	8583	149	151	17.5	102	11.8	7	17	14	92.7	112	13-0
1914.	8779	163	165	18.7	108	12.3	6	20	13	78.7	122	13.8

Name of District: BOGNOR URBAN DISTRICT.

Area of District in acres (land and inland water) 865

Total population at all ages 8142-At Census of 1911.

TABLE II.

Cases of Infectious Disease notified during the year 1914.

	Name of District :	BOGNOR	URBAN	DISTRICT.
J. Jak				TOTAL CASES RE
TADLE DIG	PACE	AT ALL ACTES	3	TO HOSPITAL

NOTIFIABLE DISEASE.		AT ALL AGE	IS.			TOTAL	HOSPITAL.
Small-pox							
CholeraPlague							
Diphtheria (including Membr	ranous cr	roup) 2					2
Erysipelas		3					
Scarlet Fever		5					3
Typhus Fever							
Enteric Fever		1					
Relapsing Fever							
Continued Fever							
Puerperal Fever							
Cerebro-spinal Meningitis							
Poliomyelitis							
Ophthalmia Neonatorum				***			
Pulmonary Tuberculosis							
Other forms of Tuberculosis							
Totals		11			•		5

Isolation Hospital—Bognor Isolation Hospital, situated in Sheepwash Lane, within the District, Provided by the Urban District Council.

TABLE III.

Causes of, and Ages at Death during the Year 1914.

Name of District: BOGNOR URBAN DISTRICT.

			Nett D	eaths at	the subjo	ined age or with	s of "Res out the I	sidents'' ı District.	whether o	courring	within	Total deaths whether of 'Residents' or
	CAUSES OF DEATH.		All Ages.	Under 1 year.	a Jeans	-	5 and under 15 years. 6		25 and under 45 years	10000	up- wards.	'nonResidents' in Institutions in the District
	1		2	3	4	5	-	7	8	9	10	<u> </u>
All Causes	(Certified		122	13		3	2	8	12	38	46	4
-	(Uncertified											
Enteric Fe	ever											
Small-pox												
Measles												
Scarlet fev	er											
Whooping	-cough											
Diphtheria	and Croup											
Influenza			1						1			
Erysipelas												
Phthisis, (I	Pulmonary Tuberes	alosis)	9					2	4	3	· · · · ·	1
Tuberculou	us Meningitis		2			1		1				
Other tube	erculous diseases		2	1			1					
Cancer, ma	lignant disease		13						2	8	3	
Rheumatic	Fever				·							
Meningitis												
Organic H	eart Disease		14						2	4	8	
Bronchitis			8	4		2				1 .	1	
Pneumonia	(all forms)		7							2	5	
Other dise	ases of Respiratory	organs										
Diarrhœa	and Enteritis		1								1	
Appendicit	is and Typhlitis		1					1				
Cirrhosis o			3							3		
Alcoholism												
Nephritis a	and Bright's Diseas	e	4					1	1	1	1	
Puerperal	Fever											
Other acci	dents and Disease cy and Parturition		1					1				
Congenital	Debility & Malfor uding Premature B	na-	3	3								
	aths, excluding Sui		3					1		2		
Suicide			1							1		
	ned Diseases		48	4			1	1	2	13	27	3
	ll-defined or unkno		1	1								
	Total	5	122	13		3	2	8	12	38	46	4

TABLE IV.

BOGNOR URBAN DISTRICT.

INFANT MORTALITY.

1914. Nett Deaths from stated causes at various Ages under I Year of Age.

CAUSES OF DEATH.	r 1 week.	Weeks.	Weeks.	Weeks.	Total under 1 Month.	Months.	Months.	Months.	9-12 Months.	Total Deaths under One
	Under 1	1-2	2-3	3-4	Tota 1 1	1-3	3-6	6.9	9-12	Year.
All Certified causes. Uncertified	5		I 		6 	I 	2	I 	3	13
Small-pox										
Chicken-pox										
Measles										
Scarlet Fever										
Whooping-cough										
Diphtheria and Croup										
Erysipelas										
(Tuberculous Meningitis										
Abdominal Tuberculosis										
Other Tuberculous Diseases									I	I
Meningitis (Not Tuberculous)										
Convulsions										
Laryngitis										
Bronchitis			I		I		I		2	4
Pneumonia (all forms)										
(Diarrhœa										
Enteritis										
Gastritis										
Syphilis										
Rickets										
Suffocation, overlying										
Injury at birth										
Atelectasis										
Congenital Malformations			,							
Premature Birth	3				3					3
Atrophy, Debility & Marasmus						I	I	1		3
Other causes	2				2					2
Totals	5		I		6	I	2	I	3	13
Nett Births { legitimate in the year { illegitimate		157. 8.			Deaths e year of			nfants infant		

