

Amongst the non-pathogenic forms we find an account of the *Micrococcus agilis*, which was found by Ali-Cohen in drinking water. This was not the first motile coccus found, as is stated by Günther, for previous to this, Mendoza isolated and described a motile form which he called *Micrococcus tetragenus mobilis ventriculi*. The *Micrococcus agilis* was the second variety found; whilst later, in 1890, Loeffler also discovered and described a motile coccus. It is surprising, therefore, to read that Ali-Cohen's variety is the only motile micrococcus known. The list has further been quite recently (1892) enriched by the discovery by Maurea of a motile sarcina, which he has designated *Sarcina mobilis*.

A fine set of seventy-six photographs, mostly taken from original preparations, together with a very exhaustive index, completes the volume. Amongst the photographic figures the series of twelve representing anthrax in every stage of development from the individual bacteria to their appearance as colonies on gelatine-plates, and growing in test-tube cultivations, are particularly beautiful; the surface colonies photographed after forty-eight hours' growth are especially characteristic and successful.

In the handy little volume "Technique Bactériologique," of Dr. Wurtz, chief of the laboratory for experimental pathology in the Faculty of Medicine in Paris, we have an entirely different stamp of book. We read in his preface: "On ne trouvera, dans ce précis de Technique bactériologique, ni l'histoire, ni l'exposé détaillé des nombreuses méthodes techniques qui ont été préconisées jusqu'à ce jour en microbiologie. Conformément au programme tracé par la Direction de l'Encyclopédie Scientifique des Aide-Mémoire, nous nous sommes efforcés d'exposer, aussi clairement que possible, les notions qu'un débutant doit posséder à fond avant d'aborder l'étude proprement dite des microbes."

Proceeding on these lines Dr. Wurtz gives us a very clear and precise account of all the various important stages passed through in bacteriological manipulations, commencing with a chapter on the principles of sterilisation.

But a novel feature in this volume is the description of the various methods of conducting experiments on animals for bacteriological purposes. This is carefully recorded and supplemented by woodcuts, and would appear to be a most useful addition, for although the possibilities of carrying out such experiments in this country are very limited, yet in those cases where they are permitted such an accurate description of the methods to be adopted should prove very helpful, more especially as in very few of the German and English bacteriological text-books is any account to be found for the information of those desiring to undertake such investigations. A chapter is also devoted to the enumeration of the substances, in as far as they have been investigated, which are elaborated by micro-organisms and a description of the most convenient methods for their successful extraction.

The crisp and concise language which characterises the book, together with the judgment displayed in its compilation, show that the author possesses, not only a full grasp of his subject, but is also highly skilled in the art of communicating it to others.

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#### THE ORDNANCE SURVEY.

A DEPARTMENTAL committee was appointed by the Board of Agriculture in April, 1892, to inquire into the condition of the Ordnance Survey. The committee consisted of Sir John E. Dorington, M.P. (chairman), Sir Archibald Geikie, F.R.S., Mr. Henry W. Primrose, Mr. William Mather, M.P., Mr. H. J. Roby, M.P., and Mr. Charles Fortescue Brickdale, with Major

Duncan A. Johnston, R.E., as secretary. The matters referred to then were:—

1. What steps should be taken to expedite the completion and publication of the new or revised one-inch map (with or without hill-shading) of the British Isles?

2. What permanent arrangements should be made for the continuous revision and speedy publication of the maps—1 in 500 (towns), 25 in., 6 in., and 1 in. scales?

3. Whether the maps as at present issued satisfy the reasonable requirements of the public in regard to the style of execution, form, information conveyed, and price, and whether any improvement can be made in the catalogue and indexes?

After the appointment of the committee Mr. T. Ellis, M.P., asked in the House of Commons a question which showed that there was dissatisfaction with regard to the inaccuracy and incompleteness of the names of places in the map of Wales; and this question was also referred to the committee.

