

or "ophitic nodules," where augite or hornblende are concerned, has been sanctioned by microscopists, but tends to mislead when actual rock-specimens are examined. Beyond these trifling criticisms, we have nothing but praise for this conscientious exposition of results, behind which lies a vista of personal sacrifice and prolonged observation in the field.

GRENVILLE A. J. COLE.

ENGLISH MEDICINE IN THE ANGLO-SAXON TIMES.¹

FROM an educational point of view, an acquaintance with the history of scientific discovery is even more important than a knowledge of the results of scientific investigation up to the most recent date. The latter knowledge is essential for progress, as it is for practical application of results already gained. The former is needful in order to understand the methods of science, to imbibe the spirit of discovery, to appreciate the reciprocal action of hypothesis and experiment, and to acquire the mental habit of looking with scientific eyes upon every branch of human knowledge.

The history of mathematics, of chemistry, of geology, and of the inductive sciences in general, has been adequately treated by many foreign and by some English writers. But one of the most ancient branches of knowledge has been sadly neglected in this country. The history of medicine as the science of disease, and of medicine as the art of prevention and cure, has been far more studied by French and German, Dutch and Italian physicians than by those who write in English. It is therefore a matter of congratulation that the College of Physicians, which dates from the wonderful re-birth of learning in the days of Sir Thomas More, of Dean Colet, of Erasmus, and of Linacre, should have been entrusted by the widow of a learned member, the late Dr. Fitz-Patrick, with the endowment of a lectureship on the history of medicine.

In this volume Dr. Payne treats with remarkable learning and interest of the art of medicine as it existed among our ancestors before the Conquest. For his purpose he has not the help of such inscriptions as describe and delineate the duties of physicians in the Babylonian and the Egyptian empires, nor the rich and wonderful collection of medical instruments which is preserved in the Museum of Naples. He has only literature to depend on.

English learning dates from Archbishop Theodore of Tarsus (A.D. 669), who, with the Abbot Adrian, founded a school at Canterbury, where Greek as well as Latin, arithmetic, and astronomy was, according to the testimony of the justly Venerable Bede, successfully taught. Bede himself wrote on astronomy, and was probably the author of a treatise "De phlebotomia." In his "Ecclesiastical History of Britain" he described several epidemics of the true oriental or bubonic plague. St. John of Beverley recorded a case of aphasia in a youth who was also affected with impetigo of the scalp, and was cured of both. Among the West Saxons in the ninth and tenth centuries literature flourished. Poetry, history, and religious works were written in native English as well as in Latin, and have been adequately studied by more than one German scholar. This civilisation, with its numerous schools and libraries, was interrupted by the disastrous inroads of the Danes; but up to the Conquest and beyond,

¹ *The Fitz-Patrick Lectures for 1903.* By Joseph Frank Payne, M.D. Oxon., Fellow and Harveian Librarian of the Royal College of Physicians, Consulting Physician to St. Thomas's Hospital. Pp. 162; with twenty-three illustrations from early English MSS. (Clarendon Press.) Price 3s. 6d. net.

notable works appeared, and some of these were treatises on medicine. Among others published by Cockayne nearly fifty years ago were "The Leech-Book" of Bald (written when Alfred was king, or soon after his death), a book of recipes and a glossary of the names of plants, of which the manuscript is preserved in the library of the Cathedral of Durham.

The following remarks by Dr. Payne deserve to be widely read, for their application is general:—

"Before speaking in detail of the old English medical books, I will venture to say a word about the spirit in which they should be studied. Too often, those few persons who have interested themselves in these monuments of ancient science have treated them in one of two ways. Either they have picked out something especially unlike the ways of modern thought, and held it up to scorn as showing the folly of our ancestors, or else in kinder mood they have con-

