by Mr. Davis, we are satisfied that it supplies deficiencies which exist in all the text-books which have up to this time appeared. While the others have been largely practical, this one is more theoretical, and, as is indicated on the titlepage, is especially designed to prepare students for their scientific examinations. This design is further elaborated in an appendix, which contains a full bibliography of the works referred to in the text, a series of examination-questions, and an index-glossary. The volume is divided into two parts, — a botanical and a zoölogical, — each of which deals with a number of types morphologically and physiologically, then briefly draws out the points of comparison between them, and ends with an outline of classification.

In Part I., which treats of vegetable morphology and physiology, fungi are first considered; *Saccharomyces*, *Bacteria*, *Mucor mucedo*, and *Penicillium glaucum* being selected as types. Of *Algæ*, the author describes *Protococcus pluvialis*, *Spirogyra*, *Fucus*, *Chara*, and *Nitella*. *Funaria* and *Polytrichum* are selected as representing the mosses. *Pteris aquilina* and *Nephrodium filix-mas*, the ferns; *Pinus*, the gymnosperms. The consideration of the angiosperms follows.

In Part II., which is devoted to animal morphology and physiology, the *Protozoa* are first dealt with through their representatives the *Amœba* and *Vorticella*. The *Hydra* represents *Cœlenterata*; *Distoma* and *Lumbricus*, *Vermes*; *Astacus*, *Arthropoda*; *Anodonta* and *Unio*, and *Helix*, *Mollusca*; *Rana*, *Amphibia*; *Columba livia*, *Aves*; *Lepus cuniculus*, *Mammalia*.

No less than one hundred and fifty-eight well-executed illustrations add to the attractiveness of the book, as well as elucidate the text. We recommend the work not only to those for whom it was originally designed, but to all students and readers who desire to obtain within a small compass the most recent reliable information on the subjects of vegetable and animal morphology and physiology.

Ethics of Boxing and Manly Sport. By JOHN BOYLE O'REILLY. Boston, Ticknor. 12°. $1.50.

THE main purpose of this book, as stated by its author, is to bring into consideration the high value, moral and intellectual as well as physical, of those exercises that develop healthy constitutions, cheerful minds, manly self-confidence, and appreciation of the beauties of nature and natural enjoyment. He further says, that so long as large numbers of our young people of both sexes are narrow-chested, thin-limbed, their muscles growing soft as their fat grows hard, timid in the face of danger, and ignorant of the great and varied exercises that are as needful to the strong body as letters to the informed mind, such books as this need no excuse for their publication.

The contents of the volume are subdivided into four sections: 1. The ethics and evolution of boxing; 2. The training of athletes tested by every-day life; 3. Ancient Irish athletic games, exercises, and weapons; 4. Canoeing sketches. Under the first the author discusses the question whether boxing has a real value. He believes that it has, and in support of his belief quotes the opinions of Sir Robert Peel, Mr. Evelyn Denison, Lord Althorp, Dr. Oliver Wendell Holmes, and others. Lord Althorp, the minister who led the British Commons when the Reform Bill was passed, was evidently an enthusiast on this subject. He said that his conviction of the advantages of pugilism was so strong that he had seriously been considering whether it was not a duty that he owed to the public to attend every prize-fight which took place, and thus to encourage the noble science to the extent of his power. In speaking of the improvement in modern boxing, the author believes that the English practice of prize-fighting with bare hands and under improper rules has brought boxing into disrepute. He praises Sullivan for having made a manly effort to establish the practice not only of sparring, but of fighting, with large gloves, and for insisting that contests should be ruled by three-minute rounds of fair boxing. The Grecian athletes, their training and skill, and the gladiators of Rome, are referred to and described. Feudalism suppressed popular athletic exercises. With the advent of chivalry, the art of boxing waned and became unfashionable. With the advance of feudalism came the growth of iron armor, until at last a fighting man resembled an armadillo: he was iron-clad from top to toe. The first modern champion boxer was James Figg, who was considered, in 1729, as the national champion. The first rules for the government of 'the ring' were prepared by Broughton, and were in force from 1743 to 1838.

In discussing the training of athletes as tested by every-day life, the author considers the question from two different standpoints, — that of the professional athlete, and that of the average person who wants to get into lasting 'good condition.' He thinks that the mass of those who live in cities, and whose occupations involve little manual or physical exercise, allow their bodies, at an early age of manhood, to sink out of all trained and athletic strength and shapeliness. He says that it is only necessary to visit a Turkish bath to find abundant evidence of the muscular collapse which has overtaken the modern city-dweller, — bodies 'developed' everywhere in the wrong direction, arms like pipe-stems, while the beautiful muscles of the shoulders and back are smothered in layers of vile fat, and spindle thighs and straight calves weakly support bellies like Bacchus. Excellent hints are given on training and the ways of promoting good health. A large number of illustrations make the volume very attractive, and accounts of canoeing on the Connecticut, Delaware, and Susquehanna Rivers add to the interest which its perusal has excited. The book, taken as a whole, is unique, and treats of questions which have seldom been so well and so thoroughly handled.