The report of the committee has just been issued, and includes the following recommendations:—

1. That the 1 in. map be produced in the following forms:—
  - (a) An engraved outline map, with contours in black.
  - (b) A black engraved map, with hill-shading either in black or in colour.
  - (c) A coloured map on thin paper, adapted to military purposes, but also on sale to the public.
  - (d) A cheap map by transfer to zinc or stone.
2. That the character of the roads on the 1 in. map be shown in four classes with distinct characteristics.
3. That parish boundaries be omitted from the 1 in. map.
4. That the contours of the sea bottom round the coast line and the depths of inland waters be shown.
5. That experiments be made in the practical application of heliogravure, and that, if results not inferior to an Austrian specimen map which we have seen be produced, that process be substituted for the existing method of engraving hills, and for so much of the country as is then uncompleted in its hill engraving.
6. That special arrangements be made to revise the 1 in. map within the next four years independently of the maps on the larger scales, and that subsequently this map be constantly revised within periods of fifteen years.
7. That the cadastral maps be revised and brought up to date in the next ten years, and that subsequently they be kept revised within periods of fifteen years.
8. That the publication of these revised maps be carried out by contract, if necessary.
9. That detail, such as single trees, footpaths in gardens, &c., be omitted.
10. That the skeleton and coloured forms of the 25 in. and town maps be abandoned, and the uses of both be combined in one edition having the houses cross-hatched.
11. That the reference numbers to parcels of land on the 25 in. plans be abandoned on revision.
12. That to a limited extent additional contour lines be added to the 6 in. map.
13. That on the 6 in. map the contours be always in black.
14. That certain of the engraved plates of the 6 in. map which are not now filled up beyond the county boundary be as soon as possible filled up to the margin of the plate with the detail of the adjoining county.
15. That the cost of the engraved sheets of the 6 in. map and that of the quarter-sheets of the photo-zincographed 6 in. map be equalised by a change of their respective selling prices.
16. That the Welsh names be gone over and corrected before the first revision of that map.
17. That the cadastral maps on the town scales be no longer entirely made or revised at the cost of the State, but that the town authorities be required by statute to maintain these maps.
18. That around towns and in tourist districts the existing sheets of the Ordnance Survey on the 6 in. and 1 in. scales be united so as to form special maps of such districts, and that advantage be taken of these maps to introduce any novelties in cartography that may be thought desirable, as these maps are not required to be joined to the general maps of the United Kingdom.
19. That certain authorities be placed under statutable

obligation to supply information to the Ordnance Survey Department in order to enable current revision to be better carried on.

20. That in future the term "revision" should be confined to the bringing up to date on its existing scale of a map already published, and that the term "resurvey" be applied to the operations necessary for the production of maps on a scale larger than that on which they were originally published.

21. That the Ordnance Survey Department be allowed to control its own supply of paper and printing material.

22. That the map on the scale of four miles to an inch be revised as soon as the 1 in. map is out of hand, and be completed with hill-shading.

23. That great freedom be allowed to private publishers desirous of bringing out other classes of maps than those specially published by the Survey Department, and that transfers of the maps on the 1 in. and smaller scales be supplied to publishers at cost price, a small sum being paid as an acknowledgment, and that all other reproduction of Ordnance Survey maps be prohibited.

24. That certain recommendations as to indices and catalogue be carried out.

25. That a book or pamphlet of information as to the Ordnance Survey be published, general in its main features and special for each county, containing the county indices or diagrams (on a reduced scale) and the information formerly contained in the parish area books, and also the table of parish areas now printed on the index of the 6 in. map, which table should in future be omitted from that map, and that copies of the small indices in this pamphlet be freely distributed for public information.

#### NOTES.

OWING to the large demand for tickets for the Croonian Lecture, which is to be delivered by Prof. Virchow before the Royal Society and their friends next Thursday, it has been decided to hold the meeting in the theatre of the London University, which has been lent for the occasion by the kind permission of the Senate.

THE public dinner which is to be given in honour of Prof. Virchow will be held on March 16, after the delivery of the Croonian lecture, at the Hôtel Métropole. Lord Kelvin will preside, and will be supported by the Presidents of the Royal Colleges of Physicians and Surgeons as vice-chairmen.

