

THE new story by "Pen Oliver" (Sir Henry Thompson) will bear the title of "All But: a Chronicle of Luxenford Life." It will contain twenty-one miniature illustrations by the author, and will be published almost immediately by Messrs. Kegan Paul and Co.

THE medical officer of health of Stourbridge has reported to his Sanitary Authority the existence of a very severe epidemic of measles, necessitating the closing for a time of the elementary and Sunday schools.

PROFESSOR FILEHNE, of Erlangen, has been nominated Professor of Pharmacology at Breslau. The clinical chair at the University of Erlangen has been apportioned between Professors Strümpell and Penzoldt.

DR. HENRY MACDSLEY is reported to be busy over a new volume of psychological research. It will bear the title "Natural Causes and Supernatural Seemings."

HEALTH OF THE NAVY.

THE Statistical Report on the Health of the Navy for the year 1884 shows the average force afloat, at home and abroad, to have been 43,000 officers and men. The cases of disease and injury among them were in the ratio of 1158, the deaths of 9·0, the number invalided of 49·34, and the mean daily sick of 51·61 per 1000. These ratios are all considerably higher than in the preceding year; the sick- and death-rates closely approximate the average of the last ten years, but there has been an increase in the proportion of invalids and of mean daily sick. The excess of sickness compared with 1883 has been chiefly from fevers and diseases of the digestive system, and in the deaths from fevers and injuries; the latter included 50 men drowned by the wreck of the *Wasp* on the Irish Coast. The following table shows the relative sickness and mortality of the different naval stations:—

station, all in different ships, but 3 of them terminated fatally. No cases of cholera occurred during the year. Thirteen out of the 45 deaths in this portion of the force were from wounds received in action among the men of the Naval Brigade employed in the Soudan, 3 at El Teb and 10 at Tamai; 9 of the latter were by spear and sword wounds, the others by gunshot. There were also 3 deaths from fractured skull by falls—2 from aloft, 1 into the hold. Next to the East Indies the China station had the highest proportion of cases, which, however, differed very little from the average of the last ten years, while the deaths were about 2 per 1000 under it. Diseases of the cellular tissue and cutaneous system, chiefly phlegmon, abscess, and ulcer, furnished one-fifth of the cases. Fever of the continued type was prevalent at Amoy and at Tamsui in Formosa. Ten cases of enteric fever were returned, 4 of them at Nagasaki and 2 at Hankow; the former were attributed to Japanese-made lemonade, partaken of while on leave on shore. Five cases of cholera occurred, 4 at Amoy and 1 at Shanghai, and 4 of them died; they are believed, like the enteric fever cases, to have been the result of drinking lemonade. "The exceedingly dangerous character of the aerated waters made in China and Japan ought to be constantly kept in view on the station, and their consumption prevented as much as possible."

The Mediterranean fleet had a higher ratio of cases than usual, chiefly due to fevers, but the deaths, exclusive of injuries, very closely approximated the average. The prevalence of fevers was attributed to the insanitary state of the harbour at Malta, to the turning up of the soil in the formation of a new dock, and the extensive drainage-works for the town of Valetta.

On the African station fevers were much above the average, but without any fatal case. The increase was due in a great measure to the occurrence of remittent fever on board the *Alecto*, at Akassa and Anamba creeks on the Niger, two very malarious localities.

The returns for the home station show a marked increase in the prevalence of syphilis and gonorrhoea; in most of the other classes of disease, there has been a decrease. The deaths were above the average, owing to the loss of 50 men in the *Wasp*. Excluding deaths from injuries, the ratio amounts only to 4·30 per 1000 of the strength. The returns afford important evidence of the value of isolation in infectious diseases: 34 cases of measles are returned, of which 23 occurred in the training-ships, generally in boys returning from leave, or contracted in the ports where the ships are

RATIO PER 1000 OF AVERAGE STRENGTH.

