NOTES ON HEALTH RESORTS.

Scheveningen.¹—This well-known seaside resort of Holland differs from Ostend and many other resorts on the North Sea by having fine parks with shady walks in its immediate neighbourhood. Scheveningen is only a short distance from the Hague, with which it is connected by steam tramways, and the promenades on the strand and dunes may be varied by excursions to the Hague and walks in the beautiful "Scheveningsche Boschjes" and the park of the Hague. In his little book, Dr. W. Francken discusses the bracing and health-giving influence of a stay at the seaside, and Scheveningen with its comfortable accommodation deserves its popularity amongst marine reports. During the season of 1898, the mean midday temperatures of the sea and the air were found to be respectively 61.7° F. and 63.5° for June, 63.5° and 61.7° for July, 67.1° and 69.8° for August, 66.2° and 67.1° for September. For delicate persons warm baths of sea water may be obtained at the hydrotherapeutic establishment.

*The Spas of Central Wales*² and neighbouring localities are well described in a recently published guide, in which medical notes on Llandrindod Wells, Llangammarch Wells, and Llanwrtyd Wells are included, those concerning Llandrindod being contributed by Dr. Morgan Evans, one of the resident medical men. The greatest portion of the book is naturally devoted to an account of this spa, which is now so well known in Great Britain, and much interesting antiquarian information and accounts of walks and excursions in the neighbourhood are given. Altogether this profusely illustrated little work will be found useful to patients and ordinary tourists alike. Much trouble has been taken in its compilation, and it is published at an exceedingly moderate price.

Folkestone.³—The bracing and invigorating climate of Folkestone, together with the attention paid to the place from a medical point of view, have rendered it a very popular seaside resort, and the growth of the town in recent years has been enormous. "The air is never stagnant," Dr. Larking truly remarks, "at Folkestone; there is always a breeze," and even on the hottest days the place is not close. Dr. Larking does not claim for Folkestone that it is a place where any particular disease is cured or relieved by any special therapeutic action, but he claims: (1) Marine influences; (2) a higher mean temperature than at many other seaside resorts; (3) a small range of temperature; (4) plenty of sunshine; (5) moderately humid climate, though not relaxing; (6) exposure to south-west and westerly winds; and (7) that the western end of the town is modern and the soil porous. Dr. Larking discusses shortly the influence of marine climates such as Folkestone in various morbid conditions.

Las Vegas Hot Springs,⁴ in New Mexico, U.S.A., is situated on the Gallinas River, at the entrance of a cañon, surrounded by a horseshoe formation of the foothills of the Rocky Mountains. The latitude is 35° 36', corresponding to Northern Africa and the Sahara Desert; yet the altitude (6,767 feet) so modifies the temperature that oppressive weather is unknown. The summers are delightfully cool. Blankets are required all the year round, but owing to the southerly latitude continued extremes of cold do not occur in winter. The annual rainfall is said to be only 12.7 inches, the relative humidity 44, the mean temperature 59.07° F., and the average number is 326 days of sunshine. Dr. Bailey says it is possible to sleep in the open air throughout the year. Patients are individually advised as to their treatment, including exercise, diet, and the minutest details of habits and life. The recognised methods of treatment are employed in tuberculosis and other diseases. The hottest of the hot springs in the neighbourhood has a temperature of 144° F. The waters of the hot springs (which might be classed in the simple thermal group, like Teplitz, Gastein, etc., in Europe) are utilised externally and

internally in treatment. According to the report of the Government Weather Bureau Station for the year ending May 21st, 1899, the mean relative humidity for the year has been 40.82; the lowest for any month was 21.55 for May, and the highest 73.45 for August. The total precipitation, including melted snow, was 15.87 for the entire year; of this amount, 9 inches fell during the "rainy season" (comprising June and July), and none fell during the month of January. The number of clear days was 261. The mean temperature for the year was 49.11° F., that for the summer months being 66.64° F., and for three winter months 29.99° F. On only eight days in the year did the temperature exceed 90° F., and these days were in the months of June and July. On five occasions only did the thermometer fall below zero, and each of these was at nighttime.

AN OUTBREAK OF FOOD POISONING AT
NUNEATON.