Medical Nursing: Lectures delivered in the Royal Infirmary, Glasgow. By J. WALLACE ANDERSON, M.D. 3d ed. Glasgow, James Maclehose & Sons. 16°. $1.

FOR many years the nurses at this Royal Infirmary of Glasgow have been practically trained in the duties pertaining to their profession. About ten years ago the managers resolved that a course of systematic lectures on nursing should be added to the practical training; and Dr. Anderson was selected to deliver the medical lectures, which are contained in the volume before us. In ten lectures the author has succeeded in condensing a vast amount of information. Modern nursing dates from the year 1836, when Theodore Fliedner, a German-Protestant clergyman, established the Deaconess Institution at Kaiserwerth on the Rhine. There, under the superintendence of himself and his wife, a training-school for female nurses was begun. The labors of Florence Nightingale, with her staff of thirty-seven nurses, in the Crimea, in 1854, are too well-known to need more than a reference. It was from such work as this of Fliedner and Florence Nightingale that all the training-schools for nurses have come. There is now hardly a hospital in the United States that has not such a school in connection with it. The lectures of Dr. Anderson deal with subjects which are essential for every nurse to know: how to obtain and record a patient's temperature, pulse, and respiration; how to prepare food for the invalid so as to make it both nutritious and palatable; how to prevent bed-sores; how to prepare fomentations and poultices. These and many other practical lessons are thoroughly taught in this little volume. In an appendix the author gives valuable recipes for the preparation of food for the sick, and a list of poisons with their antidotes. One feature of the book which we regard as of considerable worth is a list of questions at the end of each lecture. These questions bring out the salient points of the lectures, and direct attention to the most important subjects for study. There have been published other and more pretentious text-books on nursing, but we know of none that in so compact a form contains so many essentials as 'Medical Nursing.'

Bradley's Atlas of the World, for Commercial and Library Reference. Philadelphia, WILLIAM M. BRADLEY & BROTHER, 1887. f°. $25.

THIS atlas has received high praise from Dr. McCosh, Professor Libbey, Dr. Vincent, General Hazen, and others. The intention of the work is to provide a complete American and foreign atlas, full and detailed, for both hemispheres. Following a somewhat novel plan for an American atlas, the eastern hemisphere is given first. But it is the belief of the publishers that every portion of the world is equally treated. The maps contain the results of recent investigations, so far as this is possible in any atlas of this size, and each map is accompanied with an isometric index. By means of this index the

position of all places indicated on the maps may be readily found. For American towns the population is given with the index. For the eastern hemisphere a separate population table is given. Throughout the work it has been a fixed aim to render the maps easily legible, and not tiresome to the eye in consultation.

NOTES AND NEWS.

THE committee appointed by the New Jersey Assembly of the Agassiz Association at its semi-annual meeting, held in the chapel of Rutgers College, May 12, to arrange for a seaside assembly during the coming summer, organized itself by the election of Rev. L. H. Lighthipe, Woodbridge, N.J., as chairman, and Prof. P. T. Austen of Rutgers College, New Brunswick, N.J., as secretary. The plan as sketched out by the committee is somewhat as follows. The assembly is to be known as the 'Agassiz Seaside Assembly.' Its membership is to consist of such persons as shall send their names to the secretary before the opening of the assembly, or such as shall be elected members according to by-laws adopted afterward. It is proposed to make it a permanent organization; the membership fee to be one dollar per year, payable at the opening of each annual assembly. Membership badges and tickets will be provided for all who send in their names to the secretary. It is proposed to hold a six-days' session this year, at Asbury Park, N. J., provided suitable accommodations can be secured at that place in the month of August. The subjects to be discussed this year will be principally botany and entomology, under the direction of such practical specialists as can be secured. The work is to include several field-day excursions with experienced guides. Circulars setting forth these facts will be sent to all chapters within a radius of one hundred miles, and to any other chapters which may desire them. Chapters failing to receive them, or any persons desiring copies, can obtain them by addressing the secretary, Prof. P. T. Austen, Rutgers College, New Brunswick, N.J. Members will be entitled to free admission to all lectures and excursions, and will receive circulars before the opening of the assembly, giving full particulars as to time, place, railroad-trains, boarding accommodations, programme of exercises, etc. Membership is not limited to members of the Agassiz Association. It is extremely desirable that names be sent in as soon as possible, that the committee may know how far they may venture in the matter of expenses. All members of the Agassiz Association are cordially invited to co-operate with the committee in making the Seaside Assembly a success.