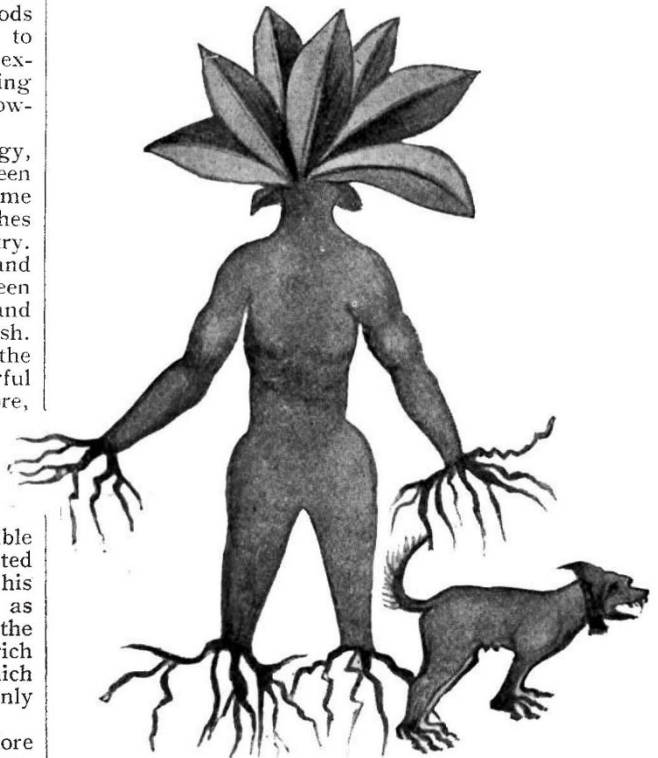


FIG. 1.—Mandragora, Mandrake, with the dog used to put it up. A simple and probably early form of the legend. (From "The Fitz-Patrick Lectures for 1903.")

descended to be amused, and calling anything old and unfamiliar 'quaint,' dismissed it with a smile. Neither of these methods will help us to understand the ancient world. The folly of our ancestors is no explanation. Their knowledge was no doubt extremely limited; they saw old and distant things through a dense and prevailing fog of ignorance. But that they tried to understand them at all is a proof of their wisdom, not of their folly.

"Still more misleading is the habit of regarding the rude features of primitive art, the stammering words of an infant literature, the childish fallacies of early science, as something to be amused at. Till we have got beyond the stage of calling these old things merely 'quaint,' there is no possibility of understanding them at all. Therefore, if we quote from the old books things which appear strange in our eyes, foolish things if you like, it is not with the object of raising

a laugh or of flattering the modern sense of superiority. The only way to understand these old writers is to try to put ourselves as far as possible in their place, and conceive how nature and science presented themselves to the eyes of the early teachers and learners in the tenth and eleventh centuries."

A full account is given of the mythical "mandrake," with several instructive drawings from Anglo-Saxon manuscripts (see Fig. 1), and others of plants which can be recognised as characteristic, while some are gracefully conventional. Many drawings of foreign plants are copied from more original sketches, until they have become mere ornamental designs. These figures may be compared with the beautiful drawings published by Prof. Haeckel of animal structures adapted to suggest the decorative use of countless organic forms to carry on the conventional lines of Greek architects and Italian decorators.

An interesting section of Dr. Payne's volume is devoted to the old English names of plants. "Way-broad" has been ill exchanged for the so-called plantain, and "maythe" for camomile. On the whole, he agrees with Prof. Earle that there was a great decadence in botanical knowledge in England between the eleventh and sixteenth centuries.

The practice of surgery by the Anglo-Saxon leeches was for the most part confined to the external application of divers vegetable or animal concoctions which can have been only negatively useful. Some of them remind us of Alexis of Piedmont, who, after describing an unfailing remedy, adds, "If this will not do it, take this other." Here and there we come across curious anticipations of modern pathology and surgery, e.g. when we are told that if the insensible hardening of the liver is of too long duration, then it forms a dropsy which cannot be cured; or when the plastic operation for hare-lip is described. Amputation for gangrene of a limb is also recommended.