1

Annual Report of the Medical Officer of Health for the year 1914 for the URBAN DISTRICT of BOGNOR, on the administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1.-INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.		E le			Number of	
1		-	-	Inspections. 2	Written Notices.	Prosecutions. 4
Factories (Including Factory Laundries).				п		
Workshops (Including Workshop Laundries).				. 79	5	
Workplaces (Other than Outworkers' premises	,					
Total				90	5	

2.-DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

	1.12	The state	11			Nu	Number		
	Particul	lars.				Found.	Remedied.	Referred to H.M. Inspector.	of Pros- ecutions
	1			100		2	3	4	5
Nuisances under the Public Hos	ith Act	*:					-		
Want of cleanliness									
Want of ventilation									
Overcrowding						1	1		
Want of drainage of floo	015								
Other nuisances									
	(insuff	ficient							
Sanitary accommodation	unsui	itable or def	fective						
	(not se	eparate for	sexes						
Offences under the Factory and	Worksh	cp Acts :-					1	Constant Products	
Illegal occupation of und	lergrou	nd bakehou	se (s 10	1)					
Breach of special sanita	ry requ	irements f	or bake	houses	(88. 97	and a gar with	1. 11.	Contra State	
to 100)			**			3	3		
Other offences						1	1		
(Excluding offences	relating	; to outwor	k).						
						and the second		a de la compañía de la	
Total						5	5		

3.-REGISTERED WORKSHOPS.

Workshops on the Register [s. 131] at the end of the year.

	[Bakers				10	Harness Makers	 	2
cehouses	here.	m. n					Dressmakers	 	14
akehous		Tailors	•		**	6	Laundries	 	5
-	rated	Carpenters .	•			9	Shoemakers	 	7
kshop	Tume	Plumbers .				5	Coach Builders	 	2
W-01	De er	Horse Farriers,	&c.			6	Watch Makers	 	4
s	may	Undertakers &	Cabir	net			Cycle Makers	 	4
such a	-	35.3				4	Brickmakers	 	1

Total number of workshops on Register

79

March 5th, 1915.

W. CONWAY-COOKE, Medical Officer of Health.

BOGNOR CLIMATOLOGICAL REPORT for the Year 1914.

The station enclosure and instruments have been maintained in good condition during the year. A new Terrestrial Radiation Thermometer of improved pattern was supplied at the beginning of the year in place of the one which was stolen. A Solar Radiation Thermometer, (Black bulb in vacuo), was mounted and brought into use on the 1st of July. A supplementary copper Rain Guage of 5 inches diameter, and measuring glass; a minimum Thermometer; and a new Barometer (Kew pattern), of the latest type supplied by the Meteorological Office and mounted in the Town Clerk's Public Office have been brought into use. The Barometer is a splendid instrument, provided with two scales, one of inches with a vernier to read to thousandths of an inch; the other of Baromils with vernier reading to tenths of a baromil; the attached thermometer is also furnished with two scales, one showing Fahrenheit degrees and the other "Absolute" degrees. The cost of these new instruments has been paid out of the funds in the hands of the Bognor Advertising Committee; the supplementary instruments being necessary for the purpose of taking evening readings which has been done by Mr. Boyce of the Town Surveyor's Department and telegrams forwarded to the Meteorological Office every evening; from these, notes of Bognor weather have appeared at intervals in several of the London daily papers. Paragraphs relating to Bognor have also been supplied by Mr. O. A. Bridges once a week to the "Daily Telegraph."

The old 8-inch Rain-guage and glass measure were tested by Mr. Carl Salter of the "British Rainfall Organization" on the 20th of April and pronounced to be "very good." The other old instruments were examined and tested by Mr. Brodie of the Meteorological Office on the 29th of April and officially certified as "satisfactory."

The weekly and monthly sheets of the daily records have continued to be sent regularly by the observers to the Meteorological Office and excerpts from them have been published in the Official Returns. Weekly and monthly notes have also been regularly sent to "The Bognor Observer."