— According to the *Publishers' Weekly*, a gypsy-lore society has just been formed. The president is Mr. C. G. Leland; the vice-president, Mr. H. T. Crofton; and the members already include the Archduke Joseph of Hungary, Sir Richard Burton, M. Paul Bataillard, Dr. Alexander Paspati, and several more English and continental students of Romany. The society will publish a quarterly journal, the first part of which will appear on July 1, and copies of which will be strictly confined to members. The honorary secretary is Mr. David MacRitchie, 4 Archibald Place, Edinburgh.

— At a late meeting of the mineralogical branch of the New York Academy of Sciences, Mr. George F. Kunz described some remarkably complicated twin diamonds which have proved to be unusually hard. Some of these will be sent to Professor Rowland of Johns Hopkins University, Baltimore, for use in ruling the diffusion gratings he is making, and using in mapping the spectrum of the sun.

— A new slang dictionary is announced by the *Publishers' Weekly*, which will aim at exceptional completeness by enlisting the co-operation of specialists in different departments. The editors-in-chief are Prof. Albert Barrère of Woolwich, author of 'Argot and Slang,' and Mr. Charles G. Leland (Hans Breitmann); and among the contributors are the Earl of Suffolk, Sir Patrick Colquhoun, Major Arthur Griffiths, Dr. Charles Mackay, Mr. John Hollingshead, Rev. J. W. Horsley, and Prof. Douglas B. W. Saden. The character of the work may be judged from its sub-title: 'A Dictionary of Unconventional Phraseology, embracing English, American, and Colonial Slang; Tinker's, Yiddish, Pidgin, and Anglo-Indian Slang; Quaint Expressions, Vulgarisms — their Origin, Meaning, and Application.' It will be issued in two volumes, to subscribers only. Applications for the work should be addressed to G. May, care of Messrs. Whittaker & Co., 2 White Hart Street, Paternoster Square, London.

— Professor Langley, secretary of the Smithsonian Institution, has asked for an appropriation of $27,050 for the expenses of the system of international exchanges between the United States and foreign countries under the direction of the Smithsonian Institution, instead of the $15,000 previously estimated for. In his letter of explanation he says that there is now an amount of matter (virtually presents to the United States) which could be secured if the institution had the larger sum at its disposal.

— The British Parliamentary Currency Commission will report in favor of the remonitization of silver. It proposes a convention of the leading commercial nations of the world to agree upon a system of weights and coinage under which gold and silver shall be exchanged in international transactions. If such an agreement could be reached, it would probably be a blessing to the world. No one nation can remonitize silver without the co operation of others, but the whole commercial world can do it.

— The feature of the meeting of the British Royal Society last week was an exhibition by Mr. Henry Burns of a class of nests of live ants. These were so arranged that all the elaborate internal economy of the insects could be fully observed. A cable despatch says that "in one cell was the queen, with servants attending upon her. In another were the aphides, or cows, watchfully herded by their keepers; and a party of workers were engaged in walling up an intruding queen which had been placed in the nest that morning. The state of ant civilization was so remarkably high, that nobody would have been much surprised at a party of scientific ants in spectacles taking notes on the Royal Society."

— The Nicaragua Canal surveying party, under Civil Engineer Menocal, have discovered that a new route, which they call 'the upper one,' is much more favorable for the line of the canal than the one recommended in 1885. By this new route it is said that the total length of the excavation from Ochoa to Greytown will not exceed nineteen miles, and will consist of several short embankments instead of one long one. The cost, it is said, will be greatly reduced, and the engineering difficulties much less.

— A new chemical process of producing aluminium, invented by Professor Curt Netto of Dresden, is thus described: "The ore used is cryolite, a double fluoride of aluminium and sodium, ground to a fine powder, and fluxed with common salt. The ore is then melted in a reverberatory furnace, and when quite liquid is run into a ladle. When in this condition, ingots of solid sodium are forced to the bottom of the ladle, and there held until they become volatilized. The gaseous sodium rising through the molten cryolite displaces a part of the aluminium, which collects in a metallic form at the bottom of the ladle. The greater part of the slag is then skimmed off, and the remainder poured into an iron crucible to cool. When the mass is turned out, a solid ingot of aluminium is found at the bottom."

— An item of interest in connection with the proposed introduction of 'World-English' is going the rounds of the press, crediting President Eliot of Harvard College with having said, "I sat down to dinner one stormy night, in a Swiss inn, with sixteen people. Six different nationalities were represented by these sixteen people, and the only language that they could all speak was English. One may travel now, as I have just travelled, through southern Spain, through northern Africa, through Greece and Constantinople, and back by Vienna, and the more usual routes, with nothing but English. I do not mean to say that you may not occasionally feel the need of some French words, but you can travel comfortably through all these countries with no language but English. That, I am sure, could not have been said twenty-five years ago. The spread of the language within that time for purposes of commerce is most noticeable, as is also the increased knowledge of the language and literature among educated people on the continent of Europe."