	Cases.	Deaths from		Invalided.	Mean sick.
		Disease.	Injury.		
Home ... ..	902	4·30	3·93	40·54	51·85
Mediterranean ... ..	1431	5·75	1·24	81·49	52·39
North America and West Indies ... ..	992	2·48	1·23	22·31	35·06
S.E. Coast of America ... ..	1073	4·87	—	24·39	31·14
Pacific ... ..	997	4·0	0·66	26·0	39·95
West Africa and Cape ... ..	1117	5·72	1·42	36·42	38·92
East Indies ... ..	1741	15·03	8·29	75·12	53·11
China ... ..	1541	5·40	2·40	20·12	50·05
Australia ... ..	1003	3·31	3·30	23·14	44·70
Irregular ... ..	1422	10·51	3·62	77·75	66·19
	1158	5·84	3·16	49·34	51·61

Omitting the "irregular force," the East Indian station furnished the highest proportion of cases, deaths, invalids, and mean sick, upwards of one-fourth of these having been due to fevers, which were nearly twice as prevalent, and caused more than twice as many deaths and thrice as many invalids, as on the average of the last ten years. The *Euryalus* had 61 cases of remittent fever, occurring chiefly at Massowah, and of these 8 died; the *Briton* had 88 cases at Bombay, and their occurrence was believed to be connected with the insanitary condition of the *Auckland*, in which the crew were hulked while their ship was in dock. The *Auckland* has since been condemned as unfit for further use as a receiving hulk, and has been withdrawn from the service. The *Osprey* had 78 cases of remittent fever while cruising off Zanzibar and off the coast of Madagascar, and the *Tourmaline* had 47 while employed in the same service. There were only 4 cases of enteric fever reported on this

stationed. "There was nothing in the form of an epidemic, the cases having been at once isolated, and effectual precautions taken against infection." In like manner with scarlet fever, of which 20 cases occurred, "each case appears to have been contracted singly during absence from the ship, and no secondary infection on board took place." There were 29 cases, and 8 deaths of enteric fever recorded; no case "could be ascribed to defective sanitation on board ship; nor was there any spread of the disease on board from secondary infection.....In almost every instance early removal from the ship for treatment in a hospital or sick quarters was resorted to."

The irregular force had very high ratios of sickness and mortality, considerably above the average of preceding years if the deaths from injuries are omitted. The excess of the cases was chiefly due to the prevalence of fever and of dysentery and diarrhoea among the men of the Naval Brigade

and the Royal Marine Battalion employed in the Soudan, and especially at Suakim. Five cases of enteric fever with two deaths occurred in the Naval Brigade among the men of the Nile expedition, and seventeen cases with nine deaths among the Royal Marines at Suakim. Remittent fever and diarrhoea were also very prevalent there. The deaths from fever amounted to 5.16 per 1000 of the strength, or upwards of one-third of the whole; and those by injuries to 3.61 per 1000, of which 1.20 were received in action. Of 21 deaths from injuries, 7 were caused by wounds received in action, 4 at El Feb and 3 at Tamai.

The strength of the Royal Marines at headquarters in England, not included in the general return, was 5060. The cases of sickness among them amounted to 1029 per 1000, the deaths to 3.35, the discharges by invaliding to 53.55, and the mean sick to 56.25. These are considerably lower than in 1883, but, except the deaths, they are all higher than in the force afloat employed on the home station.

## Public Health and Poor Law.

### LOCAL GOVERNMENT DEPARTMENT.

#### REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

*On the Pollution of the River Ure.*—Mr. Sweeting, who for some time past has been acting as a medical inspector to the Local Government Board, has submitted to that Board a very comprehensive report on the relation of the river Ure to the drainage and water-supply of Ripon and other places on its banks. The Ure rises on the northern borders of the North Riding of Yorkshire from the western slope of the great Shunnor Fell, by the influence of numerous streamlets which descend from the millstone grit of this mountainous region. It passes in its course through several sanitary districts, being joined by numerous streamlets of various size, and, passing through Ripon, flows on to Boroughbridge, just below which it is joined by the Swale and becomes the Ouse. The course of the river as it passes each inhabited place, and in so far as it relates to the different sanitary districts concerned, is given in much detail, and at each point where the river receives any sewage matter or other pollution, whether directly or indirectly, the local circumstances are fully entered into. From its source to its termination in the Ouse, it is directly polluted by twelve different places, the more important of the pollutions being at Masham, Ripon, and Boroughbridge. Other places pollute it more or less indirectly, and at one place the stream is made a receptacle for ashes. Ripon is the only populous town on the Ure which takes water directly from the river for drinking purposes, although local wells elsewhere—as, for example, at Boroughbridge—must almost of necessity be at times affected, as by the flooding of the river or its tributaries. Ripon lies below Masham, where a very substantial pollution of sewage is effected, and below three other places more or less implicated in the same way. As yet chemistry has not discovered any definite evidence that the water-supply of the city constitutes a real source of danger, but the relations of Ripon to the Ure must be regarded as serious in this respect. Ripon pours all its sewage into the river, and though the water-supply taken directly from the stream, more than one mile above the sewage outlet, does not appear at present to be suffering in any marked respect, yet the position of the intake is not free from objection; and there is always the danger of the entrance of specific particulate matter from places above Ripon. But this town is not the only place that is implicated in so far as the domestic water-supply is concerned. Ripon sends the sewage of nearly 8000 people into the Ure; Boroughbridge sends its sewage in; and fifteen miles below Boroughbridge, where the river has become the Ouse, York draws its supply from the latter river. It is not long since we had occasion to comment on an epidemic of enteric fever in York, reports on the prevalence having been prepared by Dr. Airy and Mr. North; and though there appeared good grounds for attributing the epidemic to other more obvious causes than the use of the Ouse water, yet the water-supply is not the less one that can only be regarded with suspicion. By the time the Ouse reaches York it has