THE MONTHS.

JANUARY.—This month was remarkable for the high atmospheric pressure that prevailed, ranging from 30'610-ins. on the 1st to 29'726 on the 6th which was one of the five days only on which the barometer at 9 a.m. gave readings below 30-inches. The wind was light from N.W. during the first week only, backing slightly to W. on two mornings; then came three days of S.W. winds with a little rain; then N.E. wind and dry weather from the 11th to 24th. After this date to the end of the month the wind became variable and the weather less settled; the mornings were mostly dull but the days generally became fairer later. Hoar frost was noted on five mornings, and damp mists occurred three times. The 4-ft. subsoil temperature fell from 49 degrees on the 1st to 45'1 on the 31st.

FEBRUARY.—The Climatic conditions of this month are well worth notice. The first and last weeks were fine and sunny though the first week had nearly half an inch of rain and the last week only four-hundredths of an inch. During the first five days the barometer readings were above 30-inches, but after the 5th they only rose above 30 on four occasions, the highest being 30'225 on the 27th. The lowest pressure occurred on Sunday the 22nd, when the barometer reading at noon, after the usual allowances being made for reduction to 32 degrees of temperature, mean-sea level and gravity at latitude 45, was 28'678-ins.: the previous day had been squally and wet with rain and some soft hail, the total fall being 0'48 of an inch, with S. to S.W. wind. There was only a passing shower on the morning of the 22nd, the rest of the day being fine and bright, with rising mercury. The centre of this cyclonic depression passed away far to the N. or N.E. of the British Isles, the pressure at the centre sinking to about 28'15 inches. Severe storms were reported from various places on the Continent, and at Madrid the wind seems to have been very strong, doing considerable damage. Our barometer records at Bognor shew several instances of pressure between 28 and 29 inches, but the nearest to that of the 22nd of Feb. this year is that of the 9th of Feb., 1904 when, at 6 p.m. the barometer reading was 28'687 after the usual allowances were made; this was also a wet and windy day with a rainfall of 0'40 of an inch, and one hour of sunshine and a rainbow afternoon. On the 22nd of Feb., 1914 the rain amounted to only about 0'01 of an inch and 3'1 hours of bright sunshine were registered. Squalls with hail occurred on the 12th and 21st. Hoar frost was noted on the 17th, 25th, 27th and 28th. Wet fog on 25th and 27th.

MARCH.—The month opened finely, the first two days having 9'1 and 8'5 hours of bright sunshine respectively and no rain; but after the 2nd the weather became unsettled, with varying barometer, increase in force of wind and greater relative humidity of the air. Hail fell on the 14th, 17th, 18th, and 20th. Hoar frost occurred on the 11th, 22nd, 25th and 28th but the temperature on the grass was below 30° more frequently (see Table II). On the 20th the air pressure at 9 a.m. was lower even than the lowest in Feb., a corrected reading of 28'598 ins. being registered. Although the rain was spread over so many days, there were only five days without bright sunshine.

APRIL.—During the first ten days rain fell in varying quantities, producing a total for that period of 1'18 inch. From the 10th a period of drought set in which lasted for 18 days, to the 29th, when a small quantity of rain fell during the night; lightning was also noted at 1.30 a.m. on the 30th, on which date the heaviest fall occurred, amounting to 0'42 of an inch.

Bright sunshine was abundant, no day, except the last, being without and many days having all that is possible in this latitude.

The Atmospheric pressure rose above 30-ins. on the 12th and did not fall below that until the 30th.

The 4-ft. subsoil temperature rose from 46'3 on the 1st to 49'6 on the 30th.

Ground frosts were noted on the 8th, 12th, 13th, and 27th.

MAY began with fair weather, with the barometer above 30-ins., but after the 3rd the air pressure decreased considerably, reaching the lowest of the month on the 7th. Wind S.W. with variable quantities of rain. After the 9th the mercury rose and continued above 30-ins. to the end of the month, with one exception, the 23rd. From the 11th, the only rain measurable fell on the 22nd, 28th and 31st. No day was devoid of bright sunshine and from the 15th to 21st inclusive the amounts of sunshine recorded were nearly equal to the possible.