BY EDWARD NOËL NASON, B.A., M.D.CAMB.,
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ON April 29th and 30th a considerable number of persons in the neighbourhood of Nuneaton were suddenly taken ill with symptoms which, while varying in severity, were almost identical in character. I have been able to obtain histories of 42 cases, though I believe this number by no means includes all the persons affected. The most marked symptoms were abdominal pain, vomiting, and purging with more or less collapse, muscular cramps or pains, while chills and heats, amounting in some cases to a slight rigor, were also not uncommon. It was soon found that all the persons affected in this way had eaten on the evening of April 28th or morning of April 29th what is commonly known as "chitterlings" obtained from a certain shop in the town. Chitterlings are the prepared entrails of the pig. The butcher from whom these chitterlings were bought was most anxious to assist me in investigating the cause of the outbreak, and gave me all the information he could. They came from some 16 or 17 pigs killed on April 25th, 26th, and 27th, and were prepared in precisely the same way as on other occasions, which was as follows:

After the intestines had been removed they were turned inside out for the purpose of more efficient cleansing, and were then thoroughly washed in a tub and then in a stream of water from the tap until quite clean. The water used was that supplied by the Tamworth Waterworks Company, and is excellent in quality. They were then placed in a large tub of clean water, changed twice a day, but without the addition of any preservative. This was also done with the intestines from the pigs killed on the 26th and 27th, and on the afternoon of the latter day they were all scalded together and re-washed, and then boiled for three hours. They were then placed in a tub of clean cold water, through which a stream of water from the tap was allowed to run all night. Next morning (April 28th) they were taken out, allowed to drain on a clean board, and when free from excess of moisture were divided into two portions. One-third was sold in Tamworth, and although I have made careful inquiries, I cannot find that they caused any illness. The remaining two-thirds were packed in a hamper (having above them also in the hamper some butter in hermetically sealed packages), and were conveyed by rail to Nuneaton, a distance of some 15 miles. They were all sold the same evening except 1½ pound, which was sold next morning, April 29th. The weather at the time was exceptionally cold for the time of the year.

Most of the food purchased on April 28th was eaten the same evening between 6 and 10 P.M. The premises where the pigs were killed and all the appliances used were reported by the sanitary inspector to be clean and exceptionally well kept.

In all the cases which appear in the table the food was eaten cold without being recooked from the time it was boiled on the evening of April 27th. I have not been able to find any instance in which the food failed to produce ill-effects where it was not recooked, but I have traced five instances in which the food was reboiled before being eaten, and in no one of these cases were there any ill-effects. I have not been able to

¹ *Scheveningen, sa Plage, ses Bains*, par le Dr. W. Francken. [Scheveningen, its Shore and its Baths, by Dr. W. Francken.] La Haye: Belinfante Frères, Pp. 62. With photographic illustrations.

² *Illustrated Official Guide to Llandrindod Wells, Llangammarch Wells, Llanwrtyd Wells, etc.* London: Ward, Lock and Co. Pp. 98. With map of the district, plan of Llandrindod Wells, and forty illustrations. Price 1s.

³ *Notes on Folkestone.* By Dr. A. E. Larking. London: J. and A. Churchill. 1899. Pp. 79. With view and two plans.

⁴ Information from Dr. W. Curtiss Bailey, Medical Director.

