

I believe that weather and climate had and still do have much to do with the prevalence and character of contagious diseases, in spite of the added mass effect of increased population and crowding, but our knowledge needs enlargement and consolidation.—*John R. Weeks.*

DISINFECTING ACTION OF SUN'S RAYS ON TUBERCLE BACILLI.

[Reprinted from *Schweizerische medizinische Wochenschrift*, Basel, Dec. 2, 1920, 50: No. 49. Reviewed in *Journal A. M. A.*, Jan. 29, 1921, 76: No. 5.]

Bergen reports as the results of his extensive tests at Leysin that direct exposure of virulent tubercle bacilli to the sunlight, at an altitude of 1,360 meters, rendered them innocuous when injected into the peritoneum of guinea pigs after an exposure of half an hour during the summer. An hour's exposure was required for this during the spring and fall, and a little longer during the winter. His research has further convinced him, he says, that the share of ultraviolet rays in this action of the sunlight has been much overestimated.

INFLUENCE OF TEMPERATURE ON THE NUMBER OF DEATHS FROM INFANTILE DIARRHEA AT PARIS.

By LOUIS BESSON.

[Abstracted from *Comptes Rendus*, Paris Acad., Feb. 14, 1921, pp. 401-404.]

It is well known that infantile diarrhea is increasingly fatal with rise of temperature in summer. This paper gives a quantitative determination of that relation, based upon the data given in the *Bulletin hebdomadaire de Statistique municipale* of Paris. The meteorological data are those recorded by the Montsouris observatory. It was found that the effect of temperature begins to show with a mean temperature of 16.5° C. Below that temperature there is no apparent relation, but above, the

number of deaths increases rapidly. Eliminating the deaths which would occur without the influence of temperature, the author gives the effect of mean temperatures 1°, 3°, 5°, 7°, and 9° above 16.5° and finds the number of deaths per hundred corresponding to be 5, 11, 20, 41, and 62, respectively. He deduces mathematical expressions by means of which the number of deaths can be calculated, and the figures calculated corresponding to those just given are 3, 10, 21, 38, and 63, respectively. Expressions are given for the calculation of the number of deaths for any week. Grouping by years, the number of deaths for a 10-year period were calculated with an error of about 1 per cent. Other meteorological elements were tried with a view to discovering other relations, but the results were negative, indicating that temperature is the only element having a direct effect on mortality from this disease.—*C. L. M.*

551.506 (08) 265.2 EXCHANGE OF WIRELESS WEATHER REPORTS BY VESSELS.

The Weather Bureau recently received from Capt. P. W. Trott of the British tank S. S. *Tascalusa*, a weather report covering the voyage of that vessel from Hong-kong to San Francisco, March 6-30, 1921. Embodied therein were weather reports received by wireless from other vessels.

This report is of especial interest as showing the possibilities of the exchange of weather observations by vessels at sea, from which deductions can be made as to the location and movement of storm centers and the character of weather to follow.

It is not stated whether any attempt was made to chart the observations received by the *Tascalusa*.

The report is published herewith in the hope that it will serve to stimulate the officers of other ships to collect and make use of such information.—*F. G. T.*

British S. S. Tascalusa, weather report North Pacific, Mar. 6 to 30, Hongkong to San Francisco; also weather reports by wireless from other vessels.