A thunder storm occurred on the 22nd from about 7 to 10 p.m., and again from about 2 a.m. to 2.30 a.m. on the 23rd, but the amount of rain produced was slight, only '07 of an inch being collected. Temperature was rather above the average. JUNE.—The first part of the month was rather cold for the season and from the 7th to the 14th the air pressure fell below 30-ins. Some hail fell on the 7th and a short thunder storm occurred on the 8th and another on the 14th. After this the weather became finer and warmer. On the whole the air at 9 a.m. was unusually dry; on only eight mornings was the relative humidity over 80 per cent. of saturation. The 4-ft. subsoil temperature rose from 52'3 to 55'9 during the month.

JULY.—During the first week, the weather, though fairly warm, was dull and damp, with the exception of the 4th which was brilliantly fine, having $15\frac{1}{2}$ hours of sunshine; but there was some rain at night. The 9th, 10th and 11th were also very fine with 10'9, 14'5 and 12'4 hours of sunshine to their credit respectively. This was the warmest and brightest period of the month; after this the weather became very unsettled. There were two thunder storms, one on the 12th with a fall of rain of '66 of an inch: the other on the 19th with rain amounting to '49 of an inch.

AUGUST.—The first four days of this fateful month were rather dull and damp, with weak air pressure averaging 29'76-ins. and with S.W. wind. Then came three days with only '004 of an inch of rain on the 5th, but with a small percentage of bright sunshine, followed again by two days of rain; these were succeeded by four very fine days, then came a thunder storm on the 14th and another wet day, the 15th. Fine and dry from the 16th to 21st inclusive, some rain on the 22nd, 25th and 26th, followed by very fine weather to the end of the month and continuing into September.

SEPTEMBER.—This was an exceptionally fine and dry month, on only 8 days was there any rain and on two of these no more than '05 and '06 inch were collected. The first eight days were brilliantly fine and dry. Rain was guaged from the 9th to the 13th inclusive; this spell was followed by two fine days, then two more with a little rain; and from then, the 17th, with the exception of two slight showers on the 20th, beautiful weather continued to the end of the month. The subsoil temperature declined from 58'9 to 57'4.

OCTOBER.—The dry period which began on September 21st continued till the 12th of October when the weather became unsettled, and in four days 0'71 of an inch of rain was collected. Lightning was seen on the night of the 14th. Then came four dry days to and including the 19th from which date more or less rain fell every day to the end of the month. The atmospheric pressure ranged between 30'385 on the 5th to 29'338 on the 31st. The prevailing winds were N.E., E. and N.W. A very distant thunder storm in the South occurred on the evening of the 29th. Soft hail was noted on the evening of the 31st. The mean temperature of the month was about normal. The subsoil temperature declined from 57'3 to 54'9.

NOVEMBER.—On the whole this was a fairly normal month. During the first 14 days temperature was rather high for the season and although sunshine was plentiful, there was only one day, the 9th, without some rain. On the 15th the heaviest fall of rain took place amounting to three quarters of an inch, with hail and distant lightning in the early part of the night. After this the weather continued finer and colder to the 24th with hoar frost in the morning. A change to damper and warmer weather followed to the end of the month. The subsoil temperature declined to 50'5 degrees. White frosts were noted on the 17th, 18th, 19th, 21st and 22nd. DECEMBER.—There was a shortage of rain on the average of the 11 months of the year of about 3 inches at the beginning of this month, but this deficiency was more than made up during the first 11 days: the greatest fall in 24 hours occurred on the 9th when 1'19 inch was contained in the guage. Although this quantity is not excessive it is the greatest that has fallen in the time during the whole year. December, 1914, may truthfully be described as having been a wet month, the total rainfall exceeding 8-inches, which is the greatest quantity that has been collected in Bognor (Waterloo Square) in any one month during the 17 years from the commencement of our Climatological Records. From the accompanying Tables it will be seen also that the barometric pressure was below the average—it ranged from 28'872 on the 14th to 30'312 on the 25th. S.W. winds prevailed on 15 days. As a rule the temperature was above the normal and humidity of the air very considerable. Bright sunshine was slightly deficient, but only 8 days were without some amount. Hail was noted on 5 occasions. Thunder storms occurred on the 14th and 19th, and distant lightning was noted on the 28th, with strong squalls of wind and rain. Hoar frost was noted on the 6th, 23rd and 25th.