No.	Sex.	Age.	Amount Eaten.	Hour and Date when Eaten.	Number of Hours before Onset of Illness.	Symptoms.
1	F	24	3 OZS.	10 P.M., April 28th.	26 hours	Pain at first epigastric then abdominal, violent purging, chills and heats, vomiting, cold sweats. Was in bed four days; ill for a week or ten days.
2	F	2	A taste	" "	—	This was the child of No. 1, who stated that the child was taken ill exactly as she herself was and about the same time.
3	M	53	4 OZS.	6.30 P.M., "	5½ hours	This man was on night work, and took a second helping of the food at about 12.30 A.M., when he began at once to have severe abdominal pain, retching but no vomiting, with purging to the extent of 100 times in the twenty-four hours following. The abdominal pain was severe and constant, and he was in bed a week.
4	F	31	2 OZS.	" "	10 hours	Severe abdominal pain and constant purging. In bed a week.
5	M	17	4 OZS.	" "	19 hours	Severe abdominal pain set in quite suddenly; no vomiting but constant purging for two days. In bed four days.
6	F	15	Very small piece	" "	19 hours	Sister of No. 5. Had exactly the same symptoms but less severe. She was in bed three days. She thought the food tasted peculiar.
7	F	33	4 OZS.	9.30 P.M., "	32 hours	Abdominal pain came on more gradually but soon became very severe, with vomiting and cold sweats. There was great abdominal distension and sore tenderness; no fever after the first two days. At first there was severe purging, then constipation for forty-eight hours. This woman was ill for about a fortnight, and her condition at one time gave rise to much anxiety.
8	M	38	2 OZS.	" "	46 hours	Abdominal pain and much purging, severe headache and aching in limbs, constant sickness; ill ten days.
9	M	24	"	" "	40 hours	Abdominal pain, purging, but less severe; much sickness. Ill four or five days.
10	M	23	4 OZS.	8 A.M., April 29th	39 hours	Very severe abdominal pain, with purging and vomiting, chills and heats, and profuse sweats. Six days in bed; lost 14 lbs.
11	M	20	A taste	8.30 A.M., "	48 hours	The same as in Case 10, only less severe.
12	M	23	"	8 A.M., "	"	Acute abdominal pain, vomiting, and purging.
13	F	42	3 OZS.	10 P.M., April 28th	"	Acute abdominal pain with syncope, then headache, heats, and chills, constant vomiting, and purging. Very ill for six days; slow convalescence.
14	F	17	"	" "	17 hours	Quite suddenly while walking out her legs failed her and she had to be helped home.
15	M	47	"	" "	From	Abdominal pain, purging, and vomiting quickly followed. Ill for several days.
16	M	19	"	" "	24 hours	All these were members of one family, and were all taken with similar symptoms namely, abdominal pain, purging, vomiting, with some collapse, at times varying from twenty-four to forty-eight hours after taking the food, and were ill for about a week.
17	F	18	"	" "	to	
18	F	20	"	" "	48 hours	
19	F	49	2 OZS.	8.30 P.M., "	24 hours	
20	—	—	—	—	—	Abdominal pain, excessive purging (200 times in the week), cold sweats, vomiting. This patient thought the chitterlings tasted "bitter and earthy."
21	—	—	—	—	—	These five were all members of the same family as No. 19, and all suffered in the same way, though not so severely, after about twenty-four hours interval. Two others in this family did not eat of the chitterlings and had no illness.
22	—	—	—	—	—	
23	—	—	—	—	—	
24	—	—	—	—	—	
25	M	24	Small piece	" "	24 hours	This man had a small piece sent him by the family just mentioned. His first symptoms were pain in the legs, then in the abdomen, followed by purging, heats and chills and cold sweats, and some vomiting. He was ill a week.
26	F	26	"	" "	—	Wife of No. 25. Her symptoms were similar to those of her husband.
27	F	36	2 OZS.	9 P.M., "	36 hours	Severe abdominal pain, some purging; pain in limbs, head, and back; no vomiting, but marked chills and sweats. Ill for nine days.
28	M	39	4 OZS.	" "	12 hours	Husband of No. 27. Severe abdominal pain, excessive purging, sweats and chills, vomiting. Ill seven days.
29	M	14	—	—	—	The children and two lodgers of the couple just mentioned were all taken with the same symptoms, though some less severely than others, about twenty-four hours after taking the food.
30	F	12	—	—	—	
31	F	10	—	—	—	
32	M	23	—	—	—	
33	M	25	—	—	—	This was another family in which all partook together of the chitterlings and all were taken ill. The mother's symptoms were the most severe, which were gastric pain, then abdominal pain, with vomiting and purging, etc. She was ill seven days.
34	F	42	2 OZS.	" "	—	
35	M	41	—	—	—	
36	M	17	—	—	—	
37	F	10	—	—	—	Abdominal pain, purging, etc.
38	F	7	—	—	—	
39	M	14	Very small piece	7.30 P.M., "	21 hours	
40	F	29	4 OZS.	9 P.M., "	24 hours	
41	M	40	"	5 A.M., April 29th	24 hours	Dizziness and vomiting, followed by gastric and then by abdominal pain. Purging severe, lasting four days.
42	M	21	6 OZS.	6.30 A.M., "	28 hours	Sickness, severe abdominal pain, and purging.
						Sickness, severe abdominal pain, and purging. Ill for ten days.

find that any of the pigs from which the chitterlings were taken were diseased, but about this I cannot of course speak positively. On referring to the table it will be seen that the period which elapsed between the ingestion of the food and the onset of symptoms does not seem to be influenced by the amount taken, although the severity of the attack does. The food which was eaten early in the morning of April 29th seems to have produced rather more severe symptoms on the whole than that eaten the night before, but the interval of time before the onset of symptoms does not seem to have been lessened. There was no evidence of this illness having been conveyed from one person to another; those members of a family who did not eat the food escaped entirely. It seems probable that the chitterlings became infected (most likely with the bacillus enteritidis) immediately after their separation into two portions, and possibly from the hamper in which they were placed. This certainly gives a very short time for the development of the poisonous properties which they were found to possess; but no medium could be imagined more suitable for the growth and development of the

B. enteritidis than the gelatinous, unstable material of which the chitterlings consisted.

The two points of greatest interest in these cases seem to me to be the long interval before the onset of symptoms, during which interval the individuals were in their usual health, and the fact that re-cooking the food removed all its poisonous properties. Both these facts point very strongly to the symptoms being caused by the ingestion of living organisms, which subsequently developed and produced powerful toxins, and not to already-formed poisons of the nature of ptomaines.

Unfortunately, all the chitterlings which were responsible for the illness had disappeared before the trouble had been traced to them, and no bacteriological evidence was obtained, but I think, as in the Oldham cases so carefully studied by Dr. Durham,¹ we must conclude that in all probability the bacillus enteritidis was the organism to which the mischief should be attributed.

In conclusion, I must thank Mr. J. M. Ranby for his assistance in obtaining notes of many of the cases.

¹ BRITISH MEDICAL JOURNAL, December 17th, 1898.