The last sixty pages are devoted to superstitious treatment by amulets and charms, some derived from Greek treatises, as they in their turn reproduced the magical lore of Egypt and of Babylon. One extract, however, from a sermon of St. Eligius, who furnished the gentle abess of the "Canterbury Tales" with her only oath, might still be preached from English pulpits against the quackery and miscalled Christian science of the present day. If space permitted, it would be interesting to refer to Dr. Payne's comparison between the "Practica" of the famous school of Salerno and the old English "Leech-book," and to his account of the final decay of the native art of medicine and its replacement by the less vigorous and less original doctrines of Continental Europe in the later Middle Ages.

The work is of great value and interest not only to physicians, but to scholars, antiquarians, and philologists. It is admirably printed and illustrated, and will, we hope, be succeeded by the publication of future lectures by the same accomplished physician.

NOTES.

THE *Atti dei Lincei* announces the death on August 19 of Prof. Emilio Villari, recently president of the Reale Accademia dei Lincei.

MR. C. FOX-STRANGWAYS, who joined the staff of the Geological Survey in 1867, has retired from the public service.

AN earthquake shock was felt in the Cowall district of Argyllshire shortly after 4 a.m. on September 18. In Dunoon the shock was most distinctly felt. Dishes rattled, doors were opened, bells were set ringing, and ornaments were broken.

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REUTER reports that two distinct shocks of earthquake were felt at Ottawa at 7.53 p.m. on September 14. The first lasted five seconds, and after an intermission of three seconds came the second shock, which was of six seconds' duration. The direction was from south-west to north-east.

A CONGRESS of free thought was opened at Rome on Tuesday in the Grand Court of the Roman College. Prof. Sergi, president of the committee, welcomed the members of the congress, and the following were elected honorary presidents:—Prof. Haeckel (Germany), M. Berthelot (France), Dr. Maudsley (Great Britain), Señor Salmeron (Spain), M. Novimoff (Russia), Herr Bjoersen (Norway), and Prof. Lombroso (Italy).

AT the St. Louis Exhibition a steel tower 300 feet high has been erected for wireless telegraphy by Dr. De Forest and his coadjutors, and communication has been established between St. Louis and Chicago. We learn from the *Times* that the United States Government is also exhibiting a working De Forest station, and there are seven working exhibits in the exhibition. The United States Government has contracted with the De Forest Company for five long-distance stations at Key West, Pensacola, Puertorico, South Cuba, and Panama. The longest distance between these stations will be 1000 miles, which will far exceed the distance attempted for wireless telegraphy by any Government before.

IT is announced that the high-level observatory on Ben Nevis will be closed next month. The annual cost of the double observatory, high- and low-level, is close on 1000*l.*; of this sum about three-fourths is spent on the high-level and about one-fourth on the low-level station. The Treasury has offered to pay direct to the Scottish Meteorological Society on behalf of the Ben Nevis Observatory the 350*l.* recommended by the committee of inquiry into the administration of the Parliamentary grant for meteorology, instead of making this sum a charge on the meteorological grant. The continuance of the observatories could, however, only be undertaken on a guaranteed income of 1000*l.* a year. The directors have therefore decided to close the observatories.

THE New York correspondent of the *Daily Chronicle* announces that Commander Peary will lead another expedition to the North Pole next year. The expedition will start in the summer, and will be gone probably not longer than two years. Its expenses are estimated at 30,000*l.*, which is 10,000*l.* more than the last Peary Expedition cost. American capitalists are supplying the funds. A vessel is now being built which, it is said, will be stronger and more suitable to the conditions prevailing in the Polar regions than any previous ship. One part of her equipment will be an ice-breaker bow, which is expected to enable the ship to break through to a point farther north than has hitherto been reached. The features of the expedition will be the fixing of a base within 500 miles of the Pole, the use of very light sledges and fast Esquimaux dogs to make a final dash for the Pole, and the adoption of conditions of living corresponding as nearly as possible to those of the Esquimaux themselves.

THE expedition, on board the steamer *Frithjof*, which took out a supply of coal for the Ziegler North Polar Expedition, whose ship, the *America*, left for the Arctic regions nearly fifteen months ago, has returned to Norway without having communicated with the *America*. This is the second attempt which has been made this year by the relief expedition to reach Franz Josef Land, but on each occasion the severity of the weather, together with fog and ice, has