received not only all the impurities of the Ure, but, in addition, those of the Swale, and the sum total is unquestionably considerable. The contamination is largely due to faecal matter, and hence numerous opportunities are afforded for the contamination of the water of the city by specific disease-elements. Whatever grounds of comfort the sanitary authorities of Ripon and York may find in the results of chemical analysis of their water-supplies, there remains the great fact that the sources of supply are largely contaminated by human excreta and other filth, and it behoves the sanitary authorities of both cities to consider earnestly how far they can regard such a water-service as a proper one for their inhabitants to consume. Mr. Sweeting's report, taking as it does a comprehensive glance of an important river basin in its bearing on the sanitary circumstances of the populations affected by it, has considerable local interest, and many of the questions he raises are also of wider than mere local concern.

*On Diphtheria in the Rural District of Erpingham.*—Dr. Gresswell, also one of the occasional inspectors of the Local Government Board, has presented to that Board another of a series of reports on diphtheria, the affected locality being Erpingham, in the north-east of Norfolk. There was a great epidemic of this disease in Erpingham in 1858, and fatal attacks have been off and on present there ever since; but in 1883 and 1884 there was a recrudescence, 28 diphtheria deaths being registered in addition to 4 from "croup," and a few others from allied throat affections. The population is now about 20,250, and the insanitary conditions discovered in the district raise a suspicion that it has undergone but little improvement during the twenty or thirty years since the first pestilential prevalence to the present date, and there seem grounds for believing that the persistence of diphtheria is intimately bound up with, if not directly traceable to, these insanitary conditions. One of the most interesting points discussed by Dr. Gresswell relates to the recurrence of diphtheria in particular individuals; and as to this, it is pointed out that an attack of the disease often appears to leave the tonsils in a condition in which they are, under the influence of cold and damp, particularly likely to put on a condition of activity and reproductiveness; and that the disease, dormant for a long time, is thus reproduced in an infective form. The poisons of syphilis, of ague, of relapsing fever, and perhaps of scarlet and typhoid fevers, are referred to as similarly causing recrudescences, and it is added that analogy furnished in the manifestations of cryptogamic protoplasm is in its favour. The conditions essential to this new life of diphtheria infection lying dormant in the individual are next discussed, and it is pointed out how certain damp, ill-ventilated, and mouldy dwellings may almost be regarded as "abodes" or "cultivating-grounds" for diphtheria. Whether these places supply the whole conditions requisite for maintenance of the material cause of diphtheria, or whether the persons themselves become, by reason of sustained habitation in such dwellings, exceptionally suitable "hosts" for the maintenance of the virus, is a matter on which Dr. Gresswell is not prepared as yet to express an opinion. The report is thoughtfully prepared, and it affords many highly suggestive hints which aim at explaining some of the most obscure points in connexion with the spread and recrudescence of diphtheria.

### VITAL STATISTICS.

#### HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6169 births and 3850 deaths were registered during the week ending January 30th. The annual death-rate in these towns, which had been equal to 23.8 and 22.4 per 1000 in the preceding two weeks, further declined last week to 22.1. During the first four weeks of the current quarter the death-rate in these towns averaged 22.7 per 1000, which was 1.9 below the mean rate in the corresponding periods of the ten years 1876-85. The lowest rates in these towns last week were 14.4 in Hull, 15.3 in Leicester, 15.9 in Derby, and 17.5 in Brighton. The rates in the other towns ranged upwards to 26.6 in Norwich and Plymouth, 29.6 in Blackburn, and 33.0 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the preceding four weeks from 497 to 407, further fell last week to 360; they included 168 from whooping-cough, 75 from measles, 31 from diarrhoea, 29 from scarlet fever, 28