

oxygen. The reaction, he remarks, by which the oxygen is evolved is no ordinary one, for the evolution is not constant or continuous. It is greatest in the sunlight and ceases often on a dark day, to commence again on a bright one, and the reaction goes on slowly in this way for months when it apparently ceases. If the water is renewed, however, the reaction starts again; in other words, a small amount of the scale would seem to be capable of oxygenating a large amount of water. When the receptacle contains a large amount of mineral water in contact with a layer of pan scale oxygen gas appears to be given off indefinitely. On examining the water and the scale under the microscope the presence of infusoria was revealed. Scale that had been ignited no longer gave oxygen in contact with water. The conclusion seems to be that the evolution of oxygen is due to the presence of infusoria in the scale, but it is difficult to understand how living infusoria can survive the evaporating process in the pan. The infusoria, if present, must have attached themselves to the scale after it had been removed from the evaporating pans. The evolution of oxygen in this way is, at all events, a very interesting phenomenon, whatever the correct explanation of its formation may be.

CHLORIDE OF SODIUM AND HEART DISEASE.

ACCORDING to an editorial article in the *Indian Medical Record* for May 28th the conclusions of R. Massalonga and G. Zambeli are that the chloride of sodium is a regulator of the humours, of osmotic pressure, of arterial pressure, and of the dehydration of the tissues, but is at the same time a factor in asystolic phenomena and the dropsy of cardiac disease; they have therefore practised the limitation of chlorides in the dietary of all cardiac cases for several years, and they find that this limitation of chlorides soon restores the equilibrium and arrests all unfavourable symptoms. They, however, insist upon the supplemental use of diuretics or heart tonics which accelerate the cure of such cases. The chloride-free diet itself acts as a diuretic as it helps the removal of the œdema which remains as an obstacle to the heart's action, which once thus freed increases its own energy and tends to re-regulate its own function. Widal is another fervent supporter of this chloride-free dietary. It has been noted with reference to the elimination of the chlorides, continues the writer, that it varies in direct proportion to the amount of physical signs and symptoms present, for when the cardiac lesion is not productive of distress its elimination is normal, whereas when dyspnoea or evening œdema supervenes the elimination of chlorides is found to be deficient. The good results obtained in cardiac cases with an exclusively milk diet will now find an explanation in the comparative poorness of milk in salt (1.50 to 1.80 grains (*sic*) per litre). According to the writer in the *Record* the average individual consumes by far too much salt but as long as his kidneys do not refuse to carry off the excess all goes well. As soon, however, as inadequacy in these organs takes place from any cause and the chloride of sodium is retained an excess of water is absorbed to hold it in solution. Then the trouble begins, for the salt does not remain in the blood; it must pass into the tissues and in its passage it carries the water into them and in this way a condition of œdema has to be dealt with. A dechloridated diet means that a food is supplied devoid of one of the necessary elements required in tissue metabolism, and as this demand must be supplied the surplus in the tissues is called upon to do the needful, and so in its re-passage back into the blood for its redistribution it carries with it the water which it had attracted, and so comes the reduction or disappearance of the œdema. We have thought it worth while to produce the foregoing abstract from the

columns of our contemporary, merely making a few verbal alterations for the sake of clearness as the English of the article savours of the East. The subject is certainly one that calls for attention. Many people imagine that salt is a prophylactic against ill-health and that they cannot well consume too much of it. No doubt the value of common or table salt as an aliment is considerable, and the robust who make blood easily and rapidly can afford to take it in large quantities without injury. With delicate people, however, especially those whose thoracic organs are easily deranged, the habitual ingestion of more salt than is required by the system is sure to produce an ill-effect. The amount of salt that can be consumed daily with safety depends upon the constitution of the individual; it cannot be set down in precise terms like the dose of a quack nostrum.

EPIDEMIC CEREBRO-SPINAL FEVER.

WE have already referred to the continued presence of the meningococcus in persons who had recovered from the clinical symptoms as observed by Dr. R. M. Buchanan of Glasgow and the same peculiarity has been noticed by others. At a recent meeting of a medical society in Heidelberg Dr. Krayer said that he had been able to cultivate the meningococcus from cerebro-spinal fluid in which it was not discoverable with the microscope; in one case the organism continued visible for 170 days. In Scotland during the week ended July 20th there were 7 deaths from this cause registered in Glasgow, 3 in Edinburgh, and 1 in Leith. In Glasgow the weekly report issued on July 19th showed that there were at that time 56 cases under treatment.

RATS AND PLAGUE IN INDIA.

THE Trustees of the Indian Museum in Calcutta have published in pamphlet form at the price of 8 annas (about 7d.) a number of interesting particulars bearing on the identification of rats connected with plague in India. The pamphlet has been written by Dr. W. C. Hossack of the Plague Department, Calcutta, and in an introductory note Mr. N. Annandale, superintendent of the museum, states that a more detailed account by the same writer of the species occurring in Calcutta will be issued shortly by the Trustees in the first volume of the "Memoirs of the Indian Museum." Dr. Hossack says that the external differences between the various kinds of rats are so slight that, to one who is not an expert, specimens belonging to entirely different genera may present an apparently identical appearance. The most important body measurements are the lengths of the head and body, the tail, the hind feet, and the ears. These lengths are most accurately taken by sliding callipers, but a pair of compasses and a measuring rule or tape may also be used. The length of the head and body is taken from the tip of the nose, excluding hairs, to the centre of the vent. The length of the tail is taken from the centre of the vent to the tip of the tail, excluding hair. Minute directions are given for the preparation of skins and skulls, for the labelling of specimens, and for describing the colour of the animals according to Ridgway's scale of colours for the use of naturalists. Spirit is recommended as the most trustworthy medium in which to preserve specimens if skins cannot for any reason be prepared, but no time must be lost after the animal has been killed, or putrefaction may proceed even in the spirit. Carbolic acid may be added to the spirit in the strength of one ounce to the pint. Formalin may be used, but in India weak solutions are useless; the solution should never be under 15 per cent. strength of formalin—i.e., 6 per cent. strength of formic aldehyde, as formalin is a 40 per cent. solution of the latter. Dr. Hossack describes seven kinds of rat which are of importance in connexion with plague, two of them being *mus rattus* (the