RAINFALL.—One striking fact which presents itself on comparing the totals of rain in 1913 and 1914 is that although the number of rain days was greater in 1914 the quantity of rain was a little less than fell in 1913—See Table III. The same peculiarity is also found in the records from Albert Road, Felpham and Lidsey: statistics from these places have again been obligingly supplied to us by Messrs. Guermonprez, F. J. Neale and H. Neale—see Table IV. The figures for Goodwood are taken from the "Bognor Observer" of the 6th of January, 1915. Mr. F. J. Neale has also furnished figures showing the heaviest monthly totals which have been recorded at Felpham from 1891; they are as follow:—

1891, August, 5'11, October, 5'63—1893, October, 5'59—1894, July, 5'90, November, 5'77— 1896, September, 6'04, November, 5'49—1909, October, 6'75—1911, November, 6'76, December, 6'13—1912, August, 6'06—1914, December, 7'92 inches.

From an inspection of Tables III and IV it may be noticed that the number of rain days recorded in Waterloo Square is in excess of the number at the other places: this difference probably is due to the fact that all amounts of precipitation or deposition of 0'005 and upward are included, such a quantity being reckoned by the Meteorological Office as 0'01 of an inch. As a set off against this the number of days on which moisture amounting to 0'04 and over only are counted—see Table III.

It is interesting to note the excess in the quantity of rain collected on the side of the Downs, as at Goodwood, over that which fell on the plain, as at Bognor.

DRY PERIODS of 7 or more days during 1914—January 11th to 23rd, 13 days—April 12th to 28th, 17 days—May 12th to 21st, 10 days—June 24th to 30th, 7 days—August 27th to September 8th, 13 days—September 21st to October 11th, 21 days. Two days, October 3rd and 10th of this period had '005 inch of dew only. In addition to these dry periods, there were in August, 6 days, from 16th to 21st and 5 days in June, 15th to 19th. Other dry periods of from 1 to 4 days occurred at intervals during the year.

BRIGHT SUNSHINE. Table V. This needs no comment; we only may remark that the total amount recorded during 1914 by the Campbell-Stokes Instrument exceeds that registered during 1913 by 361'4 hours. RAINFALL IN CONNECTION WITH GUN-FIRE.—The undersigned Observers have been asked by several persons "whether the firing of the heavy guns during the present war has caused the excessive rainfall that has taken place during the latter part of this year?" We can only say in reply that, at present there is no evidence that such has been the case: indeed, an examination of our year's records affords grounds for the belief that there is very little, if any connection between gun-fire and rainfall. War was declared between England and Germany on the 4th of August and the fire from guns of large calibre commenced very soon after, and perhaps before that date and has continued from various points of the seat of war ever since; consequently, in accordance with the theory that gun-fire induces rain, the rainfall in Germany since the beginning of the war should be immensely in excess of the average, as the air above that country has been subjected to the influence of gun-fire to both the East and Westward, but no reports seem to have been published that the rain has been excessive, at any rate during the early days of the war.

With regard to the relation of the theory to England, more especially to this South Coast, it would seem that the facts contained in this present Report are entirely opposed to it. From the notes on the months it will be seen that August began with rain and that there were frequent dry periods, notably that which, beginning on the 27th continued to the 8th of September. Moreover, it will be seen from Table III that the total fall in September was below the average of the last 16 years and that of October, the wettest month of the year as a rule, was below the average to the amount of 1'1-inch: and in December, during which the heavy gun-fire is reported to have slackened, the rain was greatly in excess, the overplus being 5'27 inches.

That some Meteorologists hold opinions favourable to the theory of gun-fire being conducive to rainfall is quite true and not altogether without some foundation for their belief, but it must be borne in mind that the atmospheric conditions at the time must be favourable to a rain shower at least, the air at a comparatively low height above the surface of the earth, must be nearly, if not quite at the point of saturation so that the undulations and vibrations set up by the gun-fire may be sufficient to cause a precipitation of the aqueous vapour in the form of rain and at a very short interval from the concussion. In September of the year 1912 or 1913, at a place near Battle Creek, Michigan the time being the usual dry season of the locality, an experiment was made by exploding 1,500 separate charges of dynamite, distributed among fifteen stations, each about 200 yards apart; the explosions taking place at intervals of a few minutes, from 2 p.m. and from 4.39 to 8 p.m. heavy showers of rain fell, the total quantity amounting to 0'44 of an inch; this seems a rather small quantity as the result of the explosion of 4,500 lbs. of dynamite.—See the "Daily Telegraph" of 29th September, 1913.

