

the fifty-four plates of surgical instruments have been reproduced.

The book has grown out of a thesis written by Dr. Milne for the degree of doctor of medicine at the University of Aberdeen. It shows him to be a scholar of no mean capacity, and a fit member of a profession which used to be a great deal more learned and much less practical than it is at the present time. Knowledge about ancient surgical instruments is singularly scattered. There are descriptions of them in the medical and surgical writers of classical times, and there are remains of the instruments themselves in most of the national museums of Europe and America. But in modern times very little attention has been devoted either to the instruments or to their descriptions, and those who still read descriptions of the operations in the classical authors have either been contented to imagine the instruments with which they were performed or have had to draw upon their recollection of what they saw at Naples. Dr. Milne has now removed this reproach, and any intelligent surgeon, even though he be ignorant of Greek and should know but little Latin, can follow easily the manipulations of the older surgeons. Some day, perhaps, a surgeon with an archæological bias will do for Egyptian surgery what Dr. Milne has accomplished for Greece and Rome. Dr. Milne describes the instruments under the general headings of knives, probes, forceps, bleeding cups and clysters, cauteries, bone and tooth instruments, bladder and gynæcological instruments, sutures, and the portable outfit which was necessary for the surgery of so migratory a race as the Romans. In an appendix is an inventory of the chief instruments which Dr. Milne has seen in the various European museums, and a bibliography of the subject, short but apparently complete. There are no less than three indices, the first an index of subjects, the second a Latin index, and the third in Greek. Dr. Milne has done his work so well and so accurately that as this monograph is the first dealing with the subject it must remain for a long time the standard authority until further finds prove or disprove some of the disputable conclusions drawn by the author. The monograph presupposes a considerable amount of knowledge on the part of the reader. He must in the first place be skilled in the practice of his profession, he must be interested in its antiquities, and he must be a fair classic. These qualifications being granted, the book is most excellent reading, and throws abundant light, not only on the subject of which it treats, but also on many collateral points.

*Diptera Danica. Genera and Species of Flies hitherto found in Denmark.* Part I. By William Lundbeck. (Copenhagen: G. E. C. Gad; London: William Wesley and Son, 1907.) Price 4s. 6d. net.

This work is expected to be completed in about ten parts; and the first part is accompanied by a portrait of R. C. Stæger, an eminent Danish dipterist. The book is written in English, and as it appears to be very carefully done will prove very useful to English entomologists who take up the study of Diptera, which has been more neglected in England than any other order of insects, and respecting which we possess no complete work at present; though most European countries possess good monographs of Diptera in their own languages. The introduction relates chiefly to structure, illustrated by figures of structure and neurulation. The other text-illustrations represent details of structure, such as heads, wings, palpi, &c. One term is new to us—the “yowls,” which from the context seems to apply to the lower part of the face. The English is very good, but somewhat stilted, and occasionally

rather unfamiliar words are used, such as “kinks” and “kneeformed.”

There is no general table of families, which we regret; but detailed tables are given of subfamilies, genera and species. The descriptive part of the book appears to be very good, as well as the accounts of habits, transformations, and localities. There is even a table of the larvæ of the genera of Stratiomyiidae, the first family included in part i., the others being Xylophazidae, Cœnomyiidae, Tabanidae, Leptididae, and Acroceridae.

It appears that the last estimate of the number of Danish Diptera was given by Zetterstedt in 1855 as 1439, to which Prof. Lundbeck will doubtless be able to add considerably by the time that his work is completed. The number of British species is probably somewhere between 2500 and 3000; and a considerable proportion of the Danish species probably also occur in the British islands, though the latter may be expected, when the Diptera of both countries are fully known, to possess a richer fauna than Denmark, owing to the greater extent and more varied character of the country.

#### LETTERS TO THE EDITOR.

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#### Radiation of Meteors.

THE shower of November Andromedids which occurred in 1885 exhibited a very large area of radiation, the flights being directed from a region variously estimated from  $7^{\circ}$  to  $15^{\circ}$  diameter. The Draconids of August, with a radiant near  $\alpha$  Draconis and centre at about  $290^{\circ}+60^{\circ}$ , appears to exhibit a similar feature, for the rich shower this system presented in 1879 had a very ill-defined radiant. An active shower of Taurids seen on November 2, 1886, also formed a very dispersed or scattered radiant.

The Draconids alluded to above returned rather plentifully this year between August 15 and 28, and they exhibited the same indefiniteness of radiation as in 1879. The feature is an interesting one, but it is very difficult to investigate it properly because of the errors of observation and mistakes in attributing meteors to their correct systems.

As a rule, it may be accepted as a general fact that showers of slow meteors have more diffused radiants than the swift meteors. I have often found the radiant points of the Perseids, Orionids, and Leonids very contracted and exact centres, while certain displays of slow meteors have proved rather puzzling to me in fixing their correct positions owing to the evident diffuseness in the intersections of the paths.

W. F. DENNING.

Bishopston, Bristol, August 30.

#### Experiment on the Rusting of Iron.

IN view of recent work on the rusting of iron, the following simple experiment will be of interest. It is the result of a number of attempts to devise a simple method—for class-demonstration purposes—of showing that carbon dioxide is necessary for the rusting of iron.

A 500 c.c. flask was taken, and into it were put about 100 c.c. of 15 per cent. caustic potash solution. A partially bored sound cork was inserted in the neck, and the flask shaken occasionally for two days. Then a piece of bright iron wire (a long nail is suitable) was, after boiling in distilled water, pushed through the unbored portion of cork, leaving about an inch outside. After four months the iron inside shows no sign of rust, whilst that outside was rusted in as many days.

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