AT the Nottingham meeting of the British Association, over which Prof. Burdon Sanderson will preside, Lord Salisbury will be nominated president of the Association for the Oxford meeting in 1894. The following gentlemen have consented to act as presidents of sections at Nottingham:—Section A, Mathematical and Physical Science, Prof. Clifton, F.R.S.; Section B, Chemistry and Mineralogy, Prof. J. Emerson Reynolds, F.R.S.; Section C, Geology, Mr. J. J. H. Teall, F.R.S.; Section D, Biology, the Rev. Canon Tristram, F.R.S.; Section E, Geography, Mr. Henry Seebohm, Sec. R.G.S.; Section F, Economic Science and Statistics, Prof. J. S. Nicholson; Section G, Mechanical Science, Mr. Jeremiah Head; and Section H, Anthropology, Dr. Robert Munro.

AT the ordinary meeting of the Royal Meteorological Society, to be held at 25, Great George Street, Westminster, on Wednesday, the 15th instant, at 7 p.m., a lecture will be given by Mr. Shelford Bidwell, F.R.S., on some meteorological problems, which will be illustrated by experiments.

DR. R. THORNE THORNE, Medical Officer of the Local Government Board, and Mr. H. Farnall, of the Foreign Office, have gone to Dresden, the former as British delegate to the International Sanitary Conference in that city, the latter as assistant delegate.

THE students of the Royal College of Science propose to hold a conversazione in the South Kensington Museum on the evening of March 23 next. In the course of the evening Mr. Boys, F.R.S., will deliver a lecture on soap bubbles, illustrated by his own interesting experiments. The evening will be further enlivened by various public singers, and a selection of music will be played by the band of the Grenadier Guards.

IN reply to a question put by Sir Henry Roscoe in the House of Commons on Friday last with regard to the proposed new buildings for the Royal College of Science, Mr. Shaw Lefevre said:—"The accommodation at the Royal College of Science is now undoubtedly inadequate, and in my opinion new buildings must be undertaken at some early opportunity. Block plans were drawn up in 1891 by the professors of the Royal College of Science, showing a suggested appropriation of the land on the south side of the Imperial Institute Road, for the purposes both of the Royal College of Science and of the Science Museum, and these plans were submitted to the Office of Works; but that Department pointed out that it would be premature for them to consider the plans until the Science and Art Department had obtained the sanction of the Treasury to an organisation of their teaching and exhibition establishments on the scale contemplated in the plans. I understand that the Science and Art Department are now in communication with the Treasury in this sense." Sir H. Roscoe having asked when the report from the Science and Art Department would be issued, Mr. Shaw Lefevre said it was not in the nature of a report that could be issued to Parliament, but he should be happy to show it to the hon. member.

LAST week a meeting, convened by the Duke of Westminster as president of the Royal Agricultural Society, was held at 12, Hanover Square, to consider the best means of commemorating the completion of the first half-century of the agricultural experiments which have been continuously carried on by Sir John Lawes at Rothamsted since the year 1843. The Prince of Wales presided. On taking the chair his Royal Highness stated the objects of the meeting. The Rothamsted experiments had from the commencement been entirely disconnected with any external organisation and had been maintained at the sole cost of Sir John Lawes. For the continuance of the investigations after his death Sir John had recently made the munificent endowment of £100,000, besides the famous laboratory and certain areas of land, and had nominated some of the most distinguished men of science of the day to administer the trust. In view of all these facts, and the great national importance of the Rothamsted experiments, it was only fitting that some public recognition should be made of the invaluable services rendered to agriculture by Sir John Lawes and his distinguished colleague, Dr. Gilbert. The Duke of Westminster said they all hoped that Sir John might live for many years to continue to carry on these experiments for the benefit of agriculture. He had great pleasure in proposing the following resolution:—"That, having regard to the great national importance of the series of experiments which have been carried on at Rothamsted during the last fifty years, it is desirable that some public recognition should be made of the invaluable services thus rendered to agriculture by Sir John Lawes, and also by Dr. Gilbert, who has been associated with the experiments during the whole period. That, with this object, subscriptions, to be limited to two guineas, be invited from all interested in agriculture, whether scientific or practical." Mr. Thiselton-Dyer, F.R.S., seconded the resolution—not as an agriculturist, but as one officially and all his life deeply interested in everything that was concerned with botanical science. The extraordinary merit of the work carried on at Rothamsted lay in the fact that those experiments had been continuously carried on under uniform conditions for so long a