CHANGE IN SYSTEM OF MEASUREMENTS.—Beginning in May, 1914 the Meteorological Office introduced the new International System of measurements of barometric pressure, temperature, rainfall, windforce, etc., but as it will require a considerable time to familiarise the public with the new system the Observers have considered it better to retain the old system in the preparation of this Report. We will simply state here that under the new system instead of in inches, barometric pressures are read in "Baromils" and reduced to the standard temperature, mean-sea level and gravity at latitude 45, in Millibars which are the same as baramils only under different conditions. Standard air pressure at mean-sea level instead of being taken as 30, or more correctly 29'92 inches, is now reckoned as being equal to 1013'2 millibars. A full description of the Baromil system is contained in a paper by Ernest Gold, M.A., F.R. Met. Soc., which was read at a meeting of the R. Met. Soc. on the 20th of May, 1914 and printed in the Society's Quarterly Journal of July, 1914. Rainfall is now measured in Millimetres instead of inches and wind velocity in Metres-persecond instead of miles-per-hour.

The change in the measurement of temperature from the scales in ordinary use to what are known as "Absolute" degrees is based on a physical fact and an assumption. The fact is that if the temperature of a gas be increased by 273 degrees of the Centigrade scale, the original volume of that gas will be doubled. The assumption is that inversely, should the original temperature of the gas be lowered by 273 degrees, its volume will become 0: a *Reductio ad Absurdum* perhaps, but strictly logical.

On the "Absolute" scale the freezing point of water becomes 273 and the boiling point 373 degrees.

A. G. THOMPSON, C.E., F.R.Met.Soc.H. C. L. MORRIS, M.D., F.R.Met.Soc.

	Air	Pressu	re at	9 a.r	n.						Nin	d.			
1914.	Barometer reduced 320 and Mean-Sea bred + gravity at lat, 450	Difference from Average of 16 years 1898-1913	Highest Reading.	Date.	Lowest Reading.	Date.	Number of times observed to be blowing from								
	Baron to 320 d	Diffa Arerag					х.	N.E.	ε.	8.E.	8.	s. w.	w.	N.W.	
January.	30.193	+ .108	30-610	lst	29.726	6th	0	13	1	0	0	7	4	6	0
February.	29-804	143	30-225	27th	28.678	22nd	1	0	2	2	5	16	2	0	0
March.	29-671	- ·210	30-281	31st	28.598	20th	1	0	1	0	3	14	6	6	0
April.	30·109	+ •196	30-581	26th	29-492	7th	0	4	10	0	1	9	4	2	0
May.	30.120	+ •166	30-405	20th	29.556	7th	1	5	5	4	1	8	5	2	0
June.	30-049	+ -049	30.366	26th	29-590	9th	1	8	2	3	0	11	2	3	0
July.	29.909	- •117	30-213	9th	29-551	20th	1	1	4	1	3	9	7	5	0
August.	30.045	+ .029	30.350	llth	29.680	2nd	1	4	3	3	3	11	2	2	2
September.	30.109	+ .022	30-459	30th	29.558	17th	5	2	8	2	2	5	5	1	0
October.	30.024	+ ·105	30-385	5th	29.338	31st	1	9	7	2	0	2	4	6	0
November.	29.916	- 033	30-620	18th	29-259	15th	3	1	5	2	1	9	4	5	0
December.	29-667	267	30.312	25th	28.872	14th	0	3	2	2	1	15	4	4	0
Average for the year.	29-968	003				Totals.	15	50	50	21	20	116	49	42	2

TABLE I.