Date.	App. T.	Name of ship.	Position.		Wind direction.	F.	Current set.	Direction (hours).	Barometer.	Temperature (air F.).	Remarks.
			Latitude	Longitude.							
Mar. 6	Noon	Tascalusa	N. 22½	E. 114½	ene.	4	sws.	1½	30.30	62	Overcast and dull.
7	do.	do.	(?)	(?)	ne.	6			30.30	58	Rough, northerly sea; dull.
8	do.	do.	25½	121	ne.	5			30.25	63	Rough, cloudy.
9	do.	do.	27½	124½	nne.	5			30.33	64	Rough, clear.
10	do.	do.	30	129	e.	2	ene.	½	30.28	67	Fine, clear weather.
11	do.	do.	32½	133½	sse.	6	ene.	1½	30.20	62	Rough sea, overcast.
11	8 p. m.	Broad Arrow	37½	133½	sws.	2	ene.	1½	30.10	55	Northerly swell, cloudy.
12	Noon	Tascalusa	34½	138½	sws.	6			29.82	62	Continuous rain.
12	8 p. m.	Broad Arrow	40	138	ne.	5			29.64	40	Rough sea, overcast.
13	Noon	Tascalusa	35½	143	nw.	2			29.65	62	Heavy confused seas.
13	8 p. m.	Broad Arrow	42	141½	s.	2			29.57	38	Easterly swell.
14	Noon	Tascalusa	36½	148	nw.	3			29.72	48	Heavy confused sea.
14	8 p. m.	West Cajoot	36	146½	nw.	3			29.56	47	Clear.
14	do.	Broad Arrow	41½	146½	w.	6			29.50	35	Moderate sea, clear.
15	Noon	Tascalusa	37½	153½	sw.	4	ne.	1	29.45	53	Moderate sea, cloudy.
15	8 p. m.	West Cajoot	37½	153½	sw.	7			29.92	52	High sea; squally.
15	12 p. m.	Tascalusa	35	156	nw.	12			29.03	50	Terrific squalls; thunder and lightning.
16	8 a. m.	do.	38	157	wsww.	8			29.44	46	Heavy squalls.
16	do.	Broad Arrow	41½	152½	w.	8			29.14	47	Heavy snow squalls.
16	Noon	Tascalusa	38	158½	w.	8			29.50	47	Frequent hail squalls.
16	8 p. m.	Broad Arrow	42	158	w.	9			29.04	37	Hail and snow squalls.
16	do.	Eldridge	45½	163½	w.	10			28.63	33	Do.
16	do.	Kigo	38½	150	nw.	7			29.82	42	Do.
16	do.	S. S.	38½	179½	se.	7			29.62	39	Rough sea; bar. falling.
17	Noon	Tascalusa	38	163½	w.	7			29.61	42	Clear and squally.
17	8 p. m.	West Ivan	49	* 177½	s.	4			29.56	42	Do.
17	do.	Algonquin	47	161	se.	3			29.85	42	Fine and clear; northeasterly swell.
17	do.	Alaska Maru	41½	179½	wnw.	6			29.58	53	Clear.
17	do.	Broad Arrow	42½	162½	w.	8			29.18	36	Squally.
17	do.	Eldridge	47	168½	SE.	5			28.57	38	O. R., rough sea.
17	do.	SS	40	155	nw.	5			29.77	40	O. R., heavy northwest seas.
18	do.	Tascalusa	38	171	w.	6			29.80	51	Weather moderating.
18	do.	SS	41	160	nw.	3			29.75	38	Overcast.
18	do.	do.	23½	169½	wsww.	1			29.82	76	Westerly swell.
18	do.	do.	48	174½	sw.	7			28.95	39	Wind increasing, barometer rising.
18	do.	do.	49	172	w.	4			28.92	38	Moderate cross sea.
18	do.	do.	43	168	w.	4			29.51	37	Moderate sea, cloudy.
18	do.	do.	39½	172	wnw.	4			29.58	45	Rain squalls.
19	do.	Tascalusa	38	176	sse.	7			29.62	57	Heavy rain; O. confused sea.
19	do.	SS	43½	173½	w.	1			29.56	42	O., westerly sea.
19	Noon	do.	34	170	s.	5			29.81	57	O. R., rough sea.
20	8 p. m.	Tascalusa	38½	176½	sse.	7			29.53	56	Heavy rain, confused sea.
20	do.	SS	47	* 176	se.	4			29.79	57	Squally, moderate sea.
20	do.	do.	31½	168½	s.	3			29.79	36	Foggy.
20	do.	do.	44	171	nw.	2			29.79	42	Cloudy, northwest sea.
20	do.	do.	44	* 179½	w.	3			29.72	42	Do.
20	do.	Tascalusa	38½	175	nw.	6			30.08	50	Wind moderate; p. m., F. G.
20	do.	SS	40	169½	w.	7			29.69	54	Heavy southwest sea.
20	do.	do.	44½	175½	wnw.	10			29.49	38	Heavy sea, O. C.
20	do.	do.	31½	172½	wn.	4			30.18	38	Smooth sea.
20	do.	do.	44½	176½	nw.	6			30.12	38	Clear moderate northwest sea.
21	do.	Tascalusa	38½	170	nw.	5			30.55	55	High northwest swell; Clear.
21	do.	SS	31	176½	e.	3			30.43	58	Do.
21	do.	do.	44½	170	wnw.	8			30.27	41	Rough sea.
21	do.	do.	44½	177½	sw.	3			30.42	46	Moderate southwest sea.
21	do.	do.	50	160½	ese.	2			29.22	...	Barometer rising.
22	do.	Tascalusa	38½	165	nw.	6			30.55	52	Heavy northerly swell.
22	do.	SS	41½	165	nw.	6			30.49	43	Heavy, clear.
23	do.	Tascalusa	38½	160	ne.	4			30.48	51	Clear.
23	do.	SS	39½	151	ne.	5			30.19	48	Rain squalls.
23	do.	do.	45½	159	ne.	1			30.64	46	Smooth sea.
23	do.	do.	44½	166	var.	...			30.63	40	O. F.
24	do.	Tascalusa	38½	156	ene.	5			30.25	53	High northeast swell.
24	do.	SS	39½	146	ene.	6			30.10	51	Squally.
24	do.	do.	44½	153½	e.	3			30.59	45	Easterly swell.
24	do.	do.	50	142	wsww.	4			30.52	42	O. M.
25	do.	Tascalusa	38½	152	se.	3			30.21	57	High easterly swell.
25	do.	SS	43½	149	ese.	4			30.39	48	Dense fog, head swell.
25	do.	do.	45	154	ese.	4			30.29	47	O. F.
25	do.	do.	49	137	wnw.	3			30.43	46	
25	do.	do.	49½	134½	wnw.	3			30.55	...	
26	do.	Tascalusa	38½	148½	se.	6			30.07	58	Rain; high southerly sea.
26	do.	SS	43½	149	sse.	5			30.17	...	Rain; moderate sea.
26	do.	do.	43	144	se.	4			30.40	50	Overcast.
26	do.	do.	45	148	sse.	5			30.23	47	O. M. F.
27	do.	Tascalusa	38½	145	se.	4			30.32	56	O. D. M.
27	do.	SS	44½	142½	s.	3			30.34	38	O. D. M., southerly swell.
28	do.	Tascalusa	38½	141	e.	3			30.45	54	C., smooth sea.
28	do.	SS	41	133	ne.	4			30.20	51	Do.
28	do.	do.	43	137	ne.	3			30.58	47	O., smooth sea.
29	do.	Tascalusa	38½	136	e.	3			30.36	52	O. C.
29	do.	SS	41½	131½	nne.	4			30.38	47	O. C.
30	do.	Tascalusa	38	130	nne.	4	s.	1½	30.20	52	Cloudy, northeasterly swell.

½ Minute.

* Formosa, Ch.

½ West.

NOTE.—Where only the entry "SS." occurs, the name of the reporting vessel is not given (Ed.).