1	
-	
-	
÷	
E	
2	
-	
-	

		_				_	_	_	_		_			_
Average for the year.	December.	November.	October.	September.	August.	July.	June,	May.	April.	March.	February.	January.	1914.	
56-9	48:0	21-2	9.89	61-9	69.1	8-99	8.09	59.8	56-7	49.8	48.9	• 43•0	Mean Maximum	Aver
45+6	40-1	42.1	47-0	51-9	56.1	55.7	51-3	46-7	43.5	39-2	40.7	33-3	Mean Minimum	age.
51-3	44-0	46.8	52-8	58-4	62.6	61-3	58.5	58-2	50-1	41.5	44.8	38.2	Average Mean.	Temp
+ 0-9	+0.8	+0.8	+0.1	+0.6	+1-2	-0-1	+1.2	+.0.7	+ 3.3	+1.7	+3-9	-3.0	Difference from acerage of 16 years 1838-1913	orat
11-3	7-9	9-4	11-6	13-0	13-0	11-1	14-5	13-1	13-2	10-6	8-2	9.7	Mean Range.	ure in
	21-0 ,, 6th	22-9 " 15th	22.7 " 9th	20.8 " 23nl	20-3 ,, 30th	17-6 " 10th	27-2 ,, 4th	25.4 " 28th	22-4 ,, 20th	18.6 ,, 22nd	20-4 ,, 27th	o 18-8 on 8th	Greatest range from min. to max.	Shade o
	53-9 ., 2nd	59-0 ., 4th	64.0 " 3nd	73-6 ., 3rd	75-6 ., 13th	74-3 ., 11th	76.6 " 13th	72.6 ,, 18th	69.8 " 20th	57.5 ., 6th	52.6 ,, 27th	o 52.5 on 9th	Temperature. Dute.	Average Temperature in Shade and Subsoil.
	30-1 .,	29-7 .,	37-5	41-0	19-8	46.8	45-8 ,,	36-8 ,,	35-8 .,	31.0	31-4	0 23-7 on	Temperature.	
	25th	21st	28th	30th	20th	4th	fth	26th	26th	lith	28th	23nd	Date.	
Average 105.9 of 6 mos :	71-0	8-5-9	105*5	119.8	125-1	125-0						0	Mean.	Temp By Bi
	95 "	112 ,,	123 ,,	130 .,	143	134 on 15th &						0	Highest.	Transervature in By Black-bulb th
	2nd & 3rd	6th	4th	1.5th	25th	15th & 16th							Date.	Traperature in Sumshine. By Black-bulb thermometer.
40-0	34.9	36-1	40-4	44-5	50-1	48.2	46.0	40.4	37-4	+34-5	36-7	0°4	Mean minimum on Grass.	1
	23-1 ,	25-0 ,,	31.6 "	32.7 .,	38-3 .	38-9 ,	35-9 .,	29-1	25-3 .	23-7 1	25-9 ,	0 17:9 on	Lowest on Grass	
	, 30th	, 17th & 24th	, 28th	, 23nd	, 11th	ath		. 25th	. 27th	23rd	28th	n 23rd	Date.	
Total 15	0	10	0	0	0	0	0	0	0	0	0	13	No. of times 30 ⁴ and under is serven registered.	1800
86	9	10	0	0	0	0	0	15	+	9	-1	17	Do. on Grass.	
52-2	49-7	53-2	56-0	58-7	58-5	57-5	54-1	50-7	48.0	8-81	46-2	47.0	Average Temper- ature 4-ft, below Gram at 9 a.m.	
Total Total 3797-4 399-9	120-9	204-1	338-9	487-0	632-0	579-4	497-2	361-4	275-6	140-0	112-5	48.4	Above 42° Day d	Accent
Total 399-9	58.4	2.20	1.0	1.5	0	0	0	89-4	6-3	59-1	36-8	176-7	there Below 42° 42° Juy d'egrees.	Accountiated heat.
A CONTRACTOR														1000000

"Average of 30 days.

	1-2-10-1-	Hum	idity.			R	tainfall.		
	Temper	rage ature at n. of	Vapsur	iomidity.	Monthly	v from 16 years 913.	Greatest Fall in	in days of . 005 inch.	days of more.
1914. ·	Dry Bulb.	Wet Bulò.	pressure.	Relative Humidity. Saturation=100.	Totals.	Difference from Average of 16 years 1838-1913.	24 hours,	Number of rain days of not less than -005 inch.	Number of days of •04 inch or more.
	•	•	Inch.	%	Ins.	Ins.	Ins. Date.		
January	87-9	36-6	0.202	89	0-515	- 1.80	0.15 on 29th	10	6
February	45-0	44-0	-275	92	3-665	+ 1.68	0.57 ,, 8th	20	15
March	45-4	44-2	-275	90	4-465	+ 2.28	0-66 " 19th	24	19
April	52.6	49-2	·308	78	1.605	+ 0.04	0·42 ,, 30th	12	9
May	55-1	50-7	-317	73	1-245	- 0.44	0-37 " 11th	10	9
June	60-4	55-7	.382	72	1-215	- 0.61	0.78 ,, 23rd	9	6
July	63-0	59-0	•443	77	1.882	+ 0.26	0.66 ,, 12th	14	7
August	64-3	60-8	·480	80	1.223	- 1.04	0-44 ,, 15th	10	7
September	60+6	56-4	-399	75	1-290	- 0.42	0.41 ., 12th	8	8
October	54-2	52.0	•358	85	2.465	- 1.10	0.61 ,, 14th	17	10
November	47-0	46.3	-305	94	3.345*	+ 0.31	0.75 ,, 15th	24	13
December	44-3	43.1	-264	90	8-030	+ 5*27	1·19 ,, 9th	27	21
Year's Average. Totals.	52-5	49.8	0.334	83	30.95	+ 5.01		*185	130

* 2 days of '005 each only dew.

	ГА	B	L	E	I	V	
--	----	---	---	---	---	---	--

					R	AINFA	ILL.						
		Albert	nor. Road.			Felj	pham.			Lie	lsey.		Good- wood,
1914.	Zotal rain.	Number of rain days of -01 or more.	Greatest fall.	Date.	Total vain.	Number of rain days of -01 or more.	Greatest fall.	Date.	Total Rain.	Number of vain days of -01 or more.	Greatest fail.	Date.	Total rain.
January.	Ins 0.54	19	Ins. 0-13	29th	Ins. 0°44	10	Ins. 0.12	29th	Ins. 0.52	9	Ins. 0.16	29th	Ins. 0.77
February.	3.48	18	-53	Sth	3.24	17	-50	Sth	4.16	15	•65	8th	5.11
March.	4.46	26	•69	19th	4.01	22	-72	19th	4.79	23	•76	19th	5.63
April.	1.68	11	-47	30th	1.47	11	-42	30th	1.62	10	-39	30th	2.34
May.	-97	10	-29	Srd	-80	9	-26	3rd	·88	8	-28	lst	1.49
June.	1.30	8	•73	23rd	1.28	8	·84	23rd	1.19	8	-73	23rd	1.85
July.	1.89	13	•66	12th	1.60	13	•52	12th	1.75	16	·60	- 12th	2.42
August.	1.20	10	•44	14th	1-29	11	•47	15th	1.59	11	-62	15th	1.95
September.	1.43	8	•45	12th	1.27	8	•44	12th	1.45	7	.42	J2th	2.02
October.	2.52	14	•60	14th	2.46	13	•57	14th	2.49	13	•57	28th	2.94
November.	3-49	17	•77	30th	3-27	18	-82	18th	3.61	17	.85	15th	3.97
December.	8+30	27	1.27	9th	7-92	23	1.13	9th	9.16	24	1.48	9th	11.08
Totals.	31-26	174			29.05	163			33·21	161			41.57

		Brig	ht Su	nshi	ne.			
	Totals.	from 6 years 13.	ef. mt.	of Days.	Brigh		Per centage of possible amount.	
1914.	Hours.	H Difference from Accorage of 16 year 1898-1913.	Per centage of possible amount.	Number 9 Sum-recorded	Date.	Hours.		
January.	57-1	- 13-1	°/o 21.8	20	23rd	6.5	0/0 74-7	
February.	114-4	+ 20.0	41-0	23	27th	9-8	91.6	
March.	115-3	- 25.7	31-4	25	31st	10.3	80.4	
April.	237-4	+ 47.1	57.5	29	19th	12.8	91.4	
May.	226-6	- 3.0	47-3	31	21st	14.3	91-0	
June.	287.2	+ 63-8	58-5	29	29th and 30th	14.8	90-3	
July.	205-0	- 40.0	41-5	30	4th	15.5	95.0	
August.	237-9	+ 9.5	53.1	28	11th	14.0	95-2	
September.	228.3	+ 41.1	60-4	30	2nd	12:3	91.8	
October.	112-1	- 8.9	33-9	27	7th	8-7	77-7	
November.	105-8	+ 23.9	40.0	23	18th	8.0	90-9	
December.	54.9	- 0.4	22.2	23	29th	5.6	70-8	
Totals.	1982-0	+ 114.4	44.5	318	-